# Early and Late Ergativity: Single Phenomenon, Multiple Timelines*

(case study of ergative systems in Hindi and Ch'ol)

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**Abstract.**

Not all of the world's languages follow the nominative-accusative alignment, where the subjects of both intransitive (e.g., *He fell*) and transitive (e.g., *He saw her*) constructions get treated the same way and the object of transitive constructions singled out. Some languages follow so-called ergative-absolutive alignment, where they instead treat the subject of intransitive and the object of transitive constructions equally and single out the transitive subject. Because of the split in the treatment of something as prominent to the early learner's mind as the sentential subject, it is to be expected that this phenomenon also impacts language acquisition. However, the field of language acquisition has still not settled on whether ergativity is an early or a late phenomenon. This study argues that the lack of a definitive timeline for the acquisition of ergativity is caused by the fact that the academic community has been trying to analyse a diverse range of possibilities for marking the ergative-absolutive alignment as a singular phenomenon. An alternative analysis is proposed where the ergative systems of two example languages, Hindi and Ch'ol, are broken down into various well-understood aspects and analysed based on their individual features and acquisition prospects. A concrete prediction on the acquisition of these two timelines is made.

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*Author's Note*

Linguistics of any kind is a science, and I believe that science should be done for people. On that note, I aim to contribute my share by making my science written, at least to an extent, in a way that's accessible to a wider audience as well as young scholars interested in the field. I hope that an experienced reader can pardon the occasional detour into rather folk etymologies for the studied phenomena.

I also sort of think that the scientific community owes a lot to children for what their genuine nature reveals about the ways of the mind. They deserve to be mentioned in scholarly work with terminology that avoids connotations of simplicity or incompetence and instead highlights their active role in and potential for learning. In that spirit, this work uniformly adopts the term 'early learners' to describe these young minds.*

*This study also notes that the acquisitions research draws a distinction between 'language learning' and 'language acquisition' (see for example Mohamad Nor and Ab Rashid, 2018). This distinction is not relevant throughout this work and the term 'learner' is used for convenience.

## Contents

# I Introduction

**Meet Ergativity.** Most of the world's languages, including English, treat the subject of intransitive verbs (*John* in *John fell*; marked S for 'subject') equally to the subject of transitive verbs (*John* in *John ate an apple*; marked A for 'agent'), while the object of transitive verbs (*apple* in *John ate an apple*; marked O for 'object') is handled differently. This can be done, for example, in terms of case-marking (1) or position in a clause (2). This notion is called the nominative-accusative alignment, or accusativity, and it seems like a predictable feature of language—until it is not.

(1) *Japanese:*[**]

a. [S neko **wa**] nemurimas
[S cat **NOM**] sleep
'The cat is sleeping.'

b. [A neko **wa**] [O gyūnyū **o**] nomimasu
[A cat **NOM**] [O milk **ACC**] drink
'The cat is drinking milk.'

(2) *English:*

a. [S [NOM the cat]] is sleeping

b. [A [NOM the cat]] is drinking [O [ACC milk]]

As an attentive reader might have guessed this alignment is not shared across all languages. About a quarter (Dixon, 1994, p. 2) of the world's languages display so-called ergative-absolutive alignment, or ergativity, where S and O are treated equally while A receives a different treatment (3). (This in practice means that if English were an ergative-absolutive language, speakers would say *Her slipped* instead of *She slipped*, which is the most natural way of expressing the idea of her slipping in ergative-absolutive languages.)

(3) *Basque:*

a. [S Miren eta Jon] etorri dira
[S Miren.**ABS** and Jon.**ABS**] come AUX
'Miren and Jon came.'

b. [A Nekane-**k**] [O Miren eta Jon] ikusi ditu
[A Nekane-**ERG**] [O Miren.**ABS** and Jon.**ABS**] seen AUX
'Nekane saw Miren and Jon.' (modified from Rezac et al., 2014, p. 1278)

The term *ergative* comes from the Greek word *ergon* that roughly translates to English as *work* (or *function*, *task*). In that spirit, ergativity singles out the *doers* or the *performers* of actions expressed by (most often) transitive words. It often indicates the most intuitive ways the human mind understands intention and agency, notions that grew rather ambiguous in most of the well-understood cultures and languages. Ergativity is nowadays surviving mostly (apart from a

[**]All examples in this work, unless otherwise noted, come from original data. Examples in English come from the author's own judgement. Many thanks belong to two native speakers, Abhinaba Sarkar (Hindi) and Junya Shimada (Japanese), for always giving thought to every call for grammaticality judgement and making time to dig deeper into the grammaticality of their own language; this work would not have been possible without you.

few exceptions) in understudied languages spoken within remote communities in parts of Central America, Australasia, the Middle East, and Northern Canada and Greenland.

Perhaps also due to its aura of exoticism (and often a semi-extinct status), the notion of ergativity captivated the interest of many linguists from various branches of the field. The scientific community has learnt a lot about the phenomenon over the past few decades: there is a more in-depth understanding of the variation amongst ergative languages (e.g., McGregor, 2009), multiple detailed language-specific analyses of overt regularities and irregularities of ergativity (e.g., Legate, 2008; Coon, 2010), and also some experimental work showing how the ergative mind processes language differently from previous hypotheses (Clemens et al., 2015). What remains rather controversial, however, is the place of ergativity in language acquisition.

**Overview of Previous Literature.** First of all, it is important to note that ergativity has been considerably understudied from the perspective of language acquisition. This might be in part due to the fact that CHILDES, the most popular corpora database, contains only little data from few ergative languages, and no data at all from the most widely spoken ergative languages such as Hindi and Kurdish. Second of all, even the little research that there is has not made it easy to believe that ergative languages follow the previously described acquisition patterns as we know them from nominative-accusative data.

Consider, for example, passive constructions. The process of detransitivising clauses (i.e., reducing clauses from transitive (*The man killed the bull*) to intransitive (*The bull was killed*)) has shown to pose a great issue to the early learners of nominative-accusative languages, resulting in them starting to use such constructions productively only at around age six (e.g., Pinker et al., 1987; Cychosz and Salazar, 2016; although see also Alcock et al., 2012 for exceptions from Eastern Bantu languages).

Inuktitut, an ergative-absolutive language spoken across Greenland as well as the northern regions of Canada and Alaska, has a way of forming passive constructions very similar to that in nominative-accusative languages—and even allows both short (4-a) as well as full (4-b) passives (i.e., without and with *by*-phrases, such as *by man* in *The bull was killed by a man*). Yet early learners of Inuktitut demonstrate mastery of this construction in spontaneous speech much earlier than early learners of nominative-accusative languages, as early as two years old (Allen and Crago, 1996).

(4) *Inuktitut:*

a. anaana atjiliuq-**jau**-si-gama
mother film-**PASS**-PRES-CSV.ISS
'Mom, I'm going to be filmed.'

b. piiq-**jau**-langa-gama **aluu-mut**
remove-**PASS**-FUT-CSV.1SG.SUB **white.person.BW-ALL.SG**
'I will be removed by the white person.' (from Allen and Crago, 1996, p. 142–144)

The acquisition of relative clauses follows a similar story in that it does not correspond to the previous observations of data from nominative-accusative languages. It is a recurring pattern across the nominative-accusative languages that early learners acquire subject relative clauses (5-a) earlier and with greater accuracy than object relative clauses (5-b) (e.g., Diessel and Tomasello, 2005). However, early learners of Basque, an ergative language spoken in northern Spain, seem to have an easier time acquiring object relative clauses compared to subject relative clauses (Gutierrez-Mangado, 2011).

(5) a. the girl [$_{RC}$ that ____ is painting the picture]

b. the picture [$_{RC}$ that the girl is painting ____]

That early learners of ergative-absolutive languages display different acquisition patterns across various syntactic phenomena calls into question the role of ergativity in language acquisition. A number of scholars got intrigued not only by how ergativity impacts the acquisition of constructions typically considered early or late but also by whether or not ergativity in itself is advantaged or disadvantaged in the process of language acquisition. In other words, is the ergative-absolutive alignment more or less challenging for early learners to acquire compared to the nominative-accusative alignment?

The academic community has yet to agree on what difficulties, if any at all, the ergative-absolutive alignment per se poses to its early learners. Consider Samoan, a Polynesian ergative-absolutive language spoken in Western Samoa. Early learners of this language omit or avoid ergative morphology until as late as age eight. The disfavour is so strong that these speakers even resort to more complex constructions simply to avoid producing the ergative-absolutive alignment (Muāgututi'a, 2017).

Similarly, in Basque, not even the duplicate marking of ergativity (on both verbs and their arguments) seems to sufficiently assist early learners in figuring out contexts in which it is appropriate to use the ergative-absolutive alignment. Not even at the end of their longitudinal observation would the observed, typically developing early learner distinguish when to use as opposed to avoid using the ergative morphology, leading the researchers to believe that they would have to master this skill sometime after the age of four (Ezeizabarrena and Larrañaga, 1996, p. 983).

The previous examples showed how the acquisition of the ergative-absolutive alignment seems to pose significant challenges to language acquisition. However, this is not at all the case for all ergative-absolutive languages. For example, in Mam, O'anjob'al, and Yucatec, three related ergative-absolutive Mayan languages spoken in modern Mexico, learners are sensitive to the correct use of verbal morphemes exclusive to marking ergativity in the production of free speech as early as two years old (Pye et al., 2013, p. 331).

Likewise, in Kurmanji Kurdish, an Indo-Iranian language spoken in parts of Turkey, Iran, Iraq, Syria, and the Caucasus region, early learners do not seem to struggle at all. Their first correct use of the ergative morphology starts at around age two and by the age of two years and six months, they systematically display productive marking of the ergative alignment (Mahalingappa, 2013). At this age, the early speakers use the marking appropriately in both free speech and experimental setting at a frequency comparable to that of an adult speaker.

**Questions.** From every disagreement, there follow questions. The above overview shows that not only the field of language acquisition cannot answer what kind of impact ergativity has on the acquisition timeline of various linguistic phenomena—there is no clear expectation on what timeline the acquisition of ergativity itself is expected to follow. The fact that observations in response to the latter question vary suggests that asking when ergativity is acquired might not be the most productive way to approach the puzzle. Therefore, the present study takes the conversation yet one step further and asks not only when but also why the acquisition timeline of ergativity remains disagreed upon.

**Proposal.** This study exploits the generally accepted idea that ergativity is not a singular mechanism but rather an umbrella term for many means of aligning S with O, singling out A. In other words, it pays close attention to the fact that the complexity of individual ergative systems across languages is a result of the complexity of each system's unique components. Consequently, the first aim of this study is to show that ergative systems must be broken down into pieces before a meaningful analysis of the system's acquisition can be obtained.

That said, the second aim of this study is to take apart the ergative systems in two example languages, Hindi and Ch'ol, identify phenomena relatively well-understood from the acquisitionist perspective, and explain in detail, using previous literature, how exactly the overall acquisition timeline of the alignment in a particular language is impacted. Note that this study is not broad enough to encompass all possible factors constituting any ergative system. Instead, it shall serve as an invitation for future acquisitionists to analyse ergative systems with the attention to detail that they deserve.

**Road Map.** This study is structured as follows. First, a comprehensive overview of the ergative-absolutive alignment and its components is presented for the two studied languages, Hindi and Ch'ol, in sections II and III respectively. Next, the key features of each system are selected and juxtaposed in IV. Finally, each key feature is considered in the context of language acquisition in V and the study concludes by making an explicit prediction on the acquisition of the evaluated ergative systems in VI.

## II Ergativity in Hindi

**Brief Language Overview.** Hindi, the first language considered in this study, is an Indo-Aryan language spoken by about 520 million mostly monolingual (or late multilingual) native speakers (Times of India, 2018) located primarily in the Hindi Belt in Northern India, but also in parts of Nepal, South Africa, or the United Arab Emirates (World Data, 2014). It is a morphologically ergative language (e.g., Keine, 2007), which means that its underlying processes (such as syntactic movement) behave much like those in nominative-accusative languages, but it still (at least in some contexts) displays ergative-absolutive morphology. Hindi, or  as spelt in its traditional script, Devanagari, is right after English and Mandarin the third most widely spoken language in the world (Forbes India, 2024).

**Marking Ergativity in Hindi.** Hindi is a language with a rich case-marking system, and so it comes as no surprise that also the alignment in Hindi is mostly marked by distinct morphology on the nominal and pronominal arguments. This case system contains eight cases (see Table 1), three of which (bolded) are relevant to the marking of alignment. These case-markers appear in the form of post-positional clitics.

Table 1: Case system in Hindi.

| CASE | MARKER |
|---|---|
| **nominative** | ∅ |
| **ergative** | ***ne*** |
| **accusative** | ***ko*** |
| dative | *ko* |
| instrumental | *se* |
| genitive | *kaa* |
| locative$_1$ | *par* |
| locative$_2$ | *me* |

(from Keine, 2007, p. 75)

This chart alone has a couple of interesting details to notice. For one, there is no absolutive case, a natural complement to the ergative case in ergative-absolutive systems. Hindi has two ways of treating the O arguments in ergative-absolutive constructions: either, much like in many other

ergative-absolutive languages, the absolutive argument may remain unmarked (6) or it can be optionally marked with the accusative case instead (7).

(6) a. batman taira
batman.ABS swim.PERF
'Batman swam.'

b. batman=**ne** larki=ki jan bacayi
batman=**ERG** girl=GEN life.ABS rescue.PERF
'Batman saved the girl's life.'

(modified from Ponnet and De Cuypere, 2024, p. 148)

(7) sana=**ne** seb**(=ko)** khaya
sana=**ERG** apple**(=ACC)** eat.PFV.MASC.SG
'Sana ate an apple.' (from Kidwai, 2020, p. 2)

The latter option of replacing the absolutive with an accusative is, however, only available to transitive clauses (8).

(8) a. jahaz dooba
ship.ABS sink.PAST.PERF
'The ship sank.'

b. *jahaz=**ko** dooba
ship=**ACC** sink.PAST.PERF
Intended: 'The ship sank.'

It is also worth noting that the optionality of accusative marking on O arguments in Hindi is not completely random. More specifically, it is a sufficient condition for O arguments in ergative-absolutive constructions to be animate (i.e., *a boy* but not *a book*) to receive accusative case-marking (9). Likewise, it is a necessary condition for inanimate O arguments to be definite (i.e., *the book* but not *a book*) to be able to optionally receive the accusative case-marking (10).

(9) a. ladki=ne ek **ladke=ko** dekha
girl=ERG NDEF **boy=ACC** see.PFV.SG
'The girl saw a boy.'

b. ladki=ne ek **kitaab*(=ko)** dekha
girl=ERG NDEF **book*(=ACC)** see.PFV.SG
'The girl saw a book.'

(10) a. ladki=ne **kitaab=ko** padha
1.SG=ERG **book=ACC** read.PFV.SG
'The girl read the book.'

b. ladki=ne ek **kitaab*(=ko)** padha
1.SG=ERG NDEF **book*(=ACC)** read.PFV.SG
'The girl read a book.'

**The Ergative Split.** However, not every transitive construction in Hindi subscribes to the ergative-absolutive alignment. Hindi belongs to the majority of ergative-absolutive languages in which ergativity is conditioned by other grammatical features and defaults to the nominative-accusative alignment if these conditions are not met. This so-called split ergativity is in Hindi demarcated by aspect: only perfective constructions in the past tense follow the ergative-absolutive alignment, otherwise the nominative-accusative alignment is retained (11).

(11) a. sana seb**(=ko)** kharahi he
sana.**NOM** apple**(=ACC)** eat.PFV.MASC.SG be.3.SG
'Sana is eating an apple.'

b. sana**=ne** seb**(=ko)** khaya
sana**=ERG** apple**(=ACC)** eat.PFV.MASC.SG
'Sana ate an apple.' (modified from Kidwai, 2020)

Nonetheless, these grammatical conditions (i.e., perfective aspect and past tense) are only necessary—but not sufficient—conditions for the occurrence of the ergative-absolutive alignment. In other words, not every perfective construction in the past tense marks A with the ergative and O with the absolutive (or accusative) case. This is because the assignment of the ergative case to A arguments is also subject to the semantics of volition. Subjects of verbs referring to actions or events that cannot be typically controlled by will are typically not agents and therefore do not receive the ergative case (12).

(12) a. **larkaa** raakshas=se dar-aa
**boy.NOM** demon=INS fear-PERF.SG.MASC
'The boy feared the demon.'

b. ***larkaa=ne** raakshas=se dar-aa
**boy=ERG** demon=INS fear-PERF.SG.MASC
'The boy feared the demon.' (modified from Maitreyee et al., 2023, p. 4)

Furthermore, even fully volitional verbs in the past perfective form are still subject to true optionality (i.e., free variation). This means that even in contexts where the ergative case-marker on A is perfectly grammatical as well as semantically appropriate, speakers may simply opt out of its usage and still produce well-formed constructions (13).

(13) a. **raam=ne** samaachaar bol-aa
**ram=ERG** news.ACC tell-PFV.SG.MASC
'Ram told the news.'

b. **raam** samaachaar bol-aa
**ram** news.ACC tell-PFV.SG.MASC
'Ram told the news.' (modified from Maitreyee et al., 2023, p. 4–5)

As a result, ergativity in Hindi undergoes not one but in fact three splits: structural (tense-aspect), semantic, and optionality. In the absence of meeting all the aforementioned criteria—namely, appropriate grammatical and semantic-pragmatic contexts alongside the speaker's choice to employ the ergative case—Hindi resorts to the nominative-accusative alignment, putting the ergative case in a particularly delicate position despite its continued presence in the language.

**Split Intransitivity.** Hindi is also one of those ergative-absolutive languages where the

ergative case breaks its promise to transitive verbs to exclusively mark its A argument and occasionally occurs in intransitive constructions as well. Speakers may choose to include the ergative case-marker in intransitive constructions in order to emphasise the subject's active, agentive role in the action or an event described by the intransitive verb and thereby manifest so-called split intransitivity (14).

(14) a. raam**=ne** khaans-aa
ram**=ERG** cough-PFV.MASC
'Ram coughed (on purpose).'

b. raam khaans-aa
ram.**ABS** cough-PFV.MASC
'Ram coughed.' (modified from Sinha, 2017, p. 4)

**Agreement.** When shifting from the nominative-accusative to ergative-absolutive alignment, Hindi verbs also change which argument they agree with. Consider example (15), where the verb (however complex) agrees with A when in the present, non-perfective form (15-a), but shifts to agreeing with O when in the past, perfective form, which allows for the use of the ergative-absolutive alignment (15-b).

(15) a. **pooja**.∅ rajesh=ko dekh rah-**i** hai
**Pooja(FEM)**.NOM Rajesh(MASC)=ACC see CONT-**FEM** AUX
'Pooja is seeing Rajesh.'

b. pooja=ne **rajesh**.∅ dekh-**a**
Pooja(FEM)=ERG **Rajesh(MASC)**.ABS see.PAST.PFV-**MASC**
'Pooja saw Rajesh.'

However, this view is somewhat deceptive, because the verb does not in fact agree with O but rather with the highest unmarked argument—and defaults to masculine if no unmarked argument is available. This is visible when manipulating the optional case-marking in ergative-absolutive constructions. The contrast between (16-a) and (16-b) shows that the agreement shifts based on the presence of the marker. A curious reader might ask if the masculine agreement in (16-b) is not merely shifting back on A, but the persisting presence of a masculine verb in an all-feminine contribution (16-c) confirms the above statement of masculine default.

(16) a. rajesh=ne ek **ladki**.∅ dekh-**i**
Rajesh(MASC)=ERG one **girl(FEM)**.ABS see.PAST.PFV-**FEM**
'Rajesh saw a girl.'

b. rajesh=ne ek **ladki**=ko dekh-**a**
Rajesh(MASC)=ERG one **girl(FEM)**=ACC see.PAST.PFV-**MASC**
'Rajesh saw a girl.'

c. **pooja**=ne ek **ladki**=ko dekh-**a**
**pooja(FEM)**=ERG one **girl(FEM)**=ACC see.PAST.PFV-**MASC**
'Pooja saw a girl.'

## III Ergativity in Ch'ol

**Brief Language Overview.** Ch'ol, the second language considered in this study, is a Mayan language spoken by about 250 000 native speakers in Southern Mexico (Cuéntame de México, 2020). It is a syntactically ergative language (e.g., Tollan and Clemens, 2022), which means that its overt morphology as well as complex underlying processes follow the ergative-absolutive patterning. Given that the primary language in Central America, where Ch'ol speakers are based, is Spanish, most of its today's speakers are for everyday reasons bilingual (e.g., Rodríguez, 2016, p. 282–283). Although modern Ch'ol is written in the Latin script, the linguistic heritage upheld by the Ch'ol community is believed to closely represent the earlier forms of Mayan culture (e.g., Houston et al., 2000), largely subdued as a result of the Spanish Conquest.

**Marking Ergativity.** Ch'ol does not have an elaborate case system to denote the ergative-absolutive alignment. In fact, it does not have any case system at all, and all arguments across the language come as bare nouns. Consequently, the speakers must rely on context even for discerning information such as definiteness and number (17).

(17) a. tyi i-man-a **koya' winik**
PFV A3-buy-TV **tomato man**
'The man bought the tomatoes.'

b. tyi majl-i **winik**
PFV go-ITV **man**
'The man left.' (modified from Coon, 2010, p. 217)

It is therefore appropriate to infer that also alignment in Ch'ol is expressed through verbal morphology. Verbs in Ch'ol combine with two types of affixes, traditionally labelled 'Set A' and 'Set B' morphemes, outlined in Table 2, to create meaningful constructions. Set A morphemes come in the form of prefixes, Set B morphemes come in the form of suffixes, and none of them changes its shape across various grammatical contexts (e.g., tense, aspect etc.).

Table 2: Verbal morphemes in Ch'ol

**Set A**

| person | __C | __V |
|---|---|---|
| **1** | *k-* ∼ *j-* | *k-* ∼ *j-* |
| **2** | *a-* | *aw-* |
| **3** | *i-* | *iy-* |

(a) Set A (prefix) morphemes.

**Set B**

| person | |
|---|---|
| **1** | -on |
| **2** | -ety |
| **3** | -∅ |

(b) Set B (suffix) morphemes.

Marking alignment using exclusively verbal affixes in this case means that S and O share their marking set, while A draws its marking from the alternate set. This is indeed what happens in Ch'ol: A arguments are marked as prefixes from Set A, whereas S and O arguments come in the form of suffixes from Set B (18).

(18) a. tyi **a**-k'el-e-**yon**
PFV **A2**-watch-TV-**B1**
'You watched me.'

b. tyi ts'am-i-**yon**
PFV bath-ITV-**B1**
'I bathed.' (modified from Coon, 2012, p. 242)

Notice that each Set in Table 2 contains affixes for three grammatical persons. This effectively means that when referring to an argument in the first or the second person (typically present in the conversation), the verb in question will acquire an affix from the appropriate Set in the appropriate person (18).

Referring to third-person arguments has a little bit more fine art to it, though. Pronouns are happy to be expressed solely by the appropriate affix in the third person (19). Nominal arguments, however, can replace the third-person suffix when appearing immediately after the verb (20) (comparable with English *John ate cookies* as opposed to *John ate them cookies*). This replacement is not available to prefixes; the argument has to be added to the construction as well as marked by the appropriate prefix (21).

(19) tyi **i**-mek'-e-yety
PFV **A3**-hug-TV-B2
'He hugged you.' (modified from Coon and Preminger, 2011, p. 8)

(20) tyi i-jap-a **kabal kajpej**
PFV A3-drink-TV **a.lot coffee**
'He drank a lot of coffee.' (modified from Coon, 2010, p. 219)

(21) tyi **i**-buy-a koya' **winik**
PFV **A3**-buy-TV tomato **man**
'The man bought the tomatoes.' (modified from Coon, 2010, p. 217)

**Split Intransitivity.** Intransitive verbs in Ch'ol, however, do not all draw their marking from the same set (22). In other words, some intransitive verbs in Ch'ol will only ever merge with a prefix and some only a suffix. This distinction is a result of intransitive verbs falling into one of two categories: (i) unergative verbs (those with only an agentive argument, such as *run*, *dance*, *resign*) and (ii) unaccusative verbs (those with only a patient or an experiencer argument, such as *fall*, *break*, *die*).[1]

(22) a. tyi **k**-cha'l-e son
PFV **A1**-do-TV dance
'I danced.'

b. tyi way-i-**yon**
PFV sleep-ITV-**B1**
'I slept.' (modified from Coon, 2012, p. 243)

**The Ergative Split.** Constructions in Ch'ol can have one of three possible aspects—progressive (*I'm reading a book right now*), imperfective (*I read books daily*), and perfective (*I have read that book already*)—marked by independent aspectual clitics outlined in Table 3. The imperfective and perfective morphemes come in both short and long forms, with the short form being the primary

[1] Note that treating these two types differently is not uncommon across languages. Also in English, unaccusative but not unergative verbs can be turned into the participle form, and so *the vase broke* → *the broken vase* is grammatical while *the man ran* → *the run man* is not.

choice unless the verb lacks any marking (from either Set A or Set B).

Table 3: Aspect markers in Ch'ol.

| aspect | short | long |
|---|---|---|
| PROG | *chonkol* | *chonkol* |
| IMPF | *mi* | *muk'* |
| PFV | *tyi* | *tsa'* |

The ergative-absolutive alignment initially appears to only occur in perfective (23) but not non-perfective (i.e., progressive or imperfective) (24) contexts. The following subsection proceeds to explain why this view is deceptive.

(23) a. **tyi** **a**-k'el-e-**yon**
PFV A2-watch-TV-B1
'You watched me.'

b. **tyi** ts'am-i-**yon**
PFV bath-ITV-B1
'I bathed.' (modified from Coon, 2012, p. 243)

(24) a. **mi** **a**-k'el-**on**
IMPF A2-watch-**-B1**
'You watch me.'

b. **mi** **a-**ts'am-el
IMPF A2-bathe-NML
'You bathe.' (modified from Coon, 2012, p. 243)

**Rethinking the Split.** Ergativity in Ch'ol depends on aspect, but a closer examination of the three available markers reveals that they might not have all been born equal. This can be observed when a certain construction is grammatical when marked with the non-perfective (i.e., progressive or imperfective) marker but fails when marked with the perfective one (or vice versa).

A concrete example of such a situation can be shown on non-verbal predicates, constructions without a typical self-explanatory verb such as *eat* or *slip*, where the meaning of the predicate often relies on its accompanying elements (25). In Ch'ol, these constructions form grammatical instances when merged with both imperfective (25-a) and progressive (25-b) markers but not with the perfective one (25-c).

(25) a. **muk'** ja'al tyi k-lumal
IMPF rain PREP A1-land
'It rains in my country.'

b. **chonkol** k'inijel tyi aw-otyoty
PROG party PREP A2-house
'There's a party going on at your house.'

c. ***tsa'** k'inijel tyi aw-otyoty
PFV party PREP A2-house

Intended: 'There was a party at your house.' (modified from Coon, 2010, p. 241)

It turns out that non-perfective markers in Ch'ol do not usually accompany verbs. Instead, they occur with stems with a rather nominal character, evidenced by their compatibility with elements usually associated with nominals—such as determiners (26) or nominal classifiers (27). Based on this data, Ch'ol might not in fact have any verbs other than the perfective ones. (Instead, whenever Ch'ol speakers mean to express a verb combined with a non-perfective aspect such as *She is cooking dinner*, the most natural way to convey the same message is through a nominalised construction such as *Her dinner-cooking is happening.*)

(26) a. ma'an **mi** k-mul-an [**jini** juch' ixim] / [**jini** uk'-el]
NEG **IMPF** A1-like-SUF [**DET** grind corn] / [**DET** cry-NML]
'I don't like the corn-grinding/crying.'

b. *mach wen [**jini** jap-**a** lembal] / [**jini** way-**i**]
NEG good [**DET** drink-**TV** liquor] / [**DET** sleep-**ITV**]
Intended: 'It's not good to drink liquor/sleep.' (modified from Coon, 2010, p. 226)

(27) a. an kabal [**aj**-ts'am-**el**-ob] tyi ja'
LOC many [**CL**-bathe-**NML**-PL] PREP water
'There are many bathers in the water.'

b. *an kabal [**aj**-ts'am-**i**-yob] tyi ja'
LOC many [**CL**-bathe-**ITV**-PL] PREP water
Intended: 'There are many bathers in the water.' (modified from Coon, 2010, p. 229)

These findings suggest that the ergative-absolutive alignment in Ch'ol might not be conditioned by the presence of the perfective marker but rather by the presence of a verb, and it so happens that the only kind of verb the language knows is the perfective one. That said, it appears that split ergativity in Ch'ol is not split—it is just ergativity, refining our understanding of the syntactic coherence rather than incoherence of the language.

## IV Lessons For Language Acquisition

This section is devoted to juxtaposing the key aspects of ergativity in both example languages and seeing how comparably complex these two example languages are with respect to the prominent features. Six points of comparison were selected: (i) verbal morphology, (ii) nominal and pronominal (argument) morphology, (iii) argument structure, (iv) grammatical split, (v) semantics, (vi) arbitrariness of input. The review of these features in the context of the two above-described ergative systems follows.

**Verbal Morphology.** In order to master the use of the ergative-absolutive alignment, the early learner of Hindi must understand that the verb will change the argument it agrees with. Recall that this shift may be either unmarked subject → unmarked object (16-a) or unmarked subject → default masculine (16-c) depending on whether or not an unmarked object is available. Notice that this variation is not determined by the shift in alignment itself but rather by the morphology of the related arguments. In other words, the mastery of adequate verbal marking is only a result of the mastery of the complex argument morphology, discussed in the appropriate section below.

In Ch'ol, on the other hand, verbal morphology is indicative of the alignment (23). The affixes

(or their absence) on each side of the verb offer a consistent pattern which returns every time the early learner catches an instance of a verb. These markers remain constant throughout all tenses and aspects and only vary by a singular variable: grammatical person (see again Table 2 for reference). This turns verbal markers and their order in Ch'ol into transparent data immediately available for pattern extraction to the early learner.

**Argument Morphology.** The ergative-absolutive alignment in Hindi heavily depends on proper argument case-marking. In addition to the use of case-marking on A arguments, the early learner also needs to understand that an accusative-marked O argument may complement an ergative-marked A in place of an unmarked absolutive (7). This replacement, however, is only available for O arguments in transitive contexts: an accusative-marked argument may not replace an absolutive unmarked S in intransitive construction (8).

Recall that not all O arguments in Hindi receive the accusative case-marking, though. This variation in marking—where O arguments may be marked or unmarked for case based on several different features—is called Differential Object Marking (DOM). In Hindi, DOM is conditioned by animacy for mandatory accusative case-marking (9) and definiteness for optional accusative case-marking on inanimate O arguments (10). The early learner of Hindi must grasp this conditioning to master DOM as well as its implications on shifts in verbal morphology.

On the other hand, the early learner of Ch'ol need not worry about argument morphology at all, as Ch'ol only recognises bare nouns as arguments (17). Furthermore, pronouns as arguments are usually completely absent and only marked by affixes on verbs (18). They, however, still need to select the appropriate verbal morpheme corresponding to the appropriate grammatical person (see again Table 2 for reference) and master following word-order cues to detect that the O argument immediately following a word causes the drop of its corresponding affix (20).

**Argument Structure.** The early speaker of Hindi does not rely on their understanding of the internal structure of verbal predicates to mark ergativity correctly. Whether or not the ergative-absolutive marking is available depends on the presence of certain grammatical features (11), semantics (12), and optionality (13), but only to a lesser extent on the internal division of arguments. (Note that optionality is also less predictable than the other two criteria, as discussed in the appropriate sections on Grammatical Split and Semantics.)

Examples in the previous section demonstrated that even if there are differences based on the S argument type (i.e., unergative or unaccusative), semantics can override their (in)eligibility to get the ergative case-marking (14). For these reasons, the mastery of argument structure is not considered critical for the purposes of this study.

In Ch'ol, the argument structure of verbal predicates seems a lot more crucial to the correct production of the ergative-absolutive alignment. This is particularly obvious in intransitive constructions, where the alignment depends on which of the intransitive categories (i.e., unergative or unaccusative) the verb in question falls under (22). Here the early learner must recognise that not all S arguments are equal and that they pattern differently based on the type of intransitive verb they associate it. The mastery of this skill is crucial for the correct assignment of the ergative-absolutive marking in Ch'ol.

**Grammatical Split.** In Hindi, the early learner needs to realise that the grammatical context of the verb is crucial to the appropriate use of the ergative-absolutive marking. Recall that only once the necessary conditions of past tense and perfective aspect are fulfilled can the speaker move on to considering incorporating overt marking of the ergative-absolutive alignment (11). This means that the early learner must not only grow sensitive to the fact that the ergative-absolutive alignment in Hindi is conditioned by the presence of these factors but also develop a command of both tense and aspect per se to assign it appropriately.

The early learner of Ch'ol, however, does not face the same circumstances. While it is true

that the ergative-absolutive alignment only occurs in perfective constructions (23) and not in non-perfective ones (24), it is also the case that the only verb form the early speaker ever detects in speech will always be perfective. This is because the non-perfective verb forms adhering to the nominative-accusative alignment exhibit consistent nominalisation-like behaviour (e.g., when combined with determinants (26) or classifiers (27)), strengthening the gap between them and actual verbal constructions, reinforcing the possibility of an independent consideration for each.

**Semantics.** Semantics plays a big role in the ultimate assignment of the ergative case in Hindi. The early learner will come across identical lexical entries for verbs, some accompanied by marked and some by unmarked arguments (14). They must figure out that this distinction depends on extra-grammatical influences such as intention: Did John simply happen to cough because his throat is sore or did he cough on purpose to attract Mary's attention? The early learner must be able to navigate cues that hinge upon factors beyond what grammar has the tools to explain before they fully master the ergative-absolutive landscape of Hindi.

In Ch'ol, semantics serves as a complementary rather than supplementary aspect to grammar in expressing the ergative-absolutive alignment. It is mostly only relevant in intransitive contexts, where the speaker has a choice of aligning the singular argument one way or another (22). Is there an action being performed by an active agent or is an event happening to a passive experiencer? In that sense, semantics assists—but does not lead—the process of correctly distinguishing between the two available intransitive syntactic structures.

**Arbitrariness.** Assuming that child-directed speech at least partially reflects the patterns outlined in the above sections (e.g., Narasimhan et al., 2005), the early learner of Hindi is looking at a great variance in input. In addition to the grammatical split based on tense and aspect (11) and the semantic split based on the level of agency of the considered argument (14), the language also allows speakers the freedom to choose whether or not to use markings. The proportion of input illustrative of the textbook ergative-absolutive marking is therefore limited compared to the number of all applicable contexts, heightening the barrier to pattern extraction.

In Ch'ol, on the other hand, the ergative alignment is overtly reflected in morphology with every occurrence of a verbal construction. Without the ergative-absolutive marking, the verbs feel simply unfinished. (Imagine an English speaker says *John gave Mary.* Most comprehenders would immediately think: 'John gave Mary *what*?' They would not dismiss the construction as ungrammatical but find it incomplete and demand that the speaker deliver the missing argument. This is very close to what unmarked or partially marked verbs to a Ch'ol speaker must feel like.) It is not possible to opt out of the marking as easily and unmarked input is thereby ruled out.

**Summary Table.** Table 4 offers a condensed summary of all the features that need to be mastered for an early learner to correctly assign the ergative-absolutive alignment in the analysed languages. In summary of what has been described in greater detail above, some features are clearly present (marked 'yes') or clearly absent (marked 'no'), but sometimes a feature may also serve as a peripheral contributing factor rather than being determinant in assigning the ergative-absolutive alignment (marked '∼').

Table 4: Relevance of specific properties to the expression of ergativity in Hindi and Ch'ol.

| | **morphology (verbs)** | **morphology (arguments)** | **argument structure** | **grammatical split** | **semantics** | **arbitrariness of input** |
|---|---|---|---|---|---|---|
| Hindi | ∼ | yes | ∼ | yes | yes | yes |
| Ch'ol | yes | no | yes | no | ∼ | no |

## V The Acquisitionist Perspectives

Even though the academic community may know little about the acquisition of ergativity per se, there exist findings on various aspects of early language acquisition. By breaking down the ergative systems into smaller pieces, this study aims to connect these pieces to existing literature, the results of which may thus become relevant despite drawing data from language with nominative-accusative alignment. The following subsections proceed to attempt to embed the more nuanced aspects identified in the previous sections in the wider context of acquisitions literature.

**Verbal Morphology.** Hindi does have complex verbal morphology related to the ergative-absolutive alignment. The verb changes its agreement depending on which of the arguments remains unmarked (typically A in nominative-accusative constructions and optionally O in ergative-absolutive constructions). However, recall that this distinction is not a separate phenomenon but rather depends on the behaviour of DOM in a particular construction. Therefore, the acquisition of verbal morphology is not a self-governing process but rather a result of the mastery of DOM acquisition discussed in a more appropriate section on argument morphology below.

In Ch'ol, on the other hand, the acquisition of verbal morphology is key to the correct expression of the ergative-absolutive alignment. However, the crucial morphology for the phenomenon in question is also relatively simple: recall that it consists of two sets of affixes, three morphemes each (see Table 2 for reference). These morphemes do not change across any grammatical contexts and are used consistently, which indicates one-to-one feature-to-morpheme mapping and allows the early learner to extract the correct patterns quicker than in languages with more complex morphemes (Austin, 2010).

Furthermore, Ch'ol alignment morphemes vary only by grammatical person. Even in languages which encode both person and number, the early learner typically acquires the correct morphemes by age two (e.g., Doukas and Marinis, 2012). When errors occur, they often involve replacing first- or second-person morphology with third-person morphology, which has commonly simpler (or absent) marking (e.g., Doukas and Marinis, 2012). In Ch'ol, however, the marking is equally complex for all persons and no distinction in number is necessary (or available), implying no obstacle for the early learner to acquire the correct use of verbal morphology very early.

**Argument Morphology.** Recall that argument morphology is crucial to the correct ergative-absolutive marking in Hindi. Note that, often due to their transparent concept-to-world mapping, nominal arguments enter the process of language acquisition in an advantageous position (e.g., Gentner and Boroditsky, 2001; McDonough et al., 2011). Some researchers might argue that the Noun Advantage is a feature of 'noun-friendly' languages (i.e., languages favouring nouns in the input, such as English and French), but cross-linguistic evidence suggests that early learners of 'verb-friendly' languages (i.e., languages favouring verbs, such as Hindi and Inuktitut) likewise attend to nouns more robustly than to verbs (Waxman et al., 2013). This suggests that the early learner might also be preferentially interested in parts of speech that complement nouns such as case-marking.

In that sense, it would be reasonable to predict that the early speaker of Hindi begins to master the argument marking system among their initial language acquisition milestones. However, the ergative-absolutive marking in Hindi also includes O arguments, which happen to be targets of DOM. Recall that in Hindi, animacy necessarily triggers and definiteness promotes DOM on O arguments (Montaut, 2018, p. 284). Turkish has a similar system, where definiteness triggers and animacy strongly promotes DOM (Krause and von Heusinger, 2019). This system is quite complex to the early learner: although the first instances of DOM occur as early as three years old, early learners do not equal adult-like proficiency until age six (Coskun Kunduz and Montrul, 2022, p. 614). This suggests that the acquisition of DOM in Hindi might also come rather late.

Even though the early learner of Ch'ol has no argument morphology to learn, they need to understand that post-verbal arguments come in a particular order (object-subject rather than subject-object). This is primarily because the earlier sections of this study showed that some arguments coming immediately after verbs may replace the immediately preceding verbal morpheme they are representing.

The first sensitivity to word order is developed as early as seven to eight months of age (de la Cruz-Pavía and Marino and Judit Gervain, 2021). However, this sensitivity is usually for how the arguments are positioned in relation to the verb rather than how individual argument types are positioned in relation to each other. Research on this topic is rather scarce, mostly because the vast majority of the world's languages place subjects before objects and the object-before-subject order is only demonstrated by less than 3% of the world's languages (Dryer, 2013). Nevertheless, results from preferential-looking studies involving subject *wh*-questions (e.g., *What hit the X?*) and object *wh*-questions (e.g., *What did the X hit?*) indicate that by the age of fifteen months, early learners are able to correctly tell apart objects from subjects and are sensitive to their place in a sentence (Seidl et al., 2003).

Furthermore, there is one more factor that aids the early learner in the acquisition of the correct marking: mutual exclusivity of the suffix and the argument. In other words, if a verb has a suffix referring to an argument, the argument is absent, and if a verb has an explicit argument, the suffix is absent. This allows the early learner to employ distributional learning, a skill that helps them acquire morphemes based on mutual dependency, which is available as early as the age of two (e.g., Scott and Fisher, 2009).

**Argument Structure.** The nuances of argument structures in Hindi are indicative but not determinative for the correct assignment of ergative-absolutive alignment. Earlier in this study, examples have been shown where the ergative case-marking occurs not only on A arguments but also on both kinds of S arguments (i.e., on arguments of both unergative and unaccusative verbs). This indicates that a deep understanding of the argument structure might not be essential for the early learner to understand and use ergative case-marking productively—at least not more than other aspects of language acquisition per se.

In Ch'ol, however, the early learner relies on a profound awareness of the argument structure of intransitive verbs to accurately execute alignment due to its distinctive treatment of the arguments of unergative and unaccusative verbs. In some early research, possible delays have been suggested in distinguishing the two types of S arguments, as this distinction requires mastery of the same type of movement (i.e., movement into the argument position) as the infamous late-acquired passive constructions (e.g., Borer and Wexler, 1987, Babyonyshev et al., 2001).

This analysis has two responses. First, in order for the movement into the argument position to be problematic, there would have to be a movement into the argument position to begin with. This is not a universal characteristic of language, and Mayan languages are particularly known for not always featuring this movement (Coon, 2013). Ch'ol, in particular, does not offer this option, either (Coon, 2013, p. 47). This is demonstrated by the fact that there is no designated S argument position for intransitive clauses nor a shift in the position of O arguments between transitive and passive constructions (Coon, 2013, p. 47–48).

Second, prevalent evidence has shown that the connection between the movement into the argument position and the unergative-unaccusative distinction per se might be flawed, as the unergative-unaccusative distinction is a rather early phenomenon. For example, early learners of Romance languages had been using the correct auxiliaries for unergative and unaccusative intransitive structures with overwhelming mastery well before the age of three (Snyder et al., 1995) and early learners of English sometimes make the error of producing verb-subject order with unaccusatives but never with unergatives (Déprez and Pierce, 1993; for more examples see Costa and Fried-

mann, 2012). This evidence reasonably suggests similar, early timelines for Ch'ol.

**Grammatical Split.** Recall that the ergative-absolutive alignment in Hindi is conditioned by both the past tense and the perfective aspect. This means that an early learner must be able to place an event on the timeline (*John is running* versus *John was running*) as well as determine its completion status (*John is running* versus *John has run*). The acquisition of tense requires that the speaker is able to distinguish between the past, the present, and the future, while aspect is more complex.

Consider the following constructions: *John has run* and *John has arrived*. They both share grammatical tense (present) and grammatical aspect (perfective), yet they do not feel quite the same. This is because, in addition to grammatical aspect, verbs also have so-called 'lexical aspect' (also known as 'Aktionsart'), which categorises verbs by their inherent (rather than grammatically expressed) features. The details of these classifications vary slightly depending on whom one asks (e.g., Comrie, 1976; Moens and Steedman, 1988; Vendler, 1957), but most define verbs in terms of state (i.e., the stability or dynamism of an event), telicity (i.e., the existence or the absence of an event's natural endpoint), and duration (i.e., the continuity versus discontinuity of an event over time).

Crucially, the early learner seems to have a very well-calibrated sensitivity for these inherent features of verbs, which later interferes with their mastery of grammatical aspect (Martinot et al., 2003). In other words, the early learner tends to confuse (typically marked) grammatical aspect for (typically unmarked) lexical aspect and overproduce certain types of verbs (by their lexical aspect) with a certain type of grammatical aspect marking.

The situation becomes even more complex upon the introduction of tense marking: not only do early learners now struggle to separate lexical aspect from grammatical aspect marking but also grammatical aspect from (past) tense marking (Wagner, 2012, p. 471). Although most early learners overcome this battle by the age of three Wagner, 2012, p. 468, it remains a challenging stage of language acquisition which can reasonably lead to delays in the correct assignment of the ergative-absolutive alignment in Hindi.

As established earlier, the early learner of Ch'ol does not need to worry about grammatical splits at all. Granted, the verbs in Ch'ol only follow the ergative-absolutive alignment when in perfective construction, but Ch'ol does not have any other kind of verbs beyond perfective—all remaining aspects turn into nationalisations instead. Therefore, in order to not overgeneralise the ergative-absolutive alignment, the early learner needs to be able to tell the difference between verbs and nouns.

The process of word-class acquisition has likewise been well studied. In order to distinguish word classes, the early learner needs to know how to categorise in general (Stoll, Sabine, 2023). This skill is mastered very early on, before the onset of speech: by the age of twelve months, early learners are already showing preferential listening to novel strings corresponding to category patterns previously extracted from a testing artificial language (Gómez and Lakusta, 2004).

Likewise, verbs (and hence also the ergative-absolutive alignment) always co-occur with the perfective marker in Ch'ol. This is of great help to the early learner, as they are able to employ the previously mentioned distributional learning available to them at around two years old (e.g., Scott and Fisher, 2009). Given these findings, one would expect that the early learner is capable of distinguishing when to appropriately apply the ergative-absolutive marking from very early on, possibly before producing their first speech in general.

**Semantics.** In Hindi, one can observe two semantic-pragmatic features influencing the assignment of the ergative-absolutive alignment. First, there is intentionality. In general, it is believed that early learners have access to quite fine-grained understanding of intentions. Despite their still developing theory of mind, they are able to verbalise the beliefs and intentions of others by age three

Bartsch and Wellman (1989). In fact, already at eighteen months old, early learners showed to preferentially imitate intentional but not accidental actions (Olineck and Poulin-Dubois, 2005). Unfortunately, what authors of these intentionality-related studies tend to admit is that there are various kinds of intentionality (Bloom, 2000), and it is not always clear which type is the most relevant for language development (or an aspect thereof), making it hard to draw conclusive predictions.

However, there is one more semantic-pragmatic force impacting the acquisition of ergativity in Hindi: expressive prosody. Early learners become sensitive to language stress and prosody very early (e.g., Höhle et al., 2009). However, studies suggest that even though they start producing expressive prosody relatively early, they only master the skill around age eight (Chen, 2011). These errors are particularly pronounced in complex sentences (Pronina et al., 2021). Given that emphasis plays a role in (especially optional) case-marking in Hindi, this late acquisition of expressive prosody could reflect on the assignment of the ergative-absolutive alignment as well, delaying its acquisition.

Apart from features on the syntax-semantic interface (particularly theta roles related to the unergative versus unaccusative distinction described earlier), the early learner of Ch'ol does not encounter many semantics-related obstacles on their journey of alignment acquisition. There is not much to slow down the process and the early learner would be expected to master the semantics needed for the assignment of the ergative-absolutive alignment without major difficulties.

**Arbitrariness of Input.** Finally, much like most phenomena across human language, the ergative-absolutive alignment is essentially a pattern like any other. In Hindi, this pattern faces three splits: grammatical, semantic, and also optionality on top of it. This means that the ultimate input an early speaker receives is far from consistent. The eventual mastery of the alignment suggests that the input is sufficient for what an early speaker needs to adopt a pattern (for more detail see Yang, 2006), but delays due to the amount of variation are to be expected (e.g., Shukla et al., 2022).

Given its strict internal, grammatical (rather than external, semantic-pragmatic) conditioning of the ergative-absolutive pattern, Ch'ol allows for little variation in the sense of language produced. What may, however, slow down acquisition in Ch'ol is the fact that most of the early speakers grow up in bilingual environments. A similar case has been observed, for example, in bilingual Basque-Spanish early learners who struggled to acquire verbal inflection (incl. the ergative alignment) compared to their Basque-speaking monolingual peers (Austin, 2009).

It has been argued that this delay is a result of comparatively limited exposure in each language (i.e., early learners acquiring less input in both Basque and Spanish) rather than the cross-linguistic influence of Spanish on Basque (i.e., Spanish patterns interfering those of Basque) (Austin, 2009; see also Meisel, 2006). Evidence for this claim includes the claim that delay caused by cross-linguistic influence would result in inflectional errors from one language to another, a pattern not observed in the data (Austin, 2009, Gathercole, 2007). That said, in order for the delay to reproduce in Ch'ol, the early learner would have to experience similar exposure to both Ch'ol and Spanish. In other words, they would have to grow up in a simultaneous rather than successive multilingual environment.

Although it used to be the case that Ch'ol-speaking early learners were raised as successive bilinguals with a late age of onset of Spanish at around age nine (Coon, 2004, p. 14), more recent data suggests that even in more isolated communities, the early learners are most often raised as simultaneous Spanish-Ch'ol bilinguals and only rarely as monolinguals (Rodríguez, 2016, p. 282). This suggests that the environment is similar to that of Basque-Spanish early learners with delayed acquisition of verbal morphology, and it is hence reasonable to expect a similar pattern in Ch'ol.

**(Another) Summary Table.** Table 5 summarises the exact same features as Table 4, except from the acquisitionist (rather than grammatical) point of view. Based on the compilation of evidence from various languages and perspectives, Table 5 makes predictions on the timelines of development of individual features constituting the ergative systems of Hindi and Ch'ol (relative to each other). Some features (marked 'N/A') lack a concrete verdict due to unobvious, hardly quantifiable contributions to the mastery of the ergative-absolutive alignment (notice the correlation of 'N/A' and '∼' in Table 5).

Table 5: Prediction of acquisition periods of individual features in Hindi and Ch'ol.

| | **morphology (verbs)** | **morphology (arguments)** | **argument structure** | **grammatical split** | **semantics** | **arbitrariness of input** |
|---|---|---|---|---|---|---|
| Hindi | N/A | later | N/A | later | later | later |
| Ch'ol | early | early | early | early | N/A | later |

## VI Conclusions

**Choice of Examples.** A careful reader may have noticed that Hindi and Ch'ol were chosen for this study for a reason. These two languages, despite both following the ergative-absolutive alignment, represent two vastly different linguistic landscapes related to the phenomenon of ergativity. Hindi showcased complex argument marking (with a variable verbal morphology as a consequence), rather curious grammatical, semantic, and optional splits, complex semantic-pragmatic factors, and a lot of variety in data. Ch'ol, on the other hand, demonstrated a lot of consistent, grammatically conditioned patterns, variation of markedness in argument structure, and potential for external influences to its acquisition (particularly multilingualism).

**Outcomes.** As outlined in Table 5, on all (applicable) key features selected for this analysis, the ergative system in Hindi demonstrated at least as much (but most often more) complexity than its counterpart in Ch'ol. In the meantime, all (applicable) features of the ergative system in Ch'ol point towards early acquisition, despite a minor concern regarding the consistency of input. Based on this summary, this study concludes that early speakers of Ch'ol will make fewer errors in the marking of ergativity compared to the early learners of Hindi. In that sense, the mastery of the ergative system in Ch'ol is more likely to be early and that of Hindi rather late.

**What Comes Next.** This study demonstrated that the acquisition of ergativity is a collection of various detailed processes rather than a singular process. In that sense, it is more productive to comprehensively analyse the individual pieces and their interactions rather than the full entangled cluster in order to get a better idea of its place in language acquisition. This study showed an example list of such features in two dissected languages and their potential to place an ergative system on the timeline of language acquisition. This raises the question: And now what?

This approach opens the door for loads of potential research. For example, after a list of features places the acquisition of a particular ergative system on a timeline, then we can have a conversation consisting of questions such as: Which of these features influences acquisition the most? And, perhaps more importantly, what underlying factors contribute to this influence? Making predictions on the acquisition of ergativity based on its individual syntactic features also invites interesting conversations once experimental and corpus results from the appropriate early learner groups become available: Does real-world data align with the prediction? If not, why?

*The End.*

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## VII Abbreviations Used

| Glossing | Meaning |
|---|---|
| 1 | first (grammatical) person |
| 2 | second (grammatical) person |
| 3 | third (grammatical) person |
| A | external argument marker in Ch'ol |
| ABS | absolutive (case) |
| ACC | accusative (case) |
| ALL | allative (case) |
| AUX | auxiliary |
| B | internal argument marker in Ch'ol |
| BW | baby word |
| CL | classifier |
| CONT | continuous aspect |
| CSV | causative (case) |
| DET | determiner |
| ERG | ergative (case) |
| FEM | feminine (grammatical) gender |
| FUT | future tense |
| GEN | genitive (case) |
| HAB | habitual aspect |
| IMPF | imperfection aspect |
| ITV | intransitive verb marker |
| LOC | locative (case) |
| MASC | masculine (grammatical) gender |
| NOM | nominative (case) |
| NEG | negation |
| NML | nominalisation |
| PASS | passive voice |
| PAST | past tense |
| PFV | perfective aspect |
| PL | plural |
| PREP | prepositional marker |
| PRES | present tense |
| PROG | progressive aspect |
| SG | singular |
| SUB | subject |
| SUF | suffixal marker |
| TV | transitive verb marker |