

The role of argument structure in Me'phaa verbal agreement

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The role of argument structure in Me'phaa verbal agreement

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Abstract

This dissertation explores aspects of Me'phaa morphosyntax, from verb roots to verb-initial word orders. I argue that patterns of agreement map directly onto the syntax of argument structure, which in turn feed the language's unique manifestation of ergativity. Me'phaa agreement morphology is richly complex, and I show that this is due, in part, to three core “ergativity properties” (Deal, 2015) coalescing in the language: transitive subjects and intransitive subjects are encoded differently for a subset of verbs (the ergative property), intransitive subjects are sometimes marked with the same morphology as transitive objects (the absolutive property), and split-intransitivity in the language yields differential marking for intransitives (the argument-structural property). This produces a system that is *consistently* ergative, with a particular ergativity property being visible depending on what verbs are under comparison, and what clause types are involved.

I propose an explanation of this rich agreement morphology by appealing to the syntax of argument structure. I argue that Me'phaa's way of being ergative is not about verbs *per se*, but verbal structures (Marantz, 2013) with distinct functional components and configurations. Language-specific unaccusativity diagnostics and other tests point to the existence of a constellation of verbal structures. Orienting to structural diversity reveals how Me'phaa's patterns of verbal agreement reflect a high degree of sensitivity to underlying geometries. Me'phaa agreement exponents reflect their probe, and an array of functional heads in the verbal domain participate in Agree(ment). This means that higher functional

heads (e.g., T) are not required for such operations in the language. Instead, the very pieces involved in building verbal structures are the ones responsible for determining verbal agreement.

In addition to laying the foundation for building the clause from the verb up, showing how the verb itself offers a snapshot of the core clausal architecture, this work further accounts for how the verbal and inflectional domains interact to produce verb-initial orders. I propose a VP-remnant raising account for Me'phaa, attending to aspects of the derivation that successfully account for both morpheme order in the verb stem as well as constituent order at the larger clausal level.

*To Monica,
forever & always*

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Any errors and shortcomings are, of course, my responsibility.

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Chapter 1

Me'phaa Morphosyntax: A Holistic Approach

1.1 Introduction

This dissertation investigates aspects of Me'phaa morphosyntax, using verbal structures as the locus for initial exploration of the larger clause. Me'phaa, an Otomanguean language from Guerrero, Mexico, is a VSO-VOS alternating, pure-head-marking, ergative language whose verbs exhibit striking diversity with respect to their agreement paradigms. Drawing from contemporary developments in the tradition of generative linguistics—specifically, the constructivist approach as articulated within the Minimalist Program and the framework of Distributed Morphology—I show how Me'phaa verb structures effectively image core syntactic architectures. Me'phaa agreement morphemes wear syntax on their sleeves because they reflect the probe that they agree with and, moreover, an array of functional heads in the verbal domain participate in agreement. The language's unique verbal morphosyntax thus provides glimpses into argument structure and the specific configurations that form the basis of the clausal spine.

Taking such a syntacticized approach, I argue, sheds light on Me'phaa's complex way

of being ergative that, while acknowledged in extant literature, is still little understood. I propose that the language’s numerous agreement paradigms can be explained by appealing to an array of structural configurations that implicate distinct sites where arguments are inserted into the syntax. Despite rich surface complexity, then, Me'phaa verbs end up providing a surprisingly transparent view of how argument structure is built. That there are semantic implications for distinct syntactic structures is unsurprising, as this has remained fairly constant across generative linguistics for decades. What is less expected, and uniquely evident in Me'phaa, is that there can be crucial morphosyntactic implications for distinct configurations visible through agreement, as well.

1.2 Ergativity (à la Me'phaa)

Part of what makes Me'phaa morphosyntax fascinating—and perplexing—is that its verb morphology presents highly intricate and complex patterns of agreement that seemingly defy systematic regularity. For example, previous works have noted that Me'phaa exhibits ergative alignment by way of argument indexing through verbal agreement (Suárez, 1983; Carrasco Zúñiga & Weathers, 1988; Wichmann, 1996; Carrasco Zúñiga, 2006; Navarro Solano, 2012), and this does hold for a large subset of verbs. At the same time, there is a consensus that verbs fall into somewhere between 7 to 12 classes based on patterns of verbal agreement. In (1a) below, the object of the transitive verb ‘push’ has the same agreement marking as the subject of the intransitive verb ‘jump’ in (1b).

- (1) a. Na-**ta**-majng-**ún**.
 IPFV-2SG-push-1SG
 ‘You’re pushing me.’
- b. Na-kix-**uún**.
 IPFV-jump-1SG
 ‘I’m jumping.’
- c. Na-kix-**íín**.
 IPFV-jump-2SG

‘You’re jumping.’

Transitive subjects, on the other hand, such as 2SG *ta-* in (1a), have a distinct set of person markers that covary with them. Comparing (1a) with (1c) shows that transitive and intransitive subjects can be encoded differently. These are expected properties of a language with classic ergative alignment (Comrie, 1978).

However, ergative languages are rarely well-behaved, in that they are almost never strictly uniform and it is thus typologically common for individual ergative languages to showcase differential alignments (Moravcsik, 1978). Such inter-system displays of heterogeneity are referred to as “splits” wherein the ergative pattern is lost in some context-specific way (e.g., triggered by aspect, person, clause type). A brief glance at subject marking in two additional intransitives reveals that much more is going on in Me'phaa indeed, with clause type being the primary trigger for ergative splits.

- (2) a. Na-**ta**-ndú'wa.
IPFV-2SG-laugh
‘You’re laughing.’
- b. Na-**dxanú'**.
IPFV-2SG.arrive
‘You’re arriving.’

In contrast to (1a) and (1c) above, where 2SG marking differs for the transitive subject of ‘push’ and the intransitive subject ‘jump’, in (2a) the sole argument of the unergative verb ‘laugh’ is indexed on the verb in the same way as a transitive subject, namely, with the prefix *ta-*. Further adding to the complexity, 2SG marking on the unaccusative verb ‘arrive’ in (2b) is unlike either of these: rather than agreement marking via affixation, the argument is suppletion-triggering (cf. *niganú'* ‘I’m arriving’). Accordingly, Me'phaa’s is a complex system that exhibits ergative alignment, accusative alignment, and tripartite alignment, depending on which verbs are under comparison. It remains an open question as to why such splits occur in the language.

Framed differently, though, Me'phaa can actually be seen as displaying a *consistently ergative* pattern. The language constitutes a fascinating case study for ergativity because the language is rich in “ergativity properties” (Deal, 2015). Put succinctly, some transitive subjects are marked differently than intransitive ones (the ergative property; e.g., *ta-* in (1a) *vs.* *-iín* in (1c)), some transitive objects pattern like intransitive subjects (the absolutive property; see *-ún* in (1a) and *-uín* (1b)), and some unaccusative subjects stand out as unique in the system (the argument-structural property; e.g., 2SG marking in the suppletive verb stem in (2b)). Seen in this light, the ergativity-as-alignment approach seems to suggest that certain patterns of agreement signal a departure from an ergative system (assuming that ergative is, in fact, the default). On the other hand, the ergativity properties approach suggest that Me'phaa verbal agreement always showcases ergativity. This leads to the possibility that the overall agreement paradigm, despite its surface complexity, is simply the natural outworking of a unified system. I argue that this is indeed the case, which supports the growing consensus that “*split ergativity* is a misnomer” (Laka, 2017, 160).

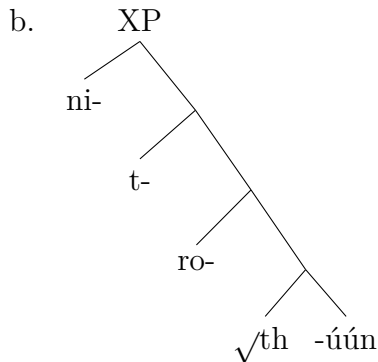
1.3 Agree(ment) and argument structure

How does Me'phaa's particular way of being ergative emerge, and what type of operations are involved? In Chapter 3, I argue that the verb classes in Me'phaa correspond to specific architectural configurations, and thus evidence an interplay between the syntax of argument structure and Agree(ment) in the verbal domain. This means that Me'phaa's expression of ergativity is shaped by syntax.

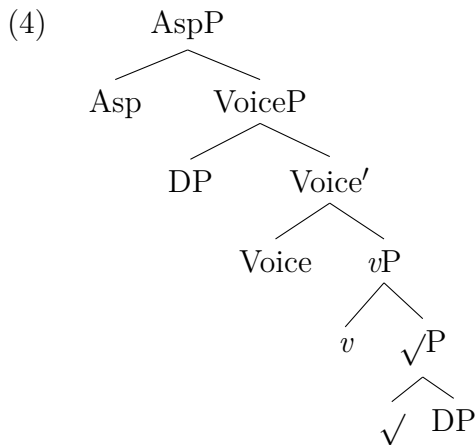
As seen in the examples above, verbal elements that covary with the subject and object of a transitive clause do not bundle together in the verb complex. Instead, agreement markers that surface in transitive constructions in Me'phaa flank the verb root in a way that is reminiscent of several Oto-Pamean languages (Campbell, 2016) and “low absolutive” Mayan languages, such as Ch'ol (Coon et al., 2014). Within the verb complex, transitive subject

marking also surfaces below aspect. The example in (3a) illustrates these properties, with the core architecture of the verbal construction schematized in (3b).

- (3) a. Ni-t-ro-th-úún.
 PFV.AFF-2SG-CAUS-cut-1SG
 ‘You cut me.’



With minor modification, assigning category labels to each morphological component relates fairly straightforwardly to a configuration like the following.

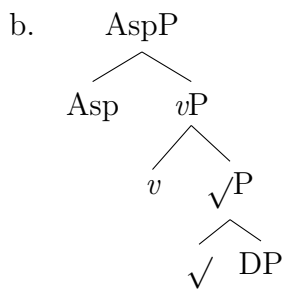


While components of this portrayal require explicit motivation (e.g., the presence of both Voice^0 and v^0 is taken up in Chapter 3), it nevertheless illustrates an important point that is key to understanding Me'phaa morphosyntax: Me'phaa verbs offer a snapshot of the clause. The composition and ordering of the components in the verb complex showcase an intimate relationship between verb morphology, argument structure, and syntax.

Me'phaa agreement morphology, then, is radically sensitive to *where* arguments are inserted. Because of this, we can begin to see how the emergence of ergativity properties in

the language is an outcome of the way that agreement interacts with specific properties of verbal structures. In the structure seen above, the active verb ‘cut’ is built, so to speak, on an unaccusative syntax. Stripping away the layer that houses the external argument produces the inchoative in (5). Notably, the morphological exponent for 1SG, *-úún*, is tied to its thematic argument position.¹

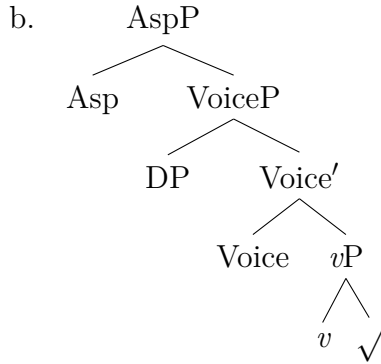
- (5) a. Ni-th-úún.
 PFV.AFF-cut-1SG
 ‘I was cut.’



Moreover, just as this unaccusative construction is (ignoring aspect) essentially the lower half of the core of a transitive clause, making the stem of unaccusative verbs like ‘be cut’ resemble the right edge of transitive stems, so unergatives in Me'phaa resemble the left edge of transitive stems. with an underlying structure like that of the upper half of the transitive core:

- (6) a. Na-ta-gundá.
 PFV.AFF-2SG-dream
 ‘You’re dreaming.’

¹That the object of a transitive should receive the same marking as a the subject of an intransitive in an ergative system is rather unsurprising. Thus, at first blush, making much of this for Me'phaa might seem unwarranted. However, recall from above that intransitive subject marking in Me'phaa is non-uniform. In light of this variability, there is, therefore, no *a priori* reason to expect that inchoative subjects should pattern together with transitive objects. In this respect, Me'phaa sharply contrasts with, say, Mayan languages (also ergative) such as Kaqchikel and K'ichee', which systematically mark all intransitive subjects with the same absolutive agreement marker that covaries with transitive objects.



Put another way, then, verb morphology—particularly verbal agreement forms—in cases such as (3a), (5a), and (6a) are a reflex of the pieces of structure generated by the syntax. Accordingly, one objective in this work is to show how Me'phaa argument structure (a) is constructed syntactically, (b) is tied to the presence/absence of functional heads (e.g., Voice⁰) that introduce arguments, and (c) feeds agreement morphology.

These claims also relate to a broader set of questions in the syntactic literature beyond ergativity, such as how syntax relates to argument structure, what syntactic heads and geometries are involved in generating structure, and what functional heads participate in Agree(ment). Me'phaa verbs are, I argue, best explained in a framework that treats the verbal domain as a complex entity within which argument structure is built and Agree(ment) is calculated. Me'phaa thus provides support for constructivist architectures (see Marantz 2013 and references therein) and accounts where ergative agreement occurs high in the verbal domain (Coon, 2017). Me'phaa's rich patterns of agreement arise because these two properties work in concert, meaning that an array of functional heads in the verbal domain participate in agreement, and not just *v*.

1.4 Unaccusativity

The account that I provide thus maintains that rich agreement and the coalescence of ergativity properties are the natural outcome of syntactic mechanisms that operate in Me'phaa. This includes suppletive forms of verbs, which I argue are paradigmatically and not just

semantically related. If this is the case, though, a potential problem arises on account of the way I have articulated the relatedness of verbal agreement to underlying syntax. Specifically, the notion that patterns of agreement are a reflex of structural properties seems to necessitate a bifurcation of unaccusative structures, given that change of state inchoatives and certain intransitive verbs of motion express agreement differently.

In Chapter 4, I argue that this is indeed the case. I propose a series of unaccusativity diagnostics for Me'phaa to provide evidence that the phenomenon of morphophonological distinction (i.e., differences in patterns of agreement) is morphosyntactically driven (i.e., based on distinct underlying structures). In line with the constructivist approach to Me'phaa syntax I advocate, I adapt Irwin's (2012; 2016) analysis of existential unaccusatives to show how suppletive verbs pattern together in terms of their pattern of agreement, their semantics, and their syntax because of the presence of extra structure sister to the verb root. This structure corresponds to directed motion on a path, and, critically, it more deeply embeds the argument, allowing it to enter into an agreement relation with another functional head. The Me'phaa data thus support syntactic accounts for differences among unaccusatives that have long been acknowledged (Levin, 1983; Levin & Rappaport Hovav, 1995). As with other distinctions, such as unergative *vs.* inchoative, Me'phaa simply makes the architectural differences visible through its agreement morphology.

1.5 Word order

Verbal structures corresponding to the syntax of argument structure thus provide an explanatory account for Me'phaa's patterns of agreement and way of being ergative. Yet, these alone paint a partial picture of Me'phaa morphosyntax; much like a sketch underlies a portrait, these heads, arguments, and their particular configurations provide a foundation on which the larger clause is layered. The process from core to clause, though, is one that has not been investigated for Me'phaa. In Chapter 5, then, I consider how the approach to

the verbal domain outlined in Chapters 3-4 can be reconciled with word order facts.

Within the broader literature on verb-initial (V1) languages, four strategies of deriving V1 have been identified: right-branching specifiers, subject lowering, verb-raising, and V(erb)P(phrase)-raising (Potsdam, 2009; Clemens & Polinsky, 2017). The latter two of these have received the most attention, especially among works that derive V1 from an underlying SVO core (see, e.g., the various chapters in Carnie & Guilfoyle 2000 and Carnie et al. 2005). Continuing this line of work within antisymmetry (Kayne, 1994), I show that the clausal core in Me'phaa is SVO, which is built in the verbal domain where agreement is calculated. SVO is thus stamped on the verb stem, and to generate V1 order I propose that the language uses EPP-driven VP-raising (Massam 2000, 2001, 2005; Lee 2000, 2005, 2006; Pearson 2001, 2005; Aldridge 2002, a.o.) of the maximal projection that contains the verb and all its pieces, namely, VoiceP/*v*P. This is preceded by argument evacuation to the inflectional domain, which I maintain is purely for purposes of word order and setting the stage for phonological well-formedness of the verb, and not, say, for purposes of agreement (as in Lee 2006).

Several derivational accounts of V1 explicitly factor in the order of morphemes on the verb stem (Lee, 2000, 2006; Clemens & Coon, 2017) or the surface position of preverbal constituents (Collins, 2017) to establish their account for how the verbal and inflectional domains connect. This type of approach factors into my discussion of Me'phaa V1 in two ways. First, as just noted, I claim that SVO order on the stem is the result of how verbal structures are built and agreement is calculated in the verbal domain. Second, I also consider the order of inflectional morphemes, which surface preverbally. Drawing from Collin's (2017) recent account of V1 in Samoan, I propose that the VP in Me'phaa raises to a functional projection situated below the layers that house Asp, Neg, Mood, and T. This enables a more straightforward account of how inflectional material comes to form part of the verb stem and appear on the left edge.

Me'phaa thus furnishes further evidence for the VP-raising account of V1, and it provides

greater insight into precisely how this can transpire in an individual language. Moreover, Me'phaa pushes the boundaries of what can be expected in a VP-raising language. Oda (2005) and Potsdam (2009) both point to the impossibility of rich agreement in a language where V1 is derived by VP-movement, because either “the subject never enters into a checking relation with T” (Oda, 2005, 131) or because the verb cannot “raise to T⁰ and check ϕ -features” (Potsdam, 2009, 751). Me'phaa invites reconsideration of the relationship between agreement and the derivational paths to V1, and also demonstrates the need for V1 accounts to explore the nature of the verbal domain. Since agreement is calculated within the VP— independent of T⁰—rich agreement and VP-raising are entirely compatible.

1.6 Fieldwork methodology and data sources

Me'phaa data presented in this dissertation come primarily from my own field research working with native speakers in the United States, all of whom come from Iliatenco, Guerrero, Mexico. I utilized a variety of methods for eliciting language data, the most common being structured elicitation sessions with Mexican Spanish functioning as our local lingua franca. For the elicitation sessions, I would typically provide an appropriate context for utterances in an attempt to approach “naturalness” despite the highly unnatural nature of formal elicitation. Additionally, I drew from available works either on or in Me'phaa, some by native speakers and/or native speaker-linguists, to inquire about and manipulate so as to test some particular parameter (e.g., word order permutations, dative shift, etc.).

The speakers I worked with were all multilingual, either Me'phaa-Spanish bilinguals or Me'phaa-Spanish-English trilinguals. On account of this, and due to the fact that our communication was in Spanish, I also used alternative means of obtaining language use *not* mediated by Spanish. One of these strategies was storytelling, initiated by simple prompts such as “Tell me about a time when . . .” or something similar. A second strategy incorporated Story-builder action cards (www.story-builder.ca) to encourage creative and spontaneous

language use. Story-builder is a picture-based elicitation method intended for use in a variety of activities, including linguistic fieldwork. “Action cards,” such as the one shown in Figure 1 below, were used individually to elicit verbs and sentences, or in sequences together with “character cards.” The sentence in (7) is an excerpt of a story based in part on the action card in Figure 1.



Figure 1.1: An example of a Story Builder action card. CC BY-NC-SA 3.0 Katie Sardinha. <https://creativecommons.org/licenses/by-nc-sa/3.0/>

- (7) Ni-ne mújúún ya'dun majaan gajmáa xuy-uú xtila.
 PFV.1SG.-do well.1SG salsa good with meat-3SG chicken
 ‘I made chicken mole.’

Orally- and visually-prompted storytelling thus served multiple functions, including drawing out longer stretches of talk (narratives), stimulating creative, non-mediated speech production (i.e., “without interference from the metalanguage”), and facilitating (more) natural speech.

Chapter 2

Me'phaa basics and verb morphology

2.1 Introduction

This chapter introduces aspects of Me'phaa verbal morphosyntax, focusing primarily on how the language manifests both ergative and non-ergative alignments. The picture that emerges is one of rich complexity driven by three core “ergativity properties” (Deal, 2015) coalescing. This attribute of the language exists primarily because intransitives are not uniform with respect to agreement marking: some intransitive subjects pattern like transitive objects, others like transitive subjects, and others still look like neither of these. While verbal agreement has received treatment in prior work on Me'phaa (Suárez, 1983; Carrasco Zúñiga & Weathers, 1988; Wichmann, 1996, 2005, 2009; Carrasco Zúñiga, 2006; Navarro Solano, 2012; Marlett, 2012a; Cline, 2013), I revisit it from the perspective of clause type to provide a foundation for arguing that these alternations are syntactic in nature, and not, say, lexical or (purely) morphological. The development of key features of verbal argument structure here thus feeds into the discussion of the syntax of argument structure in Chapters 3-4, which in turn provides insights into the core architectures that underlie Me'phaa's particular version of deriving verb-initial order (Chapters 5).

2.2 Language background and typological profile

Me'phaa is a Western Otomanguean language genus from southwest Mexico whose individual languages bear the same namesake.¹ Its approximately 100,000 speakers primarily reside in the *Montaña* region of Guerrero, located in the eastern part of the state, seen in Figure X below. Outside of Guerrero, Me'phaa is spoken sporadically where speakers have moved, including other areas in Mexico and a few locations in the United States.

Me'phaa is part of the Tlapanec-Manguenan branch within Western Otomanguean. According to Ethnologue (Simons & Fennig, 2017), speakers recognize 9 distinct varieties of Me'phaa, which are traditionally associated with distinct geographic centers (Cline et al., 2012): Tlacoapa (Mi'phaa Míjuí), Malinaltepec (Me'phaa Mañuwíin), Huehuetepic (Me'phaa Vátháá), Acatepec (Me'phaa Wí'iin), Teocuitlapa (Me'phaa Xma'íin), Zapotitlán Tablas (Me'phaa Xirágáá), Nanzintla (Me'phaa Murúxí), Huitzapula (Me'phaa Aguaa), and Azoyú (Me'pháa Tsindí).² All the speakers that I have worked with come from the Iliatenco Municipality, located at the southern border of *La Montaña* (shaded in darker blue in Figure 2.1). Among the 9 recognized varieties, Me'phaa from Iliatenco is commonly subsumed under the designation of Malinaltepec Me'phaa.³ On the whole, Me'phaa remains underdocumented, especially when compared to other Otomanguean languages, for example, Mixtec and Zapotec (both in the Eastern branch). The majority of extant work on Me'phaa represents the Malinaltepec and Azoyú varieties, though recent efforts have been taken to document

¹Me'phaa is also referred to as 'Tlapanec/Tlapaneco,' and this term is especially prevalent in earlier literature. The key difference being that the former is an autonym, whereas the latter is exonymic, originally given by Nahuatl speakers as a sort of formal equivalence (both mean 'one from A'phaa' [= Tlapa]). In my work, I have consistently used 'Me'phaa' to refer to either the language or the people, because the speakers who I have worked with generally prefer it, and it has become the norm among native speaker linguists and language teachers.

²In addition to these, Subtiaba from Nicaragua also is part of the Me'phaa genus. Subtiaba is, however, no longer spoken, having gone dormant some time in the 20th century.

³The Iliatenco and Malinaltepec municipalities border one another in *La Montaña*, and both refer to the language as *Ajngáa Me'phaa* 'the Me'phaa language.' Most, if not all, speakers I have met from Iliatenco are aware of differences between their ways of speaking and those that are found in Malinaltepec (saying, e.g., "así se dice en Mali, pero en Iliatenco, no [that's how they say it in Mali, but not in Iliatenco]" or something similar). In elicitation sessions, I have encountered such differences on several occasions and in various domains of the grammar. My point in drawing attention to this is not an attempt to register a distinct variety; I merely wish to acknowledge that these differences exist.

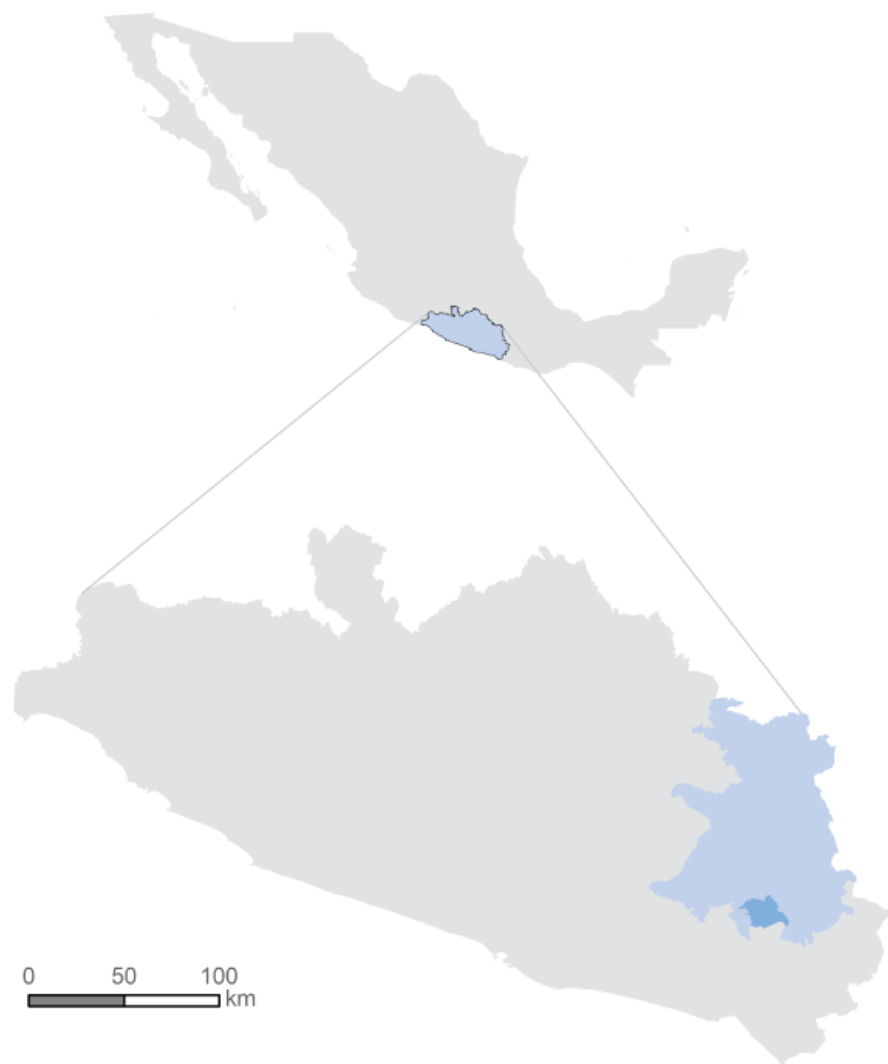


Figure 2.1: Map of Guerrero, Mexico, showing the location of the Iliatenco Municipality (dark blue) in *La Montaña* region.

properties of the entire genus (Marlett, 2011a).

As with most Otomanguean languages (Palancar, 2016), Me'phaa is tonal, polysynthetic, verb-initial, and head-marking.

- (8) a. *Áán, ne-'-khō* *Pédro gumá.*
 yes PFV-3SG-eat Pedro tortilla
 'Yes, Pedro ate the tortilla.'
- b. *Ya ni-ganú rí mo-phétso=lo'.*
 already PFV-arrive that IRR.PL-eat=1PL.INCL
 'It's time to eat.' (Lit., 'The time we eat has already arrived.')

- c. No-than=mijna=xo' gajmián=xo' ána'=xo' náá
 IPFV.PL-speak=self=1PL.EXCL with=1PL.EXCL parents=1PL.EXCL PREP
 A'pháa mbámbá mbi'i.
 A'phaa each day
 'We (but not you) speak to our parents in A'phaa (Tlapa) every day.'

Core arguments may be *pro*-dropped; when they do appear overtly, they are always unmarked for case. An argument's ϕ -features are expressed on the verb directly, and these agreement markers also encode grammatical relations.

Me'phaa verbs display rich inflectional complexity, presenting “the most complicated part of all the grammar” (Carrasco Zúñiga & Weathers, 1988, 69). For example, Suárez (1983) identified 12 separate verb classes in the Malinaltepec variety based on the behavior of person-marking suffixes; intransitives alone fall into 7 of these classes.⁴ Within the verb complex, inflection for person can either follow the verb root or precede it, and TAM morphology is always preverbal. Verbs in the language thus generally reflect the templatic structure in (9), with examples illustrating each of the verb components immediately following in (10):

(9) ASP-(NEG-)-AGR- \sqrt{Verb} -AGR=CL

- (10) a. Na-ndu'w-ee.
 IPFV-laugh-3PL
 'They're laughing.'
- b. Ma-xá-tha-ne
 IRR-NEG-2SG-do
 'You won't do it.'
- c. Nu-ngo^jwá=xo' kafé.
 IPFV.PL-sell=1PL.EXCL coffee
 'We (but not you) sell coffee.'
- d. Ni-sng-ó'=lá' máján(=lá').
 PFV-teach-1SG=2PL well=PL
 'Y'all taught me well.'

⁴The number for all Me'phaa verb classes varies when using suffixal material as the basis for class distinction because there is overlap between the inflectional paradigms of intransitives with transitives and ditransitives. Suárez himself noted that several classes resemble one another; when this is accounted for, the number of classes reduces to 7.

The simplified template in (9) is quite helpful in terms of broadly mapping out pieces of verb morphology, but it is rather opaque with respect to how inflectional paradigms pattern together in potentially significant ways. It should be noted, too, that there are currently two approaches regarding the locus of person inflection in Me'phaa literature. Wichmann (2009) sees person inflection as following the verb, which is the most common pattern among Otomanguan languages (Campbell, 2016, 141). Alternatively, Carrasco Zúñiga (2006), Navarro Solano (2012), and Cline (2013) analyze Me'phaa verbs as having preverbal and postverbal person inflection. This pattern is also attested in the Otomanguan family, especially among the Oto-Pamean languages (Campbell, 2016, 141). The account that I develop below supports the flanking approach, and the presence of preverbal inflectional material as a core component of the overall agreement paradigm is critical for discerning certain verb types.

In this dissertation, I propose that the phonological form of the agreement exponent and *where* the exponent surfaces both carry structural implications. Taking a more fine-grained approach that, for the time being, exclusively factors in where agreement surfaces but crucially factors in preverbal, postverbal, and suppletive inflection, the following distinct verbal templates can be identified.

(11) Me'phaa verb templates (to be revisited)

- a. Transitive₁: Prefix + suffix

SUBJ- $\sqrt{\text{Verb}}$ -OBJ=CL

- b. Transitive₂: Prefix + Suppletion

SUBJ- $\sqrt{\text{Verb.OBJ}}$ =CL

- c. Intransitive₁: Prefix

SUBJ- $\sqrt{\text{Verb}}$ =CL

- d. Intransitive₂: Suffix

$\sqrt{\text{Verb}}$ -SUBJ=CL

e. Intransitive₃: Suppletion

$\sqrt{\text{Verb.SUBJ=CL}}$

Each of these will be unpacked in the discussion that follows, as well as in Chapters 3 and 4. For now, I merely wish to highlight how particular patterns of agreement correspond to differences in clause type. Descriptively, transitives and unergatives bear subject marking on the left side of the verb root, while agreement surfaces to the right side for transitive objects and some unaccusative subjects. Moreover, some transitive objects and intransitive subjects are marked directly in/on the verb root via suppletion.

The discussion in the rest of this chapter proceeds as follows. I begin with a brief description of the (linearly) leftmost elements in the verbal complex: aspect, mood, and negation. Following this, I preface the exposition of Me'phaa's complex system of agreement by orienting toward ways that ergativity is understood to be manifest in languages with ergative systems. The discussion of patterns of agreement is framed in terms of clause type, which helps to reveal shared ways of agreeing among subsets of verbs. Finally, I close the chapter by turning to what advantages perspectivizing Me'phaa verb morphology in this way has for understanding the language's complex patterns of agreement and specific brand of ergativity.

2.3 Aspect and mood

Me'phaa utilizes an aspectual system composed of perfective and imperfective aspects, and it also has an irrealis mood marker (Carrasco Zúñiga & Weathers, 1988; Carrasco Zúñiga, 2006; Navarro Solano, 2012).⁵ All of these occur preverbally, as seen in (12).

- (12) a. **Na-'**xmí gome.
IPFV-3SG-sew cloth
'S/he's sewing a cloth (for wrapping tortillas).'

⁵Me'phaa also has a vowel lengthening suffix referred to as the "iterative aspect" (or simply "iterative") in some descriptive works (e.g., Carrasco Zúñiga & Weathers 1988; Navarro Solano 2012). I discuss the so-called "iterative" in Chapter 4, where I use it as a diagnostic for determining verb types.

- b. **Ni**-'-xmí gome.
 PFV-3SG-sew cloth
 ‘S/he sewed a cloth (for wrapping tortillas).’
- c. **Ma**-'-xmí gome.
 IRR-3SG-sew cloth
 ‘S/he will sew a cloth (for wrapping tortillas).’

These three markers appear on verbs in matrix clauses as well as several types of complement clauses whose structure is rich enough to contain inflectional material. Each aspect/mood prefix in the affirmative has an allomorph whose trigger is phonological, responding to features of the verb root/stem. These are *nda-*, *ndi-*, and *mba-* for imperfective, perfective, and irrealis, respectively.

- (13) a. **Nda**-yarun'-úún.
 IPFV-hug-1SG
 ‘S/he is hugging me.’
- b. **Ndi**-ya=ló'.
 PFV-see=1PL.INCL
 ‘We (including you) saw it.’
- c. **Mba**-yará'-aa.
 IRR-hug.1SG-3SG
 ‘I’m going to hug her/him.’

The generalization accounting for the distribution is that the simple nasal variants (*na-*, *ni-*, *ma-*) are the more basic form (Carrasco Zúñiga & Weathers, 1988, 60), and become prenasalized stops whenever the verb root/stem they attach to begins with a *y* [j] (Navarro Solano, 2012, 50).⁶

⁶There are, to my knowledge, two potential counterexamples to this. The first case is when the prenasalized stop variant attaches to a stem or root with *ñ* instead of *y*, as in the following:

- (1) Nde-ñ-uú án-a náa A'pháa.
 PFV-see.APPL-3PL parents-3PL PREP A'phaa
 ‘I saw your parents in A'phaa (Tlapa).’

However, *y* is the onset of the root meaning ‘see’. The addition of an applicative morpheme triggers a change in the root.

Other variants of aspect prefixes are driven by free variation among certain vowels. Modern Me'phaa utilizes a 5-vowel system composed of *a*, *i*, *u*, *e*, and *o*. The latter two in this set, *e* and *o*, may have been historical innovations (Carrasco Zúñiga, 2006). Regardless of their source, in contemporary language use these vowels often freely alternate with *i* and *u*, respectively. Among the aspect prefixes, then, both *ni-* ~ *ne-* and *ndi-* ~ *nde-* alternations can be observed:⁷

- (14) a. **Ni**-!-ne Catalína.
 PFV-3SG-do Catalina.
 ‘Catalina did it.’
- b. **Ne**-!-ne Catalína.
 PFV-3SG-do Catalina.
 ‘Catalina did it.’
- c. **Ndi**-!-yoo á!go.
 PFV-3SG-see woman
 ‘S/he saw a/the woman.’
- d. **Nde**-!-yoo á!go.
 PFV-3SG-see woman
 ‘S/he saw a/the woman.’

Beyond these variants, there are several contextual allomorphs that interact with negation and plural subject agreement for transitive and unergative subjects. These will be exemplified in the relevant sections below.

The second case is where the root/stem begins with *y*, but the simple nasal prefix ends up being retained.

- (2) Na-ya-x-oo káro.
 IPFV-see-APPL-3SG car
 ‘S/he’s looking at the car.’

Again, though, it may be that additional morphology affects the form of the prefix.

⁷Vowel harmony further complicates the issue of free variation in vowels. Although I have recorded several instances of *i* ~ *e* alternations within the same speaker and/or across speakers (e.g., *nikixuún* ~ *nikexuún* ‘I jumped’), in many cases the mid vowel variants surface in the presence of other mid vowels, and vice versa for the high ones.

2.4 Negation

Verbal negation in Me'phaa is typically expressed affixally, with different forms triggered by aspect type and verb type. Negative prefixes occur either as (a) portmanteau prefixes fused with aspect, (b) an independent prefix that surface immediately following mood, or (c) an independent prefix that occurs with aspectless verbs. Moreover, it is possible to negate using *nanguá* 'not', which can combine with truncated or whole verb forms. Finally, Me'phaa has special negation morphology for existentials and statives.

For realis aspects, negation and aspect are fused together in a single morpheme.

- (15) a. Na-tha mújún' Me'phaa.
 IPFV-speak well.1SG Me'phaa
 'I speak Me'phaa well.'
- b. **Tsí**-tha mújún' Rene.
 IPFV.NEG-speak well.1SG Mixtec
 'I don't speak Mixtec well.'
- c. Ni-chikú=ne.
 PFV-break=*ne*
 'I broke it.'
- d. **Tá**-chikú=ne.
 PFV.NEG-break=*ne*
 'I didn't break it.'

The prefixes *tsí-* and *tá-* (sometimes *thá-*) thus correspond to negation in imperfective and perfective, respectively. For verbs marked with irrealis mood, though, negation always surfaces as an independent morpheme, *xá*.

- (16) Ma-'-ne.
 IRR-3SG-do
 'S/he'll do it.'
- (17) Ma-xá-'-ne.
 IRR-NEG-3SG-do
 'S/he won't do it.'

Like its fusional counterparts that co-occur with singular subjects, the negative marker *xá-* appears to the left of transitive subject marking.⁸

Another negative prefix, *ra-*, is not compatible with verbal aspect. Instead, it occurs with stative verbs, as well as copula ‘be’ and verbal ‘have’.

- (18) a. **Ra**-máxa ex̩e r-ú'kho.
 NEG-be.green tree INAN-this
 ‘This tree isn’t green.’
- b. Pédro **ra**-ñajun x̩ab̩o tsí na-singáa.
 Pedro NEG-be person REL.AN IPFV-3SG.teach
 ‘Pedro isn’t a teacher.’
- c. **Ra**-g-ú'-d-aa mbá-a xuwán.
 NEG-have-1SG-have-3SG a-AN dog
 ‘I don’t have a dog.’

This same morpheme also surfaces in negative focus constructions, which are clefts.

- (19) a. **Ra**-'khaa ikhúún (tsí) né-kho.
 NEG-FOC 1SG REL.AN PFV-1SG.eat
 ‘It wasn’t me who ate it.’
- b. **Ra**-'kháa ikháanxo' ñajuá=xo' tsí ni-guájna=xo' mícha
 NEG-FOC 1PL.EXCL be=1PL.EXCL REL.AN PFV-PL.leave=1PL.EXCL early
 náá ndxaa mbro'on r-íge'.
 PREP party night INAN-this
 ‘It wasn’t us (not including you) who left the party early last night.’

As these examples show, negation and focus marking are adjacent. This could mean that negation is marked directly on the focus marker itself.⁹

Another negation strategy found in Me'phaa involves the independent particle *nanguá* ‘no, not’.

⁸This basic generalization has syntactic/structural importance, but on the surface level it can be difficult to see because of morphophonological processes in some aspects. In particular, plural subject marking on transitive and unergative verbs interacts with aspect and negation in most cases. For perfective negative and irrealis affirmative, plural subject marking is fused with the aspect/negation morpheme. See Section 2.6.1 for examples.

⁹I use the term “focus marker” here in following Navarro Solano (2012)’s use. However, the status of these elements is unclear. It may be that *khaa* here is a type of copula or linker in a biclausal cleft construction, for example.

- (20) a. **Nanguá** mbawian'=lo'.
 NEG be.alone=1PL.INCL
 'We're not alone.'
- b. **Nanguá** ni-d-e' ni-mbá.
 NEG PFV-throw-3SG NEG-INDEF.INAN
 'S/he didn't throw anything.'

The negative particle surfaces preverbally, and, to my knowledge, nothing may intervene between it and the verb stem.

Existentials in Me'phaa also take distinct forms based on polarity, as well as animacy.

- (21) a. **Ríga** mbá xóo magoo mo'-ne=ló'.
 EXIST.INAN a.INAN how can IRR.PL-do=1PL.INCL
 'There is a way we can do it.'
- b. **Xtáa** mbá-a tsí ndá-'-ñ-áa nakí.
 EXIST.AN a.AN REL.AN IPFV-3SG-see.APPL-2SG PST
 'Someone was looking for you earlier.' (Lit., 'There is someone who was looking for you earlier.')
- c. **Ndaa** ni-mbá xóo rí magoo ma-mbá=ló'.
 NEG.EXIST NEG-a.INDEF how REL.INAN can IRR-finish=1PL.INCL
 'There is no way we can finish.'
- d. **Ndawaa** ni-mbá-a gejió'.
 NEG.EXIST.AN NEG-a-AN here
 'There isn't anyone here.'

The affirmative existential *ríga* is only licit with inanimates, whereas *xtáa* is used exclusively with animates. Moreover, these forms are wholly unrelated morphophonologically. The negative existentials *nda* and *ndawaa*, on the other hand, showcase morphophonological affinity to each other, though neither appears to be based on an affirmative form. The animate negative existential, *ndawaa*, is more complex and is built from the inanimate one, which is a common way of encoding animacy in other domains in the language.¹⁰

¹⁰For example, consider the inanimate and animate versions of the indefinite articles, *mbá* and *mbá-a*, respectively. Of course, when there is an animacy distinction among forms, the inanimate is not always

Me'phaa also exhibits negative concord, where multiple negative elements are present in a sentence without contributing to more than one instance of negation. This phenomenon can be seen in (21c-21d) above, as well as the following examples.

- (22) a. Ikháa ni-ngajó mbá, péro **nanguá** **ta**-dxá-uun rí
 3SG PFV.3SG.-deny a.INAN but NEG PFV.NEG-hear-1SG REL.INAN
 ne-'-th-en.
 PFV.AFF-3SG-say-3SG
 'S/he denied something, but I didn't hear what s/he said.'
- b. **Ndáa** *(**ni**-)mbá gejió'.
 NEG.EXIST NEG-a.INAN here
 'There's nothing here.'
- c. **Tá**-ganuun *(**ni**-)mbá in-a.
 PFV.NEG-arrive NEG-a.INAN face-2SG
 'Nothing arrived for you.'

In (22a), the negative particle *nanguá* appears simultaneously with the negated verb *tádxáun* 'I didn't hear (it)', but this is interpreted as only having a single instance of negation. Similarly, in (22b) and (22c), the negative indefinite pronoun *nimbá* 'nothing', which itself bears an overt negative prefix unique to indefinite pronouns (Duncan, 2013), co-occurs with a negative existential and a negated verb, respectively. Negative indefinites must be licensed by negation,¹¹ and an attempt to relegate negation exclusively to the verbal/existential component results in ungrammaticality.

I have not attempted to test any potential upper limit on negative elements co-occurring in the same sentence. However, I have recorded a few instances with three, such as in the example below.

- (23) **Ndaa** **ni**-mbá **thá**-'-tha María.
 NEG.EXIST.INAN NEG-a.INAN PFV.NEG-3SG-write Maria
 'There isn't anything that Maria wrote.'

simpler. Demonstratives and relativizers are an example of this, where the prefix *r*- indicates inanimate and *ts*- signals an animate one.

¹¹One exception to this is that comparatives license negative indefinites in Me'phaa.

2.5 Person marking and manifestations of ergativity

As noted in Section 1, Me'phaa is an ergative language, and exploring the implications of how Me'phaa instantiates ergativity for syntactic structure is a central aim of this dissertation. In what follows, I preface the description of Me'phaa inflectional morphology with a short introduction to ways that ergativity is expressed cross-linguistically. Orienting to “ergativity properties” (Deal, 2015) and alignment types, I argue, helps shed light on the two competing descriptions of Me'phaa agreement and ergativity in extant literature on the language, which diverge based on whether person agreement is purely postverbal (Wichmann, 2009) or flanks the verb on both sides (Carrasco Zúñiga, 2006; Navarro Solano, 2012; Cline, 2013) in the verb template. After a general discussion of ways ergativity is typologically manifest, I turn to patterns of agreement in Me'phaa, which, I argue, are so richly complex in part because the language exhibits multiple ways of being ergative.

2.5.1 Ergativity properties

Ergativity is not a uniform phenomenon cross-linguistically (Deal, 2015). Instead, ergativity refers to a constellation of properties, which ergative systems instantiate one or more of:

(24) Ergativity properties (Deal, 2015, 654)

a. *The ergative property*

Subjects of transitive clauses behave differently from subjects of intransitive clauses for some grammatical generalization(s).

b. *The absolutive property*

Objects of transitive clauses and subjects of intransitive clauses behave identically for some grammatical generalization(s).

c. *The argument-structural property*

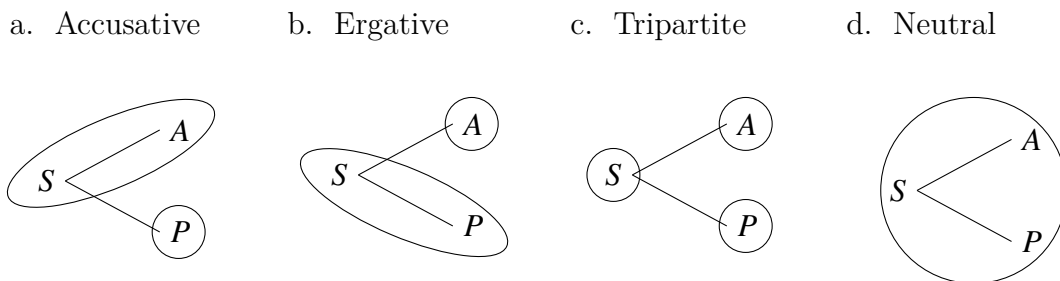
Subjects of unaccusative verbs behave differently from subjects of unergative and transitive verbs for some grammatical generalization(s).

Here, the phrasing “for some grammatical generalization(s)” is intentionally open, as ergativity is not limited to one particular grammatical property. Common aspects of the grammar that encode ergativity properties include agreement and case relations.

2.5.2 Ergative alignment

Another common way of talking about ergativity found in the literature appeals to the notion of alignment. Alignment refers to the encoding of participant roles across clause types and how these participant roles do or do not group together. I use the the following labels for participant roles of transitive and intransitive events: P = transitive object, A = transitive subject, and S = intransitive subject (following Comrie 1978 and Dixon 1994, though Dixon uses O for P; and Croft (2003)). The two most commonly attested systems of alignment across the world’s languages differ in their grouping of S with respect to either P or A. In a system where S patterns with A, the result is an accusative alignment; when S patterns with P, the result is ergative. Less commonly, S and A an P can all have differential marking, producing a tripartite system, or, (even less common) in a neutral system all receive the same treatment. The semantic maps in (25) illustrate these four possibilities.

(25) Semantic maps for the four alignment types



In what follows, I briefly exemplify accusative, ergative, and tripartite alignments by way of languages that show such patterns through (overt) morphological case or verbal agreement. My reason for focusing on these three types is that they will, ultimately, each factor into the discussion of patterns of agreement in Me'phaa.

In a language displaying accusative alignment, S and A are grouped together for some set of grammatical phenomena. An illustration of this pattern can be seen in Ibibio (Niger-Congo; Nigeria):

(26) Ibibio

- a. **Àmì** ìn-mà ù-kít **fièn.**
 1SG.NOM 1SG-PST 2SG.OBJ-see 2SG.ACC
 ‘I saw you.’
- b. **Àfò** à-mà à-ù-kít **míèn.**
 2SG.NOM 2SG.SUBJ-PST 2SG.SUBJ-1SG.OBJ-see 1SG.ACC
 ‘You saw me.’
- c. **Àmì** ìn-mà ù-dí.
 1SG.NOM 1SG-PST 1SG-come
 ‘I came.’
- d. **Àfò** à-mà à-dí.
 2SG.NOM 2SG.SUBJ-PST 2SG.SUBJ-come
 ‘You came.’

Like Modern English, Ibibio case-marks pronominal dependents. For Ibibio specifically, though, this only occurs in 1st and 2nd persons. As this mini-paradigm shows, intransitive subjects (i.e., S participant roles) are case-marked in the same way as transitive subjects (i.e., A participant roles) while transitive objects (i.e., P participant roles) are treated differently.

In contrast, in a language with ergative alignment, S receives the same treatment as P to the exclusion of A for a particular grammatical phenomenon. The Native American language Kiksht (Penutian; Oregon, U.S.A) displays this type of alignment via verbal agreement. Consider, for example, how third singular feminine arguments are encoded in transitive and intransitive events.¹²

¹²The Kiksht examples have been modified from the original sources to be rendered more in accordance with contemporary orthographic practices used in the language programs of the Warm Springs Indian Reservation in Warm Springs, Oregon.

(27) Kiksht (Dyk 1933, 28; Sapir 1909, 24)

- a. Gal-~~θ~~-ú-ya.
REM.PST-3SG.ABS.F-go-PST
'She went.'
- b. Ga-k-i-ú-chxm.
REM.PST-3SG.ERG.F-3SG.ABS.M-DIR-boil
'She boiled him.'
- c. Ga-ch-~~θ~~-túpq.
REM.PST-3SG.ERG.M-3SG.ABS.F-see
'He saw her.'

Accordingly, the null 3SG.ABS.F marker is used for both the subject of the intransitive verb 'go' in (27a) and the object of 'see' in (27c). The third singular feminine subject of a transitive verb, though, is marked differently, and is indexed on the verb with *k*- (27b).

A typologically common property of languages with ergative systems is that they are rarely—if ever—uniformly ergative (see, e.g., Comrie 1978; Moravcsik 1978, a.o.). Instead, split ergativity is the norm in languages deemed ergative. Such splits occur when the ergative pattern is lost in a particular context. Cross-linguistically, the most common types of split are aspect- and person-based (Coon and Preminger, to appear). The latter of these holds for Kiksht, where the split is driven by a distinction between local and non-local persons:

(28) Kiksht (Dyk, 1933: 54, 48, 26)

- a. N-u-txwí-lal.
1SG-DIR-stand-CONT
'I am standing (continually).'
- b. A-n-i-ú-t-k-a.
FUT-1SG-3SG.ABS.M-DIR-TEM.DIR-bury-fut
'I'll bury him in the near future.'
- c. A-ch-n-ú-t-k-a.
FUT-3SG.ABS.M-1SG-DIR-TEM.DIR-bury-FUT
'He will bury me.'

In this example, the exponent for 1SG is constant: it is realized as *n-* whether it indexes an intransitive subject (28a), a transitive subject (28b), or a transitive object (28c).

The third alignment that will be relevant for understanding how participant roles are encoded and pattern together in Me'phaa is the tripartite system, where A and P and S are all treated differently. Nez Perce (Sahaptian; Idaho, Washington, & Oregon) is a dependent-marking language where such three-way pattern is visible.

(29) Nez Perce (Deal, 2010, 74-75)

- a. hi-pa-k'oomay-na mamáy'ac.
3SUBJ-S.PL-be.sick-PERF children
'The children were sick.'
- b. pit'íin-**im** páa-yaâ-na picpíc-**ne**.
girl-ERG 3/3-find-PERF cat-OBJ
'The girl found the cat.'

Intransitive subjects are unmarked for case (29a), while transitive subjects receive ergative case and transitive objects are marked with objective case (29b).

2.6 Morphological ergativity in Me'phaa

Me'phaa manifests ergativity exclusively through person indexation on verbs. This uncontroversially represents agreement, and may or may not encode case (Wichmann, 2009). Canonical ergative alignment can be seen in the examples below.

- (30) a. Ni-xkhax-**úún**=lá'.
PFV-wake-1SG=2PL
'Y'all woke me.'
- b. Ni-kh-**úún**.
PFV-burn-1SG
'I got burned./'I burned myself (on accident).'

- c. Mba-**ya**rá'-aa.
IRR-hug.1SG-3SG
'I'm going to hug her/him.'

Here—as expected for an ergative system—P aligns with S to the exclusion of A for purposes of agreement: both the transitive object (30a) and the intransitive subject (30b) have *-úún* as the morphological exponent of 1SG, whereas the transitive subject is marked by tone change in the verb root (30c).

Nevertheless, one does not have to look far in Me'phaa for this ergative pattern to be lost. In the examples below (repeated from Chapter 1, except (31d) is added), we observe a four-way distinction in 2SG subject marking. Transitive subject marking (31a) patterns with unergative subject marking (31b). Intransitive subject marking on the whole, however, exhibits a four-way split. In addition to unergative subjects, unaccusative subjects (31c), subjects of experiencer verbs (31d), and intransitive verbs on directed motion (31e) all pattern differently.

- (31) a. Na-**ta**-majng-ún.
IPFV-2SG-push-1SG
'You're pushing me.'
- b. Na-**ta**-ndú'wa.
IPFV-2SG-laugh
'You're laughing.'
- c. Na-kix-**íín**.
IPFV-jump-2SG
'You're jumping.'
- d. Ne'-ng-**áa**.
PFV-die-2SG
'You died.'
- e. Na-**dxanú'**.
IPFV-2SG.arrive
'You're arriving.'

These examples demonstrate that, while Me'phaa is clearly ergative at some level, it is not ergative in the sense that it always (or even frequently) displays ergative *alignment*. Instead, patterns of agreement appear to be sensitive to verbal constructions that pertain to clause type. This creates a constellation of agreement paradigms such that Me'phaa can be shown to possess all three ergativity properties and all three alignment types.

2.6.1 Transitives

Transitivity is generally visible through the number of arguments indexed on the verb, as well as the location of agreement within the verbal word order. Transitives maximally index two participants and minimally index one. These verbs are thus formally “bivalent,” but can either be “bipersonal” or “monopersonal,” to use terminology applied by Wichmann (2009) and Navarro Solano (2012). The choice between the two is primarily a factor of the animacy of the object, because inanimate objects in canonical transitives do not trigger agreement. Thus, bipersonal transitives index two animate arguments, whereas monopersonal transitives index only one.

Starting on the left side of the verb complex, transitive subject agreement surfaces between aspect and the verb root/stem.

- (32) a. Na-**ta**-xkhax-uún.
 IPFV-2SG-wake-1SG
 ‘You’re waking me.’
- b. Ni-**ʼ**-sng-áa.
 PFV-3SG-teach-2SG
 ‘S/he taught you.’

Second person singular transitive subjects, as in (32a), are indexed on the verb with the prefix *ta-* (or one of its allomorphs, such as *t-*, *tha-*, or *r(a-)*). Such marking is typically ubiquitous and quite salient, in contrast to transitive subject marking for other singular participants. In (32b), the 3SG subject is indexed with a glottal stop, which is a common,

but by no means universal strategy for indexing 3SG subjects. So, for example, the prefixal glottal stop does not surface on a verb like ‘kick’ inflected with a 3SG subject.¹³

- (33) Ni-pru'-úún.
 PFV-kick-[3SG>]1SG
 ‘S/he kicked me.’

First person singular transitive subject agreement is likewise not as salient as 2SG. In (34) below, repeated from (30c) above, tone change on the verbal stem signals that a first person subject is acting on a third person singular (animate) object.¹⁴

- (34) Mba-**ya**rá'-aa.
 IRR-hug.1SG-3SG
 ‘I’m going to hug her/him.’

Given that 1SG subject agreement on transitives is—at least in some cases—purely tonal, one reason that such agreement may be less visible is that there is a high number (possibly more than 20) of tone classes that transitive verbs fall into (Suárez, 1983).¹⁵ These tone classes are little understood, and at present there is no clear evidence that such classes are morphosyntactically driven.¹⁶

Me'phaa transitive subject agreement also showcases a person split that is motivated by number, wherein plural arguments are differentially indexed on the stem.

- (35) a. **Nu**-xkhax-úún=lá'.
 IPFV.AFF.PL-wake-1SG=2PL
 ‘Y’all are waking me.’

¹³Cline (2013) proposes that the glottal stop only occurs with monosyllabic roots.

¹⁴See Cline (2013) for a discussion of tone melodies in transitive stems in the Acatepec variety. According to his analysis, the encoding of 1SG transitive subjects would be via a floating low tone.

¹⁵There are nearly 40 distinct classes accounted for in Suárez’s work when including both transitive and intransitive verbs. According to Palancar (2016, 131), “The most complex tonal system in Oto-manguean, and possibly in the world’s languages, is found in Tlapanec.”

¹⁶See Cline (2013) for an extensive discussion of tone in the Acatepec variety, including a discussion of tone melodies in the verbal complex. The issue of tone classes is further compounded by tone sandhi on verbs. This phenomenon, too, is not very well documented, though Wichmann (2006) has done some work on the subject for the Azoyú variety.

- d. Ni-pra'a=**ló'**
 PFV.AFF-kick=1PL.INCL
 'S/he kicked us (including you).'
- e. Ni-pra'a=**xo'**
 PFV.AFF-kick=1PL.EXCL
 'S/he kicked us (not including you).'
- f. Ni-pra'a=**lá'**
 PFV.AFF-kick=2PL
 'S/he kicked y'all.'
- g. Ni-pra'**-iin**.
 PFV.AFF-kick-3PL
 'S/he kicked them.'

Again, the comparison to independent pronoun forms is instructive; transitive object marking finds a formal parallel to suffixes on independent pronouns, as seen in the following:

- (39) a. Ikh-**úún** 'I'
 b. Ikh-**áan** 'you'
 c. Ikh-**aa** 's/he'
 d. Ikh-**áan=ló'** 'we (including you)'
 e. Ikh-**áan=xo'** 'we (not including you)'
 f. Ikh-**iin** 'they'

However, as is evident by comparing the paradigms in (38) and (39), plural objects are exceptions where the form of a transitive object does not exactly match. For the local plurals, the enclitics still surface, but the suffix *-áan* found on the pronouns does not appear before the clitic. The encoding of the 3PL object does not always match the suffix on the corresponding pronoun, though it can (40a), and in some cases 2SG objects take a different form, as well (40b).

- (40) a. Ni-ta-xkhax-**iin** ikhiin.
 PFV.AFF-2SG-wake-3PL 3PL
 'You woke them.'

- b. Ni-xkhax-**íin**.
 PFV.AFF-wake-2SG
 ‘S/he woke you.’

One of the more complex aspects of person inflection on transitives is that some suffixes encode features of both the subject and the object in a single suffix:

- (41) a. Na-majngu-**áan**.
 IPFV.AFF-push-2SG
 ‘I’m pushing you.’
- b. Na-majngu-**iin**.
 IPFV.AFF-push-[3SG>]2SG
 ‘S/he’s pushing you.’
- c. Na-májngu-**ii**.
 IPFV.AFF-push-[3SG>]3SG
 ‘S/he’s pushing him/her.’

Comparing (41a) and (41b) shows that transitive object encoding is not always uniform. Factoring (41c) into the comparison suggests that the suffix can in some cases covary with both the subject and the object.²⁰

Animacy factors significantly into Me'phaa grammar (Suárez, 1983; Carrasco Zúñiga & Weathers, 1988; Carrasco Zúñiga, 2006; Duncan, 2013), and one way that this plays out is through interaction with agreement patterns on verbs (Wichmann, 2009; Navarro Solano, 2012; Cline, 2013). Many inanimate subjects can trigger subject agreement in the same way that animate ones can, but inanimate objects behave differently. Inanimate objects never trigger agreement on the verb for canonical transitives.

- (42) a. Ikhúún ni-dá' itsí.
 1SG PFV.AFF-throw rock
 ‘I threw a/the rock.’

²⁰The encoding of the transitive subject suffixally in this way is not, however, a phenomenon of agreement, but rather, as Wichmann (2007) notes, something akin to switch reference and obviation (see also discussion in Carrasco Zúñiga & Weathers 1988).

- b. Ikhúún ni-dá' ajma itsí.
 1SG PFV.AFF-throw two.INAN rock
 'I threw two rocks.'
- c. Ikhúún ni-d-áa' xkaní'.
 1SG PFV.AFF-throw-[1SG>]3SG lizard
 'I threw a/the lizard.'
- d. Ikhúún ni-d-iin ajm-iin xkaní'.
 1SG PFV.AFF-throw-3PL two-AN lizard
 'I threw two lizards.'

This mini-paradigm shows that person inflection on the verb is not sensitive to the ϕ -features of inanimate objects. Thus, the final vowel on the verb stem is invariant in (42a) and (42b). Person suffixes do, however, covary based on ϕ -features of animate objects, as seen in the difference between *-áa'* and *-iin* in (42c) and (42d).

Example (43) shows a full paradigm for the verb 'throw' with an inanimate object; the optional clitic *=ne* here stands in place of an overt inanimate object (see Chapter 4 for more on the differential object marker *=ne* in Me'phaa). Moving down the paradigm, we see the expected invariant vowel on the root, with exceptions for the non-local subjects, seen in (43c) and (43g).

- (43) a. Ni-dá'=ne.
 PFV.AFF-throw=*ne*
 'I/it/they threw it.'
- b. Ni-ta-dá'=ne.
 PFV.AFF-2SG-throw=*ne*
 'You threw it.'
- c. Ni-d-é'=ne.
 PFV.AFF-throw-3SG.ERG=*ne*
 'S/he threw it.'
- d. Ni-dá'=lo'=ne.
 PFV.AFF-throw=1PL.INCL=*ne*
 'We (including you) threw it.'

- e. Ni-dá'=xo'=ne.
PFV.AFF-throw=1PL.EXCL=ne
'We (but not you) threw it.'
- f. Ni-dá'=lá'=ne.
PFV.AFF-throw=2PL=ne
'Y'all threw it.'
- g. Ni-d-e'=ne.
PFV.AFF-throw-3PL.ERG=ne
'They threw it.'

The pattern of root vowel invariance breaks because 3SG and 3PL subjects are here indexed through the verbal suffix. Accordingly, the suffixes *-é'* and *-e'* signal that a third person singular or third person plural subject, respectively, are acting on an inanimate object. Even though here only one participant is actually indexed on the verb, this pattern—where features of transitive subjects are expressed on the suffix—is analogous to cases mentioned above where subjects encode transitive subjects and objects simultaneously.

Finally, the pattern where objects do not trigger agreement across the paradigm, but non-local subjects do, also occurs when transitive verbs have reflexive objects (Navarro Solano, 2012, 163).

- (44) a. Ni-pra'a=mina'.
PFV.AFF-kick=self
'I kicked myself.'
- b. Ni-ta-pra'a=mina'.
PFV.AFF-2SG-kick=self
'You kicked yourself.'
- c. Ni-pra'a=mine'.
PFV.AFF-kick=self-3SG.ERG
'S/he kicked himself/herself.'
- d. Ni-pra'a=mijna=ló'.
PFV.AFF-kick=self.PL=1PL.INCL
'We (including you) kicked ourselves.'

- e. Ni-pra'a=míjna=xo'.
PFV.AFF-kick=self.PL=1PL.EXCL
'We (but not you) kicked ourselves.'
- f. Ni-pra'a=míjna=lá'.
PFV.AFF-kick=self.PL=1PL.INCL
'Y'all kicked yourselves.'
- g. Ni-pra'a=min-e'.
PFV.AFF-kick=self-3PL.ERG
'They kicked themselves.'

As the above examples show, the final vowel on the verb root is consistently invariant across the paradigm, and the final vowel of the whole verb complex is also invariant, except for nonlocal persons 3SG and 3PL. This suggests that reflexive objects fail to trigger agreement on the verb in the way that canonical animate objects do.

Moreover, reflexives are cliticized directly onto the verb, possibly through incorporation or pseudoincorporation. This type of analysis has been proposed for reflexives in Mayan languages, such as Ch'ol, Q'anjob'al, and K'iche' (Coon et al., 2014). Evidence for applying a (pseudo)incorporation analysis to Me'phaa comes from the location of the reflexive with respect to local plural subject clitics. Notably, reflexives intervene between the verb root and subject clitics. This suggests that reflexives must appear quite close to the verb root, in a position that is immediately adjacent. Again, note that the vowel immediately preceding the reflexive, *a* in the above example, never covaries with a change in subject. Instead, it is as if the (non)agreement paradigm that appears suffixally on a verb like 'kick' has shifted to a location immediately following the reflexive clitic. This again suggests that the reflexive has incorporated into the verb root rather than being a full-fledged object.

The table below summarizes verbal person marking for transitives.²¹

²¹My point in these tables is to illustrate in a simplistic way how ways of agreeing pattern together. I only capture a small amount of allomorphy, but do not attend to this for purposes of clarity. Thus, the summary tables are not exhaustive, and each form can vary because of factors such as vowel harmony, root tone melody, and tone sandhi, among other things.

| | S agreement prefix | O agreement suffix | S/O clitic |
|--------|--------------------|--------------------|------------|
| 1SG | (tone) | -úún | - |
| 2SG | t(a)-/r(a)- | -áan | - |
| 3SG.AN | ʼ/(tone) | -VV | - |
| 1PL | u- | - | =lóʼ |
| 1PL | u- | - | =xóʼ |
| 2PL | u- | - | =láʼ |
| 3PL.AN | u- | -VV | - |

Table 2.1: Transitive subject and object agreement markers (not including object suppletion).

2.6.2 Ditransitives

Ditransitive constructions involve three arguments: an agent (A), a theme (T), and a recipient (R) (Malchukov et al., 2010). Based on how these are encoded morphosyntactically, Me'phaa ditransitive constructions divide into two classes: those that participate in double object constructions (DOCs), and those that participate in prepositional object constructions (POCs). These are called capital-D “Ditransitives” and lowercase-d “ditransitives” by Wichmann (2010). In this section, I employ this distinction because it is both relevant and helpful for distinguishing between semantically ditransitive verbs based on differences in agreement morphology. Later on in the dissertation, though, I simply employ ‘ditransitive’ to refer to both, and differentiate them when needed by attending to whether they permit DOCs or require POCs, as this will be relevant in later chapters.

All Me'phaa ditransitives pattern like transitives with respect to the locus of person inflection and the amount of participants that can be encoded on the verb (whether they or bi- or monovalent). General facts about preverbal (especially 2SG) subject agreement, number-motivated subject splits, and subject clitics that are encountered in transitives, therefore, all apply to ditransitives, as well.

One major difference between the Ditransitive verbs, on the one hand, and ditransitives, on the other, lies in the form of the agreement suffix, as well as what arguments compete for expression in that suffix. Consider, for example, inflectional paradigm for Ditransitive ‘give’

with a third person singular subject and the inanimate direct object ‘rope’:

- (45) a. Ni-xn-**í'** xtín.
 PFV.AFF-give-[3SG>]1SG rope
 ‘S/he gave me (a/the) rope.’
- b. Ni-xn-**áa'** xtín.
 PFV.AFF-give-2SG rope
 ‘S/he gave you (a/the) rope.’
- c. Ni-xn-**úun'** xtín.
 PFV.AFF-give-3SG rope
 ‘S/he gave her/him (a/the) rope.’
- d. Ni-xna=**ló'** xtín.
 PFV.AFF-give=1PL.INCL rope
 ‘S/he gave us (including you) (a/the) rope.’
- e. Ni-xna=**xo'** xtín.
 PFV.AFF-give=1PL.EXCL rope
 ‘S/he gave us (not including you) (a/the) rope.’
- f. Ni-xna=**lá'** xtín ikháanlá'.
 PFV.AFF-give=2PL rope 2PL
 ‘S/he gave y'all (a/the) rope.’
- g. Ni-xn-**úun'** xtín ikhiin.
 PFV.AFF-give-3PL rope 3PL
 ‘S/he gave them (a/the) rope.’

Like transitives, internal arguments that are inanimate do not factor into the agreement calculus. Ditransitive person marking suffixes in Me'phaa track R rather than T when the latter is inanimate. When both R and T are animate, though, T is indexed instead:

- (46) a. Ikháa ma-xn-**í'** ikhaa.
 3SG IRR-give-[3SG>]1SG 3SG
 ‘S/he will give me to her/him.’
- b. Ikáa ma-xn-**áa'** ikhaa.
 3SG IRR-give-2SG 3SG
 ‘S/he will give you to her/him.’

Also like transitives, Ditransitive suffixes can be portmanteau, encoding both the subject and the indirect object. This phenomenon can be seen in comparing the four examples below, where the indirect object is consistently 1SG, the direct object inanimate, but the subject varies.

- (47) a. Ni-ra-xn-**ún'** xtín.
 PFV.AFF-2SG-give-1SG rope
 ‘You gave me the rope.’
- b. Ni-xn-**í'** xtín.
 PFV.AFF-give-[3SG>]1SG rope
 ‘S/he gave me (a/the) rope.’
- c. Ni-xn-**ún'**=lá' xtín.
 PFV.AFF-give-1SG=2PL rope
 ‘Y'all gave me the rope.’
- d. Ni-xn-**í'** xtín.
 PFV.AFF-give-[3PL>]1SG rope
 ‘They gave me the rope.’

Here, the suffix *-í'* only surfaces when the Ditransitive subject is a non-local subject. This is analogous to the behavior seen above in transitives where in certain contexts the suffix could “see through” to the subject in addition to the object (for animate objects) or in lieu of the object (for inanimate objects and reflexives). Moreover, comparing (47b-47d) with (46a) demonstrates that the variation in the 1SG suffix truly is not influenced by the second of the internal arguments: *-í'* encodes R when T is inanimate (47b-47d), and it encodes T when R is animate (46a)—so long as the A argument is a non-local subject.

While the encoding of multiple participants in a single morpheme is not uncommon cross-linguistically, the way that Me'phaa does this in Ditransitives is typologically exceptional. Whenever the Ditransitive subject is visible to the suffix, it's expression is unique; that is, it is unlike ergative marking in the analogous transitive construction. Because of this, Wichmann (2005, 2010) has coined the term “pegative” (from Greek *πηγη* ‘origin, source’) to refer to the suffixal indexing of the subject of a ditransitive event. The pegative is in this

sense a sort of second ergative (dative’s counterpart or “mirror-image”).²²

With transitives, I noted above that the inflectional paradigm for objects maps onto that of the independent personal pronouns. Ditransitive dative suffixes, on the other hand, are formally equivalent to one of two classes of possessive suffixes (Wichmann, 2010; Marlett, 2012b):²³

- (48) a. ru'd-**ú'** ‘my mom’
 b. ru'd-**áa'** ‘your mom’
 c. ru'd-**uu'** ‘her/his mom’
 d. ru'd-**á=ló'** ‘our (including you) mom’
 e. ru'd-**a=xo'** ‘our (not including you) mom’
 f. ru'd-**a=lá'** ‘y’all’s mom’
 g. ru'd-**uun** ‘their mom’

Finally, another type of ditransitive construction in Me'phaa requires that R be expressed in a prepositional phrase headed by a relational noun independently meaning ‘face’. With respect to person, these ditransitives (again, in contrast to Ditransitives) pattern together

²²For Wichmann, the pegative is rare on account of this, as well as for the fact that Me'phaa would evidence a case that is unattested in any other language. I use Wichmann’s terminology here because it communicates in a rather helpful way the difference between transitive and ditranstive subject encoding on verbal suffixes.

²³In addition to this, Me'phaa from Iliatenco has a second set as follows:

- (1) a. nan-**í'** ‘my mom’
 b. nani-**á'** ‘your mom’
 c. nan-**ii'** ‘her/his mom’
 d. nania'=l**ó'** ‘our (including your) mom’
 e. nania'=x**o'** ‘our (not including your) mom’
 f. nania'=l**á'** ‘y’all’s mom’
 g. nan-**ii** ‘their mom’

From the data I have gathered, the basic generalization seems to be that the set consisting of [-**ú'**, -**áa'**, -**uu'**, ...] applies to native words, while the set comprised of [-**í'**, -**á'**, -**ii'**, ...] is used for borrowed words. *Naní'* ‘my mom’ and *tatí'* ‘my dad’ have cognates that are found in several other Otomanguan languages, as well as Mesoamerican languages more broadly. Additionally, further native/non-native contrasts such as the possessed form of *dxóo* ‘friend’ compared to the possessed form of borrowed *migu* (from Spanish *amigo*) also attest to this (e.g., *díyú'* ‘my friend’ vs. *migu-í'*).

with transitives. In the paradigm below involving the verb ‘send’, the A *dxá'gu* ‘girl’ and T *mbá re'e* ‘a flower’ remain constant, while R varies (note that the word order in these examples is VDOIOS except in (49c) and (49g), where it switches to VDOSIO):

- (49) a. Ni-xu'má mbá re'e in-**u'** dxá'gu.
 PFV.AFF-send a.INAN flower face-1SG girl
 ‘The girl sent a flower to me.’
- b. Ni-xu'má mbá re'e in-**á'** dxá'gu.
 PFV.AFF-send a.INAN flower face-2SG girl
 ‘The girl sent a flower to you.’
- c. Ni-xu'má mbá re'e dxá'gu in-**uu** ikháa.
 PFV.AFF-send a.INAN flower girl face-3SG 3SG
 ‘The girl sent a flower to her/him.’
- d. Ni-xu'má mbá re'e ina=**ló'** dxá'gu.
 PFV.AFF-send a.INAN flower face=1PL.INCL girl
 ‘The girl sent a flower to us (including you).’
- e. Ni-xu'má mbá re'e ina=**xo'** dxá'gu.
 PFV.AFF-send a.INAN flower face=1PL.EXCL girl
 ‘The girl sent a flower to us (not including you).’
- f. Ni-xu'má mbá re'e ina=**lá'** dxá'gu.
 PFV.AFF-send a.INAN flower face=2PL girl
 ‘The girl sent a flower to y'all.’
- g. Ni-xu'má mbá re'e dxá'gu in-**uu** ikhiin.
 PFV.AFF-send a.INAN flower girl face-3PL 3PL
 ‘The girl sent a flower to them.’

Neither R nor T can compete for the suffixal agreement slot, since T is inanimate (and never competes for agreement in this context, as with transitive objects) and R is a prepositional phrase. The root vowel on the verb is thus invariant, and the recipient is marked within the relational noun phrase by way of possession.

Interestingly, with ‘send’ the R can be indexed directly on the verb complex by adding what appears to be an applicative affix:

- (50) a. Ni-ta-xu'má mbá re'e in-u'!
 PFV.AFF-2SG-send a.INAN flower face-1SG
 'You sent a flower to me.'
- b. Ni-ta-xu'-**du-m-úú** mbá re'e.
 PFV.AFF-2SG-send-APPL-send-1SG a.INAN flower
 'You sent me a flower.'

The table below summarizes person marking for Ditransitives.

| | S agreement prefix | O agreement suffix | S/O clitic |
|--------|--------------------|--------------------|------------|
| 1SG | (tone) | -ú(n)' | - |
| 2SG | r(a)- | -aa(n)' | - |
| 3SG.AN | '-/(tone) | -VVn | - |
| 1PL | u- | - | =ló' |
| 1PL | u- | - | =xó' |
| 2PL | u- | - | =lá' |
| 3PL.AN | u- | -VVn | - |

Table 2.2: Ditransitive subject and object agreement markers.

2.6.3 Intransitives

Intransitive constructions in Me'phaa are not uniform, and the language uses a handful of person-marking strategies when verbs take only one argument. At least at the surface level (and, as I argue later, at a structural level, too), types of intransitives can be distinguished by their patterns of agreement. This section introduces three types of intransitive constructions—unergatives, unaccusatives, and dative subjects—whose way of expressing agreement maps onto one component in either a transitive or Ditransitive construction. That is, some intransitives can be identified based on whether the morphological exponent expressing agreement matches the left side of transitives, the right side of transitives, or the right side of Ditransitives.

Examples above showed that person inflection for transitive subjects is characterized by a constellation of properties. The A participant role is generally encoded prefixally: *ta-*

(and it's allomorphs) indicate 2SG, 'l- indicates 3SG, and *a/u* alternation on the fusional aspect prefix indicates number in the imperfective and irrealis aspects. The exceptions to this include local plurals marked via postverbal clitics and third person ergatives indexed suffixally (as long as there is no agreeing object). Unergatives in Me'phaa are a class of intransitives with preverbal person inflection akin to transitive subject marking. Below is a partial paradigm for the verb 'shout' in the perfective.

- (51) a. Ni-ndxa'wá.
 PFV.AFF-shout
 'I shouted.'
- b. Ni-**ta**-ndxa'wá.
 PFV.AFF-2SG-shout
 'You shouted.'
- c. Ni-ndxa'w-**ee**.
 PFV.AFF-shout-3SG.ERG
 'S/he shouted.'
- d. Ni-ndxa'wá=**ló'**.
 PFV.AFF-shout=1PL.INCL
 'We (including you) shouted.'

In terms of patterns of agreement, a notable property of unergatives is that they are formally similar to transitive verbs when the object is either inanimate or a reflexive. Thus, apart from cases where nonlocal arguments trigger suffixal agreement (51c), the vowel of the root is invariant (51a-51b, 51d). Local plural subject clitics surface postverbally (51d), as expected; otherwise, person inflection is preverbal (51b).

Cross-linguistically, a common property of unergatives is that they can take cognate objects. This is indeed possible in Me'phaa, as well (Navarro Solano, 2012).²⁴ The paradigm below illustrates this, with the verb 'dance' (which can also mean 'sing') taking 'a dance' as an optional object:

²⁴Navarro Solano (2012, 137) provides a list of 10 cognate object verbs, most—if not all—of which I would simply classify as unergative, and others are listed elsewhere in his thesis. He does not, however, provide any instances of the cognate objects themselves.

- (52) a. Na-s_ian (gi-sian).
 IPFV.AFF-dance (NMLZ-dance)
 ‘I’m dancing (a dance).’
- b. Na-ra-s_ian (gi-sian).
 IPFV.AFF-2SG-dance (NMLZ-dance)
 ‘You’re dancing (a dance).’
- c. Na-[!]si-een (gi-sian).
 IPFV.AFF-3SG-dance-3SG.ERG (NMLZ-dance)
 ‘S/he’s dancing (a dance).’
- d. Nu[!]-s_ian=lo[!] (gi-sian).
 IPFV.AFF.PL-dance=1PL.INCL (NMLZ-dance)
 ‘We (including you) are dancing (a dance).’
- e. Nun-s_ian=xo[!] (gi-sian).
 IPFV.AFF-PL-dance-3SG.INAN.ABS=1PL.EXCL (NMLZ-dance)
 ‘We (but not you) are dancing (a dance).’
- f. Nun-s_ian=lá[!] (gi-sian).
 IPFV.AFF-PL-dance=2PL (NMLZ-dance)
 ‘Y’all are dancing (a dance).’
- g. Nun-si-een (gi-sian).
 IPFV.AFF-PL-dance-3PL.ERG (NMLZ-dance)
 ‘They’re dancing (a dance).’

Again, the pattern of agreement maps onto what is expected for unergative subjects and transitive subjects in the presence of an inanimate object. Unergatives that take cognate objects are thus “morphologically transitive” in this sense (Navarro Solano, 2012, 8). Not all unergatives allow for cognate objects, though. If, as glossed above, producing a cognate object requires verb nominalization, the fact that many unergatives do not participate may be on account of this being a rather unproductive process in the language.

A second type of intransitive recruits the set of person markers found to covary with transitive objects as a way of encoding the S participant role. Among this class of verbs are change-of-state inchoatives (53), verbs of appearance (54), and statives (55), which are exemplified in the partial paradigms below.

- (53) a. Ni-th-**ún** (ikhúún).
 PFV.AFF-cut-1SG (1SG)
 ‘I got cut.’/‘I cut myself (on accident).’
- b. Ni-th-**án** (ikháan).
 PFV.AFF-cut-2SG (2SG)
 ‘You got cut.’/‘You cut yourself (on accident).’
- (54) a. Ni-wamb-**úún** (ikhúún).
 PFV.AFF-disappear-1SG (1SG)
 ‘I disappeared.’
- b. Ni-wamb-**áan** (ikháan).
 PFV.AFF-disappear-2SG (2SG)
 ‘I disappeared.’
- (55) a. Mbá-**uun**.
 be.alone-1SG
 ‘I’m alone.’
- b. Mbáw-**iín**.
 be.alone-2SG
 ‘You’re alone.’

The optional pronouns are provided in some of the examples above as a reminder that this bundle of agreement exponents in many cases matches (or nearly matches) the suffixal material found on independent pronouns.

The third and last type of intransitive that can be grouped based on affixal person inflection patterns like the right side of a Ditransitive. This class includes psych and experiencer verbs.

- (56) a. Ne'ng-**ó'**.
 PFV.AFF-get.sick-1SG
 ‘I got sick/tired.’
- b. Ne'ng-**áa**.
 PFV.AFF-get.sick-2SG
 ‘You got sick/tired.’

- (57) a. Ni-jáñ-**u'**.
 PFV.AFF-die-1SG
 ‘I died.’
- b. Ni-jáñ-**á'**.
 PFV.AFF-die-2SG
 ‘You died.’

Because the agreement morphemes encoding S in this class of verbs bears affinity to the way R is marked, these are commonly referred to as having “dative subjects.”

Verbal person markers for intransitives are summarized in the following table.

| | Unergative | Stative/Inchoative | Experiencer | S clitic |
|--------|-------------|--------------------|-------------|----------|
| 1SG | (tone) | -úún | -ú(n)' | - |
| 2SG | t(a)-/r(a)- | -áan | -aa(n)' | - |
| 3SG.AN | ʔ/(tone) | -VV | -VV(n) | - |
| 1PL | u- | - | - | =ló' |
| 1PL | u- | - | - | =xǒ' |
| 2PL | u- | - | - | =lá' |
| 3PL.AN | u- | -VV | -VV(n) | - |

Table 2.3: Intransitive subject agreement markers (not including suppletion).

2.6.4 Suppletion

Yet another piece of the puzzle of Me'phaa agreement morphology pertains to a class of verbs that supplete based on number and (in some cases) 2SG. For Me'phaa, suppletion based on the subject is “relatively common” (Smith Stark, 2001, 99) among intransitives, though this type of argument marking also extends to certain transitive objects (Suárez, 1983). Consequently, this yet another domain where morphological ergativity is visible in the language. All Me'phaa verbs where person inflection is indicated by suppletion also are ones where number-conditioned suppletion is common cross-linguistically (Veselinova, 2006; Bobaljik & Harley, 2017).

The set of Me'phaa verbs that participate in person-based suppletion are all verbs of

motion and existence, though it is not the case that *all* verbs indicating movement supplete. For example, consider the partial paradigm below for the verbs ‘arrive’:

- (58) a. Na-ganú'.
 IPFV.AFF-arrive
 ‘S/he is arriving.’
- b. Na-dxanú'.
 IPFV.AFF.2SG-arrive
 ‘You are arriving.’
- c. Na-gua'nú'.
 IPFV.AFF-pl.arrive
 ‘They are arriving.’

In contrast to verbs discussed in previous sections, agreement in the above example is neither prefixal (as with unergative and transitive subjects) or suffixal (as with inchoatives, statives, and verbs that take dative subjects). Instead, agreement is marked by root suppletion, here *gan(u')* ~ *dxan(u')* ~ *gua'n(u')*. For intransitive verbs, suppletion is triggered by two factors/features of S. On the one hand, it is number-based, thus constituting another case of the typologically uncommon number-motivated split where S patterns with A (Palancar & Feist, 2015). Thus, 1SG and 3SG forms stems are distinct from ones with plural subjects. On the other hand, 2SG subjects also trigger suppletion in intransitives of this type, placing this phenomenon within the broader paradigms of agreement in the language (as opposed to, say, evidencing suppletion that is purely number-based).

In addition to root suppletion triggered by subjects for a subset of intransitives, some transitive verbs also supplete based on the number of the object. Again, these verbs typically encode some type of motion, direction, or location, as with ‘carry’ below:

- (59) a. Ikhúún ni-ka ja-yo' (mbá) dxama.
 1SG PFV.AFF.1SG-go ST.1SG-carry (a.INAN) banana
 ‘I brought (a) banana.’

- b. Ikhúún ni-ka ja-go' (atsún') dxama.
 1SG PFV.AFF.1SG-go ST.1SG-carry.PL (two.INAN) banana
 'I brought (two) bananas.'

The only difference between (59a) and (59b) is the amount of bananas brought, which can be expressed overtly in the DP, though this is not obligatory since many nouns do not take overt plural marking. The change in number has significant consequences for object encoding in the verb complex, in that it triggers $y \sim g$ root suppletion.

Although demonstrating the existence of number-based suppletion in a verb like 'carry' is fairly straightforward, the pattern ends up being a bit more complex than the above indicates. In particular,

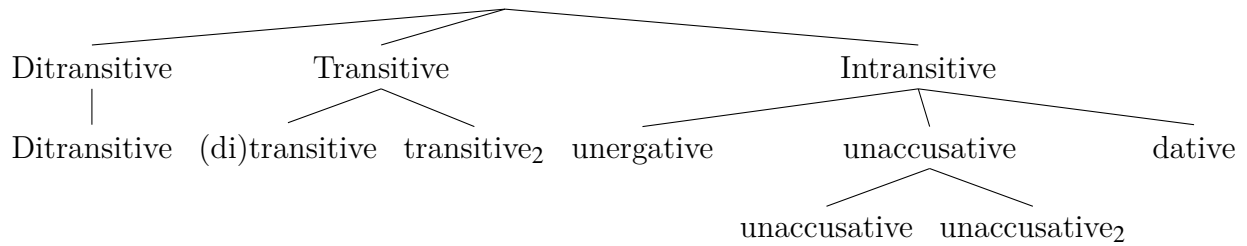
- (60) a. Ni-gwa'núu=xo' ju-yá'=xo' dxama.
 PFV.AFF-PL.arrive-ITER=1PL.EXCL ST.PL-carry=1PL.EXCL banana
 'We (not including you) arrived carrying a banana.'
- b. Ni-gwa'núu=xo' ju-dá'=xo' dxama.
 PFV.AFF-PL.arrive-ITER=1PL.EXCL ST.PL-carry.PL=1PL.EXCL banana
 'We (not including you) arrived carrying bananas.'

Here the subject of 'bring' is plural; and, as expected for a transitive verb, plural subject marking surfaces to the left of the root. The pair of examples in (60) also shows a distinction based on the number of the object, but instead of $y \sim g$ suppletive forms, as when a 1SG subject is acting on a third person object, here there is $y \sim d$ suppletion because a plural subject is acting on either a singular or plural object.

2.7 Summary: Me'phaa's way of being ergative

When both clause type and patterns of agreement (including preverbal inflection, postverbal inflection, and suppletion) are taken into consideration for Me'phaa verbs, 7 distinct verb classes emerge:

(61) Me'phaa verb classes (based on agreement patterns and clause type)



Each terminal node in the above diagram represents a verb class whose cumulative way of expressing agreement is specific to that class, though it may have partial overlap with another. Summarizing the data provided in earlier sections, these are as follows:

- **Ditransitive**: Preverbal A marking (ergative); postverbal R/T marking (dative)
- **(di)transitive**: Preverbal A marking (ergative); postverbal P marking (absolute)
- **transitive₂**: Preverbal A marking (ergative); object suppletion
- **unergative**: Preverbal S marking (ergative)
- **unaccusative**: Postverbal S marking (absolute)
- **unaccusative₂**: Suppletive S marking
- **dative**: Postverbal S marking (dative)

These verb classes also suggest a revision of the verb templates originally provided above in (11) as follows.

(62) Me'phaa verb templates (revised)

- a. Ditransitive: Ergative Prefix + Dative Suffix

ERG- $\sqrt{\text{Verb}}$ -DAT=CL

- b. Transitive₁: Ergative Prefix + Absolute Suffix

ERG- $\sqrt{\text{Verb}}$ -ABS=CL

- c. Transitive₂: Ergative Prefix + Suppletion

$$\text{ERG}-\sqrt{\text{Verb.OBJ}}=\text{CL}$$

- d. Intransitive₁: Ergative Prefix

$$\text{ERG}-\sqrt{\text{Verb}}=\text{CL}$$

- e. Intransitive₂: Absolutive Suffix

$$\sqrt{\text{Verb}}\text{-SUBJ}=\text{CL}$$

- f. Intransitive₃: Suppletion

$$\sqrt{\text{Verb.SUBJ}}=\text{CL}$$

- g. Intransitive₄: Dative Suffix

$$\sqrt{\text{Verb}}\text{-DAT}=\text{CL}$$

Following Wichmann's (2010) distinction, semantically ditransitive verbs divide into two classes: big-D Ditransitives take dative suffixes while little-d ditransitives essentially pattern like canonical transitives. The second class of transitives accounts for suppletive verbs triggered by the number of the object. Unergatives look formally like the left half of a transitive. Canonical unaccusatives include change-of-state inchoatives and statives, whereas type 2 unaccusatives supplete based on number, as well as 2SG subjects, making suppletion another type of absolutive (in that it is another case where P patterns with S to the exclusion of A). Finally, the class labeled "dative" covers verbs that take dative subjects, namely, psych verbs and experiencer verbs. Notably, I have not included postverbal ergative and negative marking, as these only apply in very specific contexts across several of the verb types.

Given such diversity among ways of expressing agreement, it is not readily apparent how ergativity factors into Me'phaa grammar. Ergative alignment, for example, accounts for only a small part of the overall system. Nevertheless, distinguishing verbs based on clause type and patterns of agreement brings clarity to this issue by drawing attention to the interrelatedness of alignment types and ergativity properties.

In terms of alignment, Me'phaa exhibits ergative, accusative, and tripartite alignment via verbal agreement, depending on what intransitive verbs are compared to the encoding

of A and P.²⁵

(63) Ergative alignment ($A \neq S = P$)

- a. Ni-**ta**-xkhax-uún.
PFV-2SG-wake-1SG
'You woke me.'
- b. Ni-xkhax-**íin**.
PFV-wake[3SG>]-2SG
'S/he woke you.'
- c. Ni-kix-**íin**.
PFV-jump-2SG
'You jumped.'

(64) Accusative alignment ($A = S \neq P$)

- a. Ni-**ta**-xkhax-uún.
PFV-2SG-wake-1SG
'You woke me.'
- b. Ni-**ta**-ndu'wá.
PFV-2SG-laugh
'You laughed.'
- c. Ni-kix-**íin**.
PFV-jump-2SG
'You jumped.'

(65) Tripartite alignment ($A \neq S \neq P$)

- a. Ni-**ta**-xkhax-uún.
PFV-2SG-wake-1SG
'You woke me.'
- b. Ni-**dxanú'**.
PFV-2SG.arrive
'You arrived.'

²⁵If we extend this to all person marking (i.e., including both agreement and clitics), it is possible to view the plural enclitics as patterning according to neutral alignment.

- c. Ni-kix-**íin**.
PFV-jump-2SG
'You jumped.'

The fact that all three of the above configurations are possible is driven by a unique manifestation of split intransitivity in the language, since intransitives divide into 4 distinct classes based on the type of person inflection they take. Because of this, some intransitive subjects pattern like transitive objects, others like transitive subjects, and others still do not pattern like either of these. Ergative alignment is also potentially obtainable if suppletive verbs are treated as patterning together. Since only certain transitive objects and intransitive subjects trigger suppletion—but transitive subjects never do—this, too, is a case where $A \neq S = P$. Me'phaa split intransitivity is therefore primarily driven by clause type, rather than by the more common triggers based on aspect or person (Coon and Preminger, to appear).

Moreover, Me'phaa's unique take on agreement and split intransitivity also makes the language rich in ergativity properties. This is because: (a) subjects of transitive clauses are marked differently than all intransitives except unergatives (the ergative property), (b) transitive objects are marked like some intransitive subjects (the absolutive property), and (c) unergative subjects and transitive subjects are marked alike while all other intransitive types are marked differently (the argument-structural property).

Me'phaa thus presents a complex manifestation of ergativity because it is characterized by three out of the four alignment types and all three ergativity properties. Like many other languages (e.g., Lakhota, Guaraní (Mithun, 1991), and Ch'ol (Coon, 2010a)), Me'phaa showcases split intransitivity. In Me'phaa, patterns of agreement are distinctly sensitive to distinctions in clause type. This produces an immensely diverse system of agreement that maps onto distinct verb classes based on patterns of agreement and clause type.

Chapter 3

Building the core architecture: Inside VoiceP

3.1 Introduction

In this chapter, I expand on the relatedness between patterns of agreement and clause type in Me'phaa to show that morphological behaviors with respect to agreement are deeply related to syntax. Specifically, I argue for the following Principle of Agreement for Me'phaa.

- (66) Principle of Me'phaa verbal agreement (first version)
- a. Agreement exponents reflect their probe, &
 - b. Voice⁰, *v*⁰, and Appl⁰ all serve as probes.

This is significant because of the number of functional heads that participate in Agree(ment), and because all of these heads are inside the verbal domain. In this way, Me'phaa's multitude of agreement markers are a reflex of the verbal structures that underpin them. This produces an effect such that Me'phaa verbs offer a snapshot of the clause, in that they are highly transparent with respect to argument structure.

The framework that emerges is one of syntactic complexity that goes beyond traditional approaches to transitivity and argument structure vis-à-vis valency in favor of contempo-

rary theories that (a) attribute differences in argument structure to different architectures generated by the syntax, and (b) advocate heterogeneity among intransitives (particularly “unaccusatives,” which is a point I turn to in Chapter 4). Me'phaa is not, therefore, unique in terms of the specific structures that exist in the language. It is, however, unique with respect to the grammatical phenomenon that furnishes evidence for such structures. Identifying Me'phaa verbal agreement as a window to argument structure complements existing work on the composition of core architectures based on semantics (Kratzer, 1996; von Stechow, 1996) and overt functional morphology (Miyagawa 1998, 1999).

3.2 Setting the stage

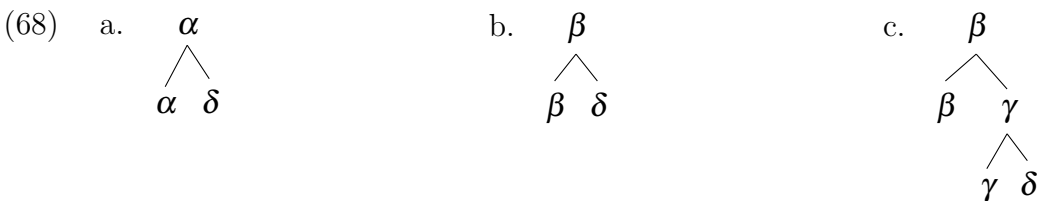
The previous chapter introduced core aspects of the inflectional complexity that Me'phaa presents. In the tradition of Suárez (1983), I proposed that verbs in the language can be organized based on how they exhibit agreement (i.e., groupings based on where the exponent surfaces and what phonological form it takes). Moreover, I argued that the organizational schema of verb classes maps onto distinct clause types. The question now arises as to how the patterns of agreement can be derived, and how clause type factors into the analysis. Answering these questions necessarily includes taking into account the mechanisms that are required to generate agreement phenomena in the first place. Since the analysis I ultimately advocate for Me'phaa depends upon the number, type, and location of syntactic heads that participate in agreement calculations, in this section I begin to motivate the need for a theoretical paradigm that can successfully incorporate these aspects.

Consider a language like English, where it is standardly assumed that subject agreement arises because T agrees with the subject. In English, T does not seem to care about things like where an argument is base-generated, so long as that argument is a viable target for agreement. This is evident when looking at how 3SG.PRES agreement is expounded on a variety of verbs whose subjects begin the derivation in drastically different locations.

- (67) a. Monica play-**s** the drums well.
 b. Jace arrive-**s** on time for swimming practice.
 c. Juliette dance-**s** brilliantly.
 d. Athan seem-**s** quite athletic.
 e. Kai get-**s** excited when he sees his siblings.

For English, whether a subject begins its syntactic life in a verb's specifier or complement position, or inside an adjective phrase etc., is irrelevant; if the argument can agree with T, T is happy to agree with it, and a rather uniform system of agreement ensues: 3SG.PRES will consistently be pronounced -s.

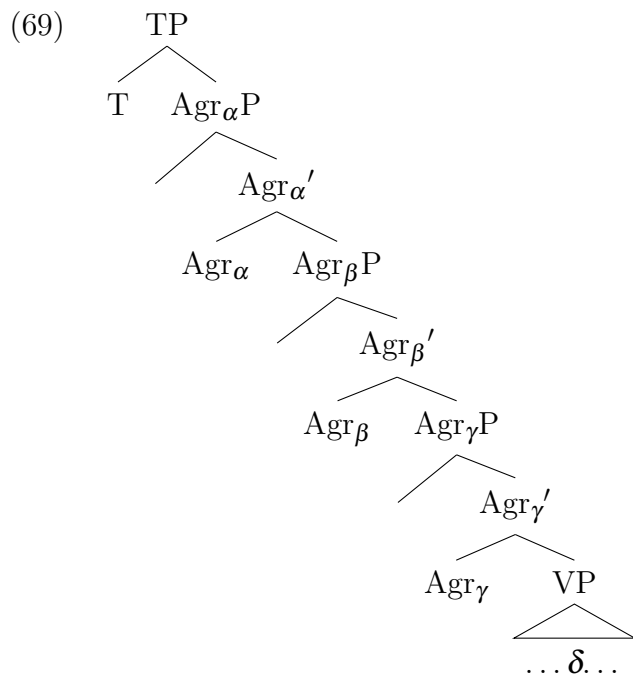
This is not the case for Me'phaa, though, as the various patterns of agreement discussed in the previous chapter demonstrate. In terms of the number of verbal agreement morphemes available, English and Me'phaa appear to be on opposite ends of a spectrum. A possibility that I explore as to how they get that way relates the number of verbal agreement paradigms to the number of heads that participate in agreement. To see how this might play out in general terms, consider the three structures schematized below, where δ stands for an argument that can trigger agreement, and α , β , and γ are all functional heads of distinct categories.



A paradigm like English emerges when these heads exist for reasons independent of agreement (e.g., structure-building, semantics), and there exists a single head not listed above that *is* responsible for agreement, which could embed each of these structures. On the other hand, in a language where these heads exist for structure-building and semantics, *and* they are responsible for agreement, each structure would give rise to a separate agreement paradigm:

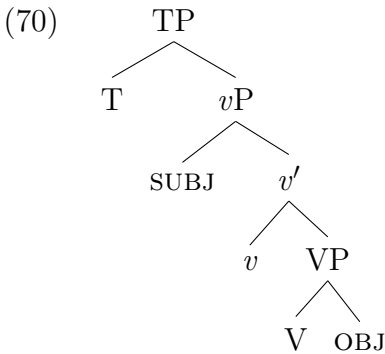
α -agreement, β -agreement, and γ -agreement.

This latter type of approach could be promising for Me'phaa. But if so, what and where might these heads be, and how many would we need to account for all the patterns of verbal agreement? Attributing rich agreement to a series of AgrPs (Chomsky, 1991, 1993) sandwiched between TP and VP is one possibility.



This type of analysis would share with English the need for VP-internal arguments to enter into agreement relations with higher heads, and would simply differ in that the amount of available heads that participate in agreement increases. However, AgrPs have been called into question for economy principles, which could make an account that appeals to multiple AgrPs difficult to sustain. Conceptually, AgrPs have been deemed problematic because they require the presence of projecting heads that lack semantic content (Chomsky 1995) and because they may be problematic for labeling (Chomsky 2000). Moreover, given that the number of Agr heads needed to account for each of Me'phaa's agreement patterns would potentially extend well beyond the traditional AgrS(ubject) and AgrO(bject), this approach would seemingly lead to arbitrarily positing the existence of additional syntactic heads whose conceptual necessity is independently viewed as suspect.

Perhaps a more viable alternative, then, would be to look further down into the clause, namely, into the verbal domain. If the VP holds the answer to Me'phaa, then treating the verbal domain as a simple structure will clearly not yield fruitful results.



In the tree in (70), *v* could be a candidate for an additional agreeing head (assuming, as is standard, that functional heads, but not lexical ones, are responsible for agreement). However, this would only produce a binary system at best, since either T agrees with the subject and *v* the object or vice versa. To rescue the orientation to VP, then, a viable account is needed that treats the VP as a complex structure, presumably with additional functional heads that are independently motivated, but capable of participating in agreement.

Within the syntactic literature, though, there is a growing consensus that the verbal domain is, in fact, much more articulated than the previously anticipated (Larson 1988; Hale & Keyser 1993; Chomsky 1995; Kratzer 1996; Marantz 2013; Travis 2000; Pylkkänen 2002, 2008; Cuervo 2003; Borer 2005; Ramchand 2008; Schäfer 2008, a.o.). This leads to the following question: What theory of syntax is equipped to capture a rich agreement system like that of Me'phaa, especially if different forms of verbal agreement are derived from an array of functional heads *within* the verbal domain? Below, I provide evidence and arguments that decomposing the VP into multiple projections has explanatory power for Me'phaa, showing how the system of verbal agreement correlates with argument structure. The decompositional approach thus successfully links argument structure to the morphology, which, in turn, reflects the syntax.

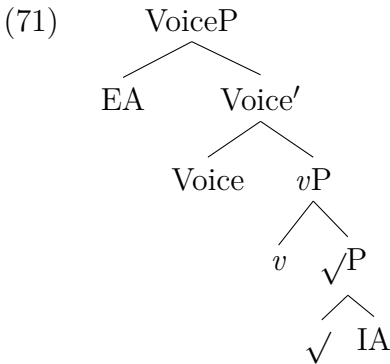
3.3 From verbs to verbal structures

One recent approach to the syntax of argument structure that decomposes verbs into functional pieces layered onto a lexical core takes a “theoretical marriage” between the Minimalist Program (MP) (Chomsky, 1995) and Distributed Morphology (DM) (Halle & Marantz, 1993, 1994) as a starting point (Marantz, 2013, 154). Both of these frameworks rely heavily on syntax in building structures that interface with other components of the grammar. Beyond DM and Minimalism, too, there exists a broader program representing a range of theoretically diverse works (e.g., Borer’s 2005; 2013 exoskeletal model), from which a consensus has emerged that argument structure is not lexically based or represented. Instead, argument structure is syntactically built: verbal meanings derive from syntactic configurations that the semantics and phonology interprets (Hale & Keyser, 2002; Borer, 2005, 2013; Ramchand, 2008; Schäfer, 2008; Wood, 2015). Taken together, these theoretically diverse perspectives constitute constructivist/decompositional approaches to syntax and meaning. They share a common objective of shifting the burden from verbs as lexical items to verbal structures with dedicated syntactic pieces that contribute to structure, function, and meaning.

Within decompositional syntax, the core of any verbal construction is taken to be a root, upon which complex architectures are built (Marantz, 1997; Arad, 2003; Doron, 2003; Borer, 2005; Harley, 2014). Such roots have no content or category in isolation and instead obtain such by merging with functional components that generate category-specific structures, such as verbs or nouns. Roots thus acquire verbal meaning by merging *v*, a verbalizing morpheme (Marantz, 1997) that produces an eventuality. For verbs, roots have a secondary, modificational role contributing to overall meaning, but lexical roots themselves do not directly effect argument structure (Marantz, 2013; Wood, 2015).

Following work that advocates a split Voice domain (Bowers, 2002; Alexiadou et al., 2006; Marantz, 2007; Pyllkkänen, 2008; Harley, 2009, 2013, 2017; Legate, 2014) where the external argument is severed from the verb (Kratzer, 1996), Voice and *v* are distinct heads with separate functions. While little *v* verbalizes and introduces an eventuality, Voice is responsible

for introducing an external argument (Pylkkänen, 2008). The “tripartite” structure below, composed of \sqrt{P} , vP , and VoiceP, represents a canonical transitive verbal structure in line with the above theoretical considerations (Harley, 2013).¹



External arguments (EAs) are situated in Spec,VoiceP and licensed by Voice, while internal arguments (IAs) in syntactic contexts like the one above are sister to the verb root. Moreover, external arguments are canonically interpreted as agents, and internal arguments that are complement to the verb root are interpreted as undergoing a change of state. Transitivity thus emerges configurationally, and is not a property of a particular lexical item.

3.4 Decomposing verbs in Me'phaa

Because of the way the decompositional approach deconstructs the verbal domain, it may offer a promising way forward for explaining Me'phaa verb morphology. Thus, for purposes of hypothesis testing, in this section I apply a decompositional approach in the tradition of Minimalism and DM to Me'phaa verbs. My aim is to test whether decomposition can successfully account for patterns of agreement in Me'phaa and work towards an explanation of the language's unique brand of ergativity.

Arguments in Me'phaa transitive clauses are indexed on the verb in such a way that they

¹The precise nature of roots has been the subject of intense debate in recent syntactic literature (e.g., Arad 2005, Borer 2005a, 2005b, Harley 2014, Borer 2014, Alexiadou et al. 2014). Among the issues raised is whether or not $\sqrt{}$ projects \sqrt{P} or merges with v to project vP , and whether or not roots can combine directly with arguments. Though the structures I propose include these latter possibilities, the proposal I develop is entirely compatible with a framework where the root merges directly with v .

flank the verb root/stem, as shown in the previous chapter. And, within the verbal complex, the ordering of functional morphology with respect to the verb root produces what on the surface looks like a flattened version of the hierarchy in (71) above (rather than, say, the mirror imaging (Baker, 1985) that results from cyclic head movement up the clausal spine (among recent proposals, see, e.g., Hamilton 2015 for Mi'gmaq, Sundaresa & McFadden 2017 for Tamil)). This means that verbs in transitive clauses effectively image transitive structures, as seen in the bracketed portion in (72) below:

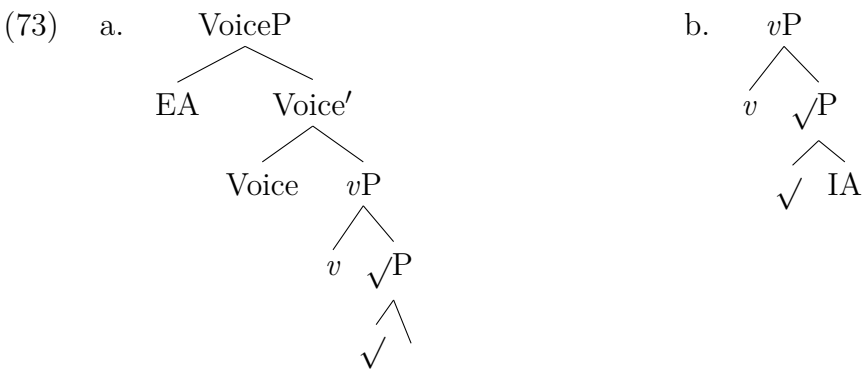
- (72) Ni- [t- \emptyset - ro- th -úún].
 Asp- [EA- Voice- *v*- \surd -IA]
 PFV- 2SG- ACT- CAUS- cut 1SG

‘You cut me.’

Transitive subjects are thus encoded prefixally, and this left-edge-of-verb linear position corresponds to the structurally superior location of external arguments with respect to the verb root. Transitive objects, on the other hand, are marked via suffixation, corresponding to the position of internal arguments. At some level, then, there appears to be a deep relationship between the structural location of an argument, on the one hand, and the location of agreement morphology, on the other. That is, the locus of agreement within the verbal word order potentially offers a straightforward diagnostic for verbs having either an external argument or an internal argument. This suggests that *where* verbal agreement happens provides initial language-internal insights for determining clause type and structural properties.

For example, the observation that distinct ways of agreeing in Me'phaa could map onto distinct structural locations provides a basis for distinguishing among the set of verbs that are intransitive. On the view that location of agreement morphology in the verbal complex relates to the base-generated position of the argument it covaries with, the basic expectations at this point are threefold: (a) there are intransitive verbs in Me'phaa whose form resembles the left half of a transitive whereas (b) others bear formal affinity to the right side, and

(c) these different patterns of agreement relate to two ways that the canonical transitive architecture can be carved up so that only one argument is present. Either the internal argument is removed, preserving the external argument introduced by Voice, or no external argument is introduced, preserving the internal argument. These structures are shown in (73), with examples following in (74). Note how the agreement morpheme in (74a) matches that of the encoding of the transitive subject in (72), while the one in (74b) matches that of the transitive object in (72).

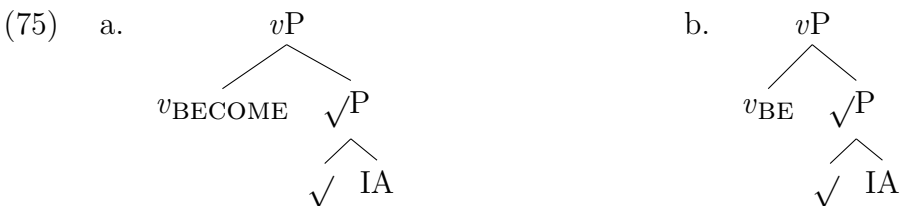


- (74) a. Na-**ta**-ndxá'wa.
 IPFV-2SG-shout
 'You're shouting.'
- b. Nda'-ts-**úún**.
 IPFV-smell.bad-1SG
 'I smell bad.'

This type of structural distinction is rather standard in generative literature, as it reflects the core proposal underlying the unaccusative hypothesis (Perlmutter, 1978). Intransitives thus fall into two distinct subclasses whose difference is primarily syntactic in nature. Recasting some of the patterns of Me'phaa verbal agreement in structural terms along these lines, a reasonable explanation is that left-side-of-verb agreement corresponds to the presence of an external argument in Spec,VoiceP, while right-side-of-verb agreement covaries with an internal argument in a sisterhood relation with the verb root. Indeed, many Me'phaa intransitives pattern in accordance with these possibilities, as the examples in (74) illustrate.

Among unaccusative structures, inchoatives and statives are two types of intransitives that in Me'phaa bear right-side agreement akin to transitive objects. Importantly, there are

long-standing syntactic and semantic issues that have been raised in relation to these constructions which suggest that the morphological affinity expressed in Me'phaa via agreement is by no means accidental. Among several decompositional and constructivist approaches to syntax and argument structure, inchoatives and statives have been analyzed as nearly identical in terms of their architecture (see, e.g., Bhatt & Embick 2003). The key difference according to one popular approach—aptly named the “flavors of *v*” approach (Harley, 1995; Embick, 2004; Cuervo, 2003; Folli & Harley, 2005, 2007)—resides in properties of the functional, verbalizing morpheme, *v*. Inchoative and stative structures are compared in (75) below, with v_{BECOME} having an eventive reading and v_{BE} having a stative one. Again, examples in Me'phaa immediately follow for illustration.



- (76) a. Ni-táx-**úún**.
 PFV-turn-1SG
 ‘I got turned around.’
- b. Max-**úún**.
 be.green-1SG
 ‘I’m bruised up.’ (Lit., ‘I’m green.’)

If Me'phaa agreement morphemes are sensitive to particular structures, which in turn make reference to particular categories, then the spell-out for an agreement exponent should be identical in each of these environments. Likewise, the addition of layers that contribute to the specific nature of the verbal construction, such as the EA-introducing VoiceP, should not tamper with the exponent of the exponent that covaries with the internal argument, since the core architecture is retained.

As is common cross-linguistically, the heads that participate in generating argument structure are often not pronounced in Me'phaa. An example of this was shown above in (72), where the Voice head is phonologically null. There are, however, certain constructions where

the language realizes Voice and *v* heads overtly, in particular passives and morphological causatives.

- (77) a. Ni-**wa**-prú^l-úún.
 PFV-PASS-kick-1SG
 ‘I was kicked.’
- b. Ma-**ro**-thón mágá.
 IRR-CAUS-cut onion
 ‘I’ll cut the onion.’

Thus, Voice is overt in (77a) and null in (77b), while *v* is overt in (77b) but null in (77a). This yields two possibilities: either Voice and *v* are “bundled” (as in Ch’ol; Coon & Preminger 2013), or they are discrete (as in Hiaki; Harley 2017). Evidence for the discreteness of these heads in Me’phaa is visible under passivization with a verb like ‘burn’.

- (78) a. Ni-kh-úún.
 PFV.AFF-burn-1SG
 ‘I got burned.’
- b. Ni-ta-**tsi**-kh-úún.
 PFV.AFF-2SG-CAUS-burn-1SG
 ‘You burned me.’
- c. Ni-**wata**-**tsi**-kh-úún. Ni-thá-ne.
 PFV.AFF-PASS-CAUS-burn-1SG PFV-2SG-do
 ‘I was burned by you.’ (Lit., ‘I was burned. You did it.’)

Since ‘burn’ participates in a causative/inchoative alteration, this allows us to see that *v* is null in the unaccusative structure in (78a), but pronounced overtly as *tsi-* in the transitive structure in (78b). When the latter is passivized, both Voice and *v* heads, *wata-* and *tsi-*, respectively, are overt.^{2,3}

²Notably, this approach also preserves the long-held notion that inchoatives and causatives share a substantial amount of overlap in their representations (Hale & Keyser 1986, Pustejovsky 1991).

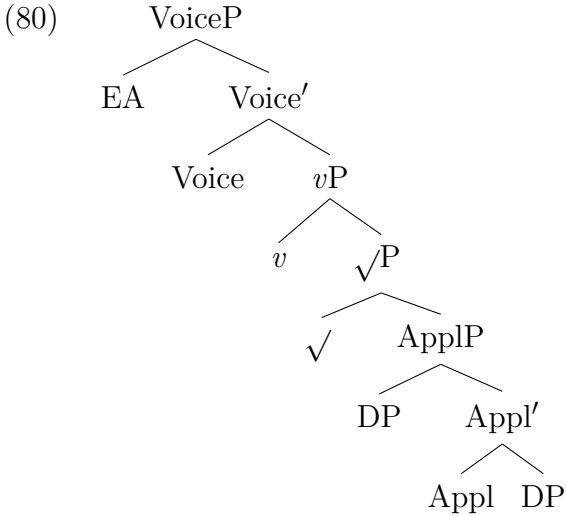
³The form of the passive morpheme varies for reasons that are unclear. In (77a) the morpheme is *wa-*, although it is *wata-* in (78c). At first, this may seem that *wata-* is morphologically complex, and should be broken down into passive *wa-* and the 2SG.ERG marker *ta-*. However, *wata-* surfaces in (78c) regardless of the Agent (e.g., *Niwatatsikhúún. Ni’ne.* ‘I was burned. S/he did it.’ is perfectly acceptable). Suárez (1983, 212) suggests that some passive forms may have retained the 2SG marking as a historical remnant.

One final core verbal architecture that will be relevant for understanding Me'phaa verbal agreement pertains to ditransitive structures. Recall from Chapter 2 that in true Ditransitives, the internal arguments compete for encoding on the suffix (Wichmann 2010). In accordance with a recent trend in the decompositional literature, I take it that ditransitives contain an applicative phrase (ApplP) wherein datives are introduced by applicative heads (e.g., Marantz 1993, Pesetsky 1995, Harley 1995, Pykkänen 2008, Anagnostopoulou 2003, Cuervo 2003, Wood 2015). Dative-marked arguments vary interpretationally because of differences in the semantics of the applicative head and/or differences in the configurations in which the applicative is inserted (Cuervo 2003, Schäfer 2008). According to Pykkänen (2008), two configurationally-driven constructions differ based on the location of the ApplP with respect to v^0 . The high applicative merges with vP and relates an argument (the DP in Spec,ApplP) to an event (building on Marantz 1993; see also Anagnostopoulou 2003, Miyagawa & Tsujioka 2004). The low applicative, on the other hand, relates two arguments to each other (akin to the core proposals of Kayne 1984 and Pesetsky 1995).

This distinction—and how verbal constructions with applicatives differ from canonical transitive constructions—can be used to understand the geometries implicated in Me'phaa Ditransitives, such as ‘give’, which involves transfer of possession and relates the direct and the indirect objects semantically:

- (79) Ni-ra-xn-ú' mbá re'e.
 PFV-2SG-give-1SG INDEF.INAN flower
 ‘You gave me a flower.’

Ditransitive constructions can therefore be derived with a low applicative head, as in (80), following Pykkänen (2008) and many others (e.g., Marantz 1993, Collins 1997, McGinnis 1998, Anagnostopoulou 2003, Miyagawa and Tsujioka 2004, Schäfer 2008, Bruening 2010b, Wood 2015, Myler 2016).

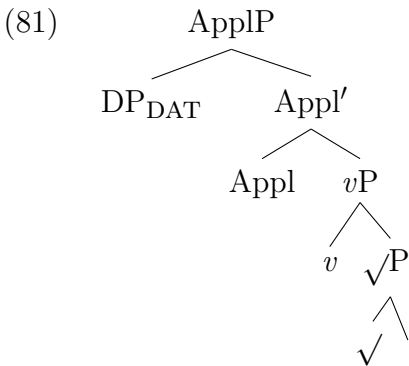


In the above structure, Appl⁰ is an argument-introducing head that induces a *have*-relation between the argument in Spec,Appl and the one that is complement to Appl⁰ (Harley, 1995; Harley & Noyer, 1999; Harley, 2002; Cuervo, 2003; Schäfer, 2008). The verb ‘give’ thus roughly decomposes into “cause X to have (= be in the possession of) Y.”

Tying this back to the core claim about Me'phaa verbal agreement and its relationship to argument structure, this again provides evidence that architectural differences correlate with differences in the morphophonological shape of agreement markers. Transitive, unergative, and ditransitive constructions share a VoiceP that correspond to the presence of (i.e., it houses) an external argument, which in Me'phaa verb morphology translates to shared ways that such an argument is indexed (e.g., prefixal *t(a)-/r(a)-* for 2SG, as in (72), (74a), and (79)). Likewise, the shape of an internal argument's indexation on the verb is sensitive to the syntactic configuration that the argument appears in: transitive objects and unaccusative (in the sense of inchoative and stative) subjects take the same shape and correlate to the argument being in a sisterhood relationship with the verb root (e.g., *-úún* for 1SG in (72), (76a), (76b) and the various examples in (78)). Person suffixes on Me'phaa Ditransitives do not expone the same as these other cases (e.g., *-ú'* in (79)), which correlates with the extra structure brought about by the presence of ApplP.

The presence and function of ApplP Me'phaa additionally helps establish a syntactic explanation for morphophonological similarity in another set of agreement morphemes, both

of which are dative-marked. The constellation where Appl is high can be leveraged to understand dative subjects in Me'phaa, which surface with experiencer- and psych-verbs. In a configuration like the one below, Appl⁰ relates the dative subject to the event, which gets modified by a particular instance of the root. Note that the agreement exponent for the 1SG dative subject in (82), *-ú'*, is identical to that of the marking of the 1SG IO in a Ditransitive (79).



- (82) Na-xkidx-ú'.
 IPFV-hunger-1SG
 'I'm hungry.'

Interpretationally, a structure such as (81) differs from that of another intransitive, such as an inchoative, both because of the nature of the high applicative head and because the verb cannot induce a change of state on the DP. This is because, in a high applicative, the argument is not in the verb root's complement position. Additionally, dative subjects lack agentive semantics because they are not introduced by Voice⁰.

In summary, this section has shown that the constructivist/decompositional approach can indeed provide an explanatory framework for verbal agreement in Me'phaa. By orienting to verbal structures, an important pattern emerges: agreement markers systematically correlate with structure and, particularly, an argument's place within that structure. This insight likewise leads to expectations regarding similarity in ways that verbal agreement is expressed. Agreement markers are related morphophonologically by virtue of appearing in similar syntactic configurations.

These observations now point to the need to determine how agreement actually happens in Me'phaa, and what functional heads are involved in the agreement calculus. Clearly there is a relationship between the shape of a morpheme and underlying geometry, but how, exactly, do ϕ -features get expressed on the verb stem, and how do they do so in a way that reflects sensitivity to structure? These are the issues to which I now turn.

3.5 Calculating agreement in the verbal domain

3.5.1 Establishing a framework

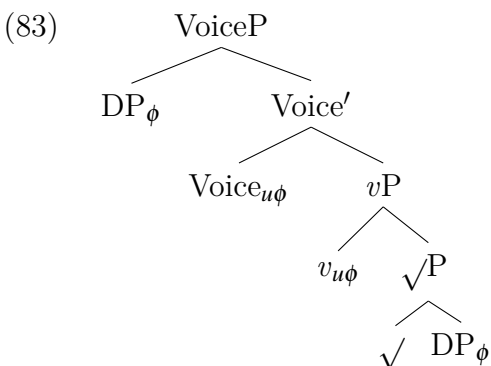
Assuming that agreement is indeed the appropriate phenomenon generating diverse patterns of context-specific verbal person marking (a position I defend in Section 3.6), the next step in solidifying the relationship between Me'phaa agreement morphology and syntactic structure is determining the mechanisms for generating agreement that are under operation. In this section, I argue that Me'phaa verbal agreement and argument licensing is determined locally, based on relationships between arguments and functional heads within the verbal domain.

Following recent works rooted in but also signaling a departure from Chomsky's (2000, 2001) Agree framework, I take it that agreement involves asymmetric feature sharing between two constituents—a *goal* and a *probe*—that involves feature valuation but does not require feature (un)interpretability (e.g., Frampton & Gutmann 2006, Pesetsky & Torrego 2007, Preminger 2014, Polinsky 2016, Deal 2016 a.o.). The Agree operation “is essentially a search and validation mechanism” (Alboiu 2004: 58) resulting in the valuation of ϕ -features on the constituent in an Agree relation that does not bear such features intrinsically. The probe searches within an appropriate domain for a goal that bears matching features, and ends up serving as a host for the phonological material encoding such. In particular, functional heads (e.g., v^0 , T^0 , etc.) are the elements that serve as probes looking for matching features that a DP possesses. Once the features of the goal are copied onto the probe, valuation occurs, the search stops, and (eventually in the derivation) agreement ensues as the morphological

expression of this syntactic dependency.

In terms of directionality, probe and valuation are inversely related: downward probing yields upward valuation, while upward probing triggers downward valuation (Polinsky 2016).⁴ Spec-head configurations arising from either internal or external Merge can also trigger agreement (Koopman 2006, Baker 2008), though the directionality of valuation is not entirely clear in such cases.⁵ Finally, following Preminger (2011, 2014), failed agreement does not lead to a system crash. Instead, a probe may initiate a search within its domain and the derivation will continue even if no valuation takes place.

With these points in mind, we are now in a position to schematize how agreement transpires in the core verbal structures detailed above. The following repeats the structure for what I have been calling a “canonical transitive” with annotations that show how ϕ -features are valued on functional heads.



In (83), the (category-less) root merges with the object, which has ϕ -features intrinsically, bearing information about person and number. The root itself, though, does not have unvalued features and does not serve as a probe. Instead, the verbalizing morpheme v , which enters the derivation with unvalued ϕ -features, merges and searches for an argument with matching features. Object agreement obtains if the argument that is sister to the root

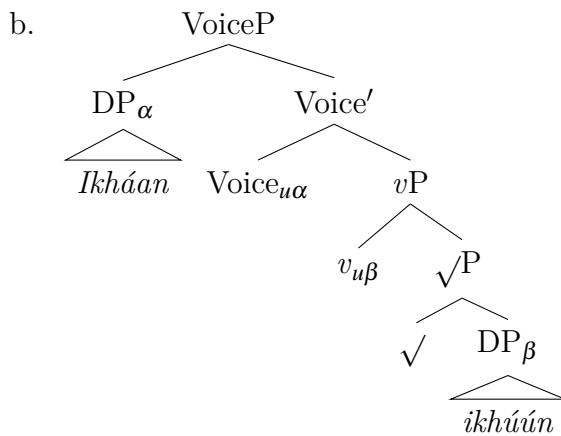
⁴The proposal I develop for Me'phaa relies heavily on a particular construal of upward valuation, but I do not here make claims as to whether this is the only directionality possible across languages. See Baker 2008, Zeijlstra 2012, Preminger 2013, Bjorkman & Zeijlstra 2014, and Polinsky 2016 for detailed discussions of directionality and the possibility of hybrid approaches.

⁵Downward valuation is typically invoked in spec-head agreement. However, Preminger (2015) notes that spec-head agreement can be construed as upward valuation through either m-command (Aoun and Sportiche 1983, Chomsky 1986) or Bare Phrase Structure (Chomsky, 1994; Schoorlemmer, 2009).

serves as a viable target for agreement. Me'phaa in particular requires that an argument be animate to participate in object agreement, whereas inanimate objects do not agree. Notably, though, this type of failed agreement does not lead to a system crash, it just means that valuation does not occur (Preminger 2011, 2014). Transitive subject agreement obtains when Voice probes and finds/values matching features on the argument base-generated in its specifier.

The way that agreement transpires in a transitive sentence such as ‘You warmed me up’ can be schematized as follows. Note that I have included overt pronominal DPs (and placed them in their base-generated positions in the trees), and have labeled the ϕ -features for the subject and object α and β , respectively, for clarity in illustration.

- (84) a. Ikháan ni-ta-tsi-g-uún ikhúún.
 2SG PFV-2SG-CAUS-warm.up-1SG 1SG
 ‘You warmed me up.’

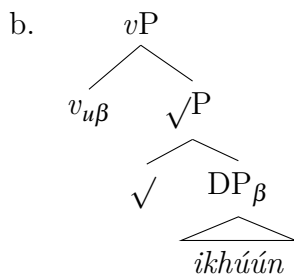


Little *v* enters the derivation with unvalued ϕ -features, and initiates a probe-goal relation with the DP *ikhúún* that is sister to the verb root. After valuation occurs, the exponent of 1SG object eventually gets pronounced as the suffix *-úún*. In a transitive structure, if the object DP is inanimate, it cannot be agreed with, and the verb root surfaces with its underlying vowel. The Voice head also serves as a probe and can enter into an agreement relationship with the DP in its specifier, *ikháan*. Once valuation occurs and the search stops, the derivative features on Voice will ultimately be realized phonologically as the prefix *ta-*

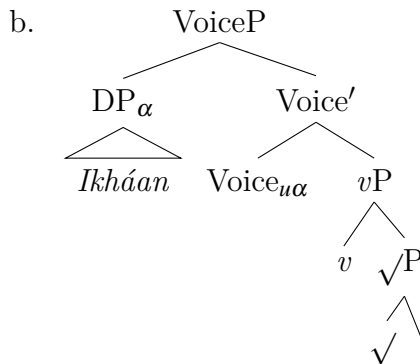
in this case. Notably, the agreement exponents are particular to the heads that they agree with. Therefore, reversing the order of the arguments gives rise to different agreement markers on the verbs; similarly, different markers appear if these arguments appear in different configurations where they can enter into Agree relations with other functional heads.

The process of transitive agreement can effectively be split to understand agreement in change of state and inchoative constructions, as well as unergatives: in the former, an Agree relation obtains between v and the sole argument sister to the verb root in the same fashion as transitive object agreement; in the latter, an Agree relation obtains between Voice and the argument in its specifier in the same fashion as transitive subject agreement.

- (85) a. Ikhúún mbay-úún.
 1SG be.tall-1SG
 ‘I’m tall.’



- (86) a. Ikháan nā-ra-siān.
 2SG IPFV-2SG-dance
 ‘You’re dancing.’

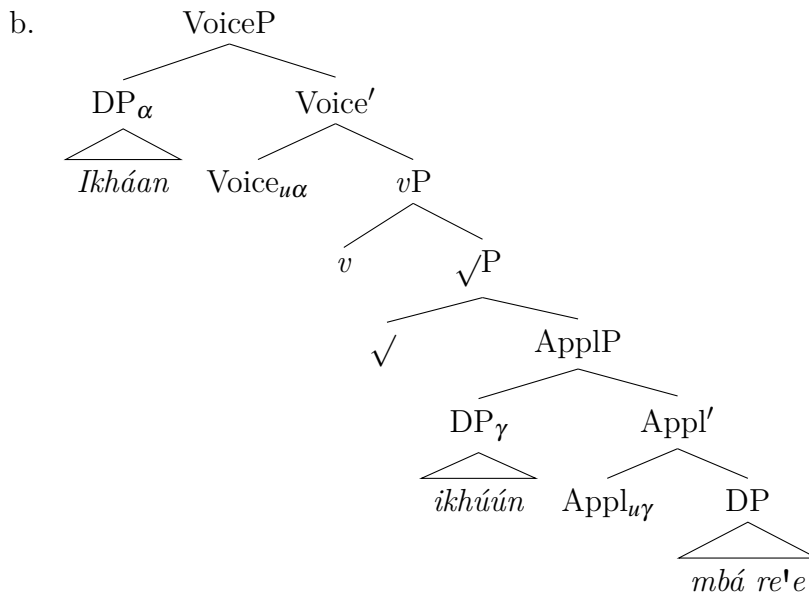


The verbal agreement marker in a stative construction thus looks like that of a transitive object because both involve little v agreement. Little v does not play a role in determining

agreement for unergative structures, giving rise to overlap between verbal forms of unergatives and transitives with inanimate objects. In unergatives, Voice agrees with the argument in its specifier, which gives rise to verbal marking that parallels transitive subject agreement.

Ditransitive constructions therefore overlap with canonical transitives and unergatives with respect to agreement for the subject in Spec,VoiceP. However, additional structure from the low applicative below *v*P results in a distinct agreement exponent that covaries with one of the arguments inside ApplP.

- (87) a. Ikháan ni-ra-xn-ú' ikhúún mbá re'e.
 2SG PFV-2SG-give-1SG 1SG INDEF.INAN flower
 'You gave me a flower.'



In this case, Appl serves as the probe, interacting with the DPs in its environment. Depending on factors such as animacy, Appl may agree with the DP in complement position at first Merge, or, with the DP in Spec,ApplP following external Merge. In the case above, Appl agrees with the argument in its specifier, *ikhúún*, triggering dative marking on the verb root.

For Me'phaa, Agree(ment) and syntactic structure interact in unique ways that give rise to the language's specific expressions of verbal agreement detailed in Chapter 2, namely the manifestation of all three ergativity properties through distinct patterns of agreement. I propose that the language possesses rich paradigms of verbal agreement because of the fol-

lowing three interrelated but conceptually distinct properties. First, the language possesses an array of verbal constructions, each with slight variations in structure and/or functional categories involved. This leads to multiple sites where arguments are base-generated, for example: Spec,VoiceP, sister to the verb root, or Spec,AppIP, to name ones that were noted above. Second, Me'phaa grammar is such that agreement exponents seem to make reference to their specific context of insertion, which is why the language has so many sets of exponents for the same ϕ -features (e.g., *ta-*, *-íin*, *-áa'* and suppletion can all encode 2SG). Third, Me'phaa calculates verbal agreement locally in the sense that it happens within the verbal domain and does not depend on higher inflectional heads like T^0 .

The first of these properties is broad and not exclusive to Me'phaa, possibly rooted in language universals constraining ways in which clauses are built. Thus, Me'phaa is by no means the only language for which a rich array of verbal constructions are claimed to be present (see, e.g., Cuervo 2003 for Spanish, Wood 2015 for Icelandic). Yet, just as languages differ in the expression of elements that comprise the underlying architectures, not all languages care to encode structural distinctions in grammatical phenomena such as agreement. Properties two and three in conjunction with this give rise to the unique way verbal agreement is manifest in Me'phaa. That is, because agreement is valued locally *and* because exponents vary due to their context of insertion, Me'phaa essentially has distinct sets of agreement markers for each syntactic configuration as a part of its grammar. Taken together, these three properties account for the existence of the multiplicity of verb classes cited in the previous chapter. Clause types feature prominently in the language's possession of all three ergativity properties when viewed from the vantage point of verbal agreement because Me'phaa agreement morphology cares deeply about geometrical distinctions corresponding to distinct verbal structures.

3.5.2 Implications of local agreement: The non-role of T

The attribute of local licensing and agreement is especially important to note because it has implications for the (non-)role of functional heads within the inflectional domain, particularly T^0 , which has been traditionally associated with things like (nominative) case assignment and argument agreement, even in languages with ergative properties (e.g., Aldridge 2007).⁶ For Me'phaa, multiverbal constructions where embedded clauses either lack a TP layer or perhaps possess a defective T^0 are instructive in this sense. As is common cross-linguistically, 'want' in Me'phaa embeds a small clause, either TP or smaller (see, e.g., Stowell 1983 for early arguments that small clauses lack certain inflectional material). Evidence in support of a small clause analysis comes from restrictions on the distribution of TAM markers in the clause embedded under 'want' in contrast to standard matrix clauses where TP is assumed to be present.

Examples (88a-88c) show cases where the argument is 1SG for both the matrix and the embedded clause; (88d-88f) show cases where the matrix clause where the argument in the matrix clause is 1SG and that of the embedded clause 2SG. In cases where agreement is consistent across clauses (perhaps via controlled PRO or something similar), standard TAM morphology is impossible on the embedded verb. In cases where the arguments differ, the embedded clause requires irrealis marking, whose morphosyntactic properties are distinct from perfective and imperfective aspects, as discussed previously.

- (88) a. Nand-o' já-ñ-u'.
want-1SG STAT-die-1SG
'I'm dying.' (Lit., 'I want to die.')
- b. Nand-o' khix-uún.
want-1SG jump-1SG
'I want to jump.'

⁶Later on, it will become apparent that this issue likewise has consequences for deriving verb-initiality, as it will help delimit the hypothesis space with respect to V1 strategies.

- c. Nand-o' gá-tse khafé.
 want-1SG DES-buy1.sg coffee
 'I want to buy coffee.'
- d. Nand-o' ma-dxá'nu-u.
 want-1SG IRR-2SG.arrive-ITER
 'I want you to return.' (Lit., 'I want you to arrive back.')
- e. Nand-o' ma-ta-gúndá.
 want-1SG IRR-2SG-dream
 'I want you to dream.'
- f. Nand-o' ma-ra-tsé khafé.
 want-1SG IRR-2SG-buy coffee
 'I want you to buy coffee.'

Whether T^0 is absent or defective, the result should be the same in either case, if argument licensing and agreement is dependent on T^0 . That is, we would expect the regular patterns of agreement to be disrupted, at least either for external arguments (88c, 88e-88f) or internal arguments (88a-88b, 88d). However, this is not for either argument type. Instead, these data are consistent with the idea I have been developing throughout this chapter, that agreement exponents are highly sensitive to their local context of insertion.

Notably, though, in some of the above examples a higher functional head *is* present in the embedded string, which could be responsible for establishing an Agree relation with some constituent in the same clause. Again remaining agnostic as to the precise nature of T^0 (present but defective *vs.* absent) in SCs, some of these clauses do provide evidence that an AspP or MoodP layer is present above the verbal domain, headed, for example by irrealis *ma-* or another aspect prefix. The example in (88b) seems to mitigate against this as a requirement for all verbal agreement, though, since the embedded verb *khixwún* contains no ostensible aspect morpheme at all. However, another viable option for the above data is that while neither T^0 nor Asp^0 are required for the licensing or determining agreement of internal arguments, external arguments must be in a c-command relation with a higher functional head for Agree to occur.

The example below provides clarity on this particular issue. The embedded clause *thaxíñúún* contains only a transitive verb with no overt aspect morphology.

- (89) Nand-a' **tha-xíñ-úún**.
 want-2SG 2SG-kill-1SG
 ‘You’re killing me.’ (Lit., ‘You want to kill me.’)

Crucially, both the external argument and the internal argument are indexed on the verb with their expected agreement forms, respectively the 2SG prefix *tha-* and the 1SG suffix *-úún*. All things being equal, this suggests that verbal agreement is calculated within the verbal domain, that is, independent of the functional material in the inflectional layer.

The key takeaway from the above data is that verbal agreement appears to be tied to the presence of functional heads *inside the verbal domain*, rendering functional heads in the inflectional domain unnecessary for argument licensing and agreement. You can, for example, have an external argument—and external argument agreement—with or without T^0 , but you cannot have such without Voice⁰. Thus, it makes sense to tether transitive, unergative, and Ditransitive subject agreement to the Voice head itself. Crucially, now we are finally in a position to elaborate on what this means and how it is achieved mechanistically.

- (90) Principle of Me'phaa verbal agreement (first version)
- a. Agreement exponents reflect their probe, &
 - b. Voice⁰, v^0 , and Appl⁰ all serve as probes.

This finding strengthens recent approaches where ergative agreement (especially in the alignment-based sense) is associated with a functional head (e.g., v^0) situated at the upper bounds of the verbal domain (e.g., Coon 2017). Similarly, in Me'phaa, additional patterns of agreement that correspond to an argument’s placement in other configurations also obtain with or without T^0 .

3.6 Verbal person markers: Agreement *vs.* clitics

Me'phaa verbal person marking uncontroversially demonstrates ϕ -feature variation with verbal arguments. Still, it remains an open question as to exactly what phenomenon or phenomena is/are under operation when this occurs, and the two most prominent candidates include agreement and clitic doubling. Up to this point I have chosen to use the term “agreement” for the majority of Me'phaa verbal argument markers, with the exception that postverbal marking of local plural arguments and the inanimate “object” marker *=ne* have been deemed “clitics.” In this section I provide a rationale for my using the terms in this way.

Though there are multiple analyses within generative literature for both agreement and clitics, and discerning between the two has proved quite difficult (see, e.g., Kramer 2014, Baker & Kramer 2016), the core difference between how each comes about pertains to the distinct nature of each: “clitics are D^0 heads while pure agreement morphology is the morphological realization of features which have been valued by *Agree*” (Coon 2017: 104, see Harizanov 2014, Kramer 2014, Preminger 2014). This difference for object agreement and object clitics can be schematized as follows for a language where *v* is implicated in each, based on representations from Kramer (2014) and Coon (2017):⁷



While these representations differ in the mechanisms that derive the phenomenon of ϕ -features from a nominal appearing on a functional head, both make the same claim with respect to the way that the arguments and heads are configured in the syntax. Consequently,

⁷Note that I have made slight modifications to fit with the framework employed here, using $\sqrt{\quad}$ instead of V, and making reference to unvalued features rather than uninterpretable ones, for reasons I explain below.

it may seem a bit of a detour to venture into the clitic *vs.* agreement territory. Nevertheless, I maintain that doing so is beneficial for the following reasons.

First, such an investigation contributes to the core thesis of this chapter—that Me'phaa verbal person marking is radically transparent with respect to the syntax of argument structure. In particular, the view that I began to advocate above maintains that person marking exponents by and large are highly sensitive to their context of insertion (in terms of the corresponding syntactic configuration). If verbal agreement in Me'phaa ends up offering a window into the syntax of argument structure in this way, it is ultimately be beneficial to sketch out an account of how agreement is calculated in the language. Doing so paints a richer, more fine-grained picture of the clausal core (and how ϕ -features of nominals get expressed within that space). Additionally, though, it is necessary to step back a bit and state what evidence exists for treating certain Me'phaa person markers as agreement morphemes in the first place. What emerges in the discussion below is that context-sensitive exponents are associated with Agree(ment), whereas context-insensitive exponents are associated with clitics.

Analyzing person markers as clitics or agreement will also have critical implications beyond the clausal core, with respect to understanding how the deep argument structure can be reconciled with word order facts. In particular, the nature of the operations relating arguments and functional heads in the verbal domain will help delimit the amount and type of possible processes involving the inflectional domain that are tied into how the language achieves verb-initiality. Thus, in this section I present evidence for viewing the majority of Me'phaa verbal person markers as agreement, based on an array of diagnostics that weigh in favor of this type of analysis. Finally, given that verbal person markers constitute the primary—if not only—grammatical phenomenon by which the language manifests ergativity, the role(s) that agreement and/or clitic doubling play in triggering ergativity properties will shed light on what ergativity means from the vantage point of Me'phaa and will enrich our understanding of what ergativity is in a broader sense.

The reason that the decision between clitics or agreement is not necessarily a straightforward one is because no cross-linguistically stable set of diagnostics currently exists for distinguishing between the two. Moreover, no attempts have been made to do so for Me'phaa, specifically.⁸ In the discussion that follows, therefore, no single argument is intended as proof for agreement; this is important to note because some of these diagnostics, when viewed individually, may be considered unreliable for some languages. Nevertheless, taken as a whole these diagnostics furnish ample support for treating verbal person markers in Me'phaa as instances of genuine agreement.

Fuß (2005, 129-139) Fuß summarizes several proposals/diagnostics aimed at distinguishing between clitics and agreement markers that shed light on the nature of Me'phaa verbal person markers. One such diagnostic is based on the observation that in some languages, clitics are in complementary distribution with DPs. The argument from complementary distribution essentially relies on a distinction between the core nature of agreement markers and clitics: the former covary with arguments whereas the latter *are* the arguments (or, perhaps more properly, some subpart of them, such as D^0). As a result, clitics are typically seen as being unable to appear with full DPs that bear the same θ -role because they compete for the same slot in the syntax. If, then, Me'phaa person markers on verbs are clitics, then, according to this diagnostic they should “disappear in the presence of overt DP arguments” (Fuß 2005: 131). This, however, does not obtain.

(92) Co-occurrence of DPs with verbal person marking: External arguments

- a. (Ikhúún) ne-ne.
 1SG PFV-do.1SG
 ‘I did it.’
- b. (Ikháa) ne-'-ne.
 3SG PFV-3SG-do
 ‘S/he did it.’

⁸Extant descriptive literature generally uses fairly neutral terminology to discuss the phenomenon of person marking on verbs. Wichmann (2009, 2010) stands out as an exception to this, in that he proposes person marking is essentially case marking. Throughout this dissertation, though, I remain agnostic as to case.

- c. (Ikháan) na-ra-xkh-o!
 2SG IPFV-2SG-pursue-1SG
 ‘You’re pursuing me.’
- d. (Ikháanló!) nu-xkh-áa*(=ló!)
 1PL.INCL IPFV.PL-pursue-3SG=1PL.INCL
 ‘We’re pursuing her/him.’

(93) Co-occurrence of DPs with verbal person marking: Internal arguments

- a. (Ikhúún) mbá-úún.
 1SG be.alone.1SG
 ‘I’m alone.’
- b. (Ikháan) ni-dxanú!
 2SG PFV-2SG.arrive
 ‘You arrived.’
- c. Ni-ta-xkhax-ijn (ikhiin).
 PFV-2SG-wake-3PL 3PL
 ‘You woke them.’

As the above examples clearly show, verbal person marking surfaces (and, in fact, is obligatory) even in the presence of a DP argument. The DP may be droppable, but the person marker is not. As long as the nominal argument is animate, the same pattern essentially holds regardless of person, number, and base-generated position. Nevertheless, it is possible that the above involve instances of clitic doubling, so this test alone is insufficient in determining the status of person markers in Me'phaa.

One exception to this, where we do see complementary distribution surfacing, pertains to the differential “object” marker *ne*.⁹ As seen in the previous chapter, *ne* surfaces postverbally, and can stand in place of an inanimate object. When the object is overt, though, *ne* is illicit:

- (94) Ni-ta-dá!(*=ne) lápi.
 PFV.AFF-2SG-throw=*ne* pen
 ‘You threw the pen.’

⁹The reason for the scare quotes will become apparent in subsequent sections, where I show that *ne* is not just about objects, but rather internal arguments located in a variety of positions.

This suggests that the status of *ne* is different from that of ordinary person markers, which is perhaps expected given that inanimate objects in canonical transitives do not trigger agreement.

A second test from Fuß (2005) pertains to interactions with an argument’s definiteness and/or specificity. The logic of this diagnostic rests on two related properties of clitics cross-linguistically: (a) “clitics usually receive an interpretation as definite/specific” (see Uriagereka 1995), and (b) “in clitic doubling constructions, the full nominal usually must be definite/specific” (Fuß, 2005, 133). If the elements I have been referring to as agreement markers were clitics, then the following would be surprising:

- (95) a. Ni-mbá-a tá-'-ne.
 NEG-INDEF-AN PFV.NEG-3SG-do
 ‘No one did it/anything.’
- b. Nanguá ni-d-a'a ni-mbá-a (xabo).
 NEG PFV-throw-3SG NEG-INDEF-AN person
 ‘S/he didn’t throw anyone.’

In (95a), we see the standard expression of 3SG transitive subject agreement for $\sqrt{\text{NE}}$ ‘do’: the glottal stop prefix agrees in person and number with the negative indefinite pronoun *nimbáa* ‘no one’. The second example shows in (95b) object agreement, as with this verb the 3SG suffix *-a'a* can only appear when the object is animate (cf. *nide'* ‘s/he threw it’, where the suffix *-e'* surfaces in a construction where the transitive subject is 3SG.AN and the object inanimate). Indefinite nominals therefore do get indexed on the verbal complex, suggesting again that the verbal elements that covary with an argument’s ϕ -features are indeed expressions of agreement.

Fuß (2005) also discusses a set of diagnostics that exploits two attachment properties of clitics with relation to their hosts, which have served as criteria for distinguishing clitics and affixes since Zwicky & Pullum (1983). First, affixes are picky with respect to their host, but clitics do not exhibit such strict “selectional requirements” (Fuß 2005, 135; Zwicky & Pullum 1983, 503). Second, it is generally held that clitics can stack (on agreement affixes or

other clitics), but affixes cannot attach on material with a clitic. In light of these properties, consider the behavior of postverbal stem material in the following pair of examples.

- (96) a. Ikháa nand-oo agó-tse=má=ló'=ne xuge'.
 3SG want-3SG DES.PL-buy=MA=1PL.INCL=*ne* today
 ‘S/he wants us to buy coffee.’
- b. Ikháanlá' nu-xkh-o'=lá'.
 2PL IPFV.PL-pursue-1SG=2PL
 ‘Y'all are pursuing me.’

In (96a), the 1PL.EXCL marker does not appear immediately adjacent to the verb root in the embedded clause. Instead, it follows the morpheme *má* (which has a rough meaning of ‘already’; see Carrasco Zúñiga & Weathers (1988, 90), and is followed by the enclitic *ne*. This pattern was also observed by Navarro Solano (2012, 57-58) for Malinaltepec Me'phaa. The elements *má*, *ló'*, and *ne* cannot be freely ordered, but the point here is that they can occur farther away from the verb root, which is a more clitic-like behavior, and uncharacteristic of the person marking suffixes for first, second, and third person singular, and third person plural. The sentence in (96b) shows a case where object and subject markers surface postverbally. Again, the order is static, meaning that *-o'* and *lá'* cannot be transposed. This example shows how the 1SG suffix has “selectional properties” such that it must appear adjacent to the verb root, whereas *lá'* can stack on top of another person marker. The property of obligatory adjacency to the verb only obtains for first, second, and third persons among the singular markers, and third person among the plural markers. The conclusion for this test seems to be that local plural postverbal markers and the “object” marker *ne* are all enclitics, whereas other types of verbal person marking constitute agreement.

Another diagnostic that has been influential in recent literature is found in Nevins (2011), whose primary means of distinguishing agreement from clitic doubling is tense invariance. Nevins argues that agreement exponents, but not clitics, may be sensitive to tense. In Chapter 2 I presented data showing how preverbal external argument marking in Me'phaa is visible for plurals in the imperfective and irrealis aspects, forming a portmanteau. This

does not, however, obtain for objects, and neither does it obtain for any arguments in the imperfective.

(97) Number marking of external argument for imperfective

- a. **Na**-[!]-sng-é!
IPFV-3SG-teach-1SG
'S/he's teaching me.'
- b. **Na**-[!]-sngá=x_Q!
IPFV-3SG-teach=1PL.EXCL
'S/he's teaching us.'
- c. **Nu**-sng-é!
IPFV.PL-teach-1SG
'They're teaching me.'

(98) No (visible) number marking of external argument for perfective

- a. **Ni**-[!]-sng-é!
PFV-3SG-teach-1SG
'S/he taught me.'
- b. **Ni**-[!]-sngá=x_Q!
PFV-3SG-teach=1PL.EXCL
'S/he taught us.'
- c. **Ni**-sng-é!
PFV.PL-teach-1SG
'They taught me.'

One possible interpretation of this phenomenon is that Me'phaa showcases tense variance for external argument marking, but in a way that is exclusively based on number. In Nevins' framework, data like this could then be taken to indicate that plural (Di)transitive and unergative subjects are genuine agreement markers (with the exception of local plural enclitics, which do not vary by tense/aspect) whereas other arguments (e.g., transitive objects, inchoative subjects, etc.) are encoded via clitics. However, for Me'phaa, this test may not be as easy to interpret as it seems. On the one hand, number-based tense variance seems

rather unsatisfying because it requires ignoring simple phonological explanations in order to treat plural external argument marking different from other cases of left-edge-of-verb marking (e.g., 2SG and 3SG prefixes). This further means that we would have to assume that because TAM marking fuses with number in the imperfective, T^0 is involved in calculating the agreement. However, as I show later on in this chapter, there is strong evidence that verbal agreement is calculated locally, that is, within the verbal domain and independent of T^0 . Thus, I tentatively conclude that Nevins' notion of tense-invariance as a means of getting at the agreement-clitic distinction may not be applicable for Me'phaa.

Baker & Kramer (2016) develop a series of tests aimed at serving as a reliable diagnostic for distinguishing clitic doubling from agreement cross-linguistically with respect to object markers. Extending the core logic of complementary distribution, their diagnostic exploits the (in)compatibility of verbal elements that exhibit ϕ -feature variation with quantified DPs, anaphoric DPs, and DPs containing a bound variable (e.g., a *wh*-element). For Baker & Kramer, incompatibility between a verbal marker and an overt DP in these cases entails clitic doubling, while compatibility signals agreement. The strength of their proposal lies in its reliance on “two cross-linguistically robust principles of grammar—the Crossover Condition and Binding Theory,” which, they argue, enables cross-linguistic application of the tests (Baker & Kramer, 2016, 39). While Me'phaa does not display agreement with reflexive anaphors (99a), the language does allow object agreement with negative indefinites (99b) and *wh*-questions (99c) (so long as the object is animate).¹⁰

- (99) a. Ikháa ni-de'-min-e'.
 3SG PFV-throw-self-3SG
 ‘S/he threw her/himself.’
- b. Nanguá ni-d-a'a ni-mbá-a xabo.
 no PFV-throw-3SG NEG-INDEF-AN person
 ‘S/he didn't thrown anyone.’

¹⁰Object *wh*-questions with *tsáa* ‘who’ and another 3SG.AN argument are technically ambiguous (Suárez, 1983, 277), which supports the claim that there is object agreement with *wh*-expressions.

- c. Tsáa ni-d-a'a ikhaa?
 who PFV-throw-3SG 3SG
 'Who did s/he throw?'

As seen in Chapter 2, certain properties of 3SG transitive and unergative subjects may be indexed suffixally when there is no object that competes for agreement marking (either because the object simply is not there, or because it is inanimate).¹¹ Thus, the suffix *-e'* in (99a) should not be taken as agreeing with the reflexive. In fact, if the object is inanimate, the same pattern arises.

- (100) a. Ikháa ni-d-e' lápi/yuská.
 3SG PFV-throw-3SG pen/trash
 'S/he threw the pen/trash.'
- b. Nanguá ni-d-e' ni-mbá.
 no PFV-throw-3SG NEG-INDEF.INAN
 'S/he didn't throw anything.'
- c. Ndíne ni-d-e'?
 what PFV-throw-3SG
 'What did s/he throw?'

In contrast, the examples (99b-99c) above both show that the verbal suffix covaries with the ϕ -features of the (animate) object, either the negative indefinite *nimbáa* (*xabo*) 'no one' or the displaced *wh*-element *tsáa* 'who'. Given the logic developed by Baker & Kramer (2016), this patterning signals agreement and not clitic agreement, as the battery of tests above also suggests.

Finally, in addition to the points above, another claim that is often made regarding the differential behavior of pronominal clitics and agreement markers pertains to the shape that a person marker takes. Clitics are commonly believed to be stable in their phonological form across a variety of syntactic environments. Thus, whether a clitic resides in Spec,ApplP, is

¹¹Again, this is often attributed to discourse-level properties such as a given/new distinction, though the exact nature of this marking is unclear because it seems to overlap with aspects pertaining to two distinct typological systems: obviation and switch reference. See Wichmann (2007) for a discussion.

sister to the verb root, or sits in Spec,VoiceP it should be exponed the same way. In Me'phaa, such morphophonological constancy only occurs with postverbal local plural marking and inanimate *ne*.¹²

- (101) a. Ikháanxo' no-xmí=xo' goome.
 1PL.EXCL IPFV.PL-sew=1PL.EXCL cloth.for.tortillas
 'We're sewing a cloth for wrapping up tortillas.'
- b. Na-ta-xkhaxáan=xo'.
 IPFV-2SG-wake=1PL.EXCL
 'You're waking us up.'
- c. Ni-guá'nu-u=xo'.
 PFV-PL.arrive-ITER=1PL
 'We returned.' (Lit., 'We arrived back.')

Agreement markers, in contrast to clitics, are commonly sensitive to the syntactic environment in which they appear, yielding differences in morphophonological form based on where the argument they covary with is located. One example of this can be seen by revisiting two of sentences immediately above. Comparing (101a) and (101b) shows that the feature PL only receives left-edge-of-verb exponence (via the portmanteau prefix *no-*) when the marker covaries with an external argument in Spec,VoiceP, though this is not possible when a plural argument is sister to the verb root (cf. **notaxkhaxáanxo'*). Additional examples where person marking shows sensitivity to syntactic location can be seen in the following three sentences, where the 2SG exponent is realized in multiple ways.

- (102) a. Ikháan na-ra-xmí goome.
 2SG IPFV-3SG-sew cloth.for.tortillas
 'You're sewing a cloth for wrapping up tortillas.'
- b. Nu-xkax-iín=xo'.
 IPFV.PL-wake-2SG=1PL.EXCL
 'We're waking you up.'

¹²I explore the significance of the positions that *ne* may occur in detail below in Chapter 4. One key distinguishing feature of *ne*, which does not hold for the local plural clitics, is that *ne* cannot sit in for an external argument.

- c. Ni-**dxanu-u**.
 PFV-2SG.arrive-ITER
 ‘You returned.’ (Lit., ‘You arrived back.’)

Using this as a diagnostic again supports my claim that all the Me'phaa person markers except *ló'*, *xó'*, and *lá'* (i.e., the local plural enclitics) are instances of true agreement.

In summary, Me'phaa verbal morphemes that covary with ϕ -features of nominal arguments are a blend of agreement and clitics, as supported by an array of diagnostics. Person markers that immediately flank the root/stem are true agreement morphemes, while local plural suffixes and the indirect object marker *ne* are clitics. The table below summarizes the properties of each morpheme.

| Morpheme: | Prefix | Suppletion | Suffix | 1/2PL suffix | INAN suffix <i>ne</i> |
|-----------|---------------|---------------|---------------|-------------------|-----------------------|
| Argument: | External | Internal | Internal | External/Internal | Internal |
| Features: | Person/number | Person/number | Person/number | Person | - |
| Status: | Agreement | Agreement | Agreement | Clitic | Clitic |

Table 3.1: Properties of Me'phaa person markers.

3.7 Putting the pieces together

Patterns of agreement in Me'phaa provide a first indication of distinct clause types in the language that correspond to unique structural configurations. If it is truly the case that Me'phaa agreement morphemes map onto specific sites within the syntactic configurations that yield argument structure, then this leads to a series of predictions about ways that agreement manifests. Put in the most intuitive way, we expect that similar ways of agreeing should be an artifact of underlying structural similarity. For example, all verbal constructions where the subject agreement marker for a 2SG argument is exponed preverbally as *ta-* should be relatable by virtue of their external argumenthood—i.e., the DP argument is sitting in Spec,VoiceP and agrees with Voice⁰. This claim thus leverages a commonly-held

structural unification of the portion of the syntax that overlaps in canonical transitives and unergatives (both have a VoiceP layer). Similar arguments were proposed for the relationship between canonical verbal agreement for transitive objects and the arguments that appear in certain unaccusative structures, in particular statives and inchoatives—all of which involve arguments sister to the verb root.

Recall from the end of Chapter 2 that Me'phaa verbs can be situated in one of seven classes, based on notions of transitivity and the positioning of the agreement markers with respect to the verb root (in terms of linear verbal word order). These are repeated below for reference.

- **Ditransitive**: Preverbal A marking (ergative); postverbal R/T marking (dative)
- **(di)transitive**: Preverbal A marking (ergative); postverbal P marking (absolutive)
- **transitive₂**: Preverbal A marking (ergative); object suppletion
- **unergative**: Preverbal S marking (ergative)
- **unaccusative**: Postverbal S marking (absolutive)
- **unaccusative₂**: Suppletive S marking
- **dative**: Postverbal S marking (dative)

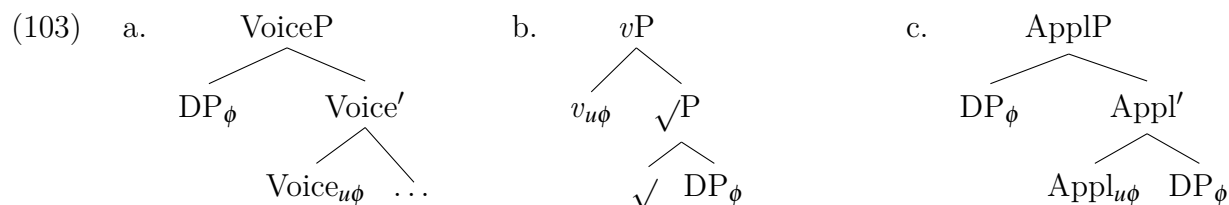
In light of the argumentation developed in this chapter, we can now see how agreement morphemes form natural classes when one takes into account similarity in form. Doing so collapses some of the above distinctions, enabling a four-fold classification of patterns of agreement (see also Cline 2013).

- **Class 1 (prefix)**: (di)transitive, unergative, & Ditransitive subjects
- **Class 2 (suffix)**: Transitive objects, inchoative & stative subjects
- **Class 3 (suffix)**: Ditransitive objects & experiencer subjects
- **Class 4 (suppletion)**: Subjects of intransitive & objects of transitive verbs of motion

| | Class 1 | | Class 2 | | Class 3 | | Class 4 |
|--------|--------------------|--------------------|-------------------|----------------------------|---------------------|----------------|----------------|
| | Transitive subject | Unergative subject | Transitive object | Stative/Inchoative subject | Ditransitive object | Dative subject | S/O suppletion |
| 1SG | (tone) | (tone) | -úún | -úún | -ú(n)' | -ú(n)' | (tone) |
| 2SG | t(a)-/r(a)- | t(a)-/r(a)- | -áan | -áan | -aa(n)' | -aa(n)' | suppletion |
| 3SG.AN | '-/(tone) | '-/(tone) | -VV | -VV | -VV(n) | -VV(n) | (tone) |
| 1PL | u- | u- | - | - | - | - | suppletion |
| 1PL | u- | u- | - | - | - | - | suppletion |
| 2PL | u- | u- | - | - | - | - | suppletion |
| 3PL.AN | u- | u- | -VV | -VV | -VV(n) | -VV(n) | suppletion |

Table 3.2: Agreement exponents ordered by class.

Moreover, these natural classes carry structural significance. Based on Me'phaa's Principle of Verbal Agreement in (90), Classes 1-3 can be accounted for with the three structures in (128a), (128b), and (128d), respectively, in accordance with the generalizations in (104).



(104) Generalizations about Me'phaa verbal agreement (first version)

- Transitive and Ditransitive subject encoding look like unergative subject encoding because all three are in Spec,VoiceP and agree with Voice⁰.
- Canonical transitive object encoding looks like change-of-state and stative unaccusative subject encoding because all are sister to the verb root and agree with v⁰.
- Ditransitive IO/DO encoding looks like the encoding of experiencer- and psych-verb subjects because the argument is in Spec,ApplP and agrees with Appl⁰.

Me'phaa patterns of agreement thus reflect radical sensitivity to the syntax of argument structure. This, in turn, feeds the language's unique expression of ergativity since Agree operates locally, which gives rise to patterns of agreement that exhibit all three ergativity properties.

One problem, however, is that Class 4 agreement (suppletion) does not fit easily into this framework. Given the way that I have articulated the relationship between morphophonological form and underlying structure, my proposal predicts that suppletion cannot be accounted for by any of the above structures. At issue are the facts that (a) suppletion forms part of Me'phaa's overall agreement paradigm and, relatedly, (b) suppletive agreement does not look like canonical transitive object agreement or unaccusative subject agreement for statives and inchoatives. Below I provide evidence that these issues are related syntactically, which allows for a unified treatment of suppletive agreement across intransitive and transitive constructions. This will require exploring the notion of unaccusativity and how it operates in Me'phaa in further depth, which is the issue I now turn to.

Chapter 4

Unaccusativity and root suppletion: Inside *vP*

4.1 Introduction

The main claim I advanced in Chapter 3 is that Me'phaa verbal agreement can be derived rather straightforwardly from the syntax of argument structure. In this chapter, I provide additional evidence for this claim by explaining the class of verbs whose structure has not been accounted for, namely, ones that encode agreement via root suppletion. Unaccusativity diagnostics together with semantic considerations reveal that suppletive verbs are not only different in terms of their agreement, they differ crucially in underlying structure. Arguments that trigger suppletive agreement are more deeply embedded in the *vP*, and this extra structure contains an additional functional head, Pred^0 , whose presence correlates with verbal suppletion. Me'phaa facts thus suggest a bifurcation of unaccusative verbs, which, I argue, also leads to positing an additional transitive structure.

4.2 Toward unaccusativities

Initially following the advent of Perlmutter’s Unaccusativity Hypothesis, unaccusatives were generally taken to constitute a uniform class. Syntactically, the traditional proposal for unaccusatives holds that the sole argument is sister to the verb. However, investigation into “unaccusative mismatches” (Levin & Rappaport, 1988; Levin, 1993; Levin & Rappaport Hovav, 1995) revealed the need for a more fine-grained approach to verbs labeled “unaccusative.” For example, *there*-insertion in English is compatible with unaccusative verbs of existence and appearance but not change of state inchoatives or unergatives (Levin, 1993). Recent attempts within syntactic literature to explain such phenomena appeal to structural distinctions that yield two classes of unaccusatives and distinct sites where internal arguments are located (Alexiadou & Schäfer, 2011; Irwin, 2012, 2016).

Several accounts that challenge the assumption of syntactic uniformity among unaccusatives have emerged over the last few decades (Borer, 1991; Kural, 1996; Alexiadou et al., 2006; Alexiadou & Schäfer, 2011; Cuervo, 2010; Irwin, 2012, 2016). In dealing with verbs of motion, these proposals typically share an appeal to the existence of additional structural material (e.g., ResultP, PP, ApplP, SC, etc.)—usually below *vP*—that accounts for the semantics of intrinsic motion and may house the argument, at least in terms of base-generation.¹

On the approach advocated by Irwin (2012), unaccusatives can be mapped onto one of two structural configurations, shown below in (105).

¹Interestingly, in parallel there have been extensive discussions and debates in the philosophy of language literature regarding the nature of predicates containing locational information (e.g., meteorological predicates/climatic verbs like ‘rain’) and whether or not they might contain hidden/unpronounced syntactic constituents (Perry, 1988; Stanley, 2000, 2002a,b; Stanley & Gendler Szabó, 2000; Recanati, 2002, 2007; Neale, 2007; Sennet, 2011). See McKenzie (2012) for a discussion of weaknesses in approaches (particularly Recanati’s) that attempt to dispense of locational variables.



Both structures satisfy traditional notions of unaccusativity because each contains a direct object that serves as the internal argument, but no external argument is present (Embick, 2004). The internal argument in (105b), though, is more deeply embedded. What this gains, according to Irwin, is a structural explanation for the long-acknowledged distinction between change of state verbs (105a) and verbs of motion and existence (105b). I explore the details of her proposal in greater depth below. For now, though, I simply wish to draw attention to a potential upshot for applying her insights to Me'phaa verbal suppletion. My explanation of verbal agreement in Me'phaa broadly speaking leverages differences in architecture to account for differences in ways that agreement gets expressed. If the language's agreement system really is transparent to syntax in this way, then suppletive agreement should be attributable to structure. Irwin's proposal thus opens up possibilities for linking suppletive agreement to a configuration where added structure puts the argument in a more local relation with another agreeing head.

In what follows, I introduce supporting evidence for claiming a distinction in syntactic structure leading to a plurality of unaccusativities, which in Me'phaa ends up being made visible by patterns of agreement. Afterward, I recruit this distinction to explain the existence of suppletive verbs of motion.

4.3 Diagnosing unaccusativity in Me'phaa

To successfully distinguish syntactically between types of unaccusatives in Me'phaa, it will be helpful to have a series of diagnostics for unaccusativity in general, as well as language-

internal evidence for subclasses of unaccusatives. However, as with the clitic-agreement distinction discussed above, there is currently no stable and robust set of unaccusativity diagnostics that obtain cross-linguistically. Diagnosing unaccusativity in Me'phaa based on tests for other languages proves to be a rather difficult task, as many key diagnostics used for these languages simply do not apply. For example, while Me'phaa does possess the verbs BE and HAVE, there are no BE/HAVE auxiliaries in the language, so selectional properties based on such are nonexistent. Similarly, as noted earlier, English shows evidence for a more fine-grained distinction among unaccusatives because it allows for *there*-insertion with intransitive verbs of motion and appearance but not change of state inchoatives or statives (Levin, 1993; Alexiadou & Schäfer, 2011). However, as is common across ergative and verb-initial languages (Polinsky, 2016, 348), expletive “there” is not a feature of Me'phaa. Still, though many tests for unaccusativity do not apply to Me'phaa directly, evidence from other languages can be instructive for defining expectations about unaccusativity and even providing a basis for cross-linguistic relatedness in spite of surface differences.

In answering whether or not there is an intimate relationship between person inflection and syntactic structure, one would hope to find a series of language-internal diagnostics that motivate the need for a syntactic account for agreement facts. In other words, it would be difficult to motivate the existence of distinct geometries based on inflectional classes alone, and this would leave us with a rather unsatisfying account of the syntax of Me'phaa argument structure.

4.3.1 Change-of-state constructions

One of the more cross-linguistically robust tests for unaccusativity that actually does yield positive results in Me'phaa involves change of state verbs that participate in causative-inchoative alternations. This pattern was noted above in Chapter 3, and is also illustrated in the following pair of sentences:

- (106) a. Ni-t-ru-th-íin ikhiin.
 PFV-2SG-CAUS-cut-3PL 3PL
 ‘You cut them.’
- b. Ni-th-íin ikhiin.
 PFV-cut-3PL 3PL
 ‘They got cut.’/‘They cut themselves (on accident).’

The alternation is not between two “verbs” *per se*, but rather verbal constructions/structures that serve as contexts the roots can appear in. Causatives of the type seen in (106a) involve transitive structures with an overt v^0 and a Voice⁰ that introduces an external argument. The inchoative in (106b) corresponds to an unaccusative structure with a null v^0 and no external argument-introducing head. The root $\sqrt{\text{TH}}$ ‘cut’ can appear in either context, the latter of which corresponds to an unaccusative structure. The consequence for verbal agreement is that the morphological causative bears two agreement markers—one indexing the external argument and the other the internal argument—while the unaccusative has a single agreement slot whose exponent is the same as the transitive object on account of the place the argument that it covaries with occupies in the syntax.

Tying this type of argument structure alternation to the core thesis developed above, agreement overlap between the two alternants derive from the ways that Me'phaa calculates verbal agreement and the fact that the causative alternant is built from the inchoative one. Importantly, though, not all of the candidates for unaccusativity in Me'phaa participate in this type of alternation, and these verbs likewise do not mark agreement in the same way. For example, an overt v_{CAUS} is impossible with intransitive verbs of motion that show agreement via root suppletion.

- (107) * Ni-ro/tsi-dxanú'=xo'.
 PFV-CAUS/CAUS-2sg.arrive=1PL.EXCL
 (Intended: ‘We made you arrive.’)

This behavior is expected, in that, cross-linguistically, verbs of motion and existence do not participate in the causative-inchoative alternation (Hale & Keyser 1986, Irwin 2012). For

Me'phaa, the most plausible explanations for this behavior seem to be that either (a) verbs like ‘arrive’ are not unaccusative, or (b) verbs like ‘arrive’ belong to a distinct subclass of unaccusatives, and that argument-structure alternation tests like the one above simply do not apply. I argue for the latter, and this requires a bit more work in terms of identifying potential unaccusativity diagnostics that yield meaningful results for Me'phaa.

4.3.2 *Ne*-cliticization, Me'phaa style

A more Me'phaa-specific test for diagnosing unaccusativity pertains to the behavior of the object clitic *ne*. As noted above, *ne* can stand in place of an inanimate object in a transitive event, as (108) shows.

- (108) a. Ni-t-ro-thón maga.
 PFV.AFF-2SG-CAUS-cut onion
 ‘You cut the onion.’
- b. Ni-t-ro-thón=**ne**.
 PFV.AFF-2SG-CAUS-cut=*ne*
 ‘You cut it.’
- c. * Ni-t-ro-thón(=**ne**) maga(=**ne**).
 PFV.AFF-2SG-CAUS-cut(=*ne*) onion(=*ne*)
 (Intended: ‘You cut the onion.’)

Ne always surfaces postverbally, and its relatedness to the absence of an overt inanimate argument may be tied to the fact that some inanimate arguments fail to agree. *Ne* is also in complementary distribution with overt nominals. In (108b), *ne* functions as an object clitic, and it can only appear when the direct object (e.g., *maga* ‘onion’ above) is not present. Attempting to use both the direct object and the object clitic simultaneously results in ungrammaticality (108c).

Importantly, while *ne* can only stand in the place of an inanimate argument, it is not the case that *ne* can be used in lieu of *any* inanimate argument. It cannot, for example, index a transitive or an unergative subject:

- (109) a. Ni-ro-th-úún chílo.
 PFV.AFF-CAUS-cut-1SG knife
 ‘The knife cut me.’
- b. *Ni-ro-th-úún=**ne**.
 PFV.AFF-CAUS-cut-1SG=**ne**
 (Intended: ‘It cut me.’)
- c. Ni-^l-sian=**ne**.
 PFV.AFF-3SG-dance=**ne**
 ‘S/he danced it.’ (*‘It danced.’)

Potentially, then, *ne*-cliticization in Me'phaa shares an incidental, but deep, structural affinity with the well-known phenomenon of *ne*-cliticization in Italian, which diagnoses direct objecthood and tests for surface unaccusativity (CITE; Irwin, 2012).² If a similar test holds for Me'phaa, it would explain why inanimate transitive objects, but not inanimate transitive subjects, participate in this construction. Moreover, if this test truly diagnoses an argument's status as a direct object, we would expect that *ne* should appear with inchoatives. This is indeed borne out:

- (110) Ni-thón=**ne**.
 PFV.AFF-cut=**ne**
 ‘It was/got cut.’

Thus, according to a scenario where Me'phaa *ne*-cliticization is to Italian *ne*-cliticization in what it reveals about structure and unaccusativity, Me'phaa's unique take on this type of construction would be that it is triggered by animacy distinctions present in the grammar.

Me'phaa *ne*-cliticization provides further information about the status of intransitives in the language, because it can also serve as the subject of verbs of motion that participate in suppletion, such as $\sqrt{\text{GANU}}$ ‘arrive’.

- (111) Ni-ganú=**ne**.
 PFV-arrive=*ne*
 ‘It arrived.’

²The fact that these share the same descriptive namesake is purely accidental: both languages just happen to have object (or object-like) clitics whose morphological exponent is *ne*.

This suggests that while intransitive suppletive verbs of motion do not pattern like statives and inchoatives with respect to agreement, they do share the property that *ne* can serve as their sole argument.

To summarize the results of this diagnostic, *ne*-cliticization in Me'phaa is possible in a variety of syntactic contexts. Postverbal *ne* can stand in for an inanimate object in a transitive structure, or as an inanimate subject for various intransitives. Moreover, although *ne* can stand in for a “subject” (i.e., an intransitive subject), it cannot take the place of a transitive subject or an unergative subject. These facts lead to the following generalization:

(112) Generalization about Me'phaa *ne*-cliticization

Ne- cliticization targets inanimate internal arguments.

Me'phaa *ne*-cliticization therefore constitutes a language-specific diagnostic for unaccusativity in that its distributional behavior manifests a clear distinction between internal arguments and external arguments. Put in the language of ergativity properties, this tests provides further evidence for the absolutive and the argument-structural properties in Me'phaa because *ne*-cliticization targets transitive objects and (certain) intransitive subjects to the exclusion of transitive subjects and unergative subjects.

Still, while intransitives do not form a single class based on this phenomenon, and *ne*-cliticization aligns nicely with the unergative-unaccusative distinction, this diagnostic treats unaccusatives uniformly. This contrasts with the picture of intransitive verbal agreement sketched out above. If agreement is the grammatical phenomenon under consideration, Me'phaa exhibits the argument-structural property not only because unaccusatives are distinct from unergatives, but unaccusatives themselves can be further broken down into subclasses based on patterns of agreement. However, *ne*-cliticization seems to ignore this distinction, showing possible evidence for a uniform class. In the sections below I argue against such uniformity based on a further diagnostic whose results show morphosyntactic differences correlating with patterns of agreement among unaccusatives.

4.3.3 The “iterative” suffix

The final test I discuss serves as a diagnostic both for unaccusativity and for distinguishing between two classes of unaccusatives. This diagnostic recruits another language-specific property that, like *ne*-cliticization and causative-inchoative alternation, also shows sensitivity to structural differences.

Me'phaa has a suffix that in previous works has been referred to as “repetitive” (Carrasco Zúñiga & Weathers, 1988; Carrasco Zúñiga, 2006) or “iterative” (Suárez, 1983; Wichmann, 1992; Navarro Solano, 2012). Examples are shown below for a sample of intransitive verbs that can take this suffix.

- | | | |
|-------|---|--|
| (113) | a. Na-ka. IPFV.AFF-1SG.go 'I'm going.' | e. Na-ka- <u>a</u> . IPFV.AFF-1SG.go-ITER 'I'm going back.' |
| | b. Na'-kha. IPFV.AFF-1SG.come 'I'm coming.' | f. Na'-kha- <u>a</u> . IPFV.AFF-1SG.come-ITER 'I'm coming back.' |
| | c. Na-gánu. IPFV.AFF-1SG.arrive 'I'm arriving.' | g. Na-gánu- <u>u</u> . IPFV.AFF-1SG.arrive-ITER 'I'm arriving back where I was.' |
| | d. Na-kojmú. IPFV.AFF-1SG.appear 'I'm appearing.' | h. Na-kojmu- <u>ú</u> . IPFV.AFF-1SG.appear-ITER 'I'm appearing back where I was.' |

Iterative suffixation in Me'phaa from Iliatenco is marked tonally and/or via vowel lengthening, as it is in Malinaltepec Me'phaa (Carrasco Zúñiga & Weathers, 1988; Carrasco Zúñiga, 2006).³ Though the semantics of this marker are yet to be fully explored, in a descriptive sense, neither “repetitive” nor “iterative” seem to be fully appropriate labels, as repetition (doing something more than once) and iteration (doing something over and over) are not

³Wichmann (1992, 127) notes that additional suffixes are used in the Azoyú variety, namely *-la'* with local persons and *-li* for “third person Given Topic.” In Huehuetepic Me'phaa, the iterative is marked by the suffix *-la'* (Kevin Cline, p.c.).

always present in the meaning. To illustrate this, consider the pair of sentences below, both of which can be translated ‘I arrived at Iliatenco’.

- (114) a. Ni-ganú' náá Mixtru'wíin.
 PFV-arrive.1SG PREP Iliatenco
 ‘I arrived at Iliatenco.’
- b. Ni-ganú-u Mixtru'wíin.
 PFV-arrive.1SG-ITER Iliatenco
 ‘I arrived at Iliatenco.’

In a context where a person who is not from Iliatenco traveled to the city for the first time, the sentence in (114a) would be appropriate for them to utter, though (114b) would be infelicitous. However, if someone who is from Iliatenco left there and returned at a later point, (114b) would be the appropriate utterance. In the second case, the iterative combines with $\sqrt{\text{GANU}}$ ‘arrive’ to create a meaning roughly akin to ‘return’ (i.e., ‘arrive back’). As this and other examples show, then, the Me'phaa iterative suffix is roughly equivalent to English *back*, *re-*, and in some cases ‘again’. Nevertheless, I follow the literature and refer to this suffix as the “iterative,” acknowledging that it must also capture the notion of returning motion encoded in these examples.

The iterative suffix can attach to a variety of intransitive verbs, as shown above, as well as certain (di)transitives:

- (115) a. Ma-xu'dá.
 IRR-measure.1SG
 ‘I’ll measure it.’
- b. Ma-xu'dá-**a**.
 IRR-measure.1SG-ITER
 ‘I’ll measure it again.’
- c. Ma-ura'á (xugín) mésa.
 IPFV-measure.pl.1SG all table
 ‘I’ll measure (all) the tables.’
- d. Ma-ura'á-**a** (xugín) mésa.
 IPFV-measure.pl.1SG-ITER all table

‘I’ll measure (all) the tables again.’

Notably, the transitive and intransitive verbs of motion where agreement is marked via suppletion are all among the set of verbs that permit iterative suffixation. For (di)transitives, this includes verbs such as ‘carry’, ‘measure’, ‘lower’, and ‘put’; for intransitives, this includes verbs such as ‘arrive’, ‘go’ and ‘come’.

Equally instructive, though, are cases where iterative vowel lengthening fails to apply. The examples below illustrate three verbal constructions where iterative suffixation is impossible:

- (116) a. *Na-ndxá’wa-a.
IPFV-shout.1SG-ITER
(Intended: ‘I’m shouting again.’ OR ‘I shouted back.’)
- b. *Ni-ta-xkhax-uú-un.
PFV-2SG-woke-1SG-ITER
(Intended: ‘You woke me again.’ OR ‘You woke me back up.’)
- c. *Ni-th-ú-un.
PFV-cut-1SG-ITER
(Intended: ‘I got cut again.’)

(??) is a failed attempt at adding the iterative to an unergative, and (116b-116c) show failed attempts at iterative suffixation in canonical transitive and inchoative constructions, respectively. Taken together, these data suggest that the iterative suffix is not possible in two specific contexts: either when there is no object (i.e., with unergatives), or when there is an argument that is sister to the verb root (canonical transitives and inchoatives).

These begin to provide a clearer picture of why suppletive verbs participate in this construction, and they also provide a foundation for appealing to structurally-distinct subtypes of unaccusatives. I elaborate on the structural implications further in the following section, but for now it is important to note that the notion of “internal argument” plays a crucial role in predicting the distribution of the iterative suffix. On the one hand, the iterative suffix is only possible when an internal argument is present, thus discounting unergatives; on the

other hand, it can only attach when *certain* internal arguments are present. The availability of iterative suffixation thus hinges on the locus of the internal argument and its ability to trigger agreement, such that the presence of a direct object marked suffixally via agreement blocks this affix.

While *ne*-cliticization supports the distinction between unergatives and unaccusatives, iterative vowel lengthening provides two additional, but related, pieces of information: (a) it helps discern among subtypes of unaccusative structures in Me'phaa, and (b) it helps refine what having an “internal argument” entails. Since the basic generalization is that the iterative suffix is illicit when an agreement-triggering internal argument is sister to the verb root, the implication for suppletive verbs of motion is that, while they do have an internal argument, this argument resides elsewhere in the syntax.

4.4 The syntax of the other unaccusative

4.4.1 Structure and inherently-directed motion

The immediately preceding discussion has aimed at motivating for Me'phaa a distinction between change of state inchoatives and stative verbs, on the one hand, and intransitive verbs of motion—all of which fall under the umbrella of “unaccusative.” Me'phaa intransitives showcase the distinction morphophonologically via agreement, and morphosyntactic evidence from unaccusativity diagnostics provides further support for the distinction. I now turn to the syntax of suppletive verbs of motion, drawing from recent developments in the syntax of unaccusatives to explain the differential patterning in Me'phaa.

Before proposing an analysis, it is first critical to refine what is meant by “motion” in the context of Me'phaa verbal suppletion. This is because the set of verbs that supplete in the language do not simply involve motion of any type. For example, ‘jump’ does not supplete, as seen in Chapter 2.

- (117) a. Ni-kix-úún.
 PFV-jump-1SG
 ‘I jumped.’
- b. Ni-kix-íin.
 PFV-jump-2SG
 ‘You jumped.’

Verbs like ‘jump’ and others where the type of motion encoded is manner of motion all mark agreement affixally. On the other hand, the set of verbs that supplete all involve motion along a path as a type of result. Verbal suppletion thus correlates with a specific semantic feature. This helps explain why in Me'phaa verbs that encode manner of motion behave differently than path-oriented type motion verbs with respect to adverbial modification in the perfective aspect.

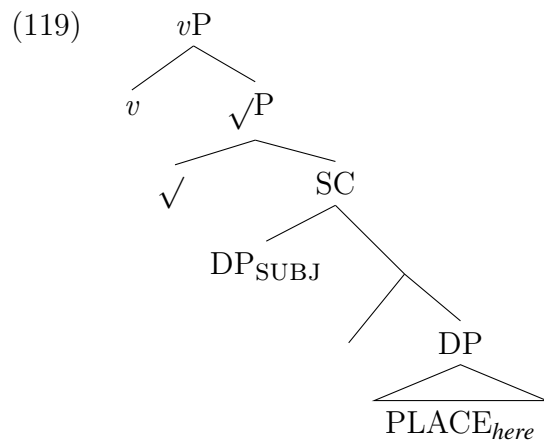
- (118) a. Ni-gayú' mbá óra.
 PFV-run.1SG INDEF.INAN hour
 ‘I ran for an hour.’
- b. Ni-kix-úún mbá óra.
 PFV-jump-1SG INDEF.INAN hour
 ‘I jumped for an hour.’
- c. *Ni-ganú mbá óra.
 PFV-arrive.1SG INDEF.INAN hour
 (Intended: ‘I arrived for an hour.’)
- d. *Nĭ-rígu lápi in-u mésa mbá óra.
 PFV-put.1SG>3SG pen face-3SG table INDEF.INAN hour
 (Intended: ‘I put the pen on the table for an hour.’)

As these data show, in the perfective, manner of motion verbs (e.g., ‘run’ (118a) and ‘jump’ (118b)) are compatible with a durative adverbial like *mbá óra* ‘for an hour’. In contrast, verbal constructions whose events involve direction along a path (e.g., ‘arrive’ (118c) and ‘put’ (118d)) are not. This type of classificational distinction among motion events has a long history in linguistic literature (Talmy 1975, 1985, 1991, 2000, Levin & Rappaport Hovav 1992, Rappaport Hovav & Levin 2001). Me'phaa again showcases the distinction

visibly through verbal patterns of agreement. Verbal suppletion in particular correlates with inherently directed motion on a path as well as emphasis on a result state.

In line with the decompositional approach to syntax, and given the previous discussion, rather than treating motion along a path as part of the contribution of the lexical properties of the root, I take it that such meaning is encoded syntactically. That is, verbs of inherently directed motion contain additional structure corresponding to a result state that includes functional material encoding path and location.

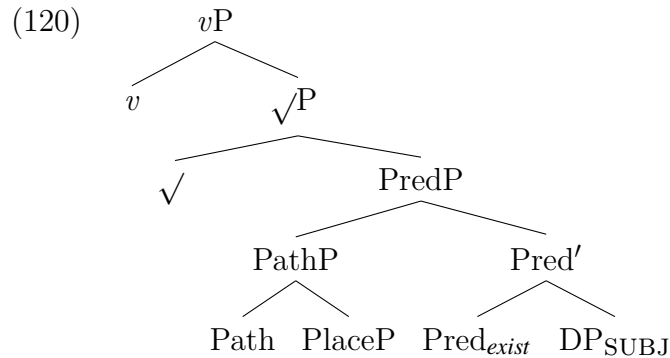
Along similar lines, Irwin (2012) proposes that unaccusative verbs of motion differ from say, change-of-state inchoatives, because the former have a small clause (SC) complement, as seen in the tree below, instead of a DP complement.



Irwin calls this type of verbal construction schematized a “complex complement unaccusative.” In such a construction, the argument DP is more deeply embedded, starting out as a small clause subject. Inside the small clause complement, the argument DP enters into a predicational relationship with a silent locative element, namely, the DP “PLACE.” Irwin treats this as an existential predication. One outcome of this is that the structural differences among “unaccusatives” lead to interpretational differences. Since subjects in small clause complement unaccusatives are not sister to the verb root, the verb cannot induce a change of state and, therefore, they cannot be interpreted as undergoing a change of state. Instead, within the small clause, the subject is interpreted as existing at a particular location.

Irwin (2016) further elaborates and refines the internal structure of the small clause

complement in (120) and its relationship to existential sentences. This helps clarify the relationship between structure and the obligatoriness of directed motion on a path, which is relevant for Me'phaa verbal suppletion. The revised structure is given below.



Relabeling the small clause PredP, Irwin builds on McCloskey’s (2014) analysis of Irish non-verbal existentials, which involves the predicate INSTANTIATE (McNally 1992, 1998, 2009). For McCloskey and Irwin, INSTANTIATE serves to establish context-dependence (Francez 2007, 2009), in the sense that there is “some individual x located at a contextually-defined (and perhaps metaphorical) spatiotemporal location a ” (McCloskey 2014: 374). In Irwin’s adaptation of McCloskey’s proposal, Pred_{exist} “adds an event variable” (Irwin 2016: 70). For verbs of directed motion, the event is one of movement on a path to a particular place, and this is encoded through PathP situated in Spec,PredP.⁴

Importantly, Irwin’s analysis of existential unaccusatives as involving a complex complement structure helps work toward an explanatory framework for Me'phaa verbal suppletion. The added structure implicated in this type of unaccusative has both interpretational and configurational consequences: it encodes directed motion semantics and it affects the position of the argument with respect to the verb. The semantic component helps identify as a class the particular verbs that participate in suppletion. The syntactic component, on the other hand, sheds light on the impetus for suppletion.

⁴Similar proposals exist, for example, in the cartographic literature. These do not invoke existential predication, but they still tie the semantics of direction and movement on a path to a rich array of extended projections associated with PP, including PathP and PlaceP (see, e.g., Koopman 2000, Svenonius 2008), which has roots in Jackendoff (1973, 1983, 1990).

The additional structure thus shows that an argument’s being inside a small clause structure has an effect on the agreement calculus. Crucially, though, it is not simply added structure sister to the verb root that correlates with suppletion; rather, it is added structure of a particular type. Recall above that low applicatives also result in an internal argument’s being located within added structure in the verb root’s complement position. However, this geometry does not yield suppletion. Consequently, there appear to be two routes to arrive at suppletion, given the proposed structure above. The added structure that PredP brings presumably either disrupts how Agree(ment) would unfold, or it introduces a head with unvalued ϕ -features.

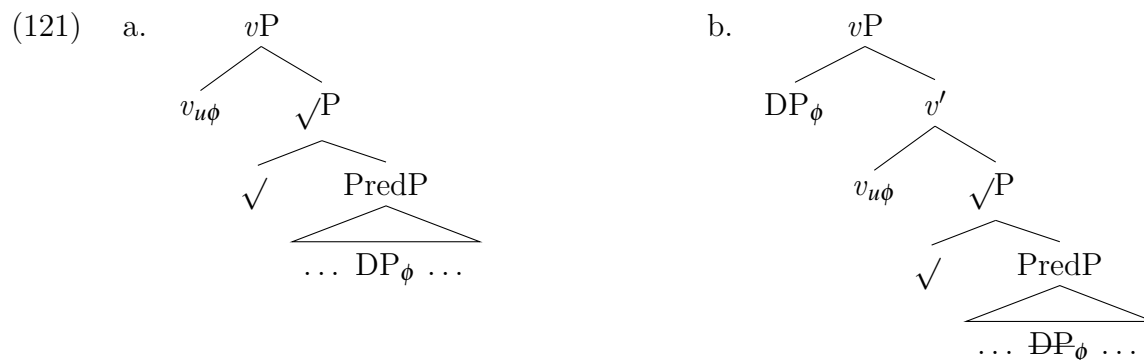
4.4.2 Agree(ment) in existential unaccusatives

In the first option—that PredP somehow disrupts Agree(ment)—the impetus for Me'phaa verbal suppletion with verbs of directed motion would seem to require two additional assumptions. The first would be a language-specific need to express verbal agreement morphophonologically at some level. This is because, although Agree(ment) is not in principle required for a well-formed derivation, this approach to suppletion would seemingly require a stipulation that, at least in Me'phaa, verbs must bear agreement. Moreover, this view would also seem to entail that Me'phaa verbal Agree(ment) does not just expone based on a relationship with a specific head, it also needs the argument to be in a specific structural location. Within these assumptions, we could posit that the presence of syntactic structure that effectively inhibits the resolution of these needs. In other words, since the argument of a complex complement unaccusative is not sister to the verb root, and therefore not in the “right place” for standard-fare little-*v* agreement to transpire, the language must resort to alternative means of encoding ϕ -features.

This account leads to the question of why agreement cannot transpire in another way, i.e., in a way that leads to a non-suppletive pattern of agreement such as those described above. The core hypothesis that I’ve advanced throughout this chapter sheds some initial

light: if Me'phaa agreement exponents are highly sensitive to their context of insertion, the form of agreement in complex complement unaccusatives cannot overlap with change-of-state inchoatives (/statives, /transitive objects) because the verb root's complement position is already occupied by the small clause. The added structure is thus inhibitory with respect to standard agreement calculus and/or eventual Vocabulary Insertion. This could be because, as search is initiated and *v* probes its environment for an appropriate goal, it either cannot establish an Agree relation with the DP embedded in the SC, or it can, but the most relevant Vocabulary Item ends up being overly-specified—indicating structural location of sisterhood to *v*—and, therefore, does not apply.

The account of suppletion that appeals to additional structure interrupting standard verbal agreement could further play out in two ways, which are schematized below.

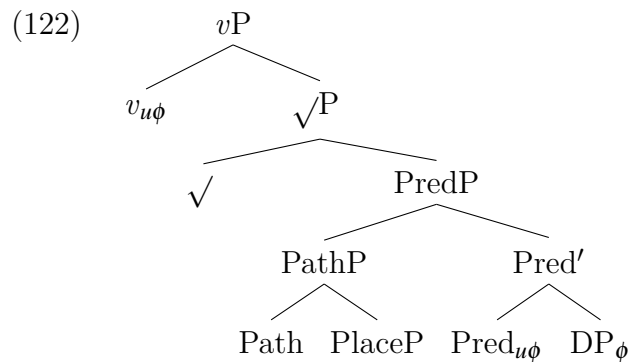


Each derivation carries slightly different implications for how suppletion happens, though the key motivating factors are essentially the same. In (121a), *v* interacts with and successfully enters into an Agree relation with the DP subject inside SC. According to this scenario, suppletion arises on account of no other applicable Vocabulary Item because context of insertion is written into each agreement affix's lexical entry.⁵ The story for (121b) is similar; however, a further assumption is that the SC-internal subject moves, perhaps because *v* an Agree relation could not otherwise be established. Agree is viable under a Spec-Head configuration, but, as noted earlier, the locus of the subject DP ends up being problematic

⁵A similar approach to this could assume feature percolation (Rezac 2008).

for standard Vocabulary Insertion, and verbal suppletion ensues.

An alternative to this exists, however, which would (a) rely on fewer assumptions and (b) be more streamlined with the framework for Agree(ment) already established above. Instead of trying to coerce agreement with *v*, it is possible simply to attribute to the added structure both the reason that agreement with a higher head does not occur, as well as the source of how that agreement is fulfilled.

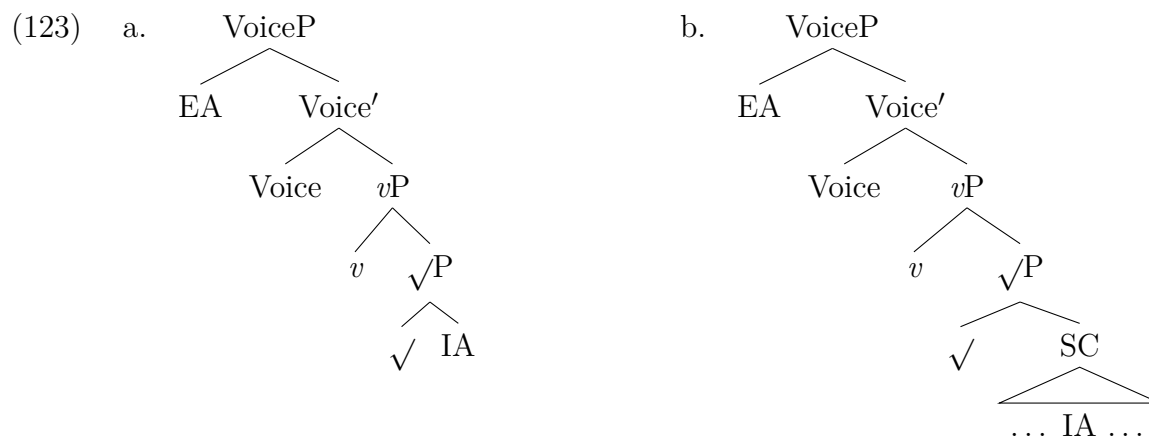


In the derivation schematized above, the argument merges with and agrees with Pred_{exist} , which bears unvalued ϕ -features. Instead of exponing suffixally, though, agreement in this particular configuration is rendered through suppletion. Little *v* could, presumably, initiate a search within its domain, as well, though valuation would not need to take place (just as when an object in a canonical transitive is inanimate). The presence of PredP thus provides the syntactic context for an alternative means of encoding agreement to occur. If verbal suppletion in Me'phaa entails Agree(ment) with a local functional head, then suppletion can be folded into the language's overall agreement paradigm. This is because, from a morphophonological perspective, suppletive paradigms parallel that of non-suppletive ones, and, syntactically, suppletion is driven by the same operations that generate agreement elsewhere.

4.5 Transitive verbal structures redux

Given my hypothesis that Me'phaa verbal agreement provides a window into the syntax of argument structure—all things being equal—shared ways of agreeing should map onto shared geometries. Again, this is the basic logic that underpins the idea that (di)transitive subjects are encoded like unergative subjects because they are base-generated in Spec,VoiceP, or that transitive objects look like inchoative or stative subjects because they are sister to the verb root. Notably, though, in Me'phaa not all transitive objects are encoded the same way. Some objects trigger suppletion based on number, which, in the framework developed here, seems to suggest an underlying relatedness to suppletive unaccusatives.

The core architecture underlying Me'phaa transitives that I outlined above reflects contemporary decompositional approaches with respect to the the layers involved, but it also retains the traditional assumption that the internal argument in a transitive event is the direct complement of the verb. Notably, though, the notion “internal argument” is problematic, in that merely serves as a cover term for things that are *not* external arguments, but the phrase itself is imprecise with respect to the exact position of an argument within the verbal domain. If, as with unaccusative subjects, internal arguments of transitive events are likewise a heterogeneous class, the transitive structure in (123b) should be possible based on an analogy with unaccusative verbs of directed motion along a path:



The claim that transitive verbal structures where object suppletion is observed are dis-

tinct from those verbal structures where it is not receives initial support from differences in agreement behavior, generally. Beyond agreement facts, though, there are several overlapping properties between transitive and intransitive suppletive verbs that make the proposed structure in (123b) compelling.

First, there is an important semantic affinity between the set of transitive verbs that supplete based on the object and the set of intransitive verbs that supplete based on their subject: all of them have inherently-directed motion with path traversal as part of their core meaning. Accordingly, verbs meaning ‘put up’ (124) and ‘carry’ (125) are among those that supplete in Me'phaa.

- (124) a. Ni-**yaxí** mésa.
 PFV-put.up.1SG table
 ‘I put up the table.’
- b. Ni-**guáxi** mésa.
 PFV-PL.put.up.1SG table
 ‘I put up the tables.’
- (125) a. Ma-**gáya**.
 IRR-carry.1SG
 ‘I’ll carry it.’
- b. Ma-**gongo'o**.
 IRR-PL.carry.1SG
 ‘I’ll carry them.’

Additional verbs that supplete include ‘measure’ and ‘take out’.⁶ Again, in a framework such as the constructivist/decompositional one where syntax and semantics are intimately related, the semantic properties of these verbs can be attributed to differences in architecture.

⁶Suárez 1983: 164 provides a list for the Malinaltepec variety of Me'phaa, though there are a few differences between his list and what I have found working with speakers from Iliatenco. For example, he provides ‘cut’ as among the list of suppletive verbs, with the forms $\sqrt{xpi'tha}$ and \sqrt{thon} . Here, though, I have here claimed that ‘cut’ does not supplete. According to the consultants I worked with, these are not forms of the same verb, but, rather, two distinct cutting verbs with full agreement paradigms of their own. I do not know whether Suárez’s inclusion of these forms in his discussion of suppletion reflects an error or variation. Importantly, my claims regarding the structure of suppletive verbs in this chapter are exclusive to those verbs with inherently-directed motion. This does not mitigate the existence of suppletion driven by other factors.

Moreover, the argument above regarding the iterative suffix capitalized on such structural differences and the location of internal arguments with respect to the verb. Specifically, the iterative suffix is incompatible with a verbal construction where a DP argument is sister to the verb root.

- (126) a. Ma-gáya mésa.
 IRR-carry.1SG table
 ‘I’m going to carry the table.’
- b. Ma-gáya-**a** mésa.
 IRR-carry.1SG-ITER table
 ‘I’m going to bring the table back.’

Since iterative suffixation is compatible with transitive constructions that where object suppletion occurs, the implication is that such objects are not in the same position as those that appear in canonical transitives. Complex complement unaccusatives likewise take the iterative suffix, as shown above, suggesting that these two verbal constructions indeed share underlying structure that directly relates the way verbal person marking gets expressed.

Additionally, the test of (failed) adverbial modification above indicating emphasis on a result state also obtains for transitive constructions where object suppletion obtains:

- (127) a. *Nì-rígu lápi in-u mésa mbá óra.
 PFV-put.1SG>3SG pen face-3SG table INDEF.INAN hour
 (Intended: ‘I put the pen on the table for an hour.’)
- b. Nì-^l-thon xtíin mbá óra.
 PFV-3SG-cut rope INDEF.INAN hour
 ‘S/he cut the rope for an hour.’

(127a), repeated from (118d) above, shows that a transitive verb that suppletes based on the object is incompatible with a phrase like *mbá óra* ‘for an hour’ in the imperfective. This contrasts with the morphological causative in (127b), which is perfectly compatible. Again, such distributional facts are in line with the proposal for a second type of transitive above, which has a small clause complement corresponding to a result state at its core.

4.6 Conclusion

Unaccusativity diagnostics reveal how distributional differences between constructions with a single argument can be explained by appealing to underlying syntactic differences. Processes such as argument structure alternations, *ne*-cliticization, and iterative suffixation are not consistent across intransitives because they are responding to different geometries. Moreover, agreement in unaccusatives reflects these differences, which supports the claim that in Me'phaa patterns of agreement map onto specific architectures.

The table below summarizes Me'phaa agreement markers.⁷ Enclitics for local plurals are also included for comparison.

| | Agreement | | | | Clitic |
|--------|--------------------|-----------------------|-------------------|-------------------|--------|
| | Voice ⁰ | <i>v</i> ⁰ | Appl ⁰ | Pred ⁰ | |
| 1SG | (tone) | -úún | -ú(n)' | (tone) | - |
| 2SG | t(a)-/r(a)- | -áan | -aa(n)' | suppletion | - |
| 3SG.AN | '/(tone) | -VV | -VV(n) | (tone) | - |
| 1PL | u- | - | - | suppletion | =ló' |
| 1PL | u- | - | - | suppletion | =xo' |
| 2PL | u- | - | - | suppletion | =lá' |
| 3PL.AN | u- | -VV | -VV(n) | suppletion | - |

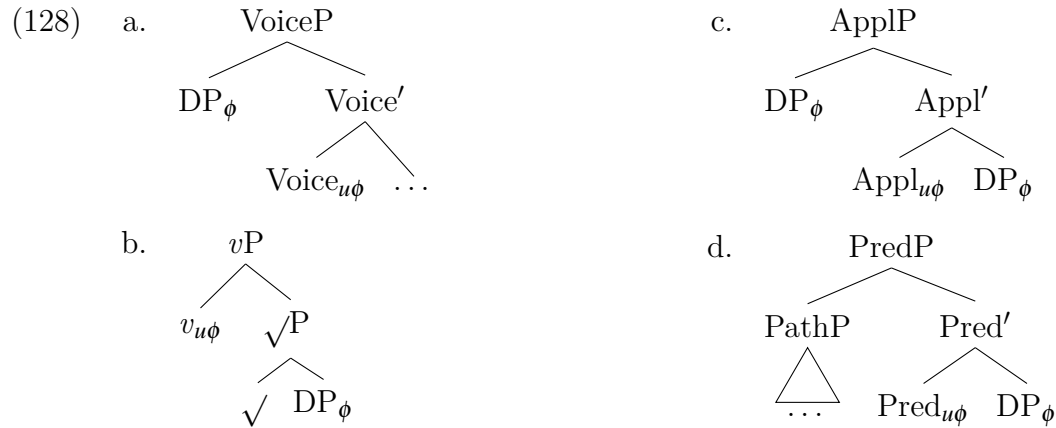
Table 4.1: Me'phaa agreement exponents and clitics.

Clitics differ from true agreement because, in addition to distributional differences previously discussed, they do not vary based on syntactic position. In contrast, true agreement markers not only enter into an Agree(ment) relation with a functional head, they also expone by virtue of the particular head that probes for the goal intrinsically bearing the ϕ -features to be expressed. Regarding subtypes of unaccusatives and transitives that supplete based on features of the internal argument, we find that these indeed comprise part of the overall agreement paradigm. The difference is that the verbal structures wherein suppletion occurs

⁷For purposes of clarity, I have chosen to exclude many of the allomorphs for these affixes. This table thus does not capture the rich phonologically-driven idiosyncrasies in the broader Me'phaa person marking paradigm. For more extensive lists of agreement morphemes, see Carrasco Zúñiga 2006 and Navarro Solano 2012 for Malinaltepec Me'phaa, and Wichmann 2009 for Azoyú Me'phaa.

embed the internal argument in a small clause sister to the verb root, which provides a configuration where the argument can agree with Pred^0 .

Based on the above discussion, then, the four natural classes of agreement posited in Chapter 3 can now be accounted for in their entirety. Each class corresponds to one of the following four geometries, based on the (revised) generalizations in (129).



(129) Generalizations about Me'phaa verbal agreement (final version)

- a. Transitive and Ditransitive subject encoding look like unergative subject encoding because all three are in Spec, VoiceP and agree with Voice^0 .
- b. Canonical transitive object encoding looks like change-of-state and stative unaccusative subject encoding because all are sister to the verb root and agree with v^0 .
- c. Ditransitive IO/DO encoding looks like the encoding of experiencer- and psych-verb subjects because the argument is in Spec, ApplP and agrees with Appl^0 .
- d. Transitive and intransitive verbs of inherently-directed motion with suppletion look alike because the internal argument is more deeply embedded and agrees with Pred_{exist} . (= Class 4 suppletion)

Chapter 5

From verb to clause: Deriving verb-initiality

5.1 Introduction

With the verbal constructions outlined in Chapters 3 and 4 serving as a foundation, we are now prepared to work further up the clausal spine and consider sentence-level derivation, particularly orienting to how Me'phaa achieves verb-initiality. This is important to consider because, given the composition of the verbal domain and how it informs rich agreement in Me'phaa, it remains an open question as to whether this comports with the current understanding of how V1 is derived. In this chapter I propose that Me'phaa uniformly recruits VP-remnant fronting (either VoiceP or *v*P) in clause-building. This strategy explains Me'phaa's clausal properties, including verbal word order and sentence-level word order alternations, without having to appeal to additional theoretical machinery beyond what is standardly assumed in minimalist literature. Keeping up the theme that verb morphology reflects syntax, and, therefore, must be taken into consideration for determining structural possibilities, I propose that the landing site of the VP is not to TP, as is traditionally maintained in VP-raising accounts. Instead, the VP fronts to a functional projection situated

lower than T (cp. Collins 2016), which enables a straightforward account of how prefixes hosted by heads high in the inflectional domain combine with the rest of the verb stem. This chapter thus shows that the previous analysis of the verbal domain is indeed compatible with contemporary derivational approaches to verb-initiality.

5.2 Surface and deep word orders in Me'phaa

5.2.1 “Basic” word order

Me'phaa exhibits variable word order, making “basic” word order difficult to determine, as is common across languages (Brody, 1984; England, 1991). Examples for each of the six logically possible word orders for standard declarative sentences—half of which are grammatical in Me'phaa—are provided in (130).

- (130) a. Ne-'ne mój-óon Eduardo yá'doon.
 PFV-3SG-make well-3SG Eduardo soup
 ‘Eduardo cooked the soup.’
- b. Ne-'ne mój-óon yá'doon Eduardo.
 PFV-3SG-make well-3SG soup Eduardo
 ‘Eduardo cooked the soup.’
- c. Eduardo ne-'ne mój-óon yá'doon.
 Eduardo PFV-3SG-make well-3SG soup
 ‘Eduardo cooked the soup.’/‘As for Eduardo, he cooked the soup.’
- d. * Eduardo yá'doon ne-'ne mój-óon.
 PFV-3SG-make well-3SG
 (Intended: ‘Eduardo cooked the soup.’/‘As for soup, Eduardo cooked it.’)
- e. * Yá'doon Eduardo ne-'ne mój-óon.
 soup Eduardo PFV-3SG-make well-3SG
 (Intended: ‘Eduardo cooked the soup.’/‘As for Eduardo, he cooked the soup.’)
- f. * Yá'doon ne-'ne mój-óon Eduardo.
 soup PFV-3SG-make well-3SG Eduardo
 (Intended: ‘Eduardo cooked the soup.’/‘As for soup, Eduardo cooked it.’)

Researchers on the language generally agree that Me'phaa is verb-initial (V1) with either canonical VOS or VSO (Suárez, 1983; Carrasco Zúñiga, 2006; Navarro Solano, 2012; Marlett, 2011b). Typologically, this type of alternation is quite common in canonical V1 languages (Clemens & Polinsky, 2017). The exact reasons for the alternation in Me'phaa is unclear, though there is evidence for interactions between animacy, definiteness, and specificity (Suárez, 1983; Marlett, 2011b). SVO is also quite frequent, though S-initial sentences tend to have a marked interpretation (Navarro Solano, 2012). In the absence of additional morphosyntactic marking, any order where the object surfaces preverbally results in ungrammaticality.

5.2.2 Order in the core

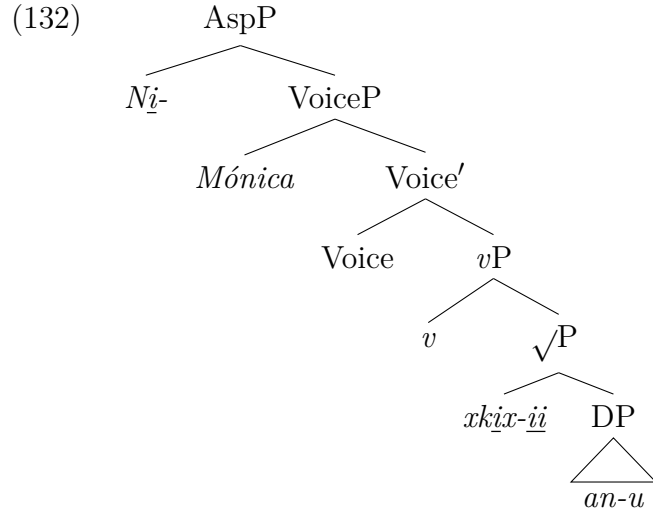
Me'phaa transitive clauses are formed from an underlying SVO core (Kayne, 1994). This is reflected in the verbal word order: transitive subject agreement is preverbal and transitive object agreement is postverbal. As I argued in Chapter 3, the relatedness of verbal word order to clausal architecture is by no means incidental, since Me'phaa verb morphology is conditioned by the structure such that it faithfully reflects the sequence of morphemes as they are ordered syntactically. Beyond agreement facts, language-internal evidence to support underlying SVO comes from asymmetric binding in transitive clauses and consistent left-headedness across a variety of phrase types.

Even though Me'pha is VOS-VSO alternating, and S-initial utterances are frequent, S asymmetrically binds O consistently across all these permutations.

- (131) a. N_i-xk_ix-ij an-u Mónica.
 PFV-wake-3SG father-3SG Monica
 'Monica_i woke her_i father.'
- b. N_i-xk_ix-ij Mónica an-u.
 PFV-wake-3SG Monica father-3SG
 'Monica_i woke her_i father.'

- c. *Mónica ni-xkix-ii an-u.*
 Monica PFV-wake-3SG father-3SG
 ‘Monica_i woke her_i father.’

The fact that S binds O regardless of surface position is readily explainable if S is base-generated higher in the architecture, as schematized in (132).



This is because the subject DP *Mónica* asymmetrically c-commands the object DP *anu* at this point in the derivation.

Like many other verb-initial languages, Me'phaa also displays a strong proclivity for head-initial structures. This tendency is perhaps unsurprising in light of robust evidence for VO constituency across V1 languages, which suggests head-initiality in the verbal domain that extends to additional categories. V1 languages also tend to be overwhelmingly prepositional and, in the nominal domain, relative clauses follow the head noun almost without exception (Greenberg, 1963; Dryer, 1992; Clemens & Polinsky, 2017).

Me'phaa likewise displays left-headedness in V-complement (133a), Prep-N (133b), and N-Rel (133c) configurations (Navarro Solano, 2012, 14).

- (133) a. *Na-jonm-ón'* [_{CP} *rí* *María ni-!-thán* *r-ú'khə íye*].
 IPFV.AFF-think-1SG REL.INAN Maria PFV.AFF-3SG-write INAN-this paper
 ‘I think that Maria wrote this book.’

- b. Mbrákha xndú maña [*pp* náa [ñáún íxu]].
 be.hanging egg red PREP hand tree
 ‘There is an apple hanging on the branch.’
- c. Xugúin ñáma ni-xúx-e [*RC* íxe [rí
 all.AN PL.boys PFV.AFF-lift-3PL.ERG wood REL.INAN
 na-pétso=ló' ínu]].
 IPFV.AFF-PL.eat=1PL.INCL face
 ‘All the boys lifted the table.’ (Lit., ‘All the boys lifted the wood that we eat on.’)

Head-initial structures are thus ubiquitous in Me'phaa.¹

More pointed evidence that the verb and the object form a constituent comes from word order in reflexives. Macaulay (2005) uses data from reflexives to argue for VP constituency in Chalcatango Mixtec. Although Chalcatango Mixtec is rigidly VSO, reflexives produce VOS order, suggesting that the verb and reflexive object form a constituent. Applying this

¹A potential exception to this otherwise uniformity comes from the distribution of demonstratives. As seen below, demonstratives can (and often do) appear postnominally:

- (1) a. Ni-guxnun María [iyé r-íge'].
 PFV.AFF-read Maria book INAN-this
 ‘Maria read this book.’
- b. Ni-xnúun [xabo ts-íge'] mbá itsí.
 PFV.AFF-hit person AN-this INDEF.INAN rock
 ‘This person hit a rock.’

The demonstrative *ríge'* ‘this (INAN)’ follows the noun *iyé* ‘book’ in (2a), and *tsíge'* ‘this (AN)’ follows *xabo* ‘person’ in (2b). Interestingly, though, the same demonstratives precede the noun they modify if the phrase containing the noun is focused.

- (2) a. Nanguá. Ni-guxnun María [r-íge' iyé].
 no PFV.AFF-write Maria INAN-this book
 ‘No. Maria read [this book]_F.’
- b. [Ts-íge' xabo] ni-xnúun mbá itsí.
 AN-this person PFV-hit INDEF.INAN rock
 ‘[This person]_F hit a rock.’
- c. Ikhaa [r-íge' iyé] María ni-guxnuun.
 FOC INAN-this book Maria PFV-3SG.read
 ‘It’s [this book]_F that Maria read.’

I note this here, but leave it as an open question, since focus constructions are not treated in this dissertation. The alternation between N-Dem and Dem-N order suggests movement within the nominal phrase, and thus demonstratives may or may not constitute a true counterexample to head-initiality in the language.

strategy to reflexives in Me'phaa is likewise insightful in this sense.

- (134) a. Ni'-sngá mina Julieta.
 PFV-3SG-teach self.3SG Julieta
 ‘Julieta taught herself.’
- b. *Ni'-sngá Julieta mina.
 PFV-3SG-teach Julieta self.3SG
 ‘Julieta taught herself.’

Since Me'phaa, unlike Chalcatango Mixtec, is VOS-VSO alternating, the order in (134a) is expected. On the other hand, the fact that VSO in (134b) is impossible is a potentially surprising result. I take it that the rigid VOS order with reflexives indicates that verbs and reflexive objects form a constituent to the exclusion of the subject, and thus evidences VP constituency in the language. The unavailability of VSO in this context is thus an outcome of specific properties of the object.

5.3 Strategies for deriving verb-initial orders

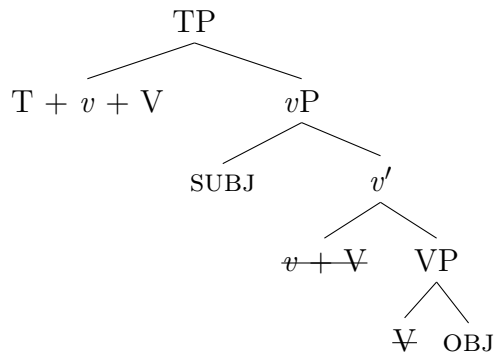
The question now arises as to how we can reconcile Me'phaa's word order facts with the SVO core proposed in (132) above. Within generative and minimalist literature, two derivational “paths” to V1 have received the most attention: V(erb)-raising and V(erb)P(hrased)-fronting.² Each has been proposed for a wide array of typologically diverse languages (see the discussion in Clemens & Polinsky (2017) for a comprehensive overview), including Otomanguean languages (see Macaulay (2005), for V-raising in Chalcatango Mixtec; Lee (2000, 2005, 2006), for VP-raising in San Lucas Quiaviní Zapotec). When applied to sentences with an SVO base, the two approaches share the notion that the verb or some unit containing the verb must raise to a position that is higher than the subject. Each pro-

²Among syntactic approaches to V1 that (a) fall within the generative tradition, and (b) invoke maximally binary structures, four principle “derivational paths to V1” (Potsdam, 2009, 740) have been identified in the literature: parameterization (right-branching specifiers), subject lowering, verb raising, and predicate fronting. I do not discuss the former two because they are not compatible with the antisymmetric framework I adopt.

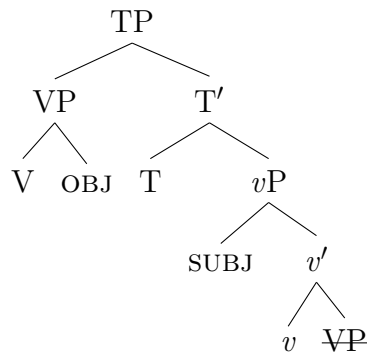
positional differs in (a), the size of the fronted constituent, (b), the mechanisms that drive such movement, and (c) how VOS-VSO alternations are captured.

Both the V-raising and VP-raising approaches are capable of deriving V1 from an SVO base. The core of each proposal is captured in the schematizations below, though actual implementations of these vary.

(135) a. V-raising (head movement)



b. VP-raising (phrasal movement)



The version of V-raising shown above is sometimes referred to as the Left Edge of Inflection Hypothesis (McCloskey, 1996; Carnie et al., 2000). In this account, the verb lands in the inflectional domain while the VP-internal subject remains *in situ*. An alternative of this variant known as the Raising-to-C hypothesis (Edmonds, 1980; Carnie et al., 2000) claims that the verb raises through the inflectional domain to the C layer, above the position of a subject sitting in Spec,TP/IP. For the VP-raising account in (135b), some larger unit containing the verb, here VP, moves to a position in the inflectional domain. The most commonly-argued-for landing site is Spec,TP, though some accounts argue for raising to a

position above TP (Aldridge, 2002; Pearson, 2001), and others propose a landing site below T (Collins, 2017). Moreover, while there is “near consensus that the VP moves to satisfy the EPP” (Clemens & Polinsky, 2017), proposals differ as to what feature drives movement (e.g., [Pred] ,[V]). Though less widely adopted on account of its recent development, Richards (2016) provides an alternative that derives the EPP from principles of phonological well-formedness.

Since Me'phaa is a VOS-VSO alternating language, it is also important to take into account how each derivational path handles word order permutations. Generally speaking, both strategies resort to keying in on behaviors and/or properties of the arguments to explain word order differences. For example, if the derivation in (135a) above representing V-raising produces VSO, one possible way to generate VOS is to posit object scrambling (e.g., Otsuka (2002); Rackowski (2002); Rackowski & Richards (2005)). If the subject remains in its base-generated VP-internal position and the object raises to Spec,TP (Otsuka, 2002, 2005), the additional step of raising-to-C produces the correct word order.

VP-raising analyses likewise appeal to behaviors or properties of arguments in capturing VOS-VSO alternations. Again, the simple derivation schematized above produces VOS. Massam (2001, 2005) and Coon (2010b) propose, for Niuean and Ch'ol, respectively, that the verb and object move together like this only if the object is an NP rather than a full DP. When objects are full DPs, they raise to a position lower than the subject, which is followed by VP-remnant raising that produces VSO. This approach works well for languages where alternations are predictable based on some property of the object, though many V1 languages do not work in this way.

In what follows, I provide an account of Me'phaa V1 in the tradition of VP-raising, specifically VP-remnant raising. After discussing the steps in the derivation, I turn to a series of arguments that weigh in favor of this type of analysis, either by providing positive evidence for VP-raising or negative evidence against V-raising. Taken as a whole, these arguments suggest that VP-raising provides a more satisfactory account for V1 and an array

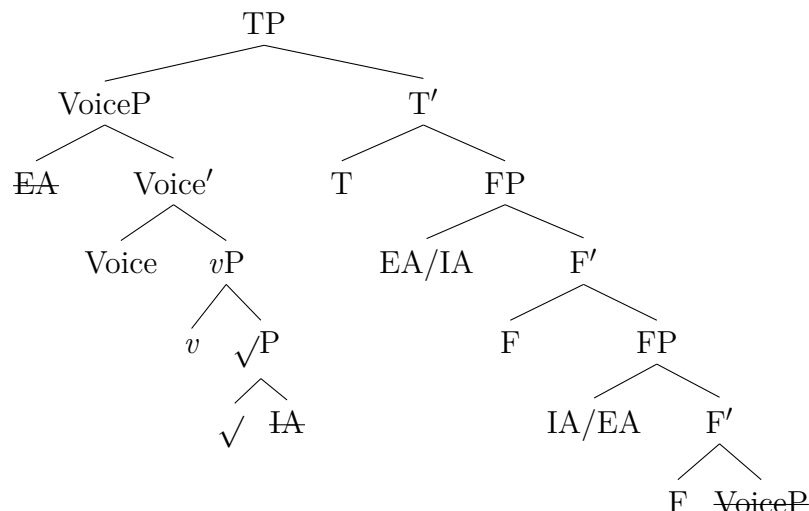
of other grammatical and distributional properties.

5.4 Deriving V1 in Me'phaa: A VP-movement account

Applying VP-fronting to a canonical Me'phaa transitive construction is not necessarily straightforward for two reasons. On the one hand, proponents of VP-raising disagree as to the size of the XP targeted for movement, so there are multiple possibilities regarding the size of the fronted unit containing the verb. Additionally, analyses within the V1 literature typically are not situated within decompositional approaches to the verbal domain. For the purposes of discussing Me'phaa, when I use the term “VP,” as in “VP”-raising, I intend the maximal unit containing the verb and the morphological components from within the verbal domain that form the verb stem, that is, either VoiceP or *v*P, depending on the particular verbal construction in question. I defend this claim below when discussing how adverbs provide evidence for the size of the verbal projection that undergoes movement.

As a first pass, I assume that, barring exceptional cases (e.g., reflexives), all arguments evacuate the VP, which is followed by raising of the entire VP remnant. For now I assume that the transitive subject can scramble higher than the object or vice versa, given that VOS-VSO alternations in Me'phaa are not fully understood and are not predictable based on features of the object that might cause it to remain VP-internally, as in Niuean (Massam 2001, 2005) and Ch'ol (Coon 2010). This is schematized as follows, where the location of scrambled arguments is labeled FP to remain neutral regarding their category.

(136)



In combination with the analysis of the Me'phaa verbal domain from Chapters 3 and 4, this initial proposal successfully accounts for many aspects of the word order facts, both in terms of the larger clause and in terms of verbal word order. Verb-initiality in the derivation above is driven by two factors: evacuation of VP-internal arguments and the movement of the remnant VP to a layer high in the inflectional domain, TP, possibly to satisfy an EPP feature that requires the moved constituent be a predicate.

However, one drawback to applying VP-fronting in this way is that the manner in which Me'phaa verb morphology consistently reflects syntax becomes lost at the clausal level, particularly when considering how VoiceP-internal verb morphology connects with affixes hosted by heads in the inflectional domain. This problem can be seen in the schematic above because T is ordered to the right of the verb stem. Assuming for now that T hosts TAM morphology then—at least in terms of surface order—it needs to appear to the left of the verb stem. The derivation as it stands in (136) would thus require additional operations to explain how T attaches the left of the VP in its specifier. It is, of course, possible to appeal to processes such as cliticization or post-syntactic algorithms to explain how T gets exponed on the verb stem as a prefix. However, these may not be necessary. Simpler explanations in the literature exist, which enable the tight relation between morphology and syntax to be kept intact, and possibly illuminate the motivation for VP movement.

In particular, Collins (2017) develops a variant of the VP-movement analysis for Samoan,

which could offer insights into resolving the landing site problem for Me'phaa. He argues that, instead of raising to Spec,TP, fronted VPs actually land in a functional layer whose head, neutrally labeled F, “requires that its specifier is filled by predicative XPs” (Collins, 2017). An initial advantage of his proposal, then, is that it offers a straightforward account for the surface location of T⁰ in VP-raising languages when T⁰ occurs at the left edge of the clause (unless preceded by a special subject, which is a point I return to below) while retaining the core features of standard VP-fronting analyses. Although his approach is novel among VP-raising analyses, the heart of the proposal is not unprecedented in V1 literature. For example, Clemens & Coon (2017) similarly consider the surface order of TAM markers in their account of Mayan V1. Although their proposal relies on V-raising, it shares with Collins (2017) a commitment to taking into account the position of higher functional heads when determining the ultimate landing site of the verbal constituent.

Collin’s analysis is particularly well-suited for Me'phaa because several verbal morphemes and constituents—not just T—must appear preverbally in the language when they appear. As noted previously, these include aspect, the negative particle, negation fused with aspect, irrealis mood, and the negative prefix under irrealis.

- (137) a. **Na-gundá** m-áa.
 IPFV-1SG.dream APPL-2SG
 ‘I’m dreaming of you.’
- b. **Nanguá na-mbiy-e'**.
 NEG IPFV-cry-3SG
 ‘S/he’s not crying.’
- c. **Tsí-y-oo**.
 IPFV.NEG-know-1SG
 ‘I don’t know.’
- d. **Ma-jañ-áa'**.
 IRR-die-2SG
 ‘You’ll die.’
- e. **Ma-xá-ne**.
 IRR-NEG-1SG.do

‘I won’t do it.’

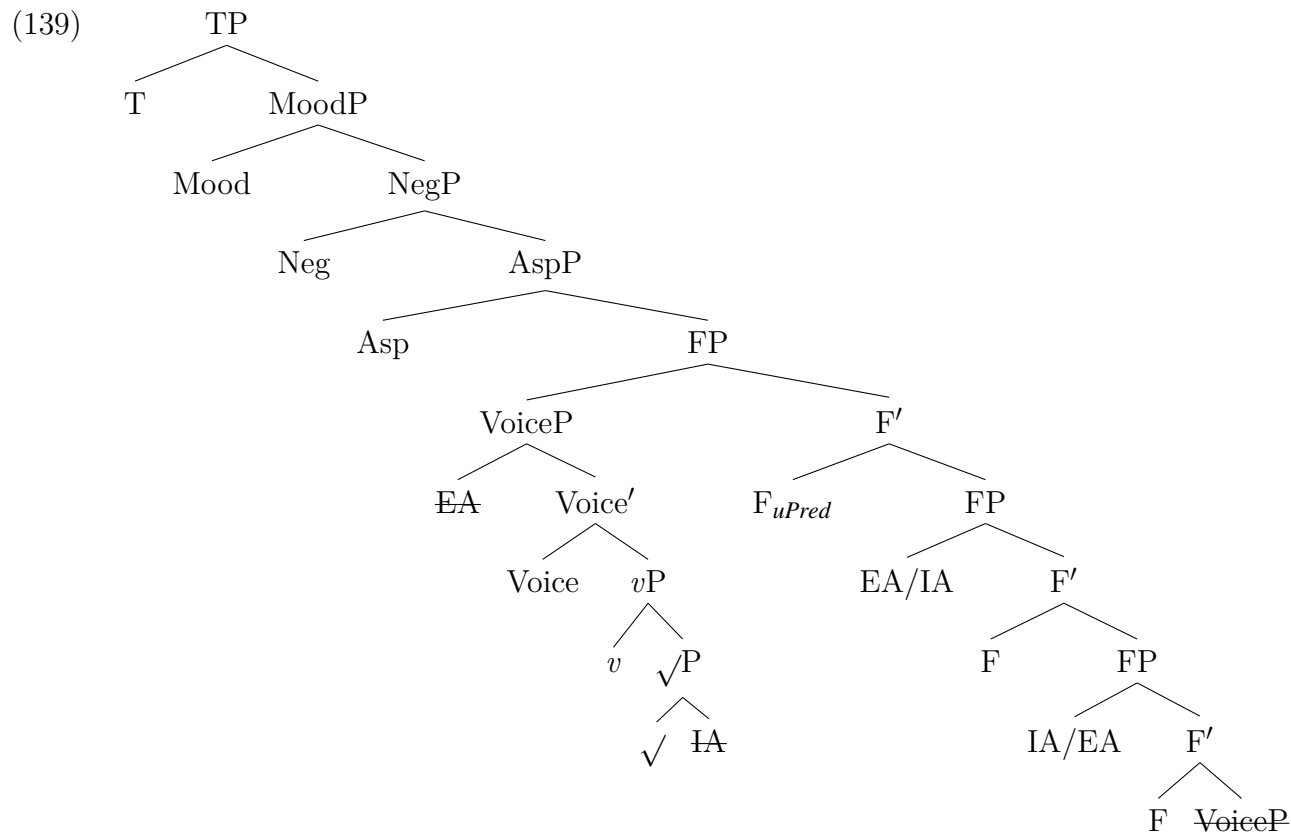
The amount of functional projections needed to host these morphemes illustrates how problematic situating VP in Spec,TP can be for connecting the pieces that compose the verb stem. This is because there are potentially multiple overtly expounded heads that, together with T, would need to attach to the left of the verb.

I propose the following hierarchy of projections high in the inflectional domain to account for the facts in (137).

(138) TP » MoodP » NegP » AspP

Distinguishing between MoodP and AspP helps account for the differential behavior of negation when a verb is marked with irrealis compared to verbs marked with perfective or imperfective aspects. In the latter cases, negation forms a portmanteau with the aspect rather surfacing as an independent prefix. T is always phonologically null, and its role will continue to be discussed in more detail throughout several sections below.

In deriving Me'phaa V1, then, it not just critical to preserve the analysis of the verbal domain argued for in Chapters 3 and 4, it is also necessary to be able to successfully connect the verb with inflectional material that surfaces preverbally. The tree diagram below shows the schematic for VP-raising in relation to various functional layers that can be present in the Me'phaa inflectional domain.



The order of operations is as follows. After the verbal domain is built, argument evacuation ensues, triggered by EPP features on one or more functional heads situated low in the inflectional domain. This is followed by fronting of the VP to the inflectional domain, much like in the standard accounts of VP-raising. Unlike standard accounts, though, VoiceP raises past the arguments and lands in the specifier position of a functional phrase lower than T (Collins, 2017), which, in Me'phaa, is no higher than AspP. Taken together, these operations produce a verb-initial order where the complex verb stem formed in the verbal domain is flanked by inflectional affixes to the left and argument DPs to the right.

Leaving TP in the structure, but not linking it directly to VP-raising would seem to suggest that other XPs could potentially raise to Spec,TP. This is true in principle, and it is a point that Collins addresses explicitly in his analysis. And, much like Samoan, this fact ends up being helpful in explaining one other point of word order variation with respect to Me'phaa: special cases of SVO. These are (a) clauses with pronominal subjects and (b) ditransitive clauses where all three arguments are overt.

- (140) a. **Ikhaa** *na-ngojuw-ii* *xtíla*.
 3SG IPFV-sell-3SG chicken
 ‘S/he is selling chickens.’
- b. **Dxá'gú** *ni-xn-úun* *mbá* *re'e* *ikhiin*.
 girl PFV-give-3PL INDEF.INAN flower 3PL
 ‘The girl gave a flower to them.’

Although some S-initial clauses involve genuine topicalization (Navarro Solano, 2012), these are two contexts that I have encountered where S-initial orderings appear to be both commonly preferred by speakers and absent any marked interpretation.³ Sentence-initial subjects are not obligatory in either of these constructions, though. In (140a) the pronoun can either be dropped or placed postverbally; in (140b) *dxá'gú* can appear postverbally (dropping it entirely renders the grammatical sentence ‘S/he gave a flower to them.’).

Applying the approach of Collins (2017) to VP-fronting to Me'phaa explains the availability of non-topic S-initial clauses (assuming that they truly are not topics). If T bears an EPP feature that can—but is not required to—be satisfied by a DP, then subject DPs become candidates for movement to this position. One potential drawback to this approach is that some of the initial motivation for the VP-raising accounts begins to fall by the wayside. In particular, one of the original upshots to explaining V1 languages by resorting to the EPP was that S-initial and V-initial languages could be united under a similar framework. Differences between the two types of languages could thus be accounted for by appealing to parametric variation of the EPP feature: S-initial languages (like English) have the EPP satisfied by an XP bearing a [D] feature, while V-initial languages satisfy the EPP with an XP bearing a [Pred] or [V] feature.

However, losing this may not be entirely problematic, as the EPP is notoriously mysterious, theory-specific, and generally non-explanatory. Perhaps, then, S-initial and V-initial

³Carrasco Zúñiga (2006, 108) notes that overt pronouns can “mark emphasis,” using S-initial sentences to illustrate the point. However, it is unclear as to whether such emphasis comes from the presence of an overt pronoun or the S-initial position of that pronoun (or both). In my experience, speakers I have worked with do tend to see overt pronouns as redundant and in many cases unnecessary given the rich person marking that exists in Me'phaa. S-initial pronouns may also play an important role related to information structure.

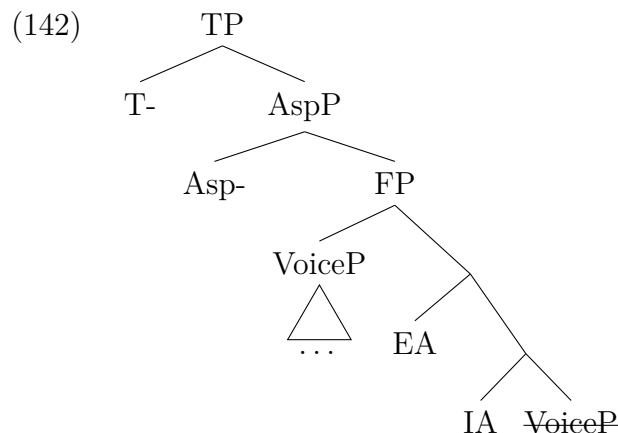
languages can be explained by appealing to less controversial (albeit ubiquitously accepted) apparatuses. As a viable alternative to EPP-driven VP-raising, I briefly sketch out a proposal such that Collin’s (2017) insights regarding the landing site of VP can be combined with Richard’s (2016) account of V1 driven by principles of phonological well-formedness. This opens up the possibility that the EPP can be dispensed of entirely in accounting for VP-raising in Me’phaa.

For Richards (2016), EPP effects are derivative and epiphenomenal. Instead of movement to satisfy the EPP, movement in the narrow syntax that is relevant for producing S1 and V1 orders instead is driven by a principle of phonological well-formedness called Affix Support.

(141) Affix Support

If a head is an affix, there must be a metrical boundary in the direction in which it attaches.

In a language like English, having an XP in Spec,TP satisfies the need to attach to a metrical boundary in a leftward direction. Since inflectional morphology in Me’phaa is prefixal, Affix Support requires that the prefix precede some material that contains a metrical boundary. In Me’phaa this can be satisfied for inflectional affixes that attach to the verb if the complement of the affix contains the verb at its left edge and is or contains a metrical unit. If, as I proposed above, VP-raising is to a functional projection lower than the the heads that host verbal prefixes, this condition is met.



Affix Support in conjunction with Collin’s (2017) proposal about VP-raising to a projection below T thus potentially offers a satisfactory explanation of Me'phaa V1 without needing to appeal to the EPP. Since Affix Support requires metrical boundaries in the direction of attachment, there is simply no need to fill Spec,TP in the first place. However, VP-raising, and perhaps VP-evacuation, could be tied to conditions related to phonological well-formedness, such as the need to satisfy Affix Support.

5.5 Supporting evidence for VP raising

I now turn to addressing the question of why VP-raising is the preferred derivational path to account for Me'phaa V1. In what follows, I discuss various facts in Me'phaa that do not necessarily stand alone as definitive evidence for VP Raising, but comport with this derivational strategy and thus collectively provide supporting evidence that VP-movement has occurred, rather than V-raising.

5.5.1 Absence of mirroring

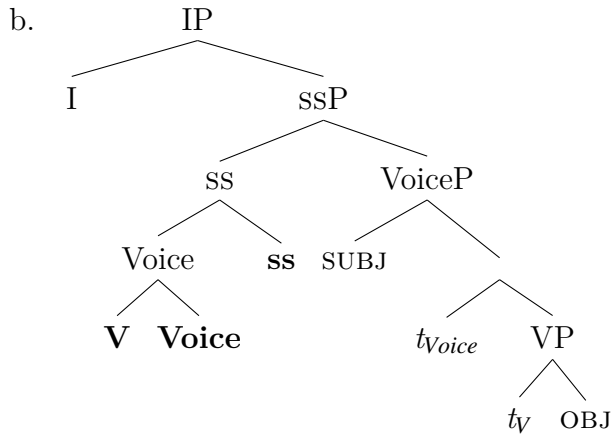
The first piece of supporting evidence comes from the order of morphemes in the Me'phaa verb stem, which mitigates against V-raising. Although not uncontroversial, one commonly appealed to relationship between verb morphology and head movement is that V-raising should produce a mirror image of the morphemes in line with Baker’s (1985) Mirror Principle.⁴ For example, if a verb root raises through a head hosting a causative morpheme, the expected order is V-CAUS rather than CAUS-V.

In their recent account for deriving V1 in Mayan, Clemens & Coon (2017) note that verb stems across the Mayan family are relatively stable with respect to morpheme order, and, further that “the order of morphemes in the stem—ROOT(-VOICE)-STATUS.SUFFIX—is

⁴Lee (2000, 160) writes that “the standard assumption [is] that verbs are inflected through head-movement, [so that] morphemes are affixed in the order in which they occur in the syntax (following Baker’s (1985) Mirror Principle), and only left-adjunction is possible (Kayne, 1994).”

consistent with the MIRROR PRINCIPLE.” Their account for a verb stem like the one from Ch’ol shown in (143a) relies on head movement up the clausal spine, schematized in (143b), which “results in the correct order of morphemes on the stem.”

- (143) a. Tyi i-**wäy-is-ä** ñeñe’ x-k’aläl.
 PFV A3-sleep-CAUS-SS baby CLF-girl
 ‘The girl put the baby to sleep.’



Similar accounts can be found in V-raising analyses for other V1 languages. For example, although (to my knowledge) McCloskey never explicitly invokes the Mirror Principle in his accounts of V-raising in Irish, he nevertheless acknowledges that morpheme order in Irish verb stems is the reverse of the heads that generate them.

Applying this to Me'phaa, though, produces the wrong order. Recall, for example, from Chapter 3 that the causative morpheme precedes rather than follows the verb root.

- (144) a. Ni-t-ro-thón.
 PFV-2SG-CAUS-cut
 ‘You cut it’
- b. *Ni-t(a)-thón-ro.
 PFV-2SG-cut-CAUS
 (Intended: ‘You cut it.’)

If Me'phaa were like Mayan, we would expect morphemes in the verb stem to be ordered as in (144b) (which is wildly ungrammatical) instead of the correct form in (144a). The same holds for overt Voice⁰ in passive constructions, which, as also noted previously, surfaces preverbally

and to the left of any causative morpheme. Consequently, the form of the Me'phaa verb itself may be an indication that V-raising has not occurred.

5.5.2 Low adverbs

5.5.2.1 Indicating the size of the fronted VP

The former argument supports VP-raising by providing evidence against a competing analysis. Positive evidence for VP raising comes from adverbs that attach in and around the verbal domain, which can serve as indicators of the size of the constituent being targeted for movement (see Clemens & Polinsky, 2017, and references therein). This test rests on an adverb's being or not being inside a moved constituent, which can produce restrictions on subconstituents. In this sense, adverb placement additionally can be used to test whether phrasal movement has happened in the first place.

Consider the data below, both of which contain the verb 'speak', a low adverb—either 'well' or 'quickly', and an overt object DP that can be dropped.

- (145) a. Nu-tha **maján=xo'** (ajngáa me'phaa).
 IPFV.PL-speak well=1PL.EXCL word Me'phaa
 'We (but not you) speak (Me'phaa) well.'
- b. Nu-tha=xo' (ajngáa me'phaa) **nacha**.
 IPFV.PL-speak well=1PL.EXCL word Me'phaa
 'We (but not you) speak (Me'phaa) quickly.'

Two distributional differences are significant in these examples regarding the placement of the adverb in relation to the verb and the subject clitic *xo'*. In (145a), the adverb 'well' surfaces between the verb and the subject clitic. This is a location typically reserved for morphological elements that form part of the verb stem and, as such, may be evidence that 'well' undergoes incorporation. On the other hand, in (145b) 'quickly' surfaces after the subject clitic, and after the object DP when present.

These facts can be accounted for in the VP-raising account by appealing to differences

in the attachment site of each adverb. Assuming that ‘quickly’ attaches above the verbal domain, we predict that it will be stranded in sentence-final position once the VP has been evacuated and undergone raising. ‘Well’, in contrast, attaches VP-internally. As a result, the prediction is that ‘well’ remains close to the verb and cannot be stranded clause-finally. Both of these predictions are borne out. Given the verbal construction involved in (145a-145b), this suggests that the size of the fronted constituent is minimally VoiceP.

In addition to providing information about the size of the constituent, the differences in the behaviors of ‘well’ and ‘quickly’ also provide evidence that V1 is obtained via phrasal movement based on what can/must move and what is/is not trapped in the moved constituent. The adverb ‘quickly’, which attaches above the verbal domain, can surface (a) postverbally (following postverbal arguments, if any), and (b) preverbally, that is, sentence-initially via topicalization. These possibilities are illustrated below in (146b). In contrast, the adverb ‘well’, which attaches inside the verbal domain and must remain adjacent to the verb, can only surface postverbally, preceding any overt arguments (146a).

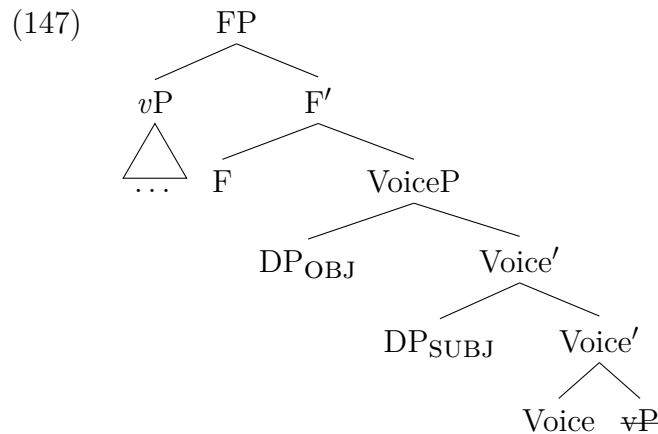
- (146) a. (*mój-ón) Ná-tha (mój-ón) ájngaa me'phaa (*mój-ón).
 well-1SG IPFV-1SG.speak well-1SG word Me'phaa well-1SG
 ‘I speak Me'phaa (well).’
- b. (nacha) Ni-guá'nú (*nacha) ajmí xabó (nacha).
 quickly PFV-PL.arrive quickly two.AN person quickly
 ‘Two people arrived quickly.’

The reason that ‘well’ stays with the verb while ‘quickly’ does not follows from the fact that the VP has moved and thus becomes an island for extraction, a phenomenon known as the Freezing Principle (Culicover & Wexler, 1977; Wexler & Culicover, 1980). Since ‘well’ is VP-internal (either by initial attachment or by virtue of incorporation), it should be trapped, unable to extract to a preverbal position. This is indeed the case. On the other hand, since the site of attachment for ‘quickly’ is VP-external, and since it is not inside a moved XP, it can undergo movement to a preverbal position. Again, such distributional properties are best explained if VP-raising is the path to V1 for Me'phaa.

5.5.2.2 One more note on VP size

Low adverb placement and distribution also provides supporting evidence for my claim that the size of the fronted VP in Me'phaa is the maximal unit containing the verb and the morphological components inside the verbal domain that form the verb stem. I address this specifically because one possible landing site for arguments that is compatible with VP-raising is to the specifier of a higher head in the verbal domain. In such a scenario, a lower layer within the verbal domain could be fronted, which does not include the arguments or the highest functional head in the verbal domain. This approach is taken by Collins (2017) in his recent account for verb-initial order in Samoan.

Once again, the form of the verb provides crucial initial insights regarding structure. If, for example, the object of a transitive raised to Spec, VoiceP and only a subconstituent of the verbal domain fronted to a higher projection, this would strand Voice⁰, as seen below.



Such a derivation would, therefore, not be able to straightforwardly account for the order of morphemes in the Me'phaa verb stem. Cases where Voice is overt (or even simply cases where Voice—null or overt—hosts the agreement exponent) suggest that Voice forms part of the constituent that transits with the verb up the clause rather than staying down low.

One of the key pieces of evidence for Collins' approach, though, crucially does not obtain for Me'phaa, and this suggests a fine-grained difference in the ways VP-raising transpires in each language. In particular, Collins (2017) shows how, in Samoan, coordination between unaccusatives and unergatives is impossible.

(148) Samoan (Collins, 2017)

- a. *sā taunu'u (mai) ma siva Simi.
PST arrive DIR and dance Simi
(Intended: 'Simi arrived and danced.')
- b. *sā siva ma taunu'u (mai) Simi.
PST dance and arrive DIR Simi
(Intended: 'Simi danced and arrived.')

This restriction does not exist, however, for Me'phaa. The equivalent of (148a) is provided in (149a), and (149b) shows a change-of-state inchoative coordinated with an unergative.

- (149) a. Pedro ni-ganú' gajm-áa ni-'-si-ee.
Pedro PFV-arrive and-3SG PFV-3SG-dance-3SG
'Pedro arrived and danced.'
- b. Ikhúún ni-th-úún gajm-á ni-mbiyá'.
1SG PFV-cut-1SG and-1SG PFV-1SG.cry
'I got cut and cried.'

The fact that these are grammatical in Me'phaa needs to be taken seriously because Collins argues that his version of VP-raising effectively *predicts* the ungrammaticality of coordinated unaccusatives and unergatives. He also suggests that the test may have broader applicability beyond Samoan (i.e., for discriminating between V-raising and VP-raising). At face value, then, the grammaticality of (149a-149b) would seem to suggest evidence against VP-raising in Me'phaa. His reason for claiming this to be so falls out of the way Samoan object DPs raise out of VP. Because of a feature on *v* in Samoan that draws all arguments in its c-command domain to its specifier, objects do not raise past the verbal domain. Moreover, since unergatives do not have their sole arguments sister to the verb root but unaccusatives do, when the unaccusative subject raises to Spec,*v*P it binds a copy of itself. According to Collins, this structural difference between unergatives and unaccusatives leads to a violation of the Coordinated Structure Constraint (CSC, Ross 1967).

This point about how arguments evacuate and where they evacuate to illustrates a critical difference between Samoan and Me'phaa. Moreover, this difference explains why they behave

differently in their coordination properties without having to erode the integrity of a VP-raising analysis for Me'phaa. Simply put, since all arguments across all verbal construction types in Me'phaa raise out of the verbal domain to a site in the inflectional domain, concerns over CSC violations disappear. Both ergative and unaccusative VPs in Me'phaa contain a trace since the sole argument in each scrambles to a VP-external position in the inflectional domain.

Recasting Collin's claim about cross-linguistic applicability of coordination tests, the Me'phaa data suggest a different conclusion. In particular, if a language can independently be determined to derive V1 via VP-raising, coordinating different types of verbal constructions may serve as a diagnostic for the size of the fronted XP and how arguments are positioned in relation to the maximal projection of the verbal domain.

5.5.3 *Wh*-questions

Another set of facts that favors a VP raising account instead of a V-raising one comes from a possible correlation between (a) the strategy a language uses for deriving V1 and (b) the way *wh*-questions are formed in the language. In particular, Potsdam (2009) notes that VP raising languages may be forced to resort to (pseudo)clefting to form *wh*-questions.

Verb-initial languages have had a longstanding association with overt \bar{A} -movement. In particular, V1 languages tend to place *wh*-expressions clause-initially in questions. Greenberg (1963) formalized this property in his well-known Universal 12.

(150) Greenberg's Universal 12

If a language has dominant word order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions.

Me'phaa fits this typological profile well, being both V1 and Wh1. The latter of these is illustrated in the following examples.

(151) a. **Díne** ne-'-ne mój-óon (*díne) Julieta (*díne)?
 what PFV-3SG-make well-3SG what Julieta what

‘What did Julieta cook?’

- b. **Tsáa** na-^l-th-úun (*tsáa) Julieta (*tsáa)?
who IPFV-3SG-talk-3SG who Julieta who
‘Who is Julieta talking to?’

The only catch to linking declarative and interrogative word orders for Me'phaa based on Universal 12 is that Me'phaa is VSO-VOS alternating, not simply VSO dominant. Potsdam (2009), however, remarks how subsequent investigations into V1 languages have led to similar observations for languages where VOS dominates. The one exception is that such languages may permit—but do not require—*wh-in-situ*. Potsdam thus reformulates Universal 12 to account for the available alternation, extending the relatedness of clause-initial interrogatives to V1 languages more broadly.

(152) Universal 12' (Potsdam, 2009, 738)

If a language has dominant verb-initial (V1) order in declarative sentences, it can put interrogative phrases first (Wh1) in interrogative questions.

In Me'phaa, though, *wh-in-situ* is not available for standard interrogatives.

This all matters for V1 generally because there may be an intimate connection between V1 and Wh1 derivations (Oda, 2005; Potsdam, 2009; Aldridge, 2013). Just as there are multiple “paths” to deriving V1, Wh1 likewise does not correspond to a single derivational strategy (Potsdam, 2009; Potsdam & Polinsky, 2011). Instead, languages draw from one of three mechanisms to generate Wh1: (a) *wh*-movement, (b) focus fronting, or (c) (pseudo)clefting (Potsdam, 2009, 743). Oda (2005) links the availability of clefting as a Wh1 strategy to languages that derive V1 via VP raising; Potsdam (2009) makes a stronger claim, linking VP raising to the absence of *wh*-movement.

(153) Universal 12-VP (VP Raising-*Wh*-in-Situ Implicational Universal) (Potsdam, 2009, 754)

If a language uses VP Raising to derive V1 word order, then it cannot have *wh*-movement.

The implications of this are significant for Me'phaa because it leads to testable predictions about V1 based on the nature of *wh*-questions. That is, if Universal 12-VP holds, questions provide a potential diagnostic for reverse engineering how verb-initiality is derived. If Me'phaa is a V-raising language then true *wh*-movement is available as a possible strategy, though V-raising is in principle compatible with the other two strategies. On the other hand, if Me'phaa is a VP Raising language then Me'phaa questions cannot be formed by *wh*-movement.

Results of this test for Me'phaa end up not being straightforward, but they are at least compatible with Universal 12-VP and thus serve as possible evidence for VP Raising. Many *wh*-questions in Me'phaa look on the surface like languages with true *wh*-movement, such as English. This is because, despite word order differences, *wh*-elements seem to freely surface at the left of the clause without any additional morphosyntactic elements that might suggest a cleft. This is seen in (154a) below.

- (154) a. **Tsáa** ni-khuu xtíla?
 who PFV-3SG.eat chicken
 ‘Who ate chicken?’
- b. **Tsáa ñaj-uun (tsí)** ni-khuu xtíla?
 who be-3SG REL.AN PFV-3SG.eat chicken
 ‘Who ate chicken?’ (Lit., ‘Who is it that ate chicken?’)
- c. **Tsáa=juun** ni-khuu xtíla?
 who=be.3SG PFV-3SG.eat chicken
 ‘Who ate chicken?’ (Lit., ‘Who’s [the one that] ate chicken?’)

What complicates the issue, though, is examples such as (154b-154c), which do have additional morphosyntactic elements, although such differences do not seem to trigger any changes in meaning (see the discussion in Suárez 1983, 278, who observed similar facts for Malinaltepec Me'phaa).⁵ At least in terms of linear order, the form of the question in (154b)

⁵In my experience during elicitation sessions, speakers commonly alternated between the various forms, seemingly unintentionally. For example, when initially asked about the form of a particular question they might not include the relative pronoun or the copula, but when asked to repeat the utterance one or both of

parallels that of a relative clause (or reduced relative if *tsí* is not present), and (154c) is a reduced relative where a phonologically reduced form of ‘be’ cliticizes onto the *wh*-expression.

To be clear, the status of these clauses is uncertain, as currently no analysis of either relative clauses or *wh*-questions exists for any of the Me'phaa varieties. Nonetheless, given that relative pronouns commonly occur in cleft constructions cross-linguistically, and clefts in many languages are built from, contain, or bear strong resemblance to relative clauses (Drubig & Schaffar, 2001; Potsdam & Polinsky, 2011), the possibility that *wh*-questions in Me'phaa are formed on clefts is one that merits further investigation. If Potsdam (2009) is correct about how V1 derivational strategies constrain possibilities for *wh*-questions formation, then the VP-raising account for Me'phaa could offer insight into the cleft-like properties of *wh*-questions in the language.⁶

5.5.4 Ellipsis

Another set of facts that appear to favor VP-raising and argue against V-raising for Me'phaa comes from VP-ellipsis (VPE). This is because, depending on the site of ellipsis, how high a verb raises leads to expectations regarding what VPE looks like in a V-raising language.

McCloskey (1991, 2011, 2017) has done extensive work on VPE in Irish, which derives V1 via head movement. Irish is well known for verb-stranding VPE. In this type of ellipsis, the verb in the second conjunct survives, which gives rise to two surface-level appearances of the verb in the whole clause.

these would surface inconspicuously. Although it is feasible that the language simply possesses two distinct mechanisms for forming *wh*-questions, I take it that such unwitting alternations point to the possibility that the different forms are underlyingly similar.

⁶It should be noted that the version of VP-raising I advocate for Me'phaa actually undercuts the motivation for the link between V1 and Wh1 as articulated by Oda (2005) and Potsdam (2009). The reasons for this are as follows. First, on the account where movement is EPP-driven, if VPs do not raise to Spec,TP and Spec,TP can host DPs as suggested by Collins (2017), then true *wh*-movement hinging on clausal typing should be possible. Second, if movement is not EPP driven in the first place, then it becomes unclear how to account for cross-linguistic differences that seem to correlate to language-specific EPP features. Nevertheless, I include this material here because the proposed correlation between V1 and Wh1 is quite convincing, and a better understanding of additional V1 languages may lead to alternative explanations for why the connection exists.

(155) Irish VPE (McCloskey, 1991, 273)

Dúirt mé go **gceannóinn** é agus **cheannaigh**.
 said I COMP buy.CONDIT it and buy.PAST

‘I said that I would buy it and I did.’

McCloskey’s explanation for this is that V-raising precedes ellipsis, and that the verb raises to a position that is higher than the ellipsis site, which allows it to escape deletion. If we take this pattern to be a diagnostic of V-raising, then we predict that the ability for a verb to survive deletion is indicative of V-raising in certain cases. It should be noted, though, that this is only a clear diagnostic for V-raising languages that involve raising-to-C, since “VP ellipsis” is often a cover term for true VP-ellipsis as well as TP-ellipsis.

Unlike Irish, VPE in Me'phaa gives rise to deletion of the verb in the second conjunct. Additionally, $\sqrt{\text{MANG}}$ ‘(do) also’ is inserted in place of the ellided constituent.

(156) a. **Ne-tse** María ájma iyé gajm-áa ikhúún **mang-ún**.
 PFV-3SG.buy Maria two.INAN book and-3SG 1SG also-1SG
 ‘Maria bought two books and I did too.’

b. Arturo **ni-'kha** **jayá** mbá rí ni-xnúún María
 Arturo PFV-3SG.come bring INDEF.INAN REL.INAN PFV-give-3SG Maria
 gajmáa Juliéta **mang-á**.
 and-3SG Julieta also-3SG
 ‘Arturo brought a gift to Maria and Julieta did too.’

Depending on the precise location of the site of ellipsis in cases like these, one possible explanation for why Me'phaa differs from a language like Irish is that the verb does not raise high enough to escape deletion.

It is possible to construct a grammatical utterance where the verb from the first conjunct is repeated in the second. (157) shows the result of this based on (156b) above.

(157) Arturo **ni-'kha** **jayá** mbá rí ni-xnúún María gajmáa
 Arturo PFV-3SG.come bring INDEF.INAN REL.INAN PFV-give-3SG Maria and-3SG
 Juliéta **ni-'kha jayá**.
 Julieta PFV-3SG.come bring
 ‘Arturo brought a gift to Maria and Julieta brought something else.’

This only gives the appearance of verb-stranding VPE, however. In reality, this is simply coordination where the second conjunct has no overt object. Critically, there is an important meaning change, which indicates that there is no longer full identity across the VPs. That is, when *ni'kha jayá* ‘bring’ appears in the second conjunct, the object is no longer *mbá rí nixnúun* ‘gift’. Instead, since the object in the second clause is not mentioned, we do not know what Julieta brought. This suggests that VPE has not occurred, since identity requirements characteristic of VPE do not obtain.

5.5.5 Analytic causatives

The final piece of supporting evidence for VP-raising that I discuss comes from distributional properties of the phrase corresponding to the caused event in an analytic causative. Analytic causatives provide good testing ground because of their biclausal nature, and the fact that in Me'phaa the second clause has unique properties indicative of a small clause. As a test for derivational paths of V1, this exploits properties associated with the absence of inflectional layers, particularly TP.

First, consider the following rather expected VS-SV alternation:

- (158) a. Na-ga'á iya.
 IPFV-boil water
 ‘The water is boiling.’
- b. Iya na-ga'á.
 water IPFV-boil
 ‘The water is boiling.’

Now consider the results for the same VS-SV alternation when the clause above us the caused event in an analytic causative.

- (159) a. Ni-tha-ne ga'á iya.
 PFV-2SG-do boil water
 ‘You made the water boil.’

- b. *Ni-tha-ne iya ga'á.
 PFV-2SG-do water boil
 (Intended: 'You made the water boil.')

Assuming that these complement clauses are tenseless small causes (Stowell (cf. 1981); Kayne (cf. 1984, a.o.)), meaning the TP layer is absent (Progovac 2015), these results are surprising if Me'phaa's derivational path to V1 is V-raising, but expected in a VP-raising account where VP-fronting is independent of T. This is because, if V1 order hinges minimally on V-to-T movement, we predict the exact opposite pattern to emerge: SV should be the only order in the complement clause because the verb should be forced to stay downstairs. On the other hand, if the VP fronts to a position lower than T and TP is not present, SV is rendered impossible because there is no site (either TP or a higher layer, such as TopP) to host a preverbal subject. Only VS should be possible in this context, which the VP-raising account developed here handles nicely.

Interestingly, though, there are cases where S can precede V in the caused event clause, although they do not serve as true counterexamples.

- (160) a. Catalína ni-'-ñ-uu Verónica ni-ndu'wá.
 Catalina PFV-3SG-make.APPL-3SG Veronica PFV-3SG.laugh
 'Catalina made Veronica laugh.'
- b. Catalína ni-'-ñ-áa Verónica ni-ta-ndu'wá.
 Catalina PFV-3SG-make.APPL-2SG Veronica PFV-2SG-laugh
 'Catalina made you laugh.'

In this pair of examples, the agreement morphology ends up being quite important in terms of understanding the structural implications, especially with respect to agreement on 'make'. First, note that the agreement on the verb in the small clause complement is unaffected. This is expected given that Me'phaa verbal agreement is valued locally, inside the verbal domain, and without T. Second, the ϕ -features of the argument from the lower clause are also expressed on the matrix verb stem, and the form of the agreement exponent is that of the dative paradigm. This coincides with a change in the verb stem itself, in that an

applicative morpheme is added immediately following the verb. The reason that this is still compatible with VP-raising is that the preverbal subject in the small clause is not in the small clause any longer. Rather than landing in a high inflectional layer in the embedded clause, the addition of an ApplP in the main clause allows the lower subject to be hosted there, and this accounts for the presence of dative agreement.

5.6 Conclusion

In this chapter I argued that V1 in Me'phaa is derivational, and that the language achieves V1 by applying VP-remnant raising to an underlying SVO core. This analysis receives support (to varying degrees) from a constellation of properties and or constructions: the lack of mirroring in the verb stem, distribution and placement of low adverbs, *wh*-questions, verb phrase ellipsis, and analytic causatives. Each of these provides either positive evidence for phrasal movement, specific indications of the size of the fronted constituent containing the verb, arguments against V-raising, or explanatory force for some other aspect of Me'phaa grammar.

Rather than in traditional approaches to VP-raising where the VP is analyzed as raising to TP, I argued following Collins (2017) that the VP in Me'phaa fronts to a position that is situated lower than the heads in the inflectional domain that host verbal prefixes. This approach has several advantages: it enables a more seamless connection between morphemes between the verbal and inflectional domains, it offers an explanation of preverbal subjects that may not be interpreted as topics, and it leads to predictions regarding word order in tenseless small clauses that are indeed borne out. However, the analysis I advocate departs from that of Collins because the size of the fronted VP is larger in Me'phaa than in Samoan. For Me'phaa, all arguments evacuate the verbal domain, and the entire verbal domain fronts. This claim is supported by the behavior of low adverbs, and it also explains why Me'phaa permits coordination of unergatives and unaccusatives.

I also entertained a second point of departure from Collins, based on considerations regarding what triggers VP-raising in the first place. In particular, drawing from Richard's (2016) proposal of Affix Support seems to open up a way that successfully accounts for VP-movement without having to appeal to the EPP. Rather than seeing phrasal movement as driven by a need of a head to satisfy its EPP features, Affix Support proposes that phrasal movement operations such as VP-fronting to achieve V1 give the appearance of EPP effects, but are actually driven by phonological conditions of well-formedness.

Though more research is needed in this area, VP-raising motivated by Affix Support may actually lead to a more uniform account for the entire V1 story in Me'phaa. This is because argument evacuation and VP-raising could both be placed under the banner of phonological well-formedness. Put simply, instead of seeing VP evacuation as being triggered by needs of inflectional heads higher up, perhaps this ensues because of the needs of the verbal heads lower down. This would mean that VP evacuation is more about the verb and less about the arguments, and it would also eliminate the need to appeal to the EPP for movement. Thus, similar to the way Clemens & Coon (2017) note that head-movement in Mayan may be tied to stem formation, VP-raising in Me'phaa stem formation could be directly linked to its specific derivational path to V1. Absent head movement to put the verbal pieces together, evacuation could be required to guarantee that all the relevant morphemes are adjacent, which in turn enables the attachment of inflectional prefixes after the VP-remnant raises around the argument to satisfy Affix Support.

Chapter 6

Conclusions

6.1 From core to fringe

In this dissertation, I have given a detailed and holistic account of clausal architecture in Me'phaa, from the verb root to the upper bounds of the inflectional domain. The centerpiece of this work has been the clausal core. I argued that unpacking the geometries associated with the verbal domain is key to understanding Me'phaa's patterns of verbal agreement and ways that it manifests ergativity through such. Specifically, I showed that a decompositional structure to the verbal domain provides an explanatory framework for Me'phaa verbal agreement because it enables different ways of agreeing to be mapped onto distinct structural configurations. The large number of verbal agreement paradigms in the language is driven by sensitivity to structure, in that arguments enter into Agree(ment) relations with an array of functional heads inside the verbal domain.

Moreover, I argued that the verbal domain connects to the inflectional domain by way of VP-raising. For Me'phaa, this first involves evacuation of all VP-internal arguments to a site low in the inflectional domain. Second, the size of the fronted VP in Me'phaa is the maximal structure of the verbal domain, that is, either VoiceP or *v*P depending on the particular verbal construction involved. Drawing from recent insights in the VP-raising

literature (Collins, 2017), I attribute the ability for morphological material inside the verbal domain to combine with inflectional morphology that together eventually comprise the verb stem to the landing site of the fronted VP. In particular, the VP in Me'phaa moves to a place below T and no higher than Asp. Language-internal evidence thus showcases the compatibility of VP-raising with a decompositional approach to the clausal core.

6.2 Understanding ergativity

One of the reasons that Me'phaa was found to have a unique manifestation of ergativity is because it is rich in ergativity properties (Deal, 2015). Consequently, understanding the structures and mechanisms that give rise to each individual property deepens our understanding of what constitutes ergativity cross-linguistically. It also sheds light on the processes and operations from which ergativity emerges. In Me'phaa, clause type plays a major role in determining what ergativity property becomes visible. Crucially, though, in the analysis that I develop, the reason for this stems from a combination of multiple factors that together corroborate to produce multiple patterns of agreement. Specifically, these include structural differences, locally-determined Agree(ment), and agreement morphemes that are lexically-specified based on the head involved in Agree. The interaction of these properties also provides an explanation for why intransitives fall into four distinct classes based on their agreement paradigms: umbrella categories like “intransitive” and “unaccusative” in Me'phaa are heterogeneous, and, together include at least four distinct verbal constructions. Overlap with transitive verbal constructions—or the lack thereof—gives rise to ergativity properties, because (di)transitives and intransitives bear resemblances in their agreement inasmuch as they have or do not have overlapping structure.

Early in this dissertation I invoked the long-held notion that ergative languages are rarely, if ever, “fully consistent” in expressing ergativity (Moravcsik, 1978, 237), and that ergative languages commonly showcase “split ergativity.” Recently, though, a trend in literature on

ergativity has deemed this a “misnomer” (Laka 2017, 160; see also references therein and Coon & Preminger (2017), treating so-called splits as natural reflexes of structural differences. In line with this trend, I have shied away from treating Me'phaa's specific expression of ergativity as a phenomenon of “split ergativity.” This is because the manifold agreement that exists in Me'phaa *is* the basic pattern, not a departure from such. When Me'phaa looks in some cases to bear ergative alignment, but accusative or tripartite in others, it is not because the system has been disrupted. Instead, given the particular way that elements of verbal constructions interact with arguments to produce local agreement, multiple alignment types simply fall out of this system rather naturally. Framing the discussion in terms of ergativity properties helps alleviate the need to give primacy to alignment. Doing so also allows Me'phaa agreement morphology to be viewed as the expression of a singular system, and this leads to the possibility that the language actually is consistently ergative.

6.3 Implications for Agree(ment)

How Agree(ment) transpires in Me'phaa is thus deeply tied to ergativity in the language. At first this fact seems rather mundane, but there is a potentially deeper significance because of the number of functional heads that participate in the operation Agree in Me'phaa. Here, a brief comparison is instructive. Consider a Mayan language like Ch'ol, also a pure-head-marking language with morphological ergativity. Like all Mayan languages, Ch'ol verbal person-marking paradigms are twofold, often referred to as Set A (= ergative) and Set B (= absolutive) in the literature. An interesting question, then is, what drives the number of person-marking paradigms in a given head-marking ergative language (or *any* language)? In other words, why do languages vary in this domain?

My investigation of Me'phaa morphosyntax points to two reasons: (1) the mechanisms that render ϕ -feature expression on a verb (e.g., agreement, clitic doubling), and (2) the number of heads that participate in Agree relations, if a language has genuine agreement.

Coon (2017), for example, argues that Ch'ol has little-*v* agreement, which corresponds to Set A marking, and cliticization, which corresponds to Set B marking. This yields a system with two person-marking paradigms. Me'phaa has agreement and cliticization, too, but the former involves an array of functional heads, not just *v*. Since Me'phaa recruits a variety of heads in calculating verbal agreement—specifically, Voice, *v*, Appl, and Pred—this yields a system with four agreement paradigms. When factoring in clitics (e.g., for local plurals), a fivefold system of person-marking emerges. These facts also conspire to permit both subject and object agreement in Me'phaa (Baker & Kramer 2016, contra Nevins 2011), and a system where transitive subject (= ergative) agreement is valued locally, independent of object agreement (Coon 2017, contra Deal 2010).

Given that true agreement markers are more likely than clitics to be sensitive to specific architectures, these grammatical properties also help us understand further why not all languages are equally transparent with respect to ϕ -feature expression and underlying structure. The basic expectations are that (a) a language with fewer agreement paradigms will be more opaque in the way person-marking reveals structural differences, and (b) a language with a high number of agreement paradigms will be more transparent in the way person-marking reflects internal structure. In a language like English, where it is generally accepted that verbal agreement is driven by T, T does not seem to care where the argument it agrees with is base-generated, so long as the particular argument can enter into an Agree relationship with it. As a result, whether the verbal structure is, say, unergative or unaccusative, the agreement exponent is unaffected (-s for 3SG, present tense, for example). In contrast, T plays no role in determining agreement in Me'phaa, and the heads that do enter into Agree relations with arguments end up providing a window into the architecture of the particular verbal construction involved.

Agreement systems in languages where fewer heads trigger agreement thus impose artificial uniformity in the way agreement morphology is manifest, treating multiple verbal constructions as a single class for purposes of agreement. On the other hand, in a language

like Me'phaa, which allows a wide array of functional heads inside the verbal domain to participate in agreement operations, distinct verbal structures emerge as their own classes with respect to patterns of agreement. Moreover, since certain heads appear in more than one verbal construction, architectural overlap in terms of underlying geometries gets worn on Me'phaa's verbal sleeve, so to speak, so that morphological overlap ends up being the expression of similarity in base structure.

6.4 Unaccusativity and verbal suppletion

Another issue that Me'phaa provides insight into pertains to the structures and configurations involved in suppletion and whether verbal suppletion can be part of the language's overall agreement paradigm. In answering this, I proposed three unaccusativity diagnostics that together differentiate unaccusatives from other verbal structures, and also identify two subtypes of unaccusatives. Me'phaa's version of *ne*-cliticization tests for internal argumenthood. Among verbs that contain internal arguments, only verbal structures that have an argument sister to the verb root can participate in causative-inchoative alternations, and only verbal structures whose meaning involves inherently directed motion can take what I termed the “volvitive” suffix.

In line with the decompositional approach, I attributed the semantics of directed motion to a structural difference. Adapting Irwin's (2012, 2016) small clause complement unaccusative structure, I argued that differing patterns of agreement among “unaccusatives” exist because they reflect key differences in architecture, as elsewhere in the language. Intransitive suppletive verbs of directed motion follow a pattern of person marking parallel to agreement, situating suppletion within Me'phaa's agreement system and particular ergative pattern. Moreover, much like an inchoative can be built on to create a canonical transitive structure, the geometry underlying suppletive intransitives can also appear in a transitive construction with an added VoiceP layer.

Since the suppletion-triggering argument is more deeply embedded, this broadens our understanding of what configurations lead to suppletion cross-linguistically. Me'phaa patterns like Hiaki in the sense that only transitive objects and unaccusative subjects can trigger root suppletion (Bobaljik & Harley, 2017). However, for Me'phaa, only a subset of transitive objects and unaccusative subjects do so, and it is particularly verbs of inherently directed motion whose internal argument is located inside a small clause. Me'phaa thus differs from Hiaki, which requires that an argument be sister to the verb root to trigger suppletion. Evidence from Me'phaa patterns of agreement and unaccusativity diagnostics, show that Bobaljik & Harley's sisterhood condition is not met, as this is precisely the environment where suppletion is unavailable in the language. Verbal suppletion in Me'phaa requires additional structure that prohibits the argument from appearing in a strict locality relation with the root. The Me'phaa facts thus provide supporting evidence for Bobaljik & Harley (2017, 159) notion that “phrasal and syntactic structure (not word-internal structure)” feed root suppletion, but the data do not confirm their hypothesis of strictly local suppletion.

6.5 VP-raising

Me'phaa not only offers support for VP-raising as a strategy for deriving V1, it deepens our understanding of such by providing key insights into both how and why VP-movement occurs. It also provides a more refined understanding of what is possible within a V1 language of this type, particularly with respect to verbal agreement.

Regarding how and why VP-fronting occurs in the language, I argued for EPP-driven movement, which upholds the spirit of traditional VP-raising analyses (e.g., Massam (2000); Lee (2006); Coon (2010b), a.o.). Departing somewhat from the traditional view, I follow Collins (2017) in maintaining a lower landing site for the fronted VP, which in Me'phaa facilitates both clause-level word order facts and morpheme order in the verb stem. Arguments also evacuate the VP, though not for purposes of agreement, as some earlier proposals

advocate (e.g., Lee (2006)).

These facets of the argumentation related to the motivation for argument movement, but also VP movement to a certain extent, require further clarification and elaboration. On the one hand, this could suggest a need for further decomposition of the inflectional domain, much in the way that decomposing the verbal domain has led to a clearer understanding. On the other hand, future work may reveal the need for a more interconnected view of syntax and phonology, and Richards' (2016) notion of Affix Support offers a promising approach to this end. In addition to reframing the motivation for phrasal movement, such that EPP effects are actually derivative of phonological well-formedness, Affix Support could lead to

In addition to these points, the very existence of VP-raising in the context of Me'phaa is significant on account of Me'phaa's rich agreement. Potsdam (2009), citing Bobaljik (2002) and Oda (2005), strongly connects VP-raising to the impossibility of rich agreement. However, his argument depends on the role of T in determining agreement. According to him, "the verb embedded within the VP in specTP would not be in a structural position from which it could raise to T⁰ and check ϕ -features" (Potsdam, 2009, 751). My account of VP-raising is entirely compatible with Me'phaa's rich verbal agreement because all verbal agreement is calculated VP-internally and without T. In this sense, Me'phaa enriches our understanding of what is possible in a language with VP-raising.

6.6 Closing thoughts: Applying theory

Much of the impetus for this project lie in testing the explanatory power of the decompositional approach to Me'phaa morphosyntax. The results of this investigation show that Me'phaa provides support for the core tenets of this theory, particularly in the way that structures are built and how morphology reflects such structures. Crucially, though this relationship is not unidirectional. In this case, the theory reveals a systematic way and previously unrecognized way that the language operates. This can be leveraged for appli-

cation in language teaching, which has broader impact because it points to the need for theoretically-informed pedagogy and revitalization.

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Appendix A

List of Abbreviations

| | |
|-------|-------------------|
| 1 | first person |
| 2 | second person |
| 3 | third person |
| ABS | absolutive |
| ACC | accusative |
| AN | animate |
| APPL | applicative |
| CONT | continuant |
| DAT | dative |
| DES | desiderative |
| DIR | directional |
| EA | external argument |
| ERG | ergative |
| EXCL | exclusive |
| EXIST | existential |
| F | feminine |
| FOC | focus |

| | |
|-------|--------------------|
| FUT | future |
| IA | internal argument |
| IPFV | imperfective |
| INAN | inanimate |
| INCL | inclusive |
| INDEF | indefinite |
| IRR | irrealis |
| ITER | iterative |
| M | masculine |
| MA | particle <i>ma</i> |
| NEG | negation, negative |
| NMLZ | nominalizer |
| NOM | nominative |
| OBJ | object |
| PFV | perfective |
| PL | plural |
| PREP | preposition |
| PST | past |
| REL | relative |
| REM | remote |
| SG | singular |
| STAT | stative |
| SUBJ | subject |
| TEM | temporal |