

# Ergativity, agreement and alignment shift in Western Indo-Aryan

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# Research Article

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# **Additional Declarations:**

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# Ergativity, agreement and alignment shift in Western Indo-Aryan

#### **Abstract**

The Western Indo-Aryan languages are known for their aspect-based split ergativity, where subjects in the perfective are marked with an ergative case and unmarked objects usually trigger verbal agreement. In this paper, we survey data from multiple languages in the area and identify patterns that indicate an ongoing ergative to nominative shift. We show that languages that initiate verbal agreement with differentially marked objects (DOM) start deviating and losing the ergative case. With the subsequent emergence of an auxiliary, the subjects also start to control agreement on T. These patterns, we claim, evolve when accusative objects trigger agreement at the vP-edge, forcing subjects to get a nominative case from T in the expanded clausal spine. Our study identifies a diachronic path, from a system where the v de facto licenses both arguments to another system with a clear division of labour between v that licenses the objects, and T that licenses the subjects.

Keywords Ergativity; Western Indo-Aryan; alignment shift; DOM; agreement

#### 1. Introduction

Since its formulation by Comrie (1978), Dixon (1979) a.o., ergativity has been at the center of linguistic debate. This paper investigates alignment shift, i.e., the shift from ergative alignment to accusative alignment, with an empirical focus on Western Indo-Aryan (WIA) varieties. Ergativity is often investigated from a synchronic viewpoint. We take a different route here, by trying to identify the triggers of alignment change through focusing on some previously unnoticed phenomena in many WIA languages and dialects, which shed light on the organization of case and agreement in alignment-shifting languages.

The aim of this article is twofold. On the one hand, we will present some ideas on alignment shift. Through a microvariational and micro-diachronic approach, we identify the starting point of change in the agreement of the verb with differentially marked object (DOM), as well as the emergence of a separate T head hosting the auxiliary. When agreement with DOM-object and a separate auxiliary head are systematically present in the language, ergative alignment starts weakening. On the other hand, we bring empirical evidence against the claim that ergative systems in WIA are stable and that, despite some apparent changes, we are still dealing with ergativity patterns (see for instance Bobalijk 2017 for such a view). We show that despite DOM appearing much like a dative marker, it is in fact an accusative marker, and the two behave differently in ergative constructions.

Methodologically, we build on an assumption that is widely accepted in traditional dialectological studies, i.e., that different dialects in a geographic continuum may embody different stages of evolution of the parent language. In other words, the form found in one dialect might be at a different stage of evolution with respect to a similar form found in another dialect of the same family. Not all variants of a language change at the same speed: some varieties are more conservative than others. This methodological assumption underlies most research on, for instance, several linguistic phenomena in Romance (see for instance Ledgeway 2012), which can be considered synchronic mirrors of different stages of a diachronic path, from Latin to the contemporary varieties. Likewise, the Germanic dialectological tradition uses the motto *Aus dem räumlichen Nebeneinander ein zeitliches Nacheinander* (roughly, "from geographical proximity (you get) a diachronic sequence"). Starting from similar considerations, Aboh (2015, 2016) argues that grammaticalization is an inaccurate term to describe the diachronic evolution of structural phenomena. A pool of variants is present in a language at any time, and speakers select one or the other depending on many factors, including extra-linguistic ones.

We borrow, here, a micro-diachronic, as well as microvariational method largely employed in Romance linguistics (see Ledgeway 2000, Kayne 2000, D'Alessandro 2021) which helps identify the direction of

language change even for those varieties for which insufficient historical documentation is available, applying it to WIA. Of course, this method is risky and needs to be applied with care, because it can well be that what we find in a variety is not an actual stage of the evolution of the language; however, it is a possible step in the evolution, a possible outcome of language change. In this sense, this method is not very different from the traditional comparative historical method used to reconstruct Indo-European from its descendants according to which if a form is present in two languages that are far enough from each other spatially, it probably belonged to the parent language.

This article is organized as follows: A brief introduction to ergativity is given in Section 2, where the possibility of most morphological ergativity being syntax-internal is discussed. Dependent Case Theory-inspired attempts to delink ergative case from agreement (Marantz 1991, Bobaljik 2008, Baker 2015, Baker and Bobaljik 2017) are also detailed out in this section, along with some counterclaims made by other researchers, drawing mostly on WIA ergativity. Section 3 lays out the physical landscape of WIA languages exhibiting ergativity, and then zooms in on those languages and dialects in the region that are fast losing out on the ergative alignment. Specifically, we focus on languages spoken in Gujarat and Rajasthan, India, that show DOM-triggered agreement and, concurrently, also exhibit either partial or complete ergative-case loss on the subject. This is followed by description of some languages and dialects spoken in Haryana, Jammu and Kashmir, and the union territory of Delhi that show the opposite patterns - an absence of DOM-triggered agreement and a strong tendency to retain the ergative alignment in the perfective. After these empirical facts comes Section 4, where we address some existing arguments for dispelling an alignment shift in WIA languages: most specifically, suggestions that marked objects are not structural accusatives, but underlying datives. We present our case against these suggestions. Section 5 includes the analysis, where we introduce an alternative structure with a EPP strong v\* that we believe is the primary reason for object raising to the vP-edge, with implications for clause structure expansion and structural case-valuation for the subject by higher heads. In this section, we also weigh in some diachronic evidence of ergativity appearing with v heads in structures with an inactive/defective T. When T weakens or vanishes, languages select systems where subjects are case valued within the vP along with other arguments. Section 6 talks about the broad implications of our study for language variation studies. WIA ergative variation is alignment shift: language variation is thus, a mirror to language change. We elaborate on this idea in this section. Section 7 concludes the paper.

# 2. Ergativity

Ergativity refers to the phenomenon, visible in many languages of the world, whereby the Agent of a transitive verb forms a class on its own, which is separate from the class including the object and other kinds of subjects (for instance, unaccusative subjects), usually marked as absolutive. Ergativity differs from the other alignment pattern found in the world's languages, the nominative-accusative one, in singling out the Agent, as opposed to the subject: subjects, independently of their nature, are opposed to objects in nominative-accusative languages. Indeed, ergativity is much more complex than this brief introductory note explains, and it rarely features in all of the language paradigms. It can be restricted to one particular tense or aspect; to one class of nouns or pronouns; to the topicality of the arguments or to their prominence more widely. The Agent can be restricted to the argument of transitive verbs or include the subject of some unergatives.

# 2.1. Morphological and Syntactic Ergativity

When discussing ergativity, scholars usually refer to *morphological* ergativity, which is the kind of ergativity that is marked on the arguments or on the verbs through agreement morphemes, as illustrated in the Basque examples in (1-2). The subject in (1) is uniquely marked with an ergative -k, in contrast to the subject in (2). *Syntactic* ergativity is instead the kind of ergativity whereby some syntactic phenomena only target those arguments belonging to the same class according to the classification above (for instance, relativization which applies to unaccusative subjects and objects, but not to Agents of transitive verbs; see Polinsky 2017). A useful example is Tongan, where the relativization of the

ergative subject requires a resumptive pronoun (RP) in the base-generated position, in contrast to the absolutive subject that does not; compare (3) and (4).

- (1) Basque (Laka 2006: 173)

  emakume-a-k ogi-a jaten dus

  woman-DET-ERG bread-DET eating has

  'The woman eats (the) bread'
- (2) Basque (Laka 2006: 173)

  emakume-a ogi-a jaten ari da

  woman-DET bread-DET eating PROG is

  'The woman is eating (the) bread'
- (3) Tongan (Polinsky 2017:3)

  'a e tamasi'ii ['oku \*(nei)'ene \_\_\_\_i 'a e ta'ahine]

  ABS DET BOY PRS RP tickle ABS DET girl

  'The boy who is tickling the girl'
- (4) Tongan (Polinsky 2017:3)

  'a e ta'ahinei ['oku malimali \_\_\_\_i]

  ABS DET girl PRS smile

  'The girl who is smiling'

The World Atlas of Language Structures (see Comrie 2013a,b, Comrie and Kuteva 2008) reports that syntactic ergativity mandates morphological ergativity; i.e., those languages that show syntactic ergativity also morphologically distinguish transitive agents from other subjects. Nonetheless, there are some morphologically ergative languages with no visible syntactic biases for ergative subjects. Instances of this type are very few: according to Polinsky (2017:10), only 8 of the 32 morphological ergative languages featured in WALS fail the syntactic-ergative diagnostics (or more precisely, the A'-extraction test). By contrast, all syntactic ergative languages are necessarily morphologically ergative; i.e., those that show syntactic ergativity also mark their ergative agents/subjects. With these considerations in mind, it is evident that there is a significant overlap between syntactic ergative languages and morphological ergative languages, with narrow syntactic operations including A'-extraction tracking down agents by their ergative case. This indicates that syntax plays a significant role in most morphologically ergative languages too.

Even for those morphologically ergative languages with no visible syntactic constraints, it is not immediately clear that ergativity lies outside the purview of syntax. Indeed, as Polinsky (2017) in her review of the two types of ergativity demonstrates, morphologically ergative languages sometimes deploy strategies to circumvent syntactic effects. Take Chukchi as an illustration: this language detransitivizes a clause as an antipassive before the subject is A'-extracted (Kozinsky, Nedjalkov and Polinskaja 1988). Anti-passivization generates an absolutive subject, which does not face the same extraction challenges as ergative subjects. Some representative examples are given below. Sentence (5) is the baseline ergative subject construction. (6) is the derived anti-passive sentence with an absolutive

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<sup>&</sup>lt;sup>1</sup> The restriction on the A'-extraction of ergative subjects, especially via relativization, is taken as one of the most reliable diagnostics for syntactic ergativity (see Polinsky 2017 for a detailed discussion). Theoretical explanations for this restriction are primarily of two kinds: either A'-extraction is unavailable for ergative subjects because of 'criterial freezing' of the subjects (Wexler and Culicover 1980) or the restriction is due to intervention caused by absolutive objects (Alridge 2004, 2008; Legate 2006, 2008). In the first approach, the ergative subject moves to a specifier of vP from a VP-internal position; this instance of movement freezes the ergative in its landing site and prevents it from moving further. In the second approach, the absolutive object moves up to vP, which creates a configuration where the absolutive is placed higher than the ergative. Minimality constraints then rule out the movement of the lower DP over the higher one.

subject, and (7) is the sentence where the absolutive subject is A'-extracted. Chukchi is a representative example of a language taking an indirect route to A'-extract its subjects by first transforming the ergative subjects into absolutive subjects.

- (5) Chukchi (Polinsky 2017: 11)

  anpanaachg-e milger kun-nin

  old man-ERG gun-ABS buy-AOR.3SG.SBJ.3SG.OBJ

  'The old man bought a gun'
- (6) Chukchi (Polinsky 2017: 11)

  anpanaachg-an ine-kun-g?e malgr-epa
  old man-ABS ANTIP-buy-AOR.3SG.SBJ gun-ABL
  'The old man bought a gun'
- (7) Chukchi (Polinsky 2017: 11)
  [malgr-epa ine-kune-1?-an] anpanaachg-an
  gun-ABL ANTIP-buy-PTCP-ABS old man-ABS
  'The old man that bought a gun'

There are other strategies as well that are put to use by languages for the same purpose. These include the 'resumptive pronoun strategy' where a pronoun is left behind at the extraction site of the moved ergative subject (see Tongan e.g. (3) above), the 'anti-agreement strategy' with agreement either suppressed or altered when the ergative is moved (e.g. Halkomelem discussed in Wiltschko 2006), and the 'vP nominalization strategy', making the ergative DP a complement to the nominalized structure, rather than an argument/agent of the verb (e.g. Inuit, as discussed by Johns 1992; 2006). These strategies are used to alter either the case on the subject, or the corresponding verbal agreement and sometimes, the structure itself, with all of them helping in creating an impression of a non-ergative subject construction. Narrow syntactic operations such as A'-extraction then apply on these newly created structures with what now seemingly non-ergative subjects.

Given that narrow syntax has schemes to eschew case/theta role-specific restrictions, it is possible that some morphological ergative languages that at least *prima facie* seem to defy syntactic constraints are, in reality, using indirect means to circumvent these restrictions. We therefore need more careful analyses of ergative structures in such languages to ensure that we are indeed dealing with cases of pure morphological ergativity (minus syntactic ergativity). If closer scrutiny reveals that these languages simply camouflage their ergative arguments to avoid syntactic restrictions, then we have very strong evidence that all morphological ergative languages are also syntactic ergative languages, with narrow syntactic operations playing important roles in morphological case assignment.

# 2.2. Agree or DCT for Case and Agreement?

One prominent theoretical approach that dismisses argumental interaction with specific functional heads for morphological ergativity and corresponding verbal agreement is Dependent Case Theory (DCT). Originally proposed by Marantz (1991), (but see also McFadden 2004, Baker & Vinokurova 2010, Baker 2015, Baker & Bobaljik 2017), this approach delinks case-marking from agreement with specific functional heads, and states that the availability of a case for an argumental XP depends on the availability of another XP present in a given domain. Case is dependent on structure and the number of DPs present in that configuration. It follows that case is not necessarily assigned at syntax, though it does depend on the syntactic configuration in which the arguments are found. In particular, DCT undermines the role of the narrow syntactic operation Agree in the assignment of case and agreement.

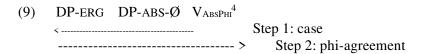
By contrast, mainstream minimalist frameworks execute case and agreement operations in narrow syntax. Here, a functional head F with uninterpretable  $\varphi$ -features probes for a DP goal with interpretable  $\varphi$ -features under Agree (Chomsky 2000), and upon matching, takes the values of the goal's features. Once the  $\varphi$ -features are matched and valued, the goal's structural case - which must be

unvalued to keep it computationally active - is assigned a case value (nominative against agreement with T, accusative against agreement with v etc.). In an Agree-based model for case assignment, case-valuation piggybacks on  $\phi$ -valuation. DCT calls Agree into question, and along with it the role of functional heads (probe-goal relations) in  $\phi$ -agreement and case valuation. Case is instead configurational and contingent on the c-command relations between two DPs, with one receiving a lexical or structural case, and the other receiving a dependent case.

Specifically, ergative, from a DCT viewpoint, is a dependent case assigned to a transitive subject. As shown in (8), the ergative case appears on DP1 when the absolutive case appears on DP2. Since the absolutive on DP2 is a structural case, a second structural case is unavailable for DP1in the same configuration. Instead, DP1 is marked with a dependent, ergative case (see also Nash 1996, Woolford 1997, 2006, 2015, Anand and Nevins 2006, Laka 2006, Legate 2006, 2008, Mahajan 2012, and Baker 2014 for claims that ergative case is inherent and not structural).

The literature mentions several instances of ergative as a dependent case. In the interest of space, we will refer to one particular construction from Burushaski, a language isolate spoken in northern Pakistan (Baker 2017). This ergative language has structures which allow two absolutive DPs. By contrast, there are no instances of two ergative marked DPs appearing in the same structure. Baker explains this difference in DCT terms: because ergative is a dependent case, its assignment is contingent on an asymmetric c-command relation between two DPs. The DP that c-commands the other DP receives a dependent ergative case; thus, there is always going to be only one dependent ergative case in a structure. Absolutive on the other hand, is not a dependent case and hence, may appear on multiple DPs at the same time. Building on these differences between the ergative and the absolutive, Baker concludes that ergative is purely configurational in Burushaski.<sup>2</sup>

Another well-accepted idea, which nicely dovetails with the concept of a syntax-free case-assignment mechanism, is that *morphological case* (m-case) marking happens at PF (cf. Bobalijk 2008), i.e., post-syntactically, after case has been established at narrow syntax in a DCT style. It thus follows from this that every operation that builds on morphological case-marking must necessarily also happen post-syntactically. Agreement is one such operation, according to Bobalijk (2008). Once the cases are assigned and their morphology is inserted on DPs at PF, agreement proceeds in a top-down manner, looking for the highest accessible case-unmarked DP. Since DP1 in (9) for instance, is ergative marked, it fails to trigger agreement. The next highest accessible DP is the unmarked absolutive object: agreement, therefore, ensues with it.<sup>3</sup>



In Bobaljik's framework, agreement is dependent on m-case marking. Since case morphology is only inserted at PF, agreement, which builds on m-case, must also be active at PF. In other words, agreement

<sup>2</sup> A challenge for the DCT account of the Burushaski facts is that it has no direct explanation for how two structural cases are assigned to two DPs in a language, i.e., since case assignment is purely configurational or relational, the second structural case should, in principle, be disallowed in the language, with the concerned DP always receiving a dependent case.

<sup>&</sup>lt;sup>3</sup> Bobaljik introduces parameters for agreement, to tackle cases as Nepali (Indo-Aryan), where the marked ergative subjects trigger person agreement on the verb.

<sup>&</sup>lt;sup>4</sup> ABS<sub>PHI</sub>, ERG<sub>PHI</sub>, OBJ<sub>PHI</sub> and SBJ<sub>PHI</sub> indicate phi-agreement of the verb with the absolutive-marked argument, with the ergative-marked argument, with the object and with the subject respectively.

is parasitic on case, not the other way around. Neither agreement nor morphological case are narrow syntactic phenomena. Obviously, for case to be assigned post-syntactically, it must have been established at syntax and not through Agree (agreement is at PF). The only possible way to assign case is through DCT, which also reflects some universal distribution of case cross-linguistically, as Bobalijk shows. Counterexamples to Bobalijk's m-case and DCT based agreement do exist: as noted in Magier (1983), Patel (2007), Wunderlich (2012) and Deal (2015), some WIA languages have structures where the expected case and agreement patterns are disregarded, resulting in structures that are schematized as in (10):

# (10) DP-NULL DP-DOM VOBJPHI

(10) is, ideally, the schema of a sentence which has a nominative-accusative case system, and an ergative-absolutive agreement system. The subject is unmarked as expected of nominative subjects, but the agreement is with the object as expected of an ergative subject construction. Bobaljik's proposed system for case and its implications for overt agreement cannot explain such hybrid alignments and patterns: for, in his analysis, agreement may ignore the highest ergative *marked* DP (see (9) again), but it cannot ignore the highest accessible *unmarked* nominative subject of (10), and instead opt for agreement with the lower *marked* DP.

To address this problem, Bobaljik (2017) treats the DOM in (10) as a dative that contributes a specific/definite reading to the DP to which it attaches. The actual case on the DP, in this account, is an (unmarked) absolutive, and it is this *unmarked* absolutive DP that agrees with the verb. A natural fallout of claiming a structural absolutive status for the object is that the subject is obligatorily assigned a dependent ergative case, though it is left phonetically unrealized here. Assuming Bobaljik is right, structures such as (10), therefore, cannot be treated as hybrids between the nominative-accusative case and ergative-absolutive alignment. They are, from the perspective of DCT and PF-realization of m-case and agreement, instances of pure ergative-absolutive alignment.

A corollary of treating (10) as an ergative schema is that all meso-level and micro-level differences are to be taken as varied manifestations of an underlying ergative form. Case and agreement variations are superficial and restricted to morphology; and the WIA belt is stable as far as its split-ergative alignment is concerned. The validity of this proposition, though interesting and worth considering, is tied too strictly to the validity of the DOM-as-dative argument. As long as the DOM is a special semantics-yielding marker, and the case on the object is a structural absolutive, the ergative alignment may be assumed to be steady in the grammars of these languages. If that argument fails, so does the argument for a stable ergative system in WIA languages.

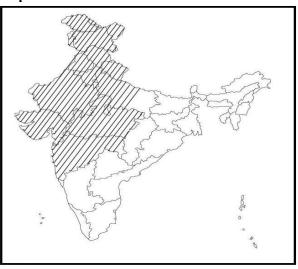
In this paper, we wish to verify if this is indeed the case with WIA ergativity, or if an alignment shift is underway in perfective. To do that, we first consider the immense variety currently available among the related WIA languages, with respect to overt ergative case-marking, DOM-triggered agreement and the overt presence of an auxiliary. As we carefully inspect the data, several interesting correlations emerge; most specifically, the connection between DOM-triggered agreement and ergative loss on the subject. In fact, we notice a directionality in the appearance of these two phenomena, with the ergative loss taking place only in those languages that already have DOM-triggered agreement. More precisely, there are no languages that have lost the ergative marker but don't also have DOM-triggered agreement. This directionality is worth studying for two reasons: first, it is hard to explain 'DOM- $\phi$  agreement to ergative loss' directionality in a framework where agreement piggybacks on case, and second, this indicates an alignment change in the WIA belt.

The DOM-triggered agreement and the absence of the ergative marker, as well as many other features including the emergence of an auxiliary are discussed for different WIA languages in Section 3. We use the variation data detailed out in the next section to claim that the perfective in many WIA languages is changing, and there are currently many grammars with different representations for the perfective, present in the WIA belt.

# 3. Western Indo-Aryan Ergativity Variation

Indo-Aryan languages form a subgroup of languages with ancestral links to the Indo-European family. Spoken primarily in India, Pakistan, Bangladesh, Nepal, and Sri Lanka, the Indo-Aryan family is broadly divided into sub-families including Dardic, Western Indo-Aryan and Eastern Indo-Aryan and multiple other divisions which we avoid delving into at this moment. In this paper, our focus is on Western Indo-Aryan languages spoken in the states of Gujarat, Rajasthan, and Haryana, the Union Territory of Jammu and Kashmir and the Union Territory of Delhi. A map of India marking out the WIA language belt is given in Map 1.

Map 1. WIA belt in India



Ergative patterns in WIA languages have generated a lot of interest among researchers working in different subfields: typology, historical and theoretical linguistics (Bhatt 2007, Davison 2004, Kachru 1987, Kachru, Pandharipande 1978, Mahajan 1990, 1997, 2012, Mohanan 1994, Subbarao 2012 among many others). For most of the data and generalizations below, we liberally draw on these already available resources. We also describe novel data that have been collected through some recent fieldwork by one of the authors. The languages and dialects we survey in this paper are Ahmedabad and Vadodara Gujarati, Surati Gujarati, Kutchi Gujarati, Kutchi, Udaipur and Jaisalmer Marwari, Shekhawati, Mewari, Harauti, Dhundari, Ahirwati, Haryanavi, Kashmiri and Hindi. 5.6

To begin with a well-accepted generalization, WIA ergativity is found in the perfective domain; as illustrated by the Hindi examples in (11a-b). Ergative case appears on agents of transitives and some unergative verbs in the perfective aspect. In all other aspects, the agents are valued (unmarked) nominative, as shown in (12a-b). Unaccusative subjects in the perfective are always valued nominative  $(12c)^7$ .

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<sup>&</sup>lt;sup>5</sup> Unless otherwise stated, the data on selected Rajasthani languages, Harayanvi, Kashmiri and Hindi dialects were collected by one of the authors over several cycles of fieldwork. The data collection was performed through questionnaires for data elicitation. Due to restrictions during the Covid-19 pandemic, data-collection in the last two years was primarily conducted through skype-interviews and email exchanges.

<sup>&</sup>lt;sup>6</sup> In the literature, the marked object is glossed as either accusative or dative. Since the actual identity of the DOM forms a core research question for our paper, we use the uniform DOM for all marked objects in perfective structures. The analysis of DOM is given in Section 5, and thereon, the DOM is marked as accusative.

<sup>&</sup>lt;sup>7</sup> In different traditions, marking of unaccusative subjects differently from unergative subjects in ergative languages is referred to as active alignment (see Comrie 2013a,b). This particular distinction is not relevant for the discussion at issue, so we leave it aside for this article.

### (11) Hindi

- a. laske-ne roții khaayii boy-ERG bread-F.ACC eat-F.PRF 'The boy had eaten bread'
- b. *laske-ne chhiikaa*boy-ERG sneeze-PRF
  'The boy sneezed'

# (12) Hindi

- a. *la.kaa roz roţii khaataa he*boy everyday bread-F.ACC eat-M.SG be-3SG
  'The boy eats bread everyday'
- b. la.kaa roz chhiiktaa he

boy everyday sneeze-M.SG be-3SG.IPFV

'The boy sneezes everyday'

c. *la.kaa* gir gayaa boy fell go-3SG.M.PFV

'The boy had fallen down'

Punjabi and Marathi have a further person split in the perfective: only 3<sup>rd</sup> person agents are marked ergative (13). The imperfective remains nominative-accusative.

# (13) Punjabi (Kaur 2016: 63)

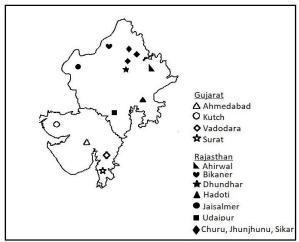
maĩ/tuu/o=ne rottii khaaddii I.1SG.OBL/2SG.OBL/3SG=ERG bread.FSG eat.F.SG.PFV 'I/you/(s)he ate bread'

While aspect and person values are the two key features that define ergativity in this area, the literature also notes more nuanced differences among the WIA languages. For the purposes of this paper, we restrict ourselves to three seemingly different phenomena that underpin ergativity differences in the region: the presence or absence of the ergative marker on the subject, the presence or absence of DOM-triggered verbal agreement, and the presence or absence of subject-agreement on the auxiliary.

# 3.1. Gujarati & Rajasthani Languages: Shifting patterns

Our focus in this section is on languages spoken in the states of Gujarat and Rajasthan (Map 2). This area exhibits a range of case and agreement patterns among its languages and dialects.

Map 2. Areas in Gujarat and Rajasthan undergoing Alignment Shift



# Standard Gujarati

We begin with Standard Gujarati (a constitutionally recognized language), spoken in the cities of Ahmedabad and Vadodara in Gujarat<sup>8</sup>, a split-ergative language that marks its transitive subjects in the perfective with the ergative marker, -e. The marker -e is currently confined to  $1^{st}$  and  $2^{nd}$  person singular pronouns and all  $3^{rd}$  person nominals.  $1^{st}$  person and  $2^{nd}$  person plural pronouns are obligatorily unmarked.

Another distinctive property of A(hmedabad)/V(adodara) Gujarati is that its verbal agreement covaries with the number and gender of the object, irrespectively of whether the object is differentially case marked (DOM) or not. Consider the perfective construction below where the marked object triggers agreement on the verb; see Mistry (1997), Butt & Deo (2017), Wunderlich (2012) for more detailed discussions.

(14) Ahmedabad/Vadodara Gujarati (Mistry 1997; cited in Bhatt 2007: 16)

seeta-eraj-nepajav-yoSeeta.F.SG-ERGRaj.M.SG-DOMread-PST-M.SG

'Seeta harassed Raj'

DOM-triggered agreement differentiates A/V Gujarati from Hindi and other languages, where when both subjects and objects are marked overtly for case in perfective constructions, the verb obligatorily takes default agreement. The A/V Gujarati perfective patterns are represented in (15):

(15) a. 1SG/2SG/3.Subj-ERG Obj-Ø/DOM V-DOM<sub>PHI</sub> b. 1PL/2PL.Subj Obj-Ø/DOM V-DOM<sub>PHI</sub>

(15) clearly deviates from the expected ergative pattern in the WIA belt, especially with its DOM-triggered agreement and an ergative marker that goes missing from 1st and 2nd person plural pronouns. A/V Gujarati clearly have moved away from the typical ergative alignment. The shift is still incipient since the ergative marker hasn't completely dropped off from all DPs, and neither has the typical nominative subject-triggered agreement on the verb-auxiliary complex emerged in this variety.

## Surati Gujarati

Similar changes are visible in other Gujarati dialects. Spoken in the city of Surat, Surati Gujarati has an ergative-marked subject, an optionally DOM-marked object and obligatory object-verb agreement in the perfective (see Joshi 2019, 2020 for an elaborate discussion of the grammatical features of this variety). Overt DOM marking on the object in Surati Gujarati is further subject to animacy and definiteness: proper names must be overtly marked (16a); animate nouns may be overtly marked (16b) and inanimates must not be overtly marked (16c).

(16) Surati Gujarati (Joshi 2020: 6)

a. raj-e ram-\*(ne) joyo Raj.M.SG-ERG Ram.M.SG-\*(DOM) see.PFV.M.SG

'Raj saw Ram'

b. raj-e bakri(ne) joyi

Raj.M.SG-ERG goat.F.SG-(DOM) see.PFV.F.SG

'Raj saw a (the) goat'

c. raj-e gaadi(\*-ne) joyi

Raj.M.SG-ERG car.F.SG-(\*DOM) see.PFV.F.SG

'Raj saw a (\*the) car'

Marked objects are, however, unavailable with nominative subjects, as can be seen below in the imperfective structure with the verb 'eat' in (17). Nominative subject-verb agreement is obligatory and is the only kind of agreement found in the imperfective; object agreement is completely prohibited

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<sup>&</sup>lt;sup>8</sup> These varieties are generally known as Standard Gujarati.

here. Sentence (18) with a marked object agreeing with the same verb 'eat', adds to the evidence for DOM-triggered agreement in perfective structures, along with sentences (16a) and (16b).

(17) Surati Gujarati (Joshi 2019: 4)

ram bakri khaa-t-o
Ram.M.SG.NOM goat.F.SG eat-IMPV.M.SG

'Ram used to eat goat'

(18) Surati Gujarati (Joshi 2022: 105)

vaagh-e bakri-ne khaa-dhi tiger.M.SG-ERG goat.F.SG-DOM eat-PFV.F.SG 'The tiger ate the goat.'

*Prima facie*, Surati Gujarati seems to have an almost stable ergative system in the perfective, marking its subjects consistently with an overt morpheme, and disallowing subject-verb agreement. Of course, DOM-triggered agreement remains an unexpected feature in this variety too.

On closer examination, however, signs of alignment shift in perfective sentences are clearly visible, though the shift seems currently restricted to negative sentences. Each of the three negative elements, *nho*, *nathi* and *nahi*, behaves differently with respect to ergative marking, object agreement and auxiliary selection. While *-nho* allows optional ergative marking and object agreement, *nathi* and *nahi* allow only subject agreement, and no object agreement. Of the three, only *nahi* co-exists with an auxiliary in the same clause. In short, perfective constructions with *nathi* and *nahi* have nominative subjects, with T also showing up in constructions with *nahi*. On the other end, sentences with *-nho* sometimes opt for ergative subjects. We infer from these data that perfective structures with *-nho* are intermediate forms between the nominative and ergative systems: they are the only instances in Surati Gujarati with tell-tale signs of an unstable case alignment system. The rest of the negative sentences have adopted the nominative alignment, with *nahi* coming closest to a typical nominative subject construction with an active T.

We begin illustrating with the negative element *-nho* which is used in perfective constructions with marked ergative subjects in (19a-b). As expected, the ergative subject does not trigger agreement on the neg-v complex, while the marked/unmarked object does. Moreover, the auxiliary is compulsorily dropped from such structures.

(19) Surati Gujarati (Joshi 2019: 7)

a. ram-e bakri-ne nho-ti khaa-dhi Ram.M.SG-ERG goat.F.SG-DOM NEG-F.SG eat-PFV.F.SG

'Ram had not eaten the goat'

b. ram-e gaadi nho-ti chalaavi Ram.M.SG-ERG car.F.SG NEG-F.SG drive.PFV.F.SG

'Ram had not driven a car'

Not all perfective structures, however, involve *-nho* and the accompanying case and agreement properties. In the past perfective structure in (20a), which comes with the negative element *nahi*, the subject is unmarked and triggers agreement on the verb-aux complex. There is no object agreement on negation, or other functional items in the clause. The same is the case with the future perfective structure in (20b). Very importantly, there is no visible restriction on the appearance of the auxiliary here.

(20) Surati Gujarati (adapted from Joshi 2019: 16)

a. shahrukh gaadi nahi laav-yo ha-to
Shahrukh.3.M.SG.NOM car.F.SG NEG bring.PFV.M.SG be-PST.M.SG
'Shahrukh had not brought the car'

b. shahrukh gaadi nahi laav-yo ha-se
Shahrukh.3.M.SG.NOM car.F.SG NEG bring.PFV.M.SG be.FUT.3P
'Shahrukh will not have brought the car'

We therefore have strong evidence of the perfective in Surati Gujarati oscillating between the ergative and the nominative alignment, which indicates that the perfective is in flux. Other instances where alignment-shift is clearly visible involve *-nho* in simple past tense, where the subject is unmarked and it triggers obligatory agreement on the verb (21a). However, the negative element may bear either subject agreement or object agreement. For object agreement to happen, the negation must be placed adjacent to the object; see (21b), where *-nho* fails object agreement when placed at the right periphery of the sentence.

(21) Surati Gujarati (Joshi 2019: 25-26)

a. shahrukh gaadi nho-ti/nho-to laav-yo Shahrukh.M.SG.NOM car.F.SG neg-F.SG/M.SG bring-PFV.M.SG

'Shahrukh did not bring a car'

b. shahrukh gaadi laav-yo nho-to/\*nho-ti
Shahrukh.M.SG.NOM car.F.SG bring.M.SG neg.M.SG/F.SG
'Shahrukh did not bring the car'

The agreement pattern in (21a) is unexpected, since the unmarked subject, on the assumption that it is nominative valued, is expected to control agreement on the negation and the verb. Moreover, the object should not be marked and, even more importantly, should not trigger agreement. With these differences in view, it becomes abundantly clear that the subjects in simple past negative sentences are not nominative-valued, as they violate both conditions of a nominative DP: obligatory subject-verb agreement and obligatory absence of marked object-agreement. Nor are the subjects valued with an ergative case, as is evident from the absence of the marker e. These suggest that (21a) is an instance of a form in transition. Simple past structures with the negation -nho are undergoing ergative attrition; they are still in transit between the nominative and the ergative alignments; they are no longer ergative marked but they allow object agreement to show up optionally when the correct structural contexts are present.

By contrast, simple present and future negative sentences show no such variability. As shown in (22a) and (22b), the subject is unmarked, and triggers obligatory agreement on the verb. Object agreement is missing in these structures. They are indeed true nominative constructions.

(22) Surati Gujarati (Joshi 2019: 12)

a. shahrukh gaadi nathi laav-to
Shahrukh.3.M.SG.NOM car.F.SG NEG.PRES bring-IPFV.M.SG
'Shahrukh is not bringing the car'

b. shahrukh gaadi nahi laav-se Shahrukh.3P.M.SG.NOM car.F.SG NEG bring-3P.FUT 'Shahrukh will not bring the car'

In summary, the perfective and the past in Surati Gujarati are slowly moving towards the nominative alignment, as attested by the case and agreement variability in the negative constructions discussed above. They are as schematized in (23).

(23) a. Subj-ERG Obj-Ø/DOM V-DOM<sub>PHI</sub>
b. Subj Obj-Ø/DOM Neg-SUBJ<sub>PHI</sub>/DOM<sub>PHI</sub> V-SUBJ<sub>PHI</sub>

While Surati Gujarati progresses slowly towards the nominative alignment, other languages spoken in the state present evidence for more wide-spread ergative attrition.

# Kutchi Gujarati

The next language we consider is Kutchi Gujarati, which is spoken in the Kutch district and is in contact with Gujarati varieties. This language has already dropped its ergative marking in the perfective but continues to exhibit simultaneous subject and object verbal agreement, much like what Surati Gujarati does in its simple past paradigm (see Patel-Grosz and Grosz 2014 for extensive discussion).

Differently from A/V Gujarati and Surati Gujarati, Kutchi Gujarati has no ergative marking on the subject in perfective constructions. Instead, a rather muted ergative alignment can be inferred from the agreement pattern: the subject triggers person agreement with the auxiliary and the marked object triggers number and gender agreement with the participle and the verb. Consider the future perfective sentence (24a) alongside the future imperfective sentence (24b).

- (24) Kutchi Gujarati (Patel-Grosz and Grosz 2014: 222-223)
  - a. hu chokra-ne jo-y-a ha-is
    - I boys-DOM see-PFV-PL aux-FUT.1SG
    - 'I will have seen the boys'
  - b. hu chokra-ne jo-th-i ha-is
    - I boys-DOM see-IPFV-F.SG aux-FUT.1SG
    - 'I will see the boys.' (speaker is female)

The difference between perfective and imperfective structures in Kutchi Gujarati is that even though the perfective subject is unmarked (much like the imperfective subject), it does not completely control agreement on the verb. It instead agrees with the auxiliary while the marked object triggers agreement on the verb. The unmarked subject in the imperfective sentence on the other hand, triggers agreement on both the verb as well as the auxiliary. There is no scope for object agreement in the imperfective construction. Kutchi Gujarati has, in short, initiated the process of ergative attrition, but object agreement is still present as a memory of an erstwhile ergative system. Its current perfective form is schematized in (25):

(25) Subj Obj-Ø/DOM V-DOM<sub>PHI</sub> T-SUBJ<sub>PHI</sub>

#### Kutchi

Kutchi, another language spoken in the state and considered to be mutually intelligible to Sindhi according to the 2001 Census of the Govt. of India, Ministry of Home Affairs, has also lost the ergative marker on the subject, but interestingly retains 'ergative remnants' in agreement (Keine, Nissar and Bhatt 2014). Both perfective and imperfective subjects are always unmarked. In the intransitive constructions across all aspects, the subjects trigger agreement on the verb in person, number and gender. However, agreement asymmetries show up with transitive perfective subjects, dependent on the person and number values of the subject.

When the transitive perfective subject is 1st person singular, it fails to trigger agreement on the verbauxiliary complex, which instead agrees with the object. For instance, in (26), the verb and the auxiliary carry the masculine and plural values of the object, not the singular value of the unmarked subject. When the subject is 1st person plural, as illustrated in (27 a-b), the verbal morphology is instead, either controlled by the subject or the object.

(26) Kutchi (Keine, Nissar and Bhatt 2014:13)

a:u hu tsa:pa: vã:ts-ya: ay i /va:

I that newspapers.M read-PFV.M.PL

'I (masc/fem) have/had read those newspapers'

be.PRES.PL / be.PST.M.PL

# (27) Kutchi (Keine, Nissar and Bhatt 2014:15)

```
a. asi/pa:n nibandh/kavita: lakh-ya: va:/ aiyu we.EXCL/we.INCL essay.M/poem.F write-PFV.PL be.PRS.1PL 'We have/had written an essay/poem'
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b. a\tilde{s}_{1}/pa:n kavita: lakh-ai vi: /a:y. we.EXCL/we.INCL poem.F.SG write-PFV.F.SG be.PST.F.SG/be.PRS.SG 'We have/had written a poem'
```

Object agreement in the perfective indicates that Kutchi retains some characteristics of an old ergative system, even after the case marker on the subject has been dropped. The 'ergative-like agreement' feature is strongest when the subject is 1<sup>st</sup> person singular. Ergativity weakens when the subject is plural: object agreement is optionally replaced by subject agreement, as we would expect with nominative subjects.

Ergativity also disappears when the subject is a  $2^{nd}$  and  $3^{rd}$  person pronoun. In such cases, a singular subject triggers number agreement and a plural-subject triggers both person and number agreement as shown below. Object agreement is obligatorily ruled out. These patterns are shown below:

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(28) Kutchi (Keine, Nissar and Bhatt 2014:10-11)
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a.ram/rina ghane tsopriyu vã:ts-e ve
Ram.M /Rina.F many book.F.PL read-PFV.SG be.PST.SG
'Ram/Rina had read many books.'
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b. \tilde{ai} hu tsopri: v\tilde{a}:ts-ya: ayo/va: you.pL that book read-PFV.PL be.PRES.2PL/e.PST.SG 'You (masc/fem) all read that book.'
```

It is thus evident that Kutchi has an established nominative system in the intransitive domain, while its transitive domain is still undergoing change. For the ongoing shift, the language has employed person and number values, with variable results. This process in Kutchi is very similar to what we observed in A/V Gujarati.

Another property of Kutchi that puts it in sync with other languages in the area is its DOM-triggered agreement. In the perfective, objects are optionally marked for case and agreement on the verb. Keine *et al* (2014) do not discuss DOM-triggered phi-agreement in detail but allude to this feature in a footnote in their paper (fn. 7, pp. 14). From the available information we have regarding DOM in Kutchi, it seems that just like other languages in the area, DOM-triggered agreement is another defining character of the perfective in this language too.

To summarize, Kutchi has lost the ergative alignment for all intransitive subjects in the perfective but hasn't yet fully endorsed the features of a nominative system in the transitive domain. 1 st person singular subjects fail to trigger agreement on the verb, and instead makes way for the object to agree. 1 st plural subjects trigger agreement optionally; when they don't, object agreement shows up. A 2 nd and 3 rd person plural subject triggers agreement in person and number, which is where the perfective subject behaves like a nominative subject of an imperfective structure. The data indicate that the plural feature fast-tracks the alignment shift in Kutchi.

Additionally, Kutchi also has person agreement on the auxiliary, which is another reliable indicator of a nominative system. Gender agreement is however missing, which indicates loss of participial agreement in the perfective. All in all, it appears that this language is also moving towards a nominative alignment but is yet to have complete subject-triggered agreement in all its person and number paradigms.

The case and agreement patterns for Kutchi perfective transitives are summarized in (29):

(29)	a. 1sG	Subj	Obj	V-OBJ <sub>PHI</sub>
	b. 1PL	Subj	Obj	V-SBJPHI/OBJPHI
	c. 2sg/3sc	3 Subj	Obj	V-SBJ <sub>PHI</sub> -SG
	d. 2PL/3PI	Subj	Obj	V-SBJPHI-2PL/3PL

Collating the facts discussed so far, we conclude that ergativity among Gujarati varieties is disappearing at different rates. In some varieties such as A/V Gujarati, the attrition is happening in the person and plural domains. For others, such as Surati Gujarati, attrition has already set in the past and future perfective structures with negation and is currently underway in the simple past with specific negative items. Languages such as Kutchi Gujarati and Kutchi have additionally lost the ergative case marker on the perfective subjects. The former however continues to have object-verb agreement simultaneously with subject-auxiliary agreement, whereas the latter has object agreement contingent on the person and number values of the subject, even while it has completely endorsed the nominative-accusative alignment for all intransitives.

# Udaipur Marwari

Moving north, the adjoining state of Rajasthan presents a similar instance of ergative attrition in many of its languages. None of these languages are constitutionally recognized. Ergativity in its languages and varieties shows several types of decay: some languages have lost the ergative marker, others haven't; yet others have simultaneous subject and object agreement on the verb and the auxiliary. DOM-triggered agreement remains a prominent and recurrent feature in this region.

We first consider Marwari, which displays very similar case and agreement patterns as Kutchi Gujarati. Consider structures (30)-(31) from the Marwari spoken in the city of Udaipur. The perfective subject is unmarked. The object is overtly case-marked, and triggers agreement on the verb. The auxiliary carries the values of the subject.

(30) Udaipur Marwari (Magier 1983: 250; present perfect) mhaaai sita-ne dekhii hu
I Sita.f-DOM saw.F be.1SG
'I have seen Sita'

(31) Udaipur Marwari (Magier 1983: 250; present perfect) ap sita-ne dekhi ho you.PL Sita.F-DOM saw.F be.2PL 'You have seen Sita'

Udaipur Marwari resembles Kutchi Gujarati (see Patel-Grosz and Grosz 2014 for a comparative study) in that both have lost the ergative case on the subject but allow optional case-marking on the objects. Both languages also allow multiple agreement, with the verb agreeing with the DOM-object, and the auxiliary agreeing with the subject. Udaipur Marwari is undergoing a movement towards the nominative alignment in the perfective, but the shift is not complete, since object-agreement on the verb continues to exist alongside subject agreement. We show its pattern in (32).

(32) Subj Obj-Ø-DOM V-OBJ<sub>PHI</sub> T-SBJ<sub>PHI</sub>

# Jaisalmer Marwari

Jaisalmer Marwari too has no ergative marker and it also allows object-triggered agreement, as can be seen in the sentence in (33). However, the auxiliary is mandatorily suppressed in this variety; note the difference with Udaipur Marwari which places no such restriction on the appearance of the auxiliary. Since there is no auxiliary in Jaisalmer Marwari, subject agreement is also missing.

#### (33) Jaisalmer Marwari

John table/ya table-(ne) dekhi/dekhiyo (\*hu)
John table/this table-(DOM) see-F.SG/DEF. (\*be)

'John had seen a table/this table'

A schematic representation of the discussed pattern is given in (34) –

# (34) Subj Obj-Ø/DOM V-OBJPHI

#### Shekhawati

A different language Shekhawati, spoken in the Rajasthan districts of Churu, Jhunjhunu and Sikar, exhibits variability in differential subject-marking. In (35), the pronoun 'she' is valued either ergative or (unmarked) nominative; in (36), the subject 'boy' is valued either (unmarked) nominative or oblique and in (37), the pronominal 'Sita' is valued as (unmarked) nominative. The object too, as can be seen from these examples, is either unmarked or marked with an overt case. In all instances, the verb always agrees with the marked/unmarked object. The auxiliary too is missing; see Stroński (2010) for details. The variable ergative case-marking, object/DOM-triggered agreement and the mandatory absence of the T are evidence that the language too has initiated an alignment shift. Schematically, you can see the pattern in (38).

# (35) Shekhawati (Stroński 2010:3)

(a)bəŋ/(b)bo/ba t͡faj pi

s/he.ERG/he/she.NOM tea.F.SG drink.PPP.F.SG

'S/he drank tea'

#### (36) Shekhawati (Stroński 2010:8)

choro/choraa kelaa mol liya

boy.NOM/OBL banana.M.PL price take.PPP.M.PL

'A boy bought bananas'

# (37) Shekhawati (Stroński 2010:17)

sita mhə-ne dgkhja Sita we-DOM see.PPP.M.PL 'Sita saw us'

(38) Subj(ERG) Obj-Ø/DOM V-OBJ<sub>PHI</sub>

# 3.2. Stable ergative systems

While Udaipur/Jaisalmer Marwari and Shekhawati present cases of ergative case attrition at different stages, the literature also reports languages and dialects in the region that exhibit stable ergative systems. The subjects in the perfective have an overt ergative case. The objects are optionally marked, but verbal agreement is allowed only with unmarked objects.

Das (2006) cites one variety of Marwari – illustrated in (39), in which the subject is marked with the ergative -ne and the unmarked object triggers number agreement on the verb.

# (39) Marwari (Das 2006: 141)

Hari-ne malik-ne pasa pe diya servant-ERG master-DOM money.M.PL find give.M.PL

'The servant returned money to the master'

Das's reported Marwari dialect is not an outlier in the region. The same patterns are observed for another language Mewari that is spoken in Udaipur. As reported by Udaar (2016), the subject, as shown in (40),

is marked with an ergative case and the animate object is also DOM-marked. The verb, as expected of ergative alignment systems, shows default agreement.<sup>9</sup>

(40) Udaipur Mewari (Udaar, 2016: 45)

jon-ne meri-ne hilayo

John-ERG Mary-DOM shake.perf

'John shook Mary'

Similarly, Dhundari, spoken in the Dhundhar district of Rajasthan, has a strong presence of ergativity in the perfective (41)-(43). Perfective transitive subjects are marked with an ergative marker; the object can be unmarked or marked, and the verb obligatorily carries default agreement. Some illustrative examples are given below.

(41) Dhundari

kæl meri-næ d̄zon-kæ de padi yesterday Mary-ERG John-DOM hit hit-PERF 'Mary had hit John yesterday'

- (42) *kæl bin-næ dagon-kæ de padi* yesterday they-ERG John-DOM hit hit-PERF 'They had hit John yesterday'
- (43) kæl mænæ dagon-kæ de padi yesterday I-ERG John-DOM hit hit-PERF 'I had hit John yesterday'

Two more languages in the region: Harauti (spoken in Hadoti) and Ahirwati (spoken in Ahirwal, an area at the Rajasthan-Haryana-Delhi border), show similar patterns. The former optionally marks the subject and the object, and the verb shows up with default morphology (44). The latter has obligatory case-marking on the subject and the object, and crucially no object agreement (45).

(44) Harauti (Śarma 1991: 161)

chori-(ne) saap-(ne) maaryo

girl-(ERG) snake.M-(DOM) hit.M.SG

'A girl hit the snake'

(45) Ahirwati (adapted from Stroński 2010: 85) *chori-ne choraa-ne dekhyo* girl-ERG boy-DOM saw.PPP.M.SG

in-Eko boy-bow saw.iii.wi.s

'A girl saw the boy'

In a nutshell, Mewari, Dhundari, Harauti, Ahirwati are going very steady on ergativity, with their perfective represented as in (46).

(46) Subj-erg/obl Obj-Ø/dom Vdefault

As an interim summary, we provide the table below listing the three primary features that we have considered here, with respect to ergativity in the languages and dialects spoken in Gujarat and Rajasthan: the presence or absence of an ergative case marker on the subject, DOM-triggered agreement

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<sup>&</sup>lt;sup>9</sup> While Udaar's reported Mewari from Udaipur exhibits typical ergative behavior, some speakers who were contacted by the authors from the same city prefer to drop the ergative marker and the auxiliary in the perfective; they also have DOM-triggered agreement. These intra-language/idiolectal differences may be due to the intense contact between Mewari and Marwari in Udaipur, with some Mewari speakers picking up the patterns from the latter.

and the presence or absence of an auxiliary. Table 1 gives a bird's eye view to the current status of the case alignment system in the WIA perfective. No doubt, there are currently multiple grammars existing in the region, but despite all the regional and intra-language variation, we can still pick out a clear sense of directionality and causality between the three phenomena. The loss of ergative case-marking and the evolution of an auxiliary are contingent on the presence of DOM-triggered agreement; DOM-triggered agreement clearly precedes the slow disappearance of the ergative case morpheme and the eventual rise of agreement between a nominative subject and the auxiliary.

Table 1. Gujarat/Rajasthan – Case Alignment at a Glance

LANGUAGE	ERGATIVE CASE	DOM	DOM- AGREEMENT	AUXILIARY	SUBJ-AUX AGREEMENT	OTHER CONDITIONS FOR ERG CASE /NOM AGREEMENT
A/V Gujarati	<b>√</b>	<b>√</b>	<b>√</b>	×	×	Person and Number
Surati Gujarati	<b>√</b>	<b>✓</b>	<b>√</b>	×	×	Negation
Kutchi Gujarati	×	<b>✓</b>	<b>✓</b>	<b>√</b>	✓	-
Китсні	×	<b>✓</b>	✓	<b>√</b>	✓	Transitivity, Person and Number
Udaipur Marwari	×	<b>√</b>	<b>√</b>	<b>√</b>	✓	-
JAISALMER MARWARI	×	<b>✓</b>	<b>√</b>	×	×	-
SHEKHAWATI	<b>√</b> /×	<b>✓</b>	✓	×	×	-
MARWARI DIALECT (DAS)	<b>√</b>	×	×	×	×	-
Udaipur Mewari	<b>√</b>	<b>√</b>	×	X	×	-
DHUNDARI	<b>√</b>	<b>√</b>	×	×	×	-
AHIRWATI	<b>√</b>	<b>√</b>	×	×	×	-
HARAUTI	<b>✓</b>	<b>√</b>	×	×	×	-

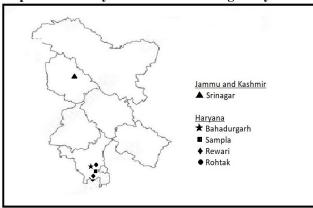
# 4. Ergative Retention in Haryanavi & Kashmiri

As we move north in the WIA belt, inching closer to the capital city of New Delhi, ergative loss is less evident. One region to consider in this regard is the state of Haryana that shares its border with both Rajasthan and New Delhi. Unlike Rajasthani (Marwari) and Gujarati, Haryanavi is not officially recognized in the Constitution of India – the language is mostly associated with a rural population, with Standard Hindi used for all official purposes including education.

Haryanavi is an interesting language to consider, because much like the non-standard Rajasthani languages, it exhibits an ergative alignment in the perfective. Differently from them, however, it even resists object marking/DOM in the perfective. In this way, the necessary trigger for alignment shift, namely DOM-triggered agreement, also never shows up in this language. As a consequence, Haryanavi ergativity faces no imminent and immediate threat of attrition. As evidence, we present the data

collected from 4 districts of Haryana, Bahadurgarh, Sampla, Rohtak and Rewari: none of them report any variation about ergativity.

Map 3: Some Haryana Districts with Ergativity



#### Haryanavi

Consider some examples below showing the contrast between perfective and imperfective patterns.

# (47) Haryanavi

- a. John-ne Mary(\*ke/\*ne) dekhii (thii)
  John-ERG Mary(\*DOM) see-F.SG (be.F.SG)
  'John had seen Mary'
- b. John Mary-ne dekhegaa
  John Mary-DOM see-FUT.M.SG
  'John will see Mary'

In the perfective in (47a), the subject bears an ergative case morpheme, while the unmarked object remains obligatorily unmarked; DOM (marked by *kelne*) is prohibited in the perfective. The unmarked object triggers agreement with the verb and the auxiliary. In the imperfective in (47b), on the other hand, the subject is unmarked for case and it also triggers agreement on the verb. The object is marked with an overt case morpheme, and it fails to trigger agreement on the verb.

The absence of the DOM from the perfective is rather puzzling, since DOM is not completely absent in Haryanavi, as one can glean from the imperfective structure in (47b). It is only in the perfective structure that DOM goes missing in this language. These patterns are very robust across all 4 varieties of Haryanavi covered in the survey. All have ergative subjects for perfective transitives, with agreement triggered by unmarked objects; and most importantly, no DOM.

Below we sketch a representation of the perfective in Haryanavi varieties -

# Kashmiri

Another language that resists ergative attrition is Kashmiri (Dardic sub-family), spoken in the union territory of Jammu and Kashmir. Importantly, this area does not border with the state of Haryana and New Delhi (see Map 4), though it shows the same resistance to changing alignment.

Kashmiri is reported to possess a very stable ergative system not just in the perfective, but also in the simple past (Syeed 1985, Wali and Koul 1997, Bhatt 2007). Relevant illustrations are given below for the present perfect (49), past perfect (50) and simple past (50).

(49) Kashmiri (Wali and Koul 1997: 232)

me/tEm'chubatIkh'o:mutI.ERG/he.ERGbe.3SG.Mfood.M.SGeat.PRF.M.SG

'I have/he has eaten the food'

(50) *me/tEm' o:s akhba:r por-mut* I.ERG/he.ERG be.PST.3SG.M newspaper.M.SG read-PRF.M.SG 'I/he had read the newspaper'

is no new round the trap up of

(51) Kashmiri (Wali and Koul 1997: 153)

mohan-an chEl' palav

mohan-ERG wash.PST.M.PL clothes.M.PL

'Mohan washed the clothes'

The ergative subjects in all three sentences fail to trigger agreement; verbal agreement is instead controlled by the unmarked object. Importantly, DOM is mandatorily ruled out in the perfective, a pattern very similar to Haryanavi. The same prohibition also extends to the pronominal objects in (52)-(53).

(52) tem chhes bI/\*me vichhmets
She.ERG has I-NOM/\*I-DOM seen
'She has seen me'

(53) tsi/\*tse chakh-an (tem) vachmats
You.NOM.F.SG/\*you-DOM PST.2SG.F-CL.E<sup>10</sup> he(ERG) see-PERF
'He saw you'

Imperfectives do not impose restrictions on DOM, as the following sentences in (54a-b) show.

(54) Kashmiri (adapted from Syeed 1985: 17)

a. tsI vuc'h-akh me/\*bI
you see.FUT-2SG me.DOM/\*I.NOM
'You will see me'

b. su vuch-i tse/\*tsI

he see.FUT.3SG you.DOM/\*you.NOM

'He will see you'

In sum, Kashmiri perfective structures prohibit a marked object from appearing alongside an ergative subject. The typical unmarked object triggered agreement is however available for Kashmiri perfective structures. The Kashmiri pattern is shown in (55):

(55) Subj-ERG Obj-(\*DOM) V-OBJ<sub>PHI</sub>

Together, the Haryanavi and Kashmiri facts substantiate what we already know from the Gujarati and Rajasthani data, that there is a strong connection between DOM-triggered agreement and the robustness of the ergative alignment in the WIA languages. Haryanavi and Kashmiri data further attest that when DOM itself is absent, a conducive environment is created to sustain the ergative alignment.

Recall that the phenomenon of DOM-triggered agreement setting off a case alignment shift is a formidable challenge for the DCT and the PF-assignment of morphological case where agreement piggybacks on case. Both sets of languages discussed here confirm that case-marking and case-change are contingent on agreement marking. The observed directionality and the imminent causality between

<sup>10</sup> E is an ergative 'clitic' on the verb, which appears when the ergative subject is dropped.

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the two phenomena cannot be straightforwardly accounted for in DCT terms. Further weakening the DCT are the data from many WIA languages that point to an accusative underlying DOM, thus contesting Bobaljik's claim that the DOM is just a dative encoding a special semantics, and that WIA sentences with unmarked subjects in the perfective are underlying ergative-absolutive structures.

Some relevant evidence is given below, in Section 5.

# 5. DOM is Accusative, not Dative

As defined in the literature, DOM consists of a marker on a direct object which is characterized by definiteness or animacy<sup>11</sup>. The fact that DOM is usually doubled by case-marked clitics and only appears on direct objects suggests that DOM is a case marker (Givón 1984, Comrie 1989, Lazard 1984, Bossong 1985, 1991, Aissen 2003, de Swart & de Hoop 2007, López 2012). For illustration, the Standard Spanish sentences are given below: in (56a), the animate object must appear with the prepositional marker *a*, in contrast to (56b), where the inanimate object appears without the morpheme.

```
(56) Spanish (Ormazabal and Romero 2013: 222)
      a. He
                  encontrado *(a)
                                                      niña
        have.1SG found
                              *(DOM) DEF DET.F.SG
                                                      girl.F.SG
        'I have found the girl'
      b. He
                       encontrado
                                      (*a)
                                                                     libro
         have.1SG
                       found
                                      (*DOM)
                                                      DEF DET.M.SG
                                                                     book.M.SG
         'I have found the book'
```

DOM often exhibits special semantic effects, such as the animacy effect observed in the Spanish sentence above. DOM may also encode specificity readings, as one witnesses in Hindi; see (57), where the -ko morpheme marks specificity on both animate and inanimate objects. Hindi pronouns, as expected of definite DPs, are always marked with DOM, with either of the two allomorphs: -ko and -e (58).

- (57) sita-ne laki-ko/kitab-ko dekha Sita-ERG girl-DOM/book-DOM see-DEF 'Sita saw the girl/book'
- (58) sita-ne usko/use dekha Sita-ERG her-DOM see-DEF 'Sita saw her'

The same forms are also used for dative experiential subjects and recipients in Hindi, as we discuss below (also see Bossong 1985 for evidence of its cross-linguistic robustness). In Hindi (59), for instance, the presence of the -ko on the subject assigns it an 'experiencer' reading - with the literal meaning: 'the moon showed itself to the girl' (and not, 'the girl -deliberately- looked at the moon'). The morpheme -kole also marks subjects in (60), as well as the recipient IO in (61). One common feature of marked DPs in these sentences is that they consistently fail to trigger verbal agreement.

(59) la.kiko/usko/use chaand dikhaa girl-DAT/she-DAT/she-DAT moon see-DEF 'The girl/She saw the moon'

\_

<sup>&</sup>lt;sup>11</sup> In this paper, we limit ourselves to "low DOM", i.e. the DOM that takes place in the vP; other instances of DOM, such as topicality-driven DOM, like those discussed in Iemmolo (2010) or López(2012) are not going to be considered here, as they are not strictly relevant to alignment.

- (60) la.kiko / usko/use pyaas aayii girl-DAT/she-DAT / she-DAT thirst came 'The girl felt thirsty'
- (61) johnne laukiko / use / usko ek kalam di John girl-DAT/she-DAT one pen give 'John gave a pen to the girl'

In the same way as in Hindi, other WIALs, including those spoken in Gujarat and Rajasthan, mark their objects, experiential subjects and IOs with the same morpheme. In short, the dative case and the accusative case for definite/animate objects are homophonous in many languages in this area. As mentioned in our introductory notes on DOM in section 2, Bobaljik uses the accusative/dative homophony to argue that the DOM is a dative. This line of reasoning constitutes the ground on which most of the DCT-inspired analysis of WIA perfective structures rests: the unmarked subject is underlyingly ergative while the marked object is underlyingly absolutive, and DOM is a special definiteness/animacy marker stacked over the unmarked case. From this, it follows that the WIA structures considered so far are not deviations from the expected ergative patterns; most importantly, they do not indicate any change in the case-alignment system of this language family.

However, there are reasons to believe that the DOM-as-dative analysis is incorrect. As we examine more data from WIALs below, it becomes evident that DOM and the dative have distinct properties, and therefore, they cannot be treated on par with each other. Instead, DOM on the object in the perfective is an accusative case assigned by v.

We first consider Standard (A/V) Gujarati, which also has the said DOM/dative overlap, as illustrated in (62) and (63). The language also has a separate dative morpheme -re, which indicates that the DOM is at least not completely coincident with the dative (64).

- (62) Gujarati (Mistry 1997: 426)

  kishor-e raaj-ne pajav-y-o

  Kishor-ERG Raj-ACC harass-PERF-M.SG

  'Kishor harassed Raj'
- (63) Gujarati (Mistry 2000: 339)

  raaj-ne potaane kaam gamyun

  Raj-DAT self-DAT work liked
  'Raj himself liked the work'
- (64) Gujarati (Lambert 1971)

  ma-re jAvuu joiee

  I-DAT go needed
  'I want/need to go'

Even in those cases where the homophonous dative -ne is used, it has distinct properties from the DOM-marked object. Compare the following sentences:

(65) Gujarati (Mistry 2004: 10-11)

a. shilaa-thi raaj-ne (naa) jagaaD-aa-y-o
Sheela.F.SG-INSTR Raj.M.SG-DOM (not) wake-ABIL-PFV-M.SG
'Sheela could (not) wake Raj'

b. shilaa-thi raaj-ne (naa) maL-aa-y-un
Sheela.F.SG-INSTR Raj.M.SG-DAT (not) meet-ABIL-PFV-DFLT
'Sheela could (not) meet Raj'

The DP *Raj* is marked with *-ne* in what are seemingly very similar sentences in (65a-b), differing only on account of the verbs they take, namely 'wake' and 'meet'. There is, however, a very important difference between the two: in (65a), the verb carries the gender and number values of the *-ne* marked *Raj*, whereas in (65b), the verb carries default agreement morphology. A possible explanation for the agreement difference is that it is tied to an argument/adjunct difference. In the former, *Raj* is a DO/argument to the verb 'wake', while in the latter, *Raj* is an IO/adjunct to the verb 'meet'. The argument receives an accusative case from v, and consequently, triggers agreement with it; which the adjunct obviously can't. Thus, even while they are both marked with the same morpheme *-ne*, they have distinct structural representations, which also show up in their varied capacities to control verbal agreement.

The DO/IO or the ACC/DAT distinction is connected to the valency of the respective verb; while 'wake' is a transitive verb which takes *Raj* as an adjunct. The intransitive nature of 'meet' is not unique to Gujarati. One finds a resemblance between the Gujarati sentence in (65b) and the English sentence 'Sheela could (not) meet with Raj', where the dative DP is essentially the object of the *with-PP*. With the assumption that the Gujarati 'meet' is also an intransitive which takes an adjunct PP, *Raj* is marked dative by the P, and not accusative by the v. It is also expected that the PP-internal DP will not trigger agreement with the verb, a prediction that is also borne out by facts. By contrast, the accusative marked (DOM) object in (65a) will trigger verbal agreement.

Joshi (2020) presents corroborating evidence from Surati Gujarati, which also uses the same marker -ne for dative and DOM. Despite being homophonous, DPs marked with it are different on two counts: obligatory/optional presence of ne and presence/absence of verbal agreement. In (66), for example, the ne marker on the object is optional; when present, it triggers verbal agreement. In (67), on the other hand, the IO is obligatorily marked with a dative morpheme, and there is, crucially, no verbal agreement with the DP.

```
(66) Surati Gujarati (Joshi 2020: 11)

raj-e bakri(-ne) joyi

Raj-ERG goat.F.SG-(DOM) see.PFV.F.SG

'Raj saw a/the goat'
```

(67) Surati Gujarati (Joshi 2020: 24)

ram-e raj-ne bakri aapi
Ram.M.SG-ERG Raj.DAT goat.F.SG give.PFV.F.SG

'Ram gave Raj a goat'

There is also evidence that suggests that *ne*-marked objects are placed preferably higher in the structure. In (68), the DOM-marked object is positioned before the adverb 'frequently'. It is obligatorily interpreted as specific. Compare (68) with the sentence in (69) where the IO 'horse' is preferably placed lower vis-à-vis the same adverbial and interpreted as both specific and non-specific.

```
(68) Surati Gujarati
     priyanka-e
                              ghoda-ne
                                                     varamvaar (?? ghoda-ne )
      Priyanka-F.SG-ERG
                              horse-M.SG-ACC
                                                     frequently horse-M.SG-ACC
      vhel-lo
                dawdaivo
      early-M.SG run.CAUS.PFV.M.SG
      'Priyanka frequently made the horse run early'
(69) Surati Gujarati
      priyanka-e
                      (??ghoda-ne) varamvaar
                                                     ghoda-ne
                                                                    chana
                      horse.M.SG.DAT frequently
      Priyanka-ERG
                                                     horse.M.SG.DAT chickpeas.PL
      vhel-a
               aapyaa
      early-PL give.PFV.PL
      'Priyanka frequently gave chickpeas to a/the horse early'
```

Also, as expected, while the object triggers agreement (masculine in 68) the IO fails to control agreement (instead, we see DO-triggered plural agreement in 69). In sum, Surati Gujarati offers strong evidence for separate *ne*-marked accusative and *ne*-marked dative morphemes; here too, only the former controls agreement and moves to a structurally higher position.

Data from Rajasthani languages confirm the same divide between the DOM-object and the dative. Speakers of Marwari varieties mark their objects optionally, while dative marking is mandatory. We present some data from Marwari spoken in the city of Bikaner, but the same facts hold for other varieties of Marwari with ergative attrition, as well. In (70), the definite object is optionally marked with -ne, and triggers agreement with the verb (and the auxiliary, when present). Differently from that, the dative IO in (71) always carries the -ne marker, and never triggers verbal agreement.

#### (70) Bikaner Marwari

```
john ek gaai / bi gaai-ne kaal dekhi (hii)
John one cow.F / that cow.F.DOM yesterday see.F (be.F)
'John saw one cow/that cow yesterday'
```

#### (71) Bikaner Marwari

```
muhn kaal ek gaai/ek kitaab john-ne di
I yesterday one cow.F/one book.F John.M-DAT give.F
'I gave a cow/a book to John yesterday'
```

The -ne marker also shows up on experiential subjects, and here too, agreement is always with the object.

## (72) BikanerMarwari

```
mane gaano sunno hain
I-DAT songs listen be-pl
'I want to listen to songs'
```

Apart from these tell-tale language-specific signs that accusative and dative cases are underlyingly different, a cursory look at the WIA case morphemes shows the DOM on the object (especially in the perfective) is unevenly spread in the area, even while the dative marker is robustly present across the region. To recollect some instances, Marwari exhibits DOM object in the perfective, but Haryanavi completely prohibits it on the perfective object. Harauti has DOM on the object, but only when the subject does not have the same marker. Some varieties of Marwari reported by Das (2006) have both subject and object sporting the same marker in the same structure. The dative is however consistently marked on experiential subjects and IOs in all these languages. Were the DOM simply the dative case morpheme used on an object DP, we would have incorrectly predicted an equally strong and consistent presence of DOM in this language belt.

Taking these data into consideration, we conclude that the WIA DOM is not a dative case; rather it is an accusative case-marker. The similarity between DOM and dative is only morphological and does not reflect a common structural underpinning. DOM-triggered phi has ramifications for case-alignment in the languages that have it. We give a possible syntactic explanation for this connection below.

# 6. Analysis: F/T as a case-assigner

While it is impossible to chart out an exact path from the ergative alignment to the nominative-accusative alignment, we have been able to note some patterns that currently coexist among WIA languages of Gujarat and Rajasthan. Some, such as certain Marwari dialects, Ahirwati, and others, still possess the typical characteristics of an ergative alignment in the perfective; these are cases that we do not discuss in any detail here. Many others have atypical patterns, which are repeated below:

(73)

- a. Pattern 1 (A/V Gujarati)
   DOM-φ agreement sets in, Aux still missing, ERG marker still present
- b. Pattern 2 (Shekhawati)
  DOM-φ present, Aux still missing, ERG marker dropped optionally
- c. Pattern 3 (Surati Gujarati)
   DOM-φ present, Aux optionally appears via NEG/host, ERG marker is dropped optionally
- d. Pattern 4 (Kutchi Gujarati, Kutchi <sup>12</sup>, Udaipur Marwari)
  DOM-φ present, Aux shows up independently, ERG marker dropped, subject-Aux agreement

A common factor underlying all four atypical patterns identified here is DOM-triggered agreement. Note that the WIA ergative pattern is typically identified by verbal agreement triggered by an unmarked object; i.e., object agreement is an important signature of WIA ergative alignment. It is, therefore, evident that object agreement is not the cause for ergative attrition; there must be something else in the E-language that makes speakers take notice and acknowledge the ongoing shift. We believe that the most important cue is the overt DOM on the object and the accompanying  $\phi$ -agreement, which comes about when the object has moved to the edge of the vP. This movement to the edge also attributes a special semantics of specificity/definiteness to the raised object (see Torrego 1998, López 2012, Irimia & Pineda 2021, a.o).

The overt accusative case/DOM marker, and the associated  $\phi$ -agreement and special semantics serve as strong cues to the language learners that a structural change is under progress. Once it appears in the grammar of a single or a handful of speakers, its spread and ultimate cooption in the grammar of a community needs solid morphological cues for other language learners to pick it up. We believe that the DOM-triggered  $\phi$ -agreement is an important signal, because it differentiates this structure from a typical ergative structure with unmarked-object triggered agreement. Speakers view structures with DOM-triggered agreement differently from ergative structures – these structures can, thus, be safely assumed to herald alignment change in the perfective domain.  $^{13}$ 

The functional head that is responsible for this change is a  $v^*$  head carrying an extra EPP feature, which is largely responsible for object raising to the edge of  $v^*P$ . Consider (74), in contrast to (75) with a vP where the extra EPP feature is absent.

- (74) [v\*P Subj [Obj [VP Obj-t V] v\*]]
- $(75) \quad [vP\ Subj\ [VP\ Obj\ V]\ v]$

•

(74) is different from (75) in that in the latter, the object remains in situ in a VP-internal position. The v head values an absolutive case (see Legate 2014 for cross-linguistic evidence for absolutive as either accusative or as nominative) on the object in a long-distance fashion. The subject, on the other hand,

<sup>&</sup>lt;sup>12</sup> Kutchi alignment shift takes additional support from person and number features. A/V Gujarati displays similar dependence on person and number - as already detailed out in section 3.

<sup>&</sup>lt;sup>13</sup> Polinsky (2018) shows that heritage language speakers reuse DOM-objects to mark the accusative in DOC. This proves that DOM is a salient feature even for "recessive" grammars, and that the speakers do get this cue very easily. She also notes that heritage speakers master the dative perfectly, while DOM is only partially mastered – this latter also confirms our claim that DOM and dative are really two separate things.

receives an inherent ergative case in the specifier of vP (see Davison 1999, 2004, Mahajan 2012, Chandra 2007 among many others). In (76), the v is replaced by a v\* head with an extra EPP feature. The EPP feature forces the object to move to the extra specifier of v\*P. Object-raising allows v\* to value the object with a structural accusative, which is morphologically realized in some of the languages we have considered here, as DOM-triggered verbal agreement. The new structural arrangement sets off other changes, including changes in case-valuation for the subject, which now seeks out case-valuing heads outside the v\*P domain. Consider the structure below:

# (76) [TP [FP Subj [v\*P Subj-t [Obj [VP Obj-t V] v\*]] F] T]

In (76), the head  $v^*$ , being  $\phi$ -complete and bearing a strong EPP feature, is selected by a  $\phi$ -complete head. We assume F to be a functional head that checks structural oblique case on the subject, an option that that grammar opens up for the subject, once the object raises to  $v^*P$ . A further step is taken when F is selected by a  $\phi$ -complete T, which is when nominative case-valuation and concomitant subject-T agreement takes over. The functions of F are slowly merged completely with T, so that T remains the only licensing head for the external argument. At that point, we are in a nominative-assigning environment. T and F can coexist, obviously, at different stages of the alignment shift. Languages have the option of choosing clauses of varying lengths, from F-v\*P, to T-v\*P, and this variation is mapped onto different case and agreement patterns and intermediate alignments in the WIA perfective.

One common contribution of all head-selections beyond the v\*P is that they extend the domain for subject case-valuation, which, in turn, facilitates the DP to agree with a higher head and receive a structural case-value. Ergative case assignment remains an option, but only for those intermediate phases when the language learner is still making the transition from a vP-internal ergative case to a structural case for its subject.

With these basic clause structural templates in place, we now take up each of the four patterns that are listed above in (73) and examine them closely to reveal the representations that underlie the current state of case system of the perfective. The first pattern we discuss is found in the subset containing A/V Gujarati. The pattern is repeated below in (77) and illustrated with an A/V Gujarati example in (78).

- (77) Pattern 1 (A/V Gujarati)
  DOM-phi agreement sets in, Aux still missing, erg marker still present
- (78) seeta-e raj-ne pajav-yo Seeta.F.SG-ERG Raj.M.SG-DOM read-PST-M.SG 'Seeta harassed Raj'

As discussed before, A/V Gujarati has already initiated DOM-triggered agreement. In our proposed framework, this implies that the object is in spec,  $v^*P$ . At this point, the language has the option to keep assigning an inherent ergative case to the subject or case-value it against a higher head. Sentence (78) is evidence that the ergative case from  $v^*$  is still available for the subject; the  $3^{rd}$  person singular subject is marked with the ergative case marker -e. But this is not the entire story, since while  $1^{st}$  and  $2^{nd}$  singular and  $3^{rd}$  subjects continue to receive ergative case from the verbal head,  $1^{st}$  person and  $2^{nd}$  person plural subjects are obligatorily unmarked (see 79a-b).

(79) a. 1SG/2SG/3.Subj-ERG Obj-Ø/DOM V-DOM<sub>PHI</sub> b. 1PL/2PL.Subj Obj-Ø/DOM V-DOM<sub>PHI</sub>

We infer from these patterns that case-valuation of 1<sup>st</sup> and 2<sup>nd</sup> person plural subjects happen at the next higher head F; they cannot access the ergative case from v\*, and instead move to the next highest FP domain, receiving an oblique case from F.<sup>14</sup> A/V Gujarati certainly does not seem to be using T as a

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<sup>&</sup>lt;sup>14</sup> Crosslinguistically, 1st/2nd person pronominals have been argued to be licensed by a higher head that 3rd person pronominals (see Bejar and Rezac 2003 and Poletto 2000 among many others for more).

case-assigner for the subjects at this point, since the perfective subject still fails to trigger personagreement with the auxiliary. A/V Gujarati and other languages exhibiting this pattern are, therefore, at a stage where the subject case-marking oscillates between the ergative within v\*P and an oblique at FP, as shown in (80). Both options for the subject (underlined below) are currently in use in these languages – with singular subjects remaining in situ by default, and 1<sup>st</sup> and 2<sup>nd</sup> person plurals moving out of the v\*P domain obligatorily.<sup>15</sup>

(80) [FP 1/2plSubj-OBL [v\*P 1sg/2sg/3sg/pl Subj-ERG [Obj-DOM [VP Obj-t V] v\* DOM<sub>PHI</sub>] F]

A different pattern is found in Shekhawati, illustrated in (81). Relevant illustrations are repeated in (82).

(81) Pattern 2 (Shekhawati)

DOM-phi present, Aux still missing, erg marker dropped optionally

```
(82) a. sita mhə-ne dgkhja
Sita we-DOM see.PPP.M.PL
'Sita saw us'
b. (a)bəŋ/(b)bo/ba t͡ʃaj pi
s/he.ERG/he/she.NOM tea.F.SG drink.PPP.F.SG
'S/he drank tea'
```

In (82a), the ergative marker is missing from the subject, which indicates that the DP moves outside the  $v^*P$  domain. Sentence (82b), however, shows that the language is still in flux. Here, the subject either opts for an ergative or a structural case - the latter is glossed as nominative by Stroński (2010). The language also has constructions where the subject can opt for either nominative or oblique – this may be taken to indicate the presence of both F and T (83) in the current stage of the language.

```
(83) choro/choraa kelaa mol liya
boy.NOM/OBL banana.M.PL price take.PPP.M.PL
'A boy bought bananas'
```

Taking all these possibilities into consideration, we conclude that with Shekhawati initiating clause structure expansion with DOM-triggered agreement, its speakers are currently trying out all three possibilities – valuing the subject as ergative in spec, v\*P, or as oblique in spec, FP or as nominative in spec, TP (see (84).

(84) [TP Subj-NOM [FP Subj-OBL [v\*P Subj-ERG [Obj-DOM [VP Obj-t V] v\* DOMPHI]] F] (T)]

Alternatively, it may be the case that Shekhawati currently allows two options: v\* and F. The language is yet to get its phi-complete T in the perfective, supported by an absence of an overt auxiliary and obligatory subject-aux agreement. If this alternative is right, then there is no T and the unmarked subjects that Stroński glosses as 'nominative' are instead other forms of oblique assigned against F.

Other languages such as Jaisalmer Marwari are at a slightly different stage here, having opted out of the ergative system altogether. Recall this language also has no evidence of a T, though the subject is unmarked. Jaisalmer Marwari thus represents a sub-class of languages that currently licenses its perfective subjects at F and no longer uses v\* as an inherent ergative case-assigner.

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<sup>&</sup>lt;sup>15</sup> Chandra and Kaur (2016) have a similar proposal for the person-split ergativity in Punjabi (another Westem Indo-Aryan language). 1<sup>st</sup> and 2<sup>nd</sup> person subjects in Punjabi perfectives are obligatorily unmarked but they do not trigger verbal agreement. To explain Punjabi differential subject marking, Chandra and Kaur posit an intermediate F projection where all 1<sup>st</sup> and 2<sup>nd</sup> person subjects raise for person-licensing, and get a structural case value as a consequence.

The third type of pattern is found in the set including Surati Gujarati. These languages have structures that allow either ergative or nominative on the subject (85).

(85) Pattern 3 (Surati Gujarati)

DOM-phi present, Aux optionally appears via neg/host, erg marker is dropped optionally

In Surati Gujarati, the flux in case-alignment is clearly evident in perfective constructions with the negative element *nho*. The sentence in (86), for instance, has an ergative subject which fails to trigger agreement on the neg-verb complex, whereas in the sentence in (87), the subject is unmarked and triggers agreement on the neg-verb complex. We take these patterns to result from grammar-internal mechanisms in Surati Gujarati. The language allows its subjects to either get ergative from v\*P (86) or a structural case from a higher head (87).

- (86) ram-e bakri-ne nho-ti khaa-dhi
  Ram.M.SG-ERG goat.F.SG-DOM NEG-F.SG eat-PFV.F.SG
  'Ram had not eaten the goat'
- (87) shahrukh gaadi nho-ti/nho-to laav-yo Shahrukh.M.SG.NOM car.F.SG neg-F.SG/M.SG bring-PFV.M.SG 'Shahrukh did not bring a car'

Joshi (2019) glosses the unmarked subject in (87) as nominative, which points to the presence of T in *nho*-perfective structures. However, recall these structures never allow overt auxiliaries, in contrast to the *nahi* perfective sentences (see (88)), which clearly point to a T head. In the latter, not only do auxiliaries show up overtly; they also agree with the unmarked subjects. We infer from the available data that with *nho* sentences, Surati Gujarati has the representation in (88). The language allows the subjects in these structures to either get inherent ergative from the v\*P or an oblique from F. T is however missing, and consequently, a nominative case-value for the subject goes missing.

- (88) shahrukh gaadi nahi laav-yo ha-to
  Shahrukh.3.M.SG.NOM car.F.SG NEG bring.PFV.M.SG be-PST.M.SG
  'Shahrukh had not brought the car'
- (89) [FP Subj-OBL [v\*P Subj-ERG [Obj-DOM [VP Obj-t V] v\* DOMPHI]] F]

The final pattern discussed here is displayed in languages such as Kutchi Gujarati; see (90). (91) provides a representative example in the future perfective, where the unmarked subject and the marked object trigger agreement on the verb and the auxiliary respectively.

- (90) Pattern 4 (e.g., Kutchi Gujarati)

  DOM-phi present, Aux shows up independently, erg marker dropped, subject-aux agreement
- (91) hu chokra-ne jo-y-a ha-is
  I boys-DOM see-PFV-PL aux-FUT.1SG
  'I will have seen the boys'

The data show that these languages have moved to a representation with a phi-complete T case-valuing the subject. The raised object continues to agree with the  $v^*$ . (92) captures the multiple agreement relations in a single frame.

(92) [TP  $\underline{\text{Subj-NOM}}$  [v\*P  $\underline{\text{Subj-t}}$  [Obj-DOM [VP  $\underline{\text{Obj-t}}$  V] v\*  $\underline{\text{DOM}}$  PHI]] T]

In effect, what these multiple representations currently co-existing in the WIAL belt suggest is that accusative case valuation at v\* has implications for clausal structure. As the v\*P-edge starts hosting raised objects that are case-valued accusative by v\*, the clausal spine expands to include higher

functional heads that are potential case-valuers of the subject. The functional F serves mostly in the intermediate stages, when the language has initiated DOM-triggered agreement with a raised object and is undecided on how to case-value its subject - at v\*P or higher up the clausal spine. Languages may eventually select a phi-complete T, which then values the subject as nominative, and sets off subject-controlled agreement.

Clause structure modification in WIA perfective is thus a primary factor behind the observed case-alignment shift – in this particular case, from an ergative system to a nominative system, but with multiple intermediate stages also including intermediate heads such as F. Similar observations regarding clause-structure dependent alignment differences have been made by Coon and Preminger (2012). In particular, Coon and Preminger, building on Laka (1996, 2006), present clausal bifurcation as the reason behind case-alignment splits found in Basque. More specifically. Basque has ergative patterns in transitive structures; while its unaccusatives mark the subjects as absolutive, as can be seen in the contrast between sentences given in (93) and (94). In the progressive, however, the transitive subjects show atypical patterns; they are marked absolutive as are the subjects of the accusatives; compare (95) and (96).

(93) Basque Perfective (Coon and Preminger: 311)

Ehiztari-**ak** otso-**a** harrapatu du

hunter-ART.SG.ERG wolf-ART.SG(ABS) caught AUX (have)

'The hunter has caught a/the wolf.'

- (94) Otso-a etorri da wolf-ART.SG(ABS) arrived AUX(be) 'The wolf has arrived.'
- (95) Basque Progressive: No Ergative (Coon and Preminger: 311)

emakume-a ogi-a] ja-te-n ari da

woman-ART.SG(ABS) bread-ART.SG(ABS) eat-NMZ-LOC PROG AUX(be)

'The woman is eating the bread.'

(96) emakume-a dantza-n ari da woman-ART.SG(ABS) dance-LOC PROG AUX(be)

'The woman is dancing.'

Coon and Preminger present the split in the progressive as resulting from a bifurcated clausal spine that separates the subject and the object into different case domains. The object remains in the VP while the subject is in the specifier of vP, and these two domains are separated by an intervening PP. This divide is shown in (97). Since the two DPs are in different case-domains, each receives an absolutive case from the respective case-valuing head.

# (97) [TP [vP/VP Subj [PP [nP [VP Obj Pred-Verb] n] P] v'/'V] T]

Our analysis of WIAL variable case-agreement patterns in the perfective falls in line with this approach to split-ergative suggested in Coon and Preminger. The WIAL structure bifurcation essentially happens with an expansion of the clausal spine, especially with active case-valuers such as F and T appearing in the structure. The subject and the object are then automatically placed in different domains - the object is in the specifier of v\*P, thereby receiving an accusative case, and the subject either in the specifier of FP or TP, receiving an oblique or a nominative case from F and T respectively.

Our clause-structure based analysis has an important theoretical lesson for the connection between case and agreement. To understand this, let us reconsider 6, repeated as (98) again, where the subject is null marked, the object is marked overtly (DOM) and the verb carries the phi feature values of the marked object.

#### (98) DP-NULL DP-DOM VORJPHI

Recall that Bobaljik (2017) claims that despite appearances, the schema in (98) does not contest the claim that agreement piggybacks on case. His alternative explanation for it is that the subject is underlyingly ergative, the object is an unmarked absolutive and the marking (DOM) is an extra dative layer, that encodes the special semantics of specificity. Since the subject is ergative and the object is unmarked absolutive, agreement predictably happens with the latter, and not the highest ergative marked argument. Bobaljik thus claims that: (i) the schema in (98) is not really a deviation from the expected WIAL ergative pattern, and (ii) agreement does indeed piggyback on case.

What our study instead argues is that DOM-triggered agreement is a result of object movement to the  $v^*P$ -edge, which some languages choose to identify via overt verbal agreement. Moreover, the inability of some unmarked subjects to trigger verbal agreement results from the absence of a  $\phi$ -complete T in the perfective of that language. Unmarked subjects without the expected subject-agreement can be treated as evidence that the language is yet to fully transit to the nominative alignment. Our study counters the claim that agreement builds on case-marking in a top-down manner. Languages work on the case and agreement patterns of lower DPs, before moving up to compute the case and agreement patterns of higher DPs. A non-trivial implication of this analysis is that case and agreement are tied tightly to certain heads and to the way in which the clausal spine is composed.

In addition, our study reveals an ongoing shift in WIA ergativity, with some showing clear signs of moving away from a typical ergative schema. However, the observed shift in WIA languages is far from being swift, and speakers attempt different routes before they converge on the alternative alignment. In A/V Gujarati, as well as speakers of Kutchi, for instance, speakers use person and number to try out the modified alignment. Surati Gujarati speakers restrict the ongoing shift to the domain of negation. All these attempts must be seen as speakers trying to incrementally implement the new system. The so-called unexpected patterns in the perfective of different languages and varieties are reflections of the attempts of the speakers to tune in their grammars to the new morphological cues they receive from the environment. At any given time, there are naturally, multiple grammars or I-languages in the area (in the sense of Aboh 2015, 2017), a fact attested by the huge amount of inter-language and intra-language variation found among the WIA languages.

If we keep other language/dialect-specific grammatical variables at bay, it is predicted that speakers will most likely converge on a communal grammar by picking up the right functional heads and features (aka the Borer-Chomsky Conjecture). The new grammar will have the nominative alignment in the perfective (99), when the resultant structures get a phi-complete T head, which probes the subject for phi-features and values it nominative in return. The most ideal nominative structure, within the WIA paradigm, is when there is only subject-controlled agreement (and no concurrently DOM-controlled agreement). Patterns such as those found in Kutchi Gujarati with both subject and object agreement morphology on the verb and auxiliary respectively are forms in flux. Such grammars have yet to settle down on a nominative alignment. Our prediction is that languages that have completely moved to the target nominative alignment, will no longer be able to differentiate between the perfective and the imperfective, based on differential argument marking and agreement.

# (99) [TP Subj-NOM [vP Subj [VP Obj V] v] T-SUBJPHI]

In sum, the movement from an ergative to a nominative system involves a v-T connection. One way to operationalize this would be to say that once an accusative assigning v\* head is introduced into the perfective, it demands selection by a phi-complete (read, person-strong) T head, but there can be intermediate steps involving a F head. When T-head is fully coopted into the grammar, it checks the subject for phi-features and also case-values it as nominative. The v-T connection is, thus, a necessary condition for WIA shift to the nominative. A corollary of this prediction is that the opposite must also hold true: the development of ergativity must be tied to the weaking of the same; the v-T connect should weaken for ergativity to gradually disappear from a language. The next section presents some data from older varieties of WIA languages, confirming the same.

# 6.1. v-T disconnect for Ergative evolution

Researchers put forward multiple accounts of the evolution of ergativity in Indo-Aryan languages. The ergative case alignment system is said to have originated in the Middle Indo-Aryan/MIA languages (approximately, 600 BC – 1000 AD), immediately following the Vedic Sanskrit/Old Indo-Aryan (OIA) era, when languages were predominantly nominative-accusative (Deo 2006, 2015, Butt and Deo 2017 for discussion, and references cited there). As to how the change came about, there are multiple viewpoints, with some tracing it back to passives or participials and others to possessives (see Butt and Deo 2017 for an overview of the literature). The participial origin view is widely accepted among researchers: it states that the participial –ta in OIA underwent a reanalysis into an active ergative form (Pray 1976, Eckardt 2006, Roberts 2007, Butt 2017, Patel-Grosz 2021). The following sentences help us understand the point better. The OIA sentence in (100) has a participial –ta. Due to the defective or participial v present in such constructions, the object gets a nominative and the external argument is realized as an instrumental DP, much like a passive or unaccusative structure.

```
(100) Vedic Sanskrit (in Patel-Grosz 2021: 4)

ahi-r

serpent-NOM.M.SG Indra-INST.SG

'The serpent has been killed by Indra' (lit: 'The serpent is one killed by Indra')
```

The participial form is said to have been reanalyzed during the MIA period as a perfective, as depicted in (100), leading to the formation of an ergative alignment in an active sentence (note the lack of any surface level difference between the two sentences). The object still receives a nominative case, while the erstwhile instrumental case on the participial subject is reanalyzed as an ergative case on the subject of an active sentence.

```
(101) Vedic Sanskrit (in Patel-Grosz 2021: 4)

ahi-r indr-ena ha-tah

serpent-NOM.M.SG. Indra-ERG.SG kill-PERF.M.SG

'Indra has killed the serpent'
```

This change is captured through the following schema, starting off with the participial in ((102)a) and leading to the active/ergative (102b).

(102)

- a. [subject the serpent] (was) (adjunct by Indra) [Predicate a.killed.one]
- b. > [object the serpent] [subject Indra] [verb killed]

(Patel-Grosz 2021: 4)

The formulation here is that a passive or participial v is reanalyzed as an active v that hosts the external argument *Indra* (an erstwhile adjunct); the rest of the structure, however, remains mostly constant. More specifically, T is common to both participial and ergative structures, which is the reason why both sentences have nominative objects DPs that trigger verbal agreement.

This, however, is not the entire story; it has also been pointed out in the literature that there was more happening to the participial in the period leading to the formation of ergative structures. Sanskrit grammarians particularly point to a specific property of the -ta participle that may have had some important ramifications for case shifts in those times. More specifically, the -ta participial and the active ta-vant constructions in OIA are said to both have the value of finite verb forms in the past tense, see Khokhlova (1992, 2001, 2002) and Hock (1986) for more discussion on OIA participial form and tense connection. With time, however, these structures became tenseless. Consider -

```
(103) Old Indo-Aryan (Pancatantra 335, Speijer 1886/1993: 264)
```

t-ena murkh-ena vaanar-ena praharo vihitah that-INSTR stupid.INSTR monkey.INSTR blow.NOM put.PP.NOM

"...that stupid monkey ... gave a blow"

(104) Old Indo-Aryan (Whitney 1896: 957)

sa nakulam vyaapaadi**ta**vaan he.NOM Ichneumon.ACC destroy.ACTP.NOM

'He destroyed the Ichneumon'

As shown above in (103) and (104), the *-ta* participle and active forms in OIA both encoded tense; both were used as past tense sentences. In fact, OIA did not even make a distinction between the perfective and the imperfective; instead, it used a common aorist tense form to represent both concepts. This, however, changed in the ensuing centuries. The MIA period saw the *ta*-participle construction completely drop the finite verbal form in diglossic situations (Hock 1986). The aorist then became a separate category aligning chiefly with the imperfective. The participle form, on the other hand, became widely associated with completed action or a result, and over time, became confined to the perfective. These two phenomena, namely, the imperfective-perfective separation and the participle-perfective association, proved critical to the foundation of ergativity. Also confirmed by Bubeník (1998: 142), the tense-less participle structure constituted the primary anchor for an ergative structure. The era was marked with an alignment shift from a pure nominative-accusative to a split system. These differences can be seen between the OIA sentences in (105 a-b) and the MIA sentences in (106 a-b).

(105) a. naram ahana vs. b. narah carati man.ACC kill.IMP.1SG. man.NOM walk.PRS.3SG 'I killed the man' 'The man walks'

(106) a. mae naru mari(y)a(u) vs. b. naru calai
I.INS man.NOM killed.M.SG man.NOM walk.PRS.3SG
'I killed the man' 'The man walks'

The separation of tense from the perfective form, along with the subsequent addition of a result meaning, signals some non-trivial structural changes. These include the eventual disappearance of the T head (or T head becoming weak or phi-defective), and the emergence of an Aspect head. We may also assume, following Mahajan (2012) that the aspectual layer is an extended vP layer, which in current-day WIA languages helps host the aspect-carrying light verbs (also see Udaar, Kaur and Chandra 2016 for double vP layers hosting light verbs). <sup>16</sup>

With the loss/weakening of T and the emergence of aspectual structure, both subject and the object end up receiving their cases within the vP. The object receives an absolutive case value from v, where we understand the absolutive as accusative, in the sense of Legate (2006). The subject on the other hand, receives an inherent ergative case in the specifier of vP (Davison 2004, Mahajan 2012).

This is schematically shown in (108), where T is marked as defective and therefore, unable to probe for phi-features on DPs .

(107) [TP [AspP [vP Subj [VP Obj V] v ] T-def]

-

<sup>&</sup>lt;sup>16</sup> There is nothing in our analysis that is immediately contingent on an independent AspP or an extended vP; we therefore remain non-committal on this Asp/vP issue here.

We pose (107) as a possible representation of the ergative structure during the MIA phase: when the v-T disconnect served as a favorable factor leading to the emergence of the ergative pattern in the perfective.

Consolidating the arguments presented so far: the initial conditions inducing ergativity in the perfective during the MIA era involved decoupling tense from v. We see the opposite happening in some of the current-day WIA languages, where a phi-complete v activates a phi-complete T (or a higher head like F) and makes it possible for languages to weaken ergativity and gradually transit to the nominative-accusative alignment. The weakening of the ergative alignment is tantamount to the introduction of a v\* head with a strong EPP feature, that prompts the movement of the object to the edge of the v\*P-phase. The ramification of this movement is the expansion of the clausal domain and the eventual movement of the subject to higher domains, in pursuit of a structural case-valuing head.

#### 7. A word on DOM (sans agreement)

The languages surveyed here that do not display any sign of a shift are essentially of two kinds. The first group includes those languages that have DOM but no DOM-triggered agreement. Some Rajasthani languages (Ahirwati, Dhundari, Harauti, some Marwari and Mewari dialects) as well as Hindi fall in this category. The second cluster includes languages that simply do not have DOM in the perfective; such as Haryanavi and Kashmiri.

Hindi from the first group needs special mention here. A well-explored language and also the official language of India, Hindi is often hailed as a representative example of the split-ergative system among WIALs. The standard variant, spoken in Delhi and other north Indian metropolises, obligatorily marks its transitive subjects in the perfective with an ergative case. The object is optionally marked overtly with -ko but there is no DOM-triggered verbal agreement (108a). When unmarked, objects trigger agreement (108b). These are expected patterns of a typical split-ergative WIA language.

```
(108) a. john-ne roTii khaayii

John-ERG bread.F.SG eat.F.SG.PERF

'John had eaten bread' (lit. John did bread-eating)
```

```
b. john-ne roTii-ko khaayaa
John-ERG bread-DOM eat.DEF.PERF
'John had eaten the/a specific kind of bread'
```

Interestingly, however, Hindi DOM objects raise to the edge of vP: a movement that we generally associate with languages with DOM-triggered agreement. Consider the following sentences, adapted from Kidwai (2010).

```
(109) Hindi (adapted from Kidwai 2010)
```

```
a. john-ne chuhe-ko uske bag-me rakhaa
John-ERG rat-DOM his bag-in keep-PERF
'John put the rat in the rat's/someone else's bag'
```

```
b. johnne chuha uske bag-me rakhaa
John-ERG rat his bag-in keep-PERF
'John put the rat in someone else's bag'
```

The DOM object in (109a) occupies a higher position than the unmarked object in (109b), which explains why only the former can bind the possessive pronominal in 'his bag'. Hindi DOM is thus, an instance of the object moving to the edge of vP. Additionally, Hindi DOM objects also display typical properties of arguments, posing no constraints on movement; see (110a). By contrast, the IO in (110b), also marked with -ko, behaves as an adjunct and prohibits the movement of internal elements; see Kidwai (2000) for more details.

# (110) Hindi (Kidwai 2000: 71)

```
a. Marx-ke ram-ne [t-i ek kitaab]-ko mere pitaa-ko di Marx-GEN Ram-ERG one book-DOM my father-DAT give 'Ram gave my father a book on Marxism'
```

b. \*[marksvad par]i alocak-ne [t-i ek kitaab-ko] bahut buri Tipanni di Marxism-on Ram-ERG a book—IO very bad review gave 'The critic gave a very bad review to the book on Marxism'

Despite this, Hindi remains a split-ergative language in the perfective. One possible reason why Hindi has not yet shifted alignment is that the marked object does not trigger agreement. Ergativity in these languages is thus stable, because DOM-triggered agreement being not possible, the speakers have no cue suggesting a change in alignment. The fidelity to the standard Hindi grammar is further bolstered by extra-linguistic factors such as normative pressures through education and media – the speakers remain committed to a certain variety which is then spread through the rest of the population, suppressing possible alternatives in the process.

This difference among WIA languages indicates an underlying parameter – languages may opt to highlight DOM as accusative through verbal morphology or they may not. Hindi and varieties of Rajasthani that have DOM but fail to express the relation through phi-agreement are in one class; other varieties of Rajasthani and Gujarati fall into a second cluster with DOM-triggered agreement.

#### 7. Conclusions

Language change is difficult to identify while it is happening. In this paper, we provided an overview of several WIA systems focusing on their argument alignment. We showed that there is a large heterogeneity in the way arguments, as well as in agreement patterns, are encoded. Comparing these varieties with each other, we identified a diachronic path, which led to the following generalization: There is an ongoing alignment shift in WIA varieties, that are shifting from an ergative/absolutive alignment towards a nominative/accusative alignment. This can be shown by the fact that these languages move from a system in which v *de facto* licenses both arguments, to a system with a clear division of labour between v, licensing the internal argument and agreeing with it, and T licensing the external argument and agreeing with it.

After showing that what looks like a dative marker is actually an accusative marker, and that internal arguments do not change their case but only their position, two factors were identified that trigger alignment shift: agreement of a DOM object with the verb, and the presence of a functional head licensing the subject, which may eventually converge with a  $\varphi$ -complete T.

Ergative alignment has been observed to be more geographically restricted (see Comrie 2013a, b) and more marked in the parameter hierarchy of case proposed by Sheehan (2014), according to which accusative alignment is the unmarked option. This contribution shows that at least in this group of languages ergative alignment is moving towards the more unmarked nominative/accusative alignment. These data also seem to corroborate the considerations put forward by Zwarts and Lindenberg (2021), according to whom ergativity is not a primitive feature of language, but the convergence of several factors. While the emergence of ergativity is very much linked to vP-level semantic factors, like agentivity or prominence in discourse, nominative accusative alignment is purely structural, and therefore subject to more stability cross-linguistically.

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