

Split-S in Mazahua and the obligatory little- ν agreement

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In this work, I explore the Split-S Case/agreement system in Mazahua, a head-marking language where unergative (S_A) and transitive subjects (A) cross-reference the same set of agreement affixes in the verb, which differs from the one that cross-reference unaccusative subjects (S_P) and objects (P). Additionally, I account for the behaviour of a set of —traditionally called— "emphatic clitics", which show an agreement pattern based on a Person hierarchy constraint that is independent from the agreement mechanism that determines the appearance of verbal affixes. Following the core idea of the Unaccusative Hypothesis (Perlmutter 1978, Burzio 1986) —which proposes that unaccusative subjects are generated in a lower position than unergative subjects—, I propose that the split can be accounted for by proposing that unaccusative subjects in Mazahua do not receive nominative Case in TP —as argued for other languages (Chomsky 1981, 1995; Massam 1985; Sportiche 1988, among others)—, but are assigned accusative from v° *in situ*. This idea builds on Coon (2010, 2013, 2017), who proposes a generalization that requires v -heads to assign a single Case to their internal arguments in some languages. On the other hand, I propose that the emphatic clitics are the spell-out of a functional F-head linked to discourse topic and located in the vP Left-Periphery. This head establishes an Agree relation with the DP that bears the most highly specified π -features in their search domain. This occurs regardless of the DP's grammatical function, which causes an agreement *displacement* in some syntactic environments (Béjar and Rezac 2009).

1. Introduction

In this paper I provide an account for the agreement system in Mazahua, a language from the Oto-Pamean branch of the Oto-Manguean family, spoken in the Estado de México and Michoacán provinces in central Mexico. This language shows, on the one hand, a Split-S system in which intransitive subjects are divided in two groups depending on the verbal-agreement morpheme that they cross-reference: S_A subjects, which pattern like subjects of transitive predicates (A), and S_P subjects, which are marked as objects of transitive predicates (P) (Dixon 1994). On the other hand, Mazahua also presents a set of enclitics that are co-indexed with argumental DPs in the clause and are related to the information structure of the sentence.

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However, the selection of one enclitic or another does not depend on the grammatical function of these DPs or the position they occupy in the structure. Rather, they follow an agreement mechanism that is sensitive to a Person hierarchy.

I propose that the split system can be accounted for by the combination of two generalizations already proposed and argued for within syntactic theory. First, I follow the widely accepted idea that intransitive subjects can be base generated in two different positions: as a complement of lexical unaccusative verbs, and in the specifier position of unergative *v*-heads. This notion, known as the Unaccusative Hypothesis, was first proposed by Perlmutter (1978) and then restated by Burzio (1986) within the Government and Binding framework. Secondly, I build on Coon's (2010, 2013, 2017) account for split systems, and propose that all *v*-heads in Mazahua follow a generalization that requires them to enter into an Agree relation with their internal argument. Such relation results in the assignment of the same (accusative) Case to transitive objects, unergative (cognate) objects and unaccusative subjects equally, suggesting that this Case can be assigned without the presence of a θ -role marked subject (*contra* Burzio (1986)) This proposal, therefore, differs from some configurational approaches to Case that propose that accusative Case can only be assigned in the presence of another Case-marked nominal expression (Bobaljik 1993, Laka 1993).

The paper is organized as follows. In section 2 I present background on Mazahua, introducing first the verbal agreement system of the language and the split alignment present in intransitive clauses. Then, I describe the set of emphatic clitics that are subject to a Person hierarchy. In section 3 I briefly introduce the Unaccusative Hypothesis and Coon's generalization on *v*-heads before providing a proposal to account for the Split-S system in Mazahua. Section 4 focuses on describing in detail the derivation of Mazahua sentences, taking into account the order in which agreement relations and movement of elements in the clause occur. Section 5 is dedicated to providing an explanation for the agreement system shown by the emphatic clitics. Finally, in section 6 I outline the conclusions of the paper.

2. Background on Mazahua

2.1 Verbal agreement and Split-S

As other languages from the Oto-Manguean family, Mazahua is a VOS head-marking language that encodes agreement with arguments via morphemes attached to the verbal stem. Argumental

DPs, which are preferably *pro*-dropped, are not morphologically Case-marked (Bartholomew 1965; Knapp 2008, 2011; López Reynoso 2016; Mora-Bustos 2011; Stewart 1966; Vargas 2013). There are three different sets of person-agreement affixes that can appear attached to a verb: prefixes that cross-reference subjects of transitive (A) and unergative (S_A) verbs, suffixes that cross-reference transitive objects (P) and unaccusative subjects (S_P), and suffixes that cross-reference IOs in ditransitive constructions.

The affix that cross-references A and S_A is fused with a morpheme that encodes TAM information. This is illustrated in the examples below, where the relevant prefixes appear in bold letters. The unergative sentences in (1) show that subjects S_A are co-indexed with different prefixes depending on the Person value found in the subject pronoun. Examples in (2) show that different TAM values are also obtained by the insertion of a different prefix. Finally, (3) demonstrates that A subjects are cross-referenced with the same set of prefixes as S_A arguments (compare (1a-b) with (3a-b)), which are different from the morphemes that cross-reference (P) objects (compare the 1P prefix *rí-* in (3a) with the 1P suffix *-tse* in (3c)). Prefixes encoding TAM information and agreement with A/ S_A are henceforth referred in text as "Agr_T (T-agreement) morphemes". On the other hand, suffixes co-indexed with P arguments appear in text and in the glosses as Agr_v (*v*-agreement).¹ (Accent diacritics on vowels indicate lexical tone).

(1) *Unergatives*

- a. **rí-**β̀ìγ̀ì (ǹùtskɔ)
 1PRS-run I
 'I run'
- b. í-β̀ìγ̀ì (ǹùts'ke)
 2PRS-run You.SG
 'You.SG run'

¹ In this work, I avoid glossing the suffixes that cross-reference P and S_P as 'DO' (direct object), as previous work on the language has done (Bartholomew 1965; Knapp 2008, 2011; López Reynoso 2016; Mora-Bustos 2011; Stewart 1966; Vargas 2013). In the same way, I don't employ the traditional nomenclature "subject prefixes" and "object prefixes" used in this literature to refer to A/ S_A and P/ S_P agreement, respectively. This is meant to avoid confusion between the morphemes that cross-reference unergative subjects and the ones that cross-reference unaccusative subjects.

- c. \emptyset - $\beta\dot{\imath}\gamma\dot{\imath}$ (áŋgeze)
 3PRS-run S/he
 'S/he runs'

(2) *Unergatives*

- a. $r\acute{o}$ - $\beta\dot{\imath}\gamma\dot{\imath}$ (nùtskɔ)
 1PST-run I
 'I ran'

- b. $r\acute{a}$ - $\beta\dot{\imath}\gamma\dot{\imath}$ (nùtskɔ)
 1IRR-run I
 'I will run'

- c. $\dot{\imath}$ - $\beta\dot{\imath}\gamma\dot{\imath}$ (nùts'ke)
 2PST-run You.SG
 'You.SG ran'

- d. $r\dot{\imath}$ - $\beta\dot{\imath}\gamma\dot{\imath}$ (nùts'ke)
 2IRR-run You.SG
 'You.SG will run'

- e. δ - $\beta\dot{\imath}\gamma\dot{\imath}$ (áŋgeze)
 3PST-run S/he
 'S/he ran'

- f. $r\grave{a}$ - $\beta\dot{\imath}\gamma\dot{\imath}$ (áŋgeze)
 3IRR-run S/he
 'S/he will run'

(3) *Transitives*

- a. $r\acute{\imath}$ -nè-ts'e (nùts'ke)
 1PRS-love-2AGR_v you.SG
 'I love you'

- b. í-nè-tse (nùtskɔ)
 2PRS-love-1AGR_v I
 'You love me'
- c. ð-p^hě-tse nù = ndʒîni
 3PST-kicked-1AGR_v DET = bull
 'The bull kicked me'
- d. ð-p^hě-ts'e nù = ndʒîni
 3PST-kicked-2AGR_v DET = bull
 'The bull kicked you'

The examples in (3c-d) and (4) below show that the DOs of transitive constructions (P) are encoded with a set of morphemes that are suffixed to the verbal stem. Additionally, the sentences in (5) show that these Agr_v morphemes also appear cross-referencing subjects of unaccusative verbs (S_P). In this case, the TAM of the predicate is encoded via a third-person prefix that appears attached to the verbal stem. For instance, the distinction between Past Tense in (5a) and Irrealis Mood in (5b) is given by the insertion of a different prefix: *ó-* and *rá-*, respectively.

(4) *Transitives*

- a. rí-zeŋgwa-tʂi
 1PRS-greet-2AGR_v
 'I greet you'
- b. í-zeŋgwa-zi
 2PRS-greet-1AGR_v
 'You greet me'

(5) *Unaccusatives*

- a. ò-tõyi-zi
 3PST-faint-1AGR_v
 'I fainted'

- b. ò-tõyi-tsì
 3PST-faint-2AGR_v
 'You fainted'
- c. rá-tõyi-zì
 3IRR-faint-1AGR_v
 'I will faint'

The fact that subjects in sentences like (1-2) and subjects of predicates like (5) cross-reference different verbal-agreement morphemes shows that Mazahua presents a split-agreement system in intransitive clauses, which has been already identified in other languages of the same family like Amuzgo (Smith-Stark and Tapia García 2002), Chichimeco (Martínez 2014), Otomí (Palancar 2009, Hernández Green 2015) and Tlahuica (Martínez 2012), among others. Such system is known as Split-S or Split-Intransitivity in Dixon's (1994) terminology, but has been referred to with other nomenclature in the linguistics typology tradition (*active/inactive* in Sapir (1917), *active-neutral/active-stative* in Mithun (1991) and *agentive/patientive* in Kibrick (1985)). This type of split has been argued to be triggered by different factors across languages, but most coincide in that they involve semantic properties and relations that elements within *vP* hold (similarly to what occurs in Low Ergative systems (Legate 2017)). For instance, in Guaraní (Tupí-Guaraní), arguments cross-reference different agreement morphemes in the verb depending on the lexical aspect (*aktionsart*) of the event. Specifically, intransitive verbs that denote activities, accomplishments and achievements (following Vendler's (1957) typology) show agreement morphemes that are different from those that cross-reference arguments of state verbs (Mithun 1991). In Lakhota and Osage (Siouan), intransitive arguments that perform, instigate or control the event are marked differently than arguments that don't (Mithun 1991, Pustet 2002). On the other hand, the split system in Central Pomo (Pomoan) is argued to be related to the degree of affectedness of the internal argument (Mithun 1991). Finally, in Chol (Mayan), the semantic nature of the main verb seems to be the factor that determines how intransitive subjects are marked (Coon 2010, 2013, 2017).

In Mazahua, the different agreement marking in intransitive verbs seems to be also determined by the semantic nature of the verb —like in Chol. Several authors (Burzio 1986, Levin and Rappaport 1995, Perlmutter 1978, Van Valin 1990, among others) have argued that

intransitive verbs are not a homogeneous class, and that there exist a semantic and syntactic distinction between unergative and unaccusative predicates that shows certain regularity across languages. Perlmutter's (1978), for instance, argues that unergative predicates normally describe willed or volitional acts (like 'to work', 'to speak', 'to talk' or 'to run'), which include manner-of-speaking verbs (such as 'to whisper' or 'to shout') and sounds made by animals (like 'to bark'). On the other hand, unaccusative predicates express events where the only participant is semantically a Patient (such as 'to burn', 'to sink', 'to tremble', 'to boil' and inchoative verbs), non-voluntary emissions of secretions or stimuli that impinge on the senses (like 'to sweat', 'to smell' or 'to stink'). If we compare the verbs belonging to each of these groups of predicates with the Mazahua intransitive verbs in table 1, we see that the verbs identified as unaccusative by Perlmutter coincide with those verbs in Mazahua that receive the Agr_V mark. Conversely, the unergative verbs described above are the ones that show the Agr_T in this language.

Agr _T		Agr _V	
pèp ^h i	'to work'	sâta	'to burn'
ɲãʔã	'to talk'	ɲgíβi	'to sink'
βìyì	'to run'	mbìʔĩ	'to tremble'
ndʒòdɛ	'to walk'	k ^w étʃki	'to cramp'
ʔàp ^h i	'to scrape maguery'	mbàyì	'to turn red'
wǎmã	'to plow'	k'àyì	'to get wet'
ʃèp ^h e	'to harvest'	t'óʃki	'to turn white'
ʔwézi	'to embroider'	t'óyĩ	'to faint'
ɲòni	'to eat.INTR'	jǎyì	'to turn pale'
něme	'to dance'	ʔìyì	'to become rigid'
tóho	'to sing'	hòyì	'to recover/get better'
híʃi	'to whistle'	nóki	'to become bigger'
màp ^h i	'to shout'	pát'i	'to warm up'
p ^h əyə	'to bark'	mbìzi	'to get scared'
ʔóβi	'to dig'	jìdɛ	'to stink'
óp ^h i	'to write'	jórehe	'to sweat'

TABLE 1. VERBS THAT SHOW AGR_T AND AGR_V AGREEMENT IN MAZAHUA²

² Around sixty intransitive predicates (thirty for each, unaccusatives and unergatives) have been enlisted in previous work on the language (Knapp 2008, 2011; López Reynoso 2016; Vargas 2013). Among these, there are two small

Additional evidence that supports the idea that verbs receiving the Agr_T morpheme are unergative and those receiving the Agr_V mark are unaccusative comes from their different syntactic behaviour in resultative constructions. Building on Simpson (1983), Levin and Rappaport (1995) observe that these constructions may be predicated of unaccusative, but not of unergative arguments. As shown in the examples below, this is, in fact, what occurs in Mazahua intransitive predicates. The examples in (6a-b) show that unaccusative verbs can be combined with a stative suffix, giving as a result a resultative construction. However, this is not possible in unergative constructions, as confirmed by the ungrammaticality in (6d).

(6)

- a. ò-ηgíβ-γi
3PST-sink-1AGR_V
'I sank'
- b. ò-ηgíβ-γi-zi
3PST-sink-1AGR_V-ST
'I am sunk'/'I am completely sunk'
- c. ró-màp^hĩ
1PST-sing
'I sang'
- d. *ró-màp^hĩ-zi
1PST-sing-ST
'I sang'

The last set of verbal agreement morphemes, which cross-reference IOs, are exemplified in the examples below. As seen in (7), these morphemes differ from the Agr_V suffixes introduced above in (4) and (5). Moreover, in Mazahua ditransitive constructions, 1st and 2nd person DOs are not possible, as shown by the ungrammaticality of (7c) (Bartholomew 1965; Knapp 2008, 2011; López Reynoso 2016; Stewart 1966; Vargas 2013). This could be due to the existence of a single

group of verbs that seem to constitute an exception to the division presented in Table 1. On the one hand, the commonly assumed unaccusative verbs *ndũʔũ* 'to die', *sòj'e* 'to get sick', *têʔe* 'to grow up' and *tsinti* 'to drown' show S_A agreement, instead of cross-reference S_P arguments, as expected. On the other hand, the verbs *hèse* 'to stumble', *jô/ki* 'to slip' and *nĩyi* 'to fall down' can present either the S_A or the S_P agreement morphemes, being a clear example of a Fluid-S pattern (Dixon 1994). I leave the analysis of the four exceptions to the unaccusative/unergative split and the three fluid verbs for future research.

morphological slot for verbal suffixes, or to a Person-Case Constraint that bars 1st and 2nd person in the presence of a 3rd person IO (Bonet 1991, 1994; Perlmutter 1971).

(7)

- a. ró-dá-ø-k'i nù = uene
 1PST-give-3AGR_v-2IO DET = baby
 'I gave you the baby'
- b. ró-nʒo-ø-p'i nù = mběʔě nù = Alondra
 1PST-hand.over-3AGR_v-3IO DET = thief DET = Alondra
 'I handed over the thief to Alondra'
- c. *ò-nʒo[-yí/-ts'i]-p'i nù = Alondra
 3PST-hand.over[-1/-2AGR_v]-3IO DET = Alondra
 'S/he handed [me/you] over to Alondra'

These IO morphemes have an applicative function since they can introduce new DPs as arguments. For instance, the transitive verb in (8a) contains two arguments and one PP adjunct with a first person pronoun. In (8b), this pronoun can be introduced as an argument by attaching the IO suffix to the verb and deleting the preposition.

(8)

- a. ò-pǎʔo-ø ín-tá kò = nùtskò
 3PST-sell-3AGR_v 1POSS-father with = I
 'Lit. My father sold it with me'
- b. ò-pǎ-ø-ki ín-tá (nùtskò)
 3PST-sell-3AGR_v-1IO 1POSS-father I
 'My father sold it to me'

Before proceeding to the next subsection, I provide a summary of the morphemes introduced until now. Table 2 below presents a simplified version of the Agr_T prefix paradigm.³ Tone in

³ Although Mazahua has an extensive TAM morpheme paradigm, some aspectual distinctions are not longer found in certain dialects (especially the ones spoken in the Temascalcingo municipality in the western part of Estado de México), and their use varies across the East, Center and South regions of the same province and the sole dialect of Michoacán. For this reason, examples in this work are limited to show the four TAM distinctions that are still found among all dialects: Present, Past Perfective and Irrealis (Future). For a more complete TAM morpheme paradigm, refer to Vargas (2013) for Central (Estado de México) Mazahua and to López Reynoso (2016) for Michoacán Mazahua.

these prefixes is phonemic, and it is independent from the one that appears in the verbal stem to which the prefixes attach. As I will argue in section 3, the phonological independence of the prefix⁴ will be important for its linearization at the end of the syntactic derivation, especially when comparing it to affixes that attach to the right of the stem and that have no underlying tone.

	PRS	PST	IRR
1	rí-	ró-	rá-
2	í-	ì-	rì-
3	∅	ò-	rà-

TABLE 2. AGR_T MORPHEMES PARADIGM

Unlike Agr_T morphemes, which are spelled out with a single morph each (i. e. they have a single phonological realization), the Agr_V and IO suffixes show a complex phonology-based allomorphy that depends on the phonetic segments of the verbal root.⁵ Table 3 shows the whole paradigm for these suffixes, including the underlying representations of each morpheme and their possible allomorphs. A more detailed description of the environments in which each of them appears is included in the Appendix.

	1	2	3
DO/Sp	/-yV/ -k ^h V -kV -zV -tsV	/-k'V/ -ts'V	∅
IO	/-kV/ -ŋgV -zV -tsV	/-ʔk'V/ -kV -ʔts'V	/-pV/ -mbV -p'V -p ^h V

TABLE 3. AGR_V AND IO MORPHEMES PARADIGM

2.2 *Emphatic clitics*

There is a set of morphemes, known as *emphatic clitics* in previous descriptive work on the language, which can be optionally cliticized to the right of the verbal base (after the Agr_V or IO suffix) (Knapp 2008, 2011; López Reynoso 2016; Mora-Bustos 2011; Vargas 2013). These

⁴ Stewart (1966) and some subsequent work in the language (Knapp 2008, 2011, and Vargas 2016) refer to these morphemes as proclitics rather than prefixes, which might be related to the phonological independence that they have with respect to the stem. In fact, in Otomí (the closest related language to Mazahua), similar Tense morphemes can appear between the verbal stem and other aspectual morphemes (Palancar 2009, Hernández-Green 2015). While it can be clearly argued that these morphemes are clitics in Otomí, none of the work on Mazahua has provided clear evidence in favor of considering them clitics —rather than affixes— in this language.

⁵ Verbal stems in Mazahua are mostly disyllabic words conformed of a root (first syllable) and a formative whose nucleus is harmonic to the vowel in the root. The formative can be optionally dropped when attaching a phonologically-overt suffix. Conversely, the formative is pronounced in contexts when the phonologically-null third-person Agr_V suffix or an enclitic is attached.

enclitics are co-indexed with a single argument in the clause and have been described as elements that add an emphatic reading to the argument with which they establish an agreement relation. However, they can't cross-reference any DP in the structure. Rather, they are subject to a Person hierarchy constraint that requires them to Agree with a DP that possesses certain π -features, regardless of whether it is a subject or an object. The hierarchy that is followed by the constraint places 1st person over 2nd person and 2nd person over 3rd person in a prominence scale. The enclitic can then only be co-indexed with a 1st person if there is a 1st person argument in the clause, as seen in (9a-b), or with a 2nd if the only arguments in the clause are 2nd and 3rd, as shown in (9c). There is no emphatic enclitic for the third person.

(9)

- | | | | |
|----|-----------------------------|-----------------------------|-----------------------|
| a. | rí-nè-ts' | =kɔ/*ke | (nùts'k'e) |
| | 1PRS-love-2AGR _v | = 1EMPH/2EMPH | you.SG |
| | 'I love you' | | |
| | | | |
| b. | í-nè-z | =ɣɔ/*ɣe | (nùtskɔ) |
| | 2PRS-love-1AGR _v | = 1EMPH/2EMPH | I |
| | 'You love me' | | |
| | | | |
| c. | (ángeze) | ø-nè-ts' | =ɣe (nùts'k'e) |
| | He | 3PRS-love-2AGR _v | = 2EMPH you.SG |
| | 'He loves you' | | |

An interesting fact about these enclitics is that they can (and should if in the right environment) cross-reference IOs. However, as discussed in section 5 below, the agreement relation established by the clitic is very local and restricted to arguments. In other words, oblique phrases containing arguments with a 1st or 2nd π -value can't be co-indexed with the emphatic clitic. This is demonstrated in the examples below. In (10a), the emphatic clitic =ɣɔ is co-indexed with the 1st person pronoun *nùtskɔ* introduced as an argument by the applicative suffix *-ki*. However, the clitic cannot appear in (10b), where the 1st person appears within a PP as an adjunct. More characteristics about the emphatic clitic are discussed in section 5.

(10)

- a. ò-pǎ-ø-ki(= γ_i) ín-tá nùtsk_i
3PST-sell-3AGR_v-1IO = 1EMPH 1POSS-father I
'My father sold it to me'
- b. ò-pǎʔ_o-ø(* = γ_i) ín-tá kò = nùtsk_i
3PST-sell-3AGR_v = 1EMPH 1POSS-father with = I
'Lit. My father sold it with me'

As a summary of this section, Mazahua presents three different sets of Person-agreement verbal affixes and one of enclitics. The first set is conformed of portmanteau prefixes that encode TAM information and π -features that cross-reference A and S_A subjects. The second and third sets are suffixes co-indexed with P/S_P arguments and with IOs, respectively. IO suffixes are applicative morphemes that introduce arguments to the predicate. Finally, the enclitics establish an agreement relation, not with DPs having a particular grammatical function, but with the argumental DP that satisfies a specific π -features requirement. The next section is focused on providing an account for the Agree system shown in the verbal suffixes.

3. Case and Agreement in Mazahua Split-S

3.1 Assigning accusative to internal arguments

Any account for the agreement system in Mazahua has to be able to explain the fact that the agreement with external arguments (A and S_A) in this language is related to T—as it is always fused with the TAM morpheme—, while agreement with internal arguments (S_P and P) is related to a different (lower) head, say v . In this section, I provide an account for these facts based on two premises. One is related to the position where arguments are merged in the structure, while the other regards assignment of Case and Agree relations. First, I assume that intransitive subjects can be base-generated in two different positions, depending on whether the verb that introduces them is unergative or unaccusative. This idea was first introduced under the name of Unaccusative Hypothesis, proposed by Perlmutter (1978) and then restated by Burzio (1986) within the GB theory. I take these two positions to be Spec v P for unergative subjects, and the complement of V for unaccusative subjects. This is in accordance to the VP-Internal Subject Hypothesis, according to which all subjects are base-generated within v P (Koopman and Sportiche 1991, Levin and Rappaport 1995, Sportiche 1998, Zagana 1982).

Secondly, I build on a generalization proposed by Coon (2010, 2013, 2017) to account for a split system found in Chol, a Mayan language where unergative and antipassive subjects show ergative Case, while unaccusative and passive subjects show absolutive. Coon (2010) observes that, in this language, stems can only be inflected as verbs if they combine with a DP complement (p. 63). Notice, for example, that the unergative and antipassive sentences in (11) are conformed of a verb *cha'l* 'to do' that takes as a complement a noun and a nominalized verb, respectively, and assigns ergative Case to the subject. On the other hand, in unaccusative and passive sentences (12), the single argument of the verb —traditionally assumed to be base-generated as a complement position of V— is marked with absolutive Case.

(11) Unergatives and antipassives

a. Tyi **a-cha'l-e** k'ay
 PFV 2ERG-do-DTV song
 'You sang'

b. Tyi **a-cha'l-e** wuts'oñ-el
 PFV 2ERG-do-DTV wash-APASS-NMLZ
 'You washed'

(Coon 2013: 22)

(12) Unaccusatives and passives

a. Tyi **jul-i-yety**
 PFV arrive.here-ITV-2ABS
 'You arrived here'

b. Tyi **mejk'-i-yety**
 PFV hug.PASS-ITV-2ABS
 'You were hugged'

(Coon 2013: 22)

To account for this, Coon argues that all verbs in Chol possess an internal argument, an idea that has been independently argued (Hale and Keyser 1993, Roberge 2003, Cummins and Roberge 2004) and empirically motivated (Larjavaara 2000). Additionally, she proposes that Chol's *v*-heads follow the generalization stated in (13), which requires all light *v* heads (intransitive and transitive) to mark their internal argument with a single case. This generalization shares some similarities with the idea that languages need a particular Case to be obligatorily assigned in all

sentences (Levin and Massam 1985), later known as the *Obligatory Case Parameter* (Bobaljik 1993, Laka 1993).

(13) *Chol Little v° Generalization* (Coon 2010)

- a. All internal arguments must be assigned (absolutive) case by a v° head.
- b. All v° heads must assign absolutive case to an internal argument.

The generalization in (13) accounts for the Case-marking mechanism of languages like Chol, whose main morphosyntactic alignment can be argued to be ergative-absolutive. However, the situation of Mazahua is quite different, as it has been considered to be a nominative-accusative language by previous descriptive work (Knapp 2008, 2011; López Reynoso 2016; Vargas 2013). This assumption, in fact, has also been made for other languages belonging to the Oto-Pamean branch of the Oto-Manguean family, which have been described as having a nominative-accusative Case system with a split in intransitive clauses (see Hernández-Green 2015, and Palancar 2009 for Otomí; Martínez 2012 for Tlahuica, and Martínez 2014 for Chichimeco).

The assumption that Mazahua is an accusative language that presents a split—rather than considering the Split-S itself an alignment— carries some problems which are discussed below. Regardless of this, there are some facts that lead to conclude that Mazahua is not an ergative-absolutive language, and that the Cases that are assigned to arguments in this language are, in fact, nominative and accusative. For instance, it has been argued that syntactic ergative languages allow only arguments marked with absolutive—but not ergative— Case to undergo A'-movement (Aldridge 2004, 2005, 2007). This means that, in a transitive construction, the only element that can be A'-moved is the internal argument. Mazahua, however, doesn't behave like these languages, since external arguments of transitive constructions can be relativized, as shown in (14).

(14)

- a.

ò-sìhi-ø	nù = sǔŋgopi	nù = 6ězo
3PST-bring-3AGR _v	DET = hen	DET = man
'The man brought the hen'		

- b.

nù = 6ězo	kĩ	ò-sìhi-ø	nù = sǔŋgopi
DET = man	REL	3PST-bring-3AGR _v	DET = hen
'The man who brought the hen'			

Some work on ergative systems have also argued that ergative Case is inherently assigned to external arguments having an agent θ -role by the v -head (Legate 2006, 2012; Massam 2006, Woolford 2006). This would present a problem for the data introduced until now since the agreement controlled by the external argument in Mazahua seems to be related to T rather than v . This relation between A/S_A agreement and Tense can, however, be captured by assuming instead that Mazahua is a nominative-accusative language where external arguments receive nominative Case from T, something that has been widely argued in Case theory (Aldridge 2007, 2008; Chomsky 1981, 1995; Massam 1985; Sportiche 1988; Zagana 1982, among others). Such analysis would require, of course, proposing that internal arguments of transitive and unaccusative verbs receive accusative Case from a lower head, say v . This scenario seems to contradict the assumption that accusative Case can't be assigned in unaccusative predicates. This idea, known as the *Burzio's Generalization*, states that only verbs that assign a θ -role to the argument in the subject position (Spec v P) can assign accusative Case to an object (Burzio 1986). Unaccusative predicates, therefore, wouldn't be able to assign Case as no θ -role is assigned to any external argument.

Although *Burzio's Generalization* seems to be supported by data from different nominative-accusative languages, there is also evidence that it is not consistent in every syntactic context. For instance, Bresnan and Moshi (1990) observe that, when a double object construction is passivized in Kishaga (Bantu) and one of the objects is promoted as subject, the non-promoted object still receives accusative Case, even though the promoted argument moves to a non-thematic subject position. Marantz (2000) also shows that there are raising contexts in English where accusative Case seems to be assigned to the object even when the subject position of the sentence is non-thematic, as in (15).

(15)

- a. It struck **me** that I should have used "Elmer" in this sentence.
- b. There struck **me** as being too many examples in his paper. (Marantz 2000: 17)

The characteristics discussed above suggest that nominative and accusative are the Cases that are assigned by functional heads to arguments in Mazahua Split-S system. Therefore, a generalization about the requirements of v -heads regarding Case-assignment in this language would have to require v to assign accusative Case —instead of absolutive— to their internal arguments. Furthermore, since DPs in Mazahua are not morphologically Case-marked but cross-

reference verbal agreement morphemes, the relevant modification to (13) would have to be specific about how and with which argument v -heads establish an Agree relation. This is, the correct generalization for Mazahua would require all v -heads to Agree with their internal arguments and vice-versa, as stated in (16).

(16) *Mazahua Little v° Generalization*

- a. All internal arguments must establish an Agree relation with a v -head and must be assigned (accusative) Case by it.
- b. All v -heads must Agree with and assign (accusative) Case to their internal argument.

The generalization in (16) does not only suggest that *Burzio's Generalization* is not universal regarding the assignment of Case in unaccusative predicates. It also leads to think that Burzio's (1986) notion of unaccusativity (which is also assumed within the GB framework) is an account for the fact that, in prototypical nominative-accusative languages (with no split), all intransitive subjects receive nominative Case equally, while accusative is not assigned. On the other hand, the statement in (16) also contributes to the question of whether the assignment of a marked Case (like accusative) depends on the existence of another Case-marked argument in the same structure, an idea explored and supported in dependent-Case theories (Bittner and Hale 1996, Bobaljik 1993, Laka 1993, Marantz 1991, Yip 1987 et al.).

3.2 Agree relations

I follow the Agree theory proposed in Chomsky (2000) and assume that agreement relations (and Case assignment) are obtained by a matching mechanism that relates a functional head (Probe) bearing uninterpretable ϕ -features [$u\phi$] with an argument (Goal) in its c-command domain which has interpretable ϕ -features [$i\phi$] and uninterpretable Case-features [$u\text{Case}$]. Valuating a particular feature results in its deletion, satisfying the Full Interpretation Principle (which requires all [u] features to be deleted before the derivation splits). Thus, in order for the v -heads to assign accusative Case in Mazahua, as stated in (16), they must enter into the derivation with [$u\phi$] that can be valued with their internal argument through the Agree mechanism. The same applies for T, which has been argued to be the functional head that assigns nominative Case to subjects in accusative languages (Chomsky 1986, Mohanan 1982, Ouhalla 1991, Rizzi 1982, among others) and, therefore, to bear [$u\phi$] too. As discussed in 3.1, this coincides with the fact that in Mazahua the TAM prefix is fused with the A/S_A agreement morpheme in transitive and unergative predicates.

For reasons that become clearer in section 5 (when distinguishing between Probes related to Case assignment and those related to the spell-out of emphatic clitics), I assume for now that the uninterpretable features [μ F] located in the Probes in ν and T are π -features with the least specified value in a geometric representation of features, which is [person] (or [3]) (Harley and Ritter 2002). This means that ν and T can Agree with the closest Goal in their search space whose π -features match the value [3], which could be any DP bearing 3rd, 2nd or 1st person values

According to these assumptions, functional heads in Mazahua would have the characteristics described in (17).

(17)

- i. T: has a ϕ -Probe which assigns nominative to its Goal
- ii. ν : has a ϕ -Probe which assigns accusative to its Goal

According to the agreement mechanism described above and the characteristics in (17), transitive and unaccusative ν -heads always enter into an Agree relation with their internal argument, assigning the same (accusative) Case to it. The only difference between a transitive and an unaccusative structure in terms of their internal argument would be then the grammatical function of the DP that receives Case from the ν -head. This is, accusative Case is assigned to DOs in transitive sentences and to subjects in unaccusative predicates.

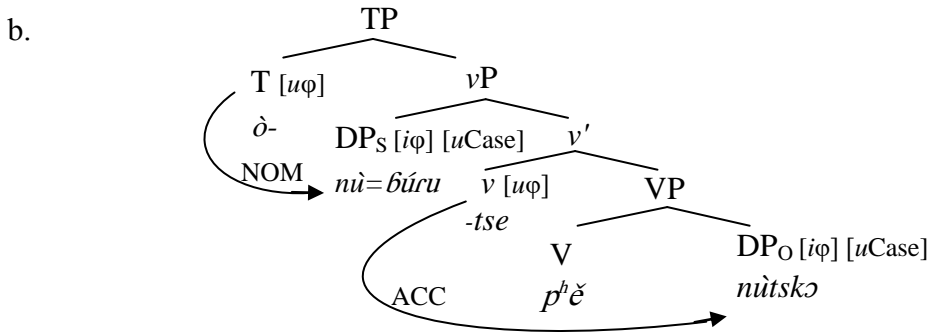
Unergative predicates can also be analysed under the same hypothesis. As it has been argued previously, unergative verbs —like transitive and unaccusatives— also introduce an internal argument (Hale and Keyser 1993, Roberge 2003, Cummins and Roberge 2004). These arguments can be phonologically null, realized as a cognate object, or as a pseudo-incorporated object (Massam 2009). This is also in compliance with Coon's (2010) observation about the obligatory presence of internal arguments in Chol's unergative and antipassive predicates. Following this, unergative ν -heads in Mazahua would also establish an Agree relation with their internal argument, which is always a 3rd person and, therefore, is not overtly marked in the verb. Regarding the assignment of nominative, T would enter into an Agree relation with the external argument in transitive and unergative sentences, but not in unaccusatives, where no DP is merged in Spec ν P. I provide an explanation for why nominative Case is unassigned in some structures at the end of this section.

I take the agreement morphemes present in the verb as the spell-out of the functional heads that establish the Agree relation with the relevant arguments. This follows the idea that

words are built in syntax and inflectional markers do not reflect features present in the verb, but in inflectional heads (Julien 2002). Thus, Agr_T prefixes would be the phonological realization of T, while Agr_v suffixes spell out *v*. A transitive sentence like the one in (18a) would have the structure in (18b), where the object is base generated as a complement of the verb and the subject merges in Spec_vP. Then, the *v*-head agrees with its internal argument, assigning accusative Case to it, and T assigns nominative to the higher DP. (Movement is not represented in this structure, but a complete derivation of Mazahua predicates is provided in the next section).

(18) *Transitives*

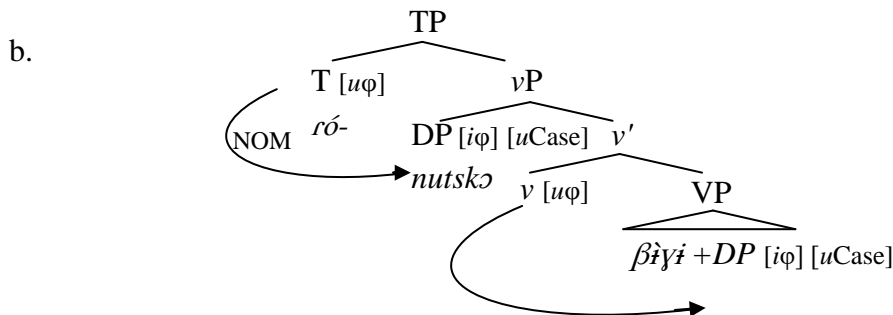
- a. ò-p^hě-tse nùtskɔ nù = 6úru
 3PST-kick-1AGR_v I DET = donkey
 'The donkey kicked me'



Unergative sentences also have an external argument being generated in Spec_vP and an internal one within VP. In the example in (19), the internal argument is not overtly realized. Case assignment and agreement resolves in the same way as in transitive structures, with *v* assigning accusative Case to the DP within VP and T assigning nominative to the subject.

(19)

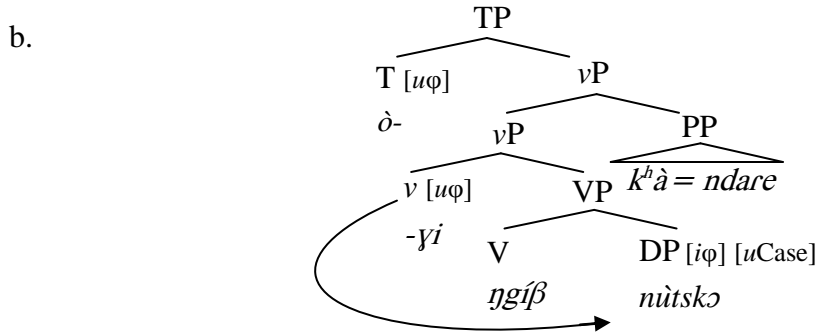
- a. ró-βìyí nùtskɔ
 1PST-run I
 'I ran'



On the other hand, in unaccusative sentences like (20a) only one argument is merged in the structure: the subject that is base-generated in the complement position of V. Since this DP is the only possible Goal in the search space of v (and following the generalization in (16)), this head establishes an Agree relation with it and assigns accusative Case, as represented in (20b).

(20)

- a. δ - $\eta g i \beta$ - γi $n \grave{u} t s k \omega$ $k^h \grave{a}$ = *ndare*
 3PST-sink-1AGR_v I into = river
 'I sank into the river'



Two questions that remain to be answered are 1) what happens to the agreement in T in structures like (20), and 2) how is the 3rd person prefix spelled out. A solution for these can be found in Nevins and Anand's (2006) account for ergative alignment in Hindi and Basque, where nominative Case is not assigned in certain syntactic contexts. This results in the appearance of a third (objective) Case marking objects in Hindi and an ergative Case morpheme marking some unaccusative subjects in Basque. Nevins and Anand account for this by proposing that agreement in these languages is maximized, but is not obligatory. In other words, the Obligatory Case Parameter regulating the agreement mechanism and Case assignment of the functional heads T and v in these languages, as stated in (21), can be set ON or OFF in particular syntactic contexts.

(21)

- Obligatory v Case Parameter:** v must assign a Case
Obligatory T Case Parameter: T must assign a Case (Nevins and Anand 2006: 18)

One of the contexts in which these parameters can be set ON or OFF is, for instance, a sentence with a defective v that has $[u\phi]$, but no Case-features to assign. A second situation, occurring in Hindi, is a sentence where no DP can enter into a ϕ -Agree relation with a functional category H, so the ϕ -features in H are valued with a default 3SG. This is, in fact, what occurs in Mazahua unaccusative predicates, where a default 3rd agreement is spelled out in T to encode TAM

information, but doesn't cross-reference an argument in the predicate. Based on this, it can be proposed that while transitive and unergative predicates in Mazahua have both the v and T Case Parameters turned ON, unaccusative predicates have only the v Parameter active. This proposal presents a disadvantage in that intransitive verbs are taken to be asymmetrical regarding their Case Parameters.

An alternative proposal that avoids this asymmetry and still follows the same line of reasoning would require saying that unergative and unaccusative predicates are the mirror image of each other. This is, regarding the parameters in (21), unergative predicates would be specified as v : OFF, T: ON, while unaccusatives would be v : ON, T: OFF. This would result in a situation where unergative predicates assign only nominative Case, while unaccusatives assign only accusative. This, however, would represent a problem for *Mazahua little- v° Generalization* in that there would be a disparity between transitive and unaccusative verbs, which Agree with their internal argument, and unergative verbs, which wouldn't. Furthermore, the hypothesis that the T Case Parameter is the only one that can be set OFF in Mazahua follows independent work that suggests that unmarked Cases (nominative and absolutive) are not, in fact, *assigned* during the syntactic derivation. Rather, they are the morphological forms spelled out in a verbal agreement morpheme or in an NP whose Case features were not valued during in the syntactic structure (Preminger 2011, 2014).

I assume, therefore, that while *Mazahua little- v° Generalization* requires v to assign accusative Case always, it is possible for T not to assign nominative Case in certain structures, specifically, in unaccusative sentences where the lack of an external argument leaves the Probe T without a Goal to Agree with. This results in the insertion of a default 3rd Agr_T morpheme that encodes TAM information. In the next section I discuss the syntactic derivation of Mazahua clauses, which results in an unmarked VOS word order.

4. Deriving Mazahua VOS order

As with other languages from the same linguistic branch, Mazahua is a verb-initial language. However, unlike most of them, which show a basic VSO order, Mazahua's unmarked word order is VOS. Thus, in transitive clauses full DP arguments appear postverbally (22a). These DPs can be fronted for topicalization purposes, as seen in (22b); nonetheless, no more than one Topic argument can appear at the left of the verb, as confirmed by the ungrammaticality in (22c). This

suggests that there is only one position at the left of the verb where Topic information is encoded.

(22)

- a. δ -p^hětʃe- \emptyset nù = 6úru nù = ndzâni
 3PST-kicked-3DO DET = donkey DET = bull
 'The bull kicked the donkey'
- b. nù = ndzâni δ -p^hětʃe- \emptyset nù = 6úru
 DET = bull 3PST-kicked-3DO DET = donkey
 'The bull kicked the donkey'
- c. *nù = ndzâni nù = 6úru δ -p^hětʃe- \emptyset
 DET = bull DET = donkey 3PST-kicked-3DO
 'The bull kicked the donkey'

As mentioned in section 1, argumental DPs are preferably *pro*-dropped without being substituted by an overt pronoun. This allows for a single sentence to have multiple interpretations, like in (23).

(23)

- a. δ -p^hětʃe- \emptyset nù = 6úru
 3PST-kicked-3DO DET = donkey
 'S/he/it kicked the donkey'
 'The donkey kicked her/him/it'
- b. δ -p^hětʃe- \emptyset
 3PST-kicked-3DO
 'S/he/it kicked her/him/it'

Full pronouns can also appear preceding the verb or following it, as shown in (24). However, unlike the DPs introduced in (22), the appearance of overt pronouns always involves a Topic/Focus reading of that argument. Like fronted DPs, pre-verbal pronouns are interpreted as topicalized (located probably in TopicP within the Left-Periphery of the clause (Rizzi 1997)). On the other hand, post-verbal pronouns receive a focalized reading. Furthermore, as shown in (24b) and (24d), sentences containing two full pronouns at the right of the verb are degraded. This suggests that post-verbal pronouns are located in a Focus position that can only be occupied by

one DP/NP —which I assume is located in the ν P Left-Periphery (Belletti 2004, Kahnemuyipour and Kornfilt 2011, Su 2012). Monotransitive clauses with one or more pronominal arguments would, then, allow: 1) a VS and VO orders if the overt argument is focalized, 2) SV and OV if the overt argument is topicalized, or 3) SVO and —less often— OVS if one argument is topicalized and the other focalized.

(24)

- | | | | | | |
|----|-----------------------------|--------------|----------|---|-----------------|
| a. | nùts'k'e | ì-jâbi-ɣi | NÛTSKO | | |
| | You | 2PST-hit-1DO | I | | |
| | 'You hit ME' | | | | |
| b. | ??/* ì-jâbi-ɣi | NÛTSKO | nùts'k'e | / | nùtskə NÛTS'K'É |
| | 2PST-hit-1DO | I | You | | |
| | 'You hit ME / YOU hit me' | | | | |
| c. | áŋgeze | ò-jâbi-ɣi | NÛTSKO | | |
| | S/he | 2PST-hit-1DO | I | | |
| | 'S/he hit ME' | | | | |
| d. | ??/* ì-jâbi-ɣi | NÛTSKO | áŋgeze | / | nùtskə ÁŋGEZE |
| | 2PST-hit-1DO | I | S/he | | |
| | 'S/he hit ME / S/HE hit me' | | | | |

If we consider that subjects, objects and verbs in transitive constructions are base-generated within ν P, and that the unmarked word order in Mazahua is VOS, we can conclude that the verbal complex (verb plus verbal morphology) moves from the position where it is merged to a position higher than ν P before Spell-out takes place. On the other hand, there is evidence that the verb doesn't move as high as C. In the sentences in (25), for example, the complementizer and the Agr_T prefix are independent morphemes, which can, in fact, be separated by other particles, like negation (25b).

(25)

- | | | | | | |
|----|---------------------------------|------------|----------------------------|--|-------------------|
| a. | rí-sú-k'i | k'i | ì-jâb-ɣi | | |
| | 1PRS-fear-2AGR _v | because | 2PST-hit-1AGR _v | | |
| | 'I fear you because you hit me' | | | | (Vargas 2013: 62) |

- b. **mà** **j'a** = rì-hâs'ə-ø záki rà-mbăyi
 if NEG = 2IRR-put-3AGR_v fast IRR-red
 'If you don't put it fast, it will become red' (Vargas 2013: 71)

Based on the position of the verb with respect to its arguments and to the complementizers, I assume that the final landing site of the verbal complex is T. This is also consistent with other two facts of the language. First, in the previous section we assumed that agreement morphemes are base-generated in different functional heads —following Julien (2002). Thus, the Agr_T morpheme would have to be merged in T. Now, this morpheme is always attached directly to the verbal root (i.e. there cannot be any intervening morphemes between the root and Agr_T), which suggests that the verb moves as high as T during the derivation. This idea is also consistent with the fact that only topicalized DPs can appear at the left of the verb. This indicates that pre-verbal positions in Mazahua are related to the information structure of the sentence and are not associated with the assignment of a particular grammatical function, which suggests that they are located in the Left-Periphery of the clause, above TP (Rizzi 1997). If the final landing site of the verbal complex is T, arguments not undergoing A'-movement (like topicalization or *wh*-movement) should be located before T at Spell-out.

What still needs to be clarified is how the different agreement morphemes and the verb end up together in T. This can be explained, again, if we consider that words are built in syntax and agreement morphemes are merged in different functional heads. In this situation, the lexical verb would undergo head-movement, adjoining each agreement morpheme in its way up to T. A question that needs to be answered now is in which position each of these agreement morphemes is located.

From the examples discussed until now, we can conclude that the morphological template of a verb in Mazahua looks like in (26).⁶ The π -features of A and S_A arguments and TAM information are fused into an Agr_T morpheme that is prefixed to the verbal stem. Conversely, the Agr_v morpheme, the applicative head that introduces IOs, and the emphatic clitics are attached from the right.

(26)

Agr_T — Verbal stem — Agr_v — Appl = Emphatic clitics

⁶ Other morphemes that attach at the periphery of the template in (22) are left aside in this work. These include the number enclitics =*hi* 'PL.INCL', =*βi* 'DU.INCL', =*ŋe* '1PL.EXCL' and =*βe* '1DU.EXCL', the delimitative aspect enclitic =*t^ho*, the negation *j'a*=, the pre-verbal adverbial marker *βi*= 'too', and the Spanish loan *ja*= 'already'.

As mentioned above, in order for the morphemes to attach to the verbal stem, the verb has to adjoin to each of the head-positions containing these morphemes during movement. Let's take, for example, the derivation of a transitive sentence. In it, the verb is base-generated within VP with the object as a complement, as shown in (27a). The v -head merged above VP introduces the subject as an external argument in Spec v P, below TP. I follow Aldridge (2008) in that v -heads in VOS languages can have an EPP⁷ feature that causes the internal argument to move to an outer Spec v P, crossing the external argument in transitive clauses.⁸ (I assume here that the subject in Spec v P can't check the EPP feature in v , although an alternative analysis would require the EPP to be a secondary feature of the Probe in v , which would be triggered as a result of agreement.)

Prior to movement, little v assigns accusative Case to the object (in compliance with *Mazahua little- v ^o Generalization*). V-movement would then proceed as in (27b), where the lexical verb rises to v and adjoins the Agr v agreement morpheme there. The EPP feature in v is then triggered, causing the object to shift its position (27c). The Agr T morpheme is then merged in T, which assigns nominative Case to the subject in Spec v P (23d). Finally, V+ v rise to T, where they adjoin the Agr T morpheme. Notice that the DO and the subject in (27d) are in the same minimal domain of T and, therefore, they are equidistant for Case-assignment purposes (Chomsky 1993, 1995). I argue, then, that both DPs can potentially receive nominative Case from T; however, marking the object with nominative and leaving the subject unmarked for Case would cause the derivation to crash. (Again, an alternative analysis for this situation, following Preminger's (2011, 2014) line of reasoning, would be to assume that nominative Case is spelled out as a default form in the subject if this is not marked with a different Case during the derivation.)

(27) *Transitives*

- | | | | |
|----|--|-------------------------------------|---|
| a. | $[_{vP} \text{SU}_{[i\phi]}$ | $[_v \nu_{[EPP] [\#\phi]}$ | $[_{VP} \text{V DO}_{[i\phi]}]]]$ |
| b. | $[_{vP} \text{SU}_{[i\phi]}$ | $[_v \text{V}+\nu_{[EPP] [\#\phi]}$ | $[_{VP} \text{t}_V \text{DO}_{[i\phi]}]]]$ |
| c. | $[_{vP} \text{DO}_{[i\phi]}$ | $[_{vP} \text{SU}_{[i\phi]}$ | $[_v \text{V}+\nu_{[EPP] [\#\phi]} [_{VP} \text{t}_V \text{t}_{\text{DO}}]]]]]$ |
| d. | $[_{TP} \text{T}_{[\#\phi]} [_{vP} \text{DO}_{[i\phi]}$ | $[_{vP} \text{SU}_{[i\phi]}$ | $[_v \text{V}+\nu_{[EPP] [\#\phi]} [_{VP} \text{t}_V \text{t}_{\text{DO}}]]]]]$ |
| e. | $[_{TP} \text{T}_{[\#\phi]}+\text{V}+\nu_{[EPP] [\#\phi]}$ | $[_{vP} \text{DO}_{[i\phi]}$ | $[_{vP} \text{SU}_{[i\phi]} \quad [_v \text{t}_V \quad [_{VP} \text{t}_V \text{t}_{\text{DO}}]]]]]$ |

⁷ Aldridge (2008) proposes the presence of this feature in v to account for the fact that ergative languages mark objects with absolutive Case. If the object moves above the subject in these structures, it becomes the closest Goal DP to the functional head that assigns absolutive Case, that is T. Case can be then assigned without another DP, like the external argument, acting as an intervener.

⁸ An alternative explanation to the VOS order in Mazahua is to assume that V movement occurs as a self-attachment (Koenemann 1995, Bury 2000, 2010). This would mean that every time V adjoins to v , it will project a new (outer) specifier position in that phrase and trigger obligatory Topicalization of a lower DP —say, the object. Thus, adjunction of V to v would always cause the object to move above the subject in transitive clauses.

Structures involving focalized pronouns derive in a very similar way to (27). As discussed above, these elements have to be located in a Focus-head within the ν P Left-Periphery before the derivation splits. This head would merge above ν P after the object-shifts in (27c), triggering the movement of a pronominal argument bearing Focus features to SpecFocusP. The verbal complex, conformed of $V+\nu$, would then move and adjoin the Focus-head before rising to T. Assignment of nominative Case would occur normally. This is because, even in a situation where the object has been focalized and moved to SpecFocusP between T and ν P, the movement of the complex $V+\nu$ to T would cause both the subject and the object to be within the extended minimal domain of T, being able to be marked with nominative Case by this head. Again, leaving the subject unmarked for Case would cause the derivation to crash.

The verbal stem can also adjoin to other heads if the clause structure is bigger than a transitive sentence like (27). For instance, we have shown that a verbal stem can have IO markers and emphatic clitics attached to it. As seen in the contrast in (7) in section 1, the IO suffix works as an applicative marker that introduces a new argument. I assume, therefore, that this suffix is the spell-out of a high applicative head located above ν P that introduces the IO argument in its specifier position (Pykkänen 2002, 2008). Regarding the emphatic clitics, I propose for now that they are located in a position higher than the ApplP, in a discourse functional projection FP within the Left-Periphery of ν P. A more detailed analysis of these elements and the projection where they generate is included in the next section.

Following these assumptions, ditransitive sentences involving an emphatic clitic would derive as follows. The lexical verb and the DO are generated within VP. Little ν is then merged above VP, introducing an external argument in Spec ν P and assigning accusative Case to the DO (28a). V moves to ν (28b) and the EPP feature is triggered, causing the DO to move to an outer Spec ν P (28c). The applicative head merges above ν P and introduces an applicative argument in its specifier with which establishes an Agree relation (28d). (Here I follow Woolford (2006) and assume that dative Case is assigned to the IO inherently.) The emphatic clitic is merged after the ApplP and agrees with one of the arguments in its c-command domain (through an Agree mechanism discussed in the next section). $V+\nu$ adjoin to the Appl-head and then to F (28e). T is then merged and establishes an Agree relation with the subject, assigning nominative Case to it prior to the movement of the verbal complex $V+\nu$ +Appl+F (28f).

(28) *Ditransitives with emphatic clitics*

- a. [_{VP} SU_[iφ] [_v V_[EPP] [_{##φ}] [_{VP} V DO_[iφ]]]]
- b. [_{VP} SU_[iφ] [_v V+V_[EPP] [_{##φ}] [_{VP} tv DO_[iφ]]]]
- c. [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_v V+V_[EPP] [_{##φ}] [_{VP} tv t_{DO}]]]]
- d. [_{AppIP} IO_[iφ] [_{AppIP} Appl_[##φ] [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_v V+V_[EPP] [_{##φ}] [_{VP} tv t_{DO}]]]]]]
- e. [_{FP} V+V_[EPP] [_{##φ}] +Appl_[##φ] +F [_{AppIP} IO_[iφ] [_{AppIP} tv [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_v tv [_{VP} tv t_{DO}]]]]]]]]
- f. [_{TP} T_[##φ] +V+V_[EPP] [_{##φ}] +Appl_[##φ] +F [_{FP} tv [_{AppIP} IO_[iφ] [_{AppIP} tv [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_v tv [_{VP} tv t_{DO}]]]]]]]]]]

The derivation for intransitive clauses would be similar to the one for transitive ones, differing only in the number of arguments present in the structure and the place where the single argument generates. As discussed in the previous section, the subject of an unaccusative verb is base-generated within VP, where it receives accusative Case from *v* (29a). This occurs prior to V-movement to *v* (29b). The internal argument is then shifted, satisfying the EPP feature in *v* (29c). Finally, T is merged and the complex V+*v* adjoins to it (29d). As proposed before, the lack of a DP with which T can Agree results in the non-assignment of nominative Case in these structures and, therefore, in the spell-out of a default 3rd person TAM morphology in this head.

(29) *Unaccusatives*

- a. [_{VP} V_[EPP] [_{##φ}] [_{VP} V SU_[iφ]]]
- b. [_{VP} V+V_[EPP] [_{##φ}] [_{VP} tv SU_[iφ]]]
- c. [_{VP} SU_[iφ] [_{VP} V+V_[EPP] [_{##φ}] [_{VP} tv t_{SU}]]]]]
- d. [_{TP} T_[uφ] +V+V_[EPP] [_{##φ}] [_{VP} SU_[iφ] [_{VP} tv [_{VP} tv t_{SU}]]]]]

In unergative sentences, on the other hand, subjects are generated in SpecvP and the phonologically null objects within VP, where they Agree with the *v*-head (30a). The lexical verb adjoins to *v* (30b) and the EPP feature is triggered, causing the object to undergo movement to an outer SpecvP (30c). The verbal complex then move to T once this head is merged (30d). Finally, nominative Case is assigned to the external argument through an Agree relation between T and the DP in the lower SpecvP, as shown in (30e).

(30) *Unergatives*

- a. [_{VP} SU_[iφ] [_{VP} V_[EPP] [_{##φ}] [_{VP} V DO_[iφ]]]]]]
- b. [_{VP} SU_[iφ] [_{VP} V+V_[EPP] [_{##φ}] [_{VP} tv DO_[iφ]]]]]]
- c. [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_{VP} V+V_[EPP] [_{##φ}] [_{VP} tv t_{DO}]]]]]]]
- d. [_{TP} T_[uφ] +V+V_[EPP] [_{##φ}] [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_{VP} tv [_{VP} tv t_{DO}]]]]]]]]]
- e. [_{TP} T_[##φ] +V+V_[EPP] [_{##φ}] [_{VP} DO_[iφ] [_{VP} SU_[iφ] [_{VP} tv [_{VP} tv t_{DO}]]]]]]]]]

A traditional assumption about Case-assignment in accusative languages suggested that all intransitive arguments, although generated in different syntactic positions, ended up in the same

projection —SpecTP— in order to satisfy an EPP feature in T, receive nominative Case from it and, thus, be interpreted as subjects of the sentence (Chomsky 1981, 1995; Levin and Rappaport 1995, Sportiche 1988, Zagana 1982). The Mazahua data discussed here, however, indicates that it is possible for some arguments to receive a different Case *in situ* and still be interpreted as subjects of a predicate due to the absence of another argument in the clause that could be marked with nominative Case. This suggests that the relation between this Case —associated with a particular structural position (SpecTP)— and subjects in nominative-accusative systems (which had been argued to be consistent cross-linguistically) is not obligatory in all languages that follow this pattern.

Before moving to the next section, I would like to point out an apparent issue between the linear order of morphemes in the verbal complex and the direction in which the verb adjoins other heads in the structure. This is related to the fact that the Agr_v suffix, the IO applicative morpheme and the emphatic clitics are attached at the right of the verb, while the Agr_T morpheme is prefixed to the verbal root. This asymmetry can, in fact, be explained by proposing that the verb left-adjoins all the functional heads in its way up to T, with the exception of T itself, which the verbal complex adjoins from the right. Such idea is actually motivated by the phonological properties of the prefix compared to other verbal morphemes. As mentioned in section 1, only Agr_T morphemes and verbal roots bear a lexical tone. On the other hand, the tone that surfaces in other agreement morphemes is propagated from the verbal root. This is something that doesn't affect the tone in the Agr_T morphemes since the propagation of the tone from the root occurs from left to right.

The fact that Agr_T morphemes are, in this sense, phonologically independent with respect to the rest of the verbal complex is important since modifying the tone of these elements involves a distinction in their grammatical information. For instance, table 2 in section 1 shows that the 2nd person Agr_T morphemes for Present and Past are phonologically identical except for their lexical tone. The same situation holds for the 1st person Present and 2nd person Irrealis morphemes. The different phonological status of the Agr_T morphemes can be, then, a motivation to suggest that they have to appear at the left of the verbal root before PF in order to avoid being located within the environment where the tone of the root is propagated. This could also constitute a reason to argue in favour of the idea that Agr_T morphemes are pro-clitics rather than

prefixes (see footnote 4), a question that will not be explored deeper here, and I will leave it open for future research.⁹

In the next section I discuss the agreement pattern shown by emphatic clitics in Mazahua. In order to account for their behaviour, I propose that this pattern is the result of an Agree relation that is established between a discourse-related Probe and a local DP whose features are the most highly specified in a Person-based hierarchy.

5. Emphatic clitics

As described in section 1, there is a set of enclitics that the literature on Mazahua has referred to as "emphatic clitics". The relevant examples introduced in (9) are repeated here as (31). These clitics can only be co-indexed with argumental DPs, but not with adjuncts, as confirmed by the example in (32). This co-indexation is subject to a constraint that ranks 1st person over 2nd, and 2nd over 3rd, which can only be captured by assuming that morphemes do not contain bundles of features, but these features are hierarchically organized (Bonet 1991, 1994; Harley and Ritter 2002). An enclitic, then, can only cross-reference the DP whose π -features are the most highly specified in the clause (i.e. the DP whose feature values are the most prominent in the hierarchy). As the example below shows, a 1st person clitic occurs in sentences containing an argumental DP with 1st person, regardless of whether this DP is a subject (31a) or an object (31b). Conversely, the 2nd person clitic can only appear in sentences where the only arguments are 2nd and 3rd person (31c). As mentioned before, there is no 3rd person emphatic clitic.

⁹ An alternative analysis would require proposing that all head-adjunctions occur to the left and that the Agr_T morpheme is linearized at the left of the stem after the derivation splits. In this case, it would be necessary to assume that this morpheme is underlyingly specified to be a prefix and, therefore, targeted by a specific linearization rule that places it at the beginning of the verbal complex *à la* Distributed Morphology framework (Halle and Marantz 1993).

A third possibility to avoid right-adjunction is that the verb and its suffixes are not located in the same projection as the Agr_T by the end of the derivation. This is possible if either the verb doesn't move as high as T (but lands in a projection just below TP) or if the verb moves to T, but the Agr_T is located in a higher projection, say FinP, by the end of the derivation. In both situations, the Agr_T prefix would have to be considered as an element that is independent from the verbal complex, as it has been argued to be the case of preverbal inflectional markers in verb-initial (Bury 2000, 2010), non-verb-initial languages (Julien 2002, Spears 1990), and in Mazahua itself (see footnote 4). One problem that this approach faces, however, is that it would be necessary to propose a functional head located between TP and ν P where the verbal complex could land if it doesn't move as high as T. On the other hand, assuming that the A/S_A agreement is merged in Fin^o encounters the issue of explaining how T can rise and adjoin Fin^o to be fused into the Agr_T morpheme, but without taking the verbal complex with it. In other words, it would have to be proposed that, after V-movement to T, T is extracted from TP, an environment where it serves as a host for the verbal adjunction and which has been argued to be a situation where head excorporation is not allowed (Roberts 1991, 2010).

(31)

- a. **rí-nè-ts'** = **kɔ/*ke** (nùts'k'e)
 1PRS-love-2AGR_v = 1EMPH/2EMPH you.SG
 'I love you'
- b. **í-nè-z** = **ɣɔ/*ɣe** (nùtskɔ)
 2PRS-love-1AGR_v = 1EMPH/2EMPH I
 'You love me'
- c. (ángeze) **ø-nè-ts'** = **ɣe** (nuts'ke)
 He 3PRS-love-2AGR_v = 2EMPH you.SG
 'He loves you'

- (32) ò-pǎʔɔ-ø(* = ɣɔ_i) ín-tá kò = nùtskɔ_i
 3PST-sell-3AGR_v = 1EMPH 1POSS-father with = I
 'Lit. My father sold it with me'

The possible combinations of 1st, 2nd and 3rd person subjects and objects within a sentence are represented in Table 4. The intersection of each combination of subject and object(s) indicates the emphatic clitic available for that particular combination. Cells colored in black indicate combinations of two identical grammatical persons (like *I love I*) that are only possible to spell out with a reflexive morpheme due to restrictions of Binding Theory. Grey cells indicate combinations of 1st or 2nd person DOs with 3rd IOs, which are barred in Mazahua due to a Person-Case Constraint (Bonet 1991, 1994; Perlmutter 1971).

		Indirect Object												
		ø			1			2			3			
		Direct Object			Direct Object			Direct Object			Direct Object			
Subject		1	2	3	1	2	3	1	2	3	1	2	3	
	1		1P	1P							1P			1P
	2	1P		2P			1P							2P
	3	1P	2P	ø			1P				2P			ø

TABLE 4. EMPHATIC CLITICS SPELLED OUT FOR EACH COMBINATION OF SUBJECT/OBJECT.

None of the previous work on Mazahua has been able to delimit the contexts in which these morphemes are spelled out or to describe how a sentence containing one of these clitics is

interpreted compared to another structure that doesn't have them. Considering these morphemes as elements that add an "emphatic" reading to the argument that is co-indexed with them (Knapp 2008, López Reynoso 2016) leads to think that they are related to a Focus or Topic positions in the structure. However, the fact that they are optionally spelled out regardless of the presence of a focalized or topicalized argument in the sentence suggests that they encode different discourse information. Furthermore, as seen in Table 4, there is only one clitic available for each structure regardless of which argument is focalized or topicalized. This entails that, whichever is the meaning conveyed by the enclitic, this meaning can only be interpreted for an argument bearing particular π -features, but not for any other argument in the clause. For instance, in a transitive construction with 1st and a 2nd person arguments, only the 1st person can be interpreted as "emphasized", but never the 2nd. This creates a gap not found in focalized and topicalized contexts: with the use of emphatic clitics, a 2nd and 3rd person could never be "emphasized" in the presence of a 1st, and a 3rd couldn't in the presence of a 2nd.

The fact that these morphemes are only available for 1st and 2nd person suggests that their use is limited to syntactic environments involving discourse participants and, therefore, that their distribution could be restricted to discourse contexts, and not to the sentence level. This seems to follow also from the fact that the appearance of these clitics is not affected or triggered by the occurrence of a sentential topic phrase (i.e. an argument being fronted to the Left-Periphery's TopicP). Rather, the emphatic clitics could be an instance of a morpheme whose use is linked to discourse topic, without necessarily involving or allowing switch-reference of arguments (Jacobsen 1967). If we follow this idea, the clitic would be limited to topicalize only the prominent discourse participant in a given utterance. For instance, an uttered transitive sentence involving only the speaker and the hearer as participants of the event would necessarily involve 1st and a 2nd person arguments and, therefore, the topicalization would only be able to apply to the argument that co-refers to the speaker. On the other hand, an utterance involving the hearer and a non-discourse participant would only allow the use of the morpheme to interpret the 2nd person argument as topic of the discourse.

Since the distribution of the emphatic clitics suggests that they are not merged either in TopicP or FocusP, I propose that they are the spell-out of different functional head that encodes emphasis, contrast or point of view, following Uriagereka (1995a, p. 155; 1995b). I also build on work that has proposed the existence of a vP Left-Periphery —where projections that are related

to discourse-information are located (Belletti 2004, Kahnemuyipour and Kornfilt 2011, Su 2012)—, and propose that FP is merged in that location, below TP, but above the high ApplP. The reason to propose this position is supported by the fact that the enclitic is attached to the verbal stem at the right of the Agr_v, which suggests that a verbal complex moving to F is already conformed of V+v+Appl.¹⁰

An analysis trying to explain the behavior of these clitics would have to account for the fact that the agreement relation that they establish with a DP is not sensitive to the position of that DP in the structure. In other words, the Agree mechanism which the clitics are subject to doesn't have to require a Probe like *v* or T to Agree always with the closest Goal within the Probe search space, but to give preference to an argument bearing particular π -features. Specifically, we need a Probe that establishes an Agree relation with a Goal bearing 1st person features if the arguments are 1st and 2nd (regardless of whether the 1st is a subject or an object), with one bearing 2nd person features if the arguments are 2nd and 3rd, or with a 3rd person otherwise.

Béjar and Rezac (2009) propose an Agree mechanism to account for the Case-marking system in languages that show inverse contexts (i.e. where the internal—rather than the external argument— controls the agreement in the verb). This mechanism follows from a cyclic construction of the phrase marker (Rezac 2003) and requires features to be eliminated as early in the derivation as possible (in compliance with the Earliness Principle). Cyclic Agree requires a Probe like *v* to seek a match in the internal argument first and, in the case this argument fails to control the agreement in the Probe, the Probe then seeks for a match in the external argument once this is merged. The specific way in which this mechanism works based on cyclic constructions of phrases is not relevant for analyzing emphatic clitics in Mazahua since, as proposed in section 4, all potential matches to Agree with the emphatic clitics (i.e. all DP arguments) are within the c-command domain of the head where the clitics are merged: F. This means that, if the internal argument fails to Agree with the Probe, the Probe doesn't have to wait until the external argument is merged to seek for a match during another Agree cycle. In addition, the Earliness Principle is already captured in the mechanism that was proposed for to account for the split in Mazahua, specifically, in the *Mazahua Little-v Generalization*, which

¹⁰ An alternative proposal is that the emphatic clitic is merged in the TP Left-Periphery and, then, its clitic nature allows it to be attached to the right of the verbal stem. As mentioned before, the clitic has no underlying tone. Therefore, even though it has a different morphological status from the Agr_v suffixes, it would not be aligned at the left of the verbal stem like the Agr_T morpheme, which could be argued that is prefixed in order to preserve its lexical tone.

requires ν -heads to match the argument that is closer to them in their domain. What is relevant to explain the agreement of these clitics, however, is the idea that it is possible for more than one potential match to Agree with a particular Probe, and that it is possible for agreement to be *displaced*, meaning that an argument can control agreement if another argument failed to match with that head's features first (Béjar and Rezac 2009).

In order to account for agreement displacement, Béjar and Rezac (2009) build on Harley and Ritter's (2002) geometric features representation, and assume that the π -features bundle present in both Probes (as [uF]) and Goals (as [iF]) are articulated into a set of hierarchically structured features organized in semantic entailment relations. These relations are as follows: the three grammatical persons share the feature [person] or [3], 2nd and 1st person share [participant] or [2], while [speaker] or [1] distinguishes 1st from 2nd person. The entailment relation involving the last two persons is language specific. Thus, in a language like Mazahua, which places 1>2>3, 3rd person would be specified as [3], 2nd as [3][2] and 1st as [3][2][1]. Following this, a highly specified Probe or Goal would be the one containing more articulated features, in this case, 1st person.

In Béjar and Rezac's (2009) proposal, features can each Agree independently, allowing an argument to match particular features in a Probe as stated by the *Match Requirement* in (33). However, this also allows an argument to fail to Agree for a particular feature [uF] if it lacks a matching [F] in the articulated Probe. If this occurs, the matching process leaves an *active residue* (the feature in the Probe that was not matched). A second argument can then become a new Goal for the Probe and, potentially, control the agreement of the Probe, causing an agreement displacement.

(33) *Match Requirement*

For a probe segment [uF], a subset [uF'] of [uF] must match.

With this in mind, agreement displacement in this framework works as follows. If, for instance, a DP bearing the features [3][2] is within the search domain of a Probe specified as [3][2][1] (this is, it is a potential match for Agree by that Probe), that DP will match all the possible features in that Probe. In this specific example, the argument would only be able to match a subset of the Probe's features, leaving an active residue. This residue can, then, Agree with a different DP in the search domain. Active residues that are not matched (because there is no DP bearing the

relevant features) do not present a problem for the syntactic structure nor for the Full Interpretation Principle.

We can give an account for the agreement mechanism of both the Case-assigning heads and the heads that are spelled out by emphatic clitics following this approach. Recall that in section 3 I suggested that the [μ F] in the Probes ν and T in Mazahua were, in fact, π -features with the least specified value in the Person feature hierarchy: [3]. I also concluded that, in this language, a Probe or Goal with 3rd person features is specified as [3], with 2nd as [3][2] and with 1st as [3][2][1]. The restriction on the locality between the Probes ν /T and the Goal that Agrees with them can now be explained since the [μ F]s bore in these Probes are not highly specified. This allows ν and T to Agree with the closest DP in their search space because any argument encountered first would be either 1st ([3][2][1]), 2nd ([3][2]) or 3rd person([3]) and, therefore, would match the feature [3] in the Probe.

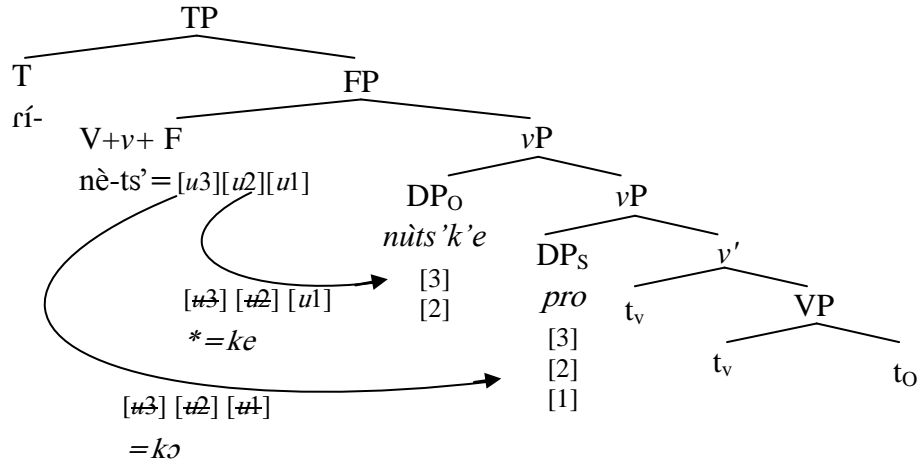
Emphatic clitics, on the other hand, need to Agree with a more highly specified Goal, which means that the Probe head where the clitic is base-generated has to bear the articulation [3][2][1] in order to give preference to 1st person DPs over 2nd, and 2nd ones over 3rd. Following the Agree mechanism introduced above, this Probe will search in its domain for an argumental DP that can match all of its features. If the first potential match for Agree only matches a subset of the features in the Probe, it will leave an active residue that will Agree with another argument, causing an agreement displacement.

The Agree relation between F and an argumental DP in a sentence like (34a) would occur as in (34b). In this structure, the closest potential match for Agree with the head F is the 2nd person pronoun *nùts'k'e*, which is located in an outer Spec ν P and acts as the DO of the clause. This pronoun, however, can only match two of the segments of the π -feature in F, leaving an active residue (the segment [1]). However, the active residue can Agree with another DP in the domain of F whose features match those in the Probe, in this case, the 1st person subject. This leads to an Agree relation between F and the subject DP.

(34)

- | | | |
|----------------------|-----------------|------------|
| a. rí-nè-ts' | = kɔ/*ke | (nùts'k'e) |
| 1PRS-love-2AGR ν | = 1EMPH/2EMPH | you.SG |
| ‘I love you’ | | |

b.



Spelling out F with the 2nd person emphatic clitic in this case would not be possible since there is another potential match for Agree that is more highly specified in π -features and that could match the active residue. In a structure containing, for instance, a 2nd object and 3rd person subject, the segments [3][2] of the object would match those of the Probe F, leaving an active residue [1]. In this case, however, the Probe could not Agree with the 3rd person subject since it would only bear the feature segment [3]. Hence, spelling out the 2nd person clitic would be possible in these situations. As said before, active residues that are left unmatched do not present a problem for the Full Interpretation Principle and, therefore, the derivation would not crash.

6. Conclusions

In this work I provided an account for the Split-S Case/agreement system in Mazahua, and for the independent agreement pattern shown by a set of emphatic clitics. While the Split-S alignment causes two types of intransitive subjects to cross-reference different agreement morphemes in the verb, emphatic clitics are sensitive to a Person-based hierarchy and Agree with a particular DP, regardless of its grammatical function. Based on two generalizations already proposed in the literature (the Unaccusative Hypothesis and the Little- v° Generalization), I argued that the split can be explained by considering that subjects of intransitive verbs can be generated in two different positions: Spec v P in unergative predicates and as complements of V in unaccusatives. Furthermore, a restriction on v -heads requires them to always enter into an Agree relation with their internal argument, which can be either an object or an unaccusative subject. This allows the assignment of accusative Case to an internal argument without the presence of an agent θ -role in the structure (*contra Burzio's Generalization*) or a different argument marked

with nominative (against dependent-Case theories). Subjects generated as external arguments are not subject to enter into this relation due to their position in the clause. Therefore, transitive and unergative subjects Agree with a higher head (T), from which they receive nominative Case.

On the other hand, I proposed that emphatic clitics are the spell-out of a functional head F linked to discourse topic information and located in the ν P Left-Periphery. This head is a Probe that establishes an Agree relation not with the closest DP in its c-command domain, but with the argument that bears the most highly specified π -features in the clause. Establishing this relation is possible under a mechanism that allows DPs to match only a subset of the features in the Probe, leaving an active residue. This residue can then be matched by a more highly specified DP, which will control the agreement in clitic instead.

Abbreviations

1	First person
2	Second person
3	Third person
ABS	Absolutive
AGR _T	T-agreement
AGR _V	ν -agreement
APASS	Antipassive
DET	Determinant
DO	Direct Object
DTV	Derived Transitive
DU	Dual
EMPH	Emphatic
ERG	Ergative
EXCL	Exclusive
INCL	Inclusive
IO	Indirect Object
IRR	Irrealis
ITV	Intransitive Verb Suffix
NEG	Negation
NMLZ	Nominalizer
PL	Plural
PFV	Perfective
POSS	Possessive
PRS	Present
PST	Past
SG	Singular
ST	Stative

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Appendix

	1		2		3	
DO	/-yV/ →	[-k^hV] / h+ [-kV] / {t/t'/ŋ}+ [-zV] / {V/VC/VC ^y }+ [-tsV] / V{t/t'}+ [-yV] / elsewhere	/-k'V/ →	[-ts'V] / {V/VC/VC ^y }+ [-k'V] / elsewhere	∅	
IO	/-kV/ →	[-ŋgV] / N+ [-zV] / VC ^y + [-tsV] / V+ [-kV] / elsewhere	/-ʔk'V/ →	[-ʔts'V] / {V/VC ^y }+ [-ʔk'V] / elsewhere	/-pV/ →	[-mbV] / N+ [-p^hV] / h+ [-p'V] / C'+ [-pV] / elsewhere

TABLE 5. ALLOMORPHY OF THE AGR_V AND IO SUFFIXES WITH PHONOLOGICAL ENVIRONMENTS