

## HEADLESS RELATIVE CLAUSES IN ILIATENCO ME'PHAA

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This paper documents the morphosyntactic and semantic properties of headless relative clauses in a variety of Me'phaa spoken in Iliatenco, Guerrero, Mexico. Me'phaa possesses four types of headless relative clauses, which can be divided into two groups: those introduced by *wh*-expressions (free relative clauses), and those not introduced by *wh*-expressions. The former type is comprised of three varieties: maximal free relative clauses, which are largely productive, existential free relative clauses, which are limited to a few *wh*-expressions, and free choice free relative clauses, which are introduced by *ájndo* ‘until’. The second type of headless relative clause is simply introduced by a relativizer/subordinator. Nearly all Me'phaa *wh*-expressions participate in some or all kinds of free relative clauses. However, the inanimate argument *wh*-expression *dí(ne)* ‘what’ seems to be robustly impermissible in such constructions.

### **1. Introduction and basic features of Iliatenco Me'phaa**

Me'phaa is a language genus within the western branch of the Otomanguean family.<sup>1</sup> Altogether, the genus is comprised of about 10 varieties, and the approximately 130,000 people who speak Me'phaa primarily reside in the *La Montaña* region in eastern Guerrero, Mexico. Additional speakers live in various areas throughout Mexico and the United States. Varieties of Me'phaa are traditionally associated with municipal centers throughout *La Montaña*. The variety discussed in this paper represents that spoken in

<sup>1</sup> Me'phaa is also known as *Tlapanec* in the literature. We use the autonym in this paper.

Iliatenco, which for purposes of classification is typically subsumed under the variety of Malinaltepec Me'phaa (Cline et al. 2012).

Data from this paper were collected between 2015 and 2018 and come from working with three native speakers of Me'phaa who are from Iliatenco and moved to the U.S. as adults, and one native speaker living in Iliatenco. The primary method for data collection was one-on-one structured elicitation sessions, with Spanish serving as the lingua franca. Additional methods included unstructured, open-ended narrative prompts (e.g., “Tell me about a time when...”), and the use of Story Builder picture cards (Sardinha 2011). Texts from the Malinaltepec variety (Suárez 1988, Carrasco Zúñiga & Weathers 1988, Liga Bíblica 2015, a.o.) were also consulted on account of the similarity between the varieties and the availability of printed material in Me'phaa from Malinaltepec.

Me'phaa is a VOS-VSO alternating language, though SVO order is also quite common. SOV and O-initial orders are not permissible in unmarked clauses.<sup>2</sup>

- |     |  |     |
|-----|--|-----|
| (1) | a. Ni-'- tháán María mbá iyee'.<br>PFV-3SG-write María INDF.INAN paper<br>‘Maria wrote a letter/book.’ | VSO |
|     | b. María ni-'- tháán mbá iyee'.<br>María PFV-3SG-write INDF.INAN paper<br>‘María wrote a letter/book.’ | SVO |
|     | c. Ni-'- tháán mbá iyee' María.<br>PFV-3SG-write INDF.INAN paper María<br>‘María wrote a letter/book.’ | VOS |

Although all the conditions that inform word order variability have not been identified for Me'phaa, different orders likely depend on information structure, as is common in many Mesoamerican languages. Animacy, definiteness, nominal type (e.g., proper names, common nouns), and topic-comment relations all appear to play a role in Me'phaa's word

<sup>2</sup> Abbreviations in glosses follow the Leipzig Glossing Rules when possible. Additional abbreviations used in chapter paper are: AN = animate, EXIST = existential, HUM = human, INAN = inanimate, IPFV = imperfective, MA = discourse particle *má*, which can encode immediately occurring and completed actions, NHUM = nonhuman, POT = potential, RA = the discourse particle *rá* (its uses and functions are numerous; see Carrasco Zúñiga & Weathers 1988: 86-87 for discussion). Iliatenco Me'phaa is a tone language with three level tones and an as-yet undetermined number of contour tones. Mid tone is unmarked and low tone is indicated with an underline in this paper.

order flexibility. For example, SVO can indicate a topicalized subject (Navarro Solano 2013), though it is also particularly frequent with an unmarked reading when the subject is an overt pronoun or an inanimate entity. In addition, inanimate indefinite subject pronouns are also obligatorily SVO (Duncan 2013).<sup>3</sup>

Me'phaa is a head-marking, pro-drop language, with core arguments coindexed in the verbal stem. The system of alignment in Me'phaa is complex in that multiple alignment types emerge. The language has traditionally been classified as ergative-absolutive (Suárez 1983; Carrasco Zúñiga 2006, Wichmann 2009, Navarro Solano 2012), though it displays properties of an Active-Stative language (Duncan 2017). The ergative pattern arises because verbal person markers that covary with intransitive subjects are often the same ones that covary with the transitive objects, whereas transitive subjects are marked differently. The ergative-absolutive pattern for verbal person marking is seen in the examples in (2).

- |     |   |   |
|-----|---|---|
| (2) | a. Ni- <b>ta</b> -xkhax- <b>uún</b> .<br>PFV-2SG-wake-1SG<br>'You woke me.' | b. Ni- <b>kix</b> - <b>uún</b> .<br>PFV-jump-1SG<br>'I jumped.' |
|     | c. Ni- <b>kix</b> - <b>iín</b> .<br>PFV-jump-2SG<br>'You jumped.'           | d. Ni-xkhax- <b>iín</b> .<br>PFV.1SG-wake-2SG<br>'I woke you.'  |

In (2a-b), both the transitive object (2a) and intransitive subject (2b) markers for first person are marked suffixally with *-uún*. Alternatively, transitive subject marking (2d) for the first person singular is a floating low tone (Cline 2013) at the left edge of the verb root. Similarly, second person singular is encoded suffixally as *-iín* when encoding a transitive object (2d) or intransitive subject (2c), and prefixally as *ta-* as a transitive subject (2a).

Nominative-accusative and tripartite alignments also occur because of a four-way split in the marking of intransitive subjects (Cline 2013, Duncan 2017). The examples in (3)

<sup>3</sup> The notion that Me'phaa is a VOS-VSO alternating language not only holds for Me'phaa from Iliatenco, but also seems to be a fitting description for the genus as a whole. However, individual varieties may show a preference for one order over the other. For example, Wichmann (2010) argues that VSO (though he uses VAP) is the basic word order for the Azoyú variety. More recently, Hemphill (2019) suggests that VOS is basic in Teocuitlapa Me'phaa.

exemplify this by showing three further ways second person singular is encoded in intransitives, in addition to that seen in (2c).

- |     |   |   |  |
|-----|---|---|--|
| (3) | a. Ni- <b>ta</b> -ndu' <i>wá</i> .<br>PFV-2SG-laugh<br>'You laughed.' | b. Ni- <b>jáñ-aa'</b> .<br>PFV-die-2SG<br>'You died.' | c. Ni- <b>d</b> xanú'.<br>PFV-2SG.arrive<br>'You arrived.' |
|-----|---|---|--|

The unergative verb *ndu'wá* 'laugh' in (3a) takes the same prefixal marking as the transitive subject in (2a), which is reminiscent of a nominative-accusative pattern. Psych verbs and verbs of experience take yet another suffix, as seen in (3b), which is also used to encode (in)direct objects in ditransitives; thus, the three-way comparison between intransitive markers in (2c) and (3a-b) gives rise to a tripartite pattern. Finally, verbal person marking for unaccusative verbs of inherently directed motion on a path, such as *dyanú'* 'arrive', is encoded through suppletion.<sup>4</sup>

Animacy factors significantly in Me'phaa grammar (Suárez 1983, Carrasco Zúñiga & Weathers 1988, Carrasco Zúñiga 2006, a.o.). For example, with respect to verbal agreement, inanimate internal arguments are not coindexed on the verb. In (4), we show a mini paradigm for the verb *ngojwá* 'sell', with a third singular animate subject, and the transitive objects differing in animacy and number. Third person subject marking for all examples in (4) is encoded tonally,<sup>5</sup> and the object is encoded suffixally if the object is animate.

<sup>4</sup> This suppletion can be seen by comparing *arrive* in the following (cf. also example (3c) above):

- |      |   |  |
|------|---|--|
| (i)  | Ni- <b>ganú'</b> .<br>PFV-arrive.1SG<br>'I arrived.'  | arrive = <i>ganú'</i> Duncan 2017, p. 101  |
| (ii) | Ni- <b>guá'nú</b> <i>ajmii</i> <i>xabó</i> .<br>PFV-arrive.PL.AN      two.AN      person<br>'Two people arrived.' | arrive = <i>guá'nú</i> Duncan 2017, p. 146 |

<sup>5</sup> The following pair illustrate a tonal contrast between 3SG and 1SG subjects with *ngojwá* 'sell', where the latter is encoded with a floating low tone at the left edge of the root, causing the imperfective marker to be realized as *na-* (see also Cline 2013: 149 for this contrast but with different object markers in Acatepec Me'paa):

- |       |  |
|-------|--|
| (iii) | Na- <i>ngojw-ee</i> (=ne).<br>IPFV.3SG-sell-3SG.3AN.SUBJ<br>'S/he's selling (it).' |
| (iv)  | Na- <i>ngojwa</i> (=ne).<br>IPFV.1SG-sell<br>'I'm selling (it).'                   |

- (4) a. Na-ngojw-**aa** (\*atsú-un) xtíla.  
     IPFV-3SG.sell-3SG three-AN chicken  
     ‘S/he is selling a chicken.’
- b. Na-ngojw-**iín** (atsú-un) xtíla.  
     IPFV-3SG.sell-3PL.3AN.SUBJ three-AN chicken  
     ‘S/he is selling (three) chickens.’
- c. Na-ngojw-**ee** (atsú) xtíin.  
     IPFV-3SG.sell-3AN.SUBJ three.INAN cloth  
     ‘S/he is selling (three) cloth(s).’

The suffixes in (4a-b) are sensitive to number since *xtíla* ‘chicken(s)’ is an animate entity. This is the reason why adding the numeral *atsúun* ‘3’ is not possible in (4a), since this would require coindexation via a plural suffix, but *-aa* indicates that the object is both animate and singular. The numeral in (4b) is optional, though, because bare nominals can be either singular or plural, depending on context; since the verbal suffix *-iín* indicates plural object agreement, *xtíla* must be interpreted as ‘chickens’ in this example. On the other hand, the suffix in (4c) actually covaries with the transitive subject but is not an agreement exponent; instead, it tracks discourse-oriented properties of third person animate entities, though its precise use and distribution is not well understood.<sup>6</sup> Since there is no verbal affix marking the object *xtíin* ‘cloth’, the verb form does not change based on the number of the object.<sup>7</sup>

Encoding of animacy extends well beyond the verbal domain. Indefinite markers, indefinite pronouns, numerals, adjectives, and quantifiers all mark animacy via suffixation.

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<sup>6</sup> Although we gloss the suffix in this and other examples as “3AN.SUBJ,” we acknowledge that this label is not quite fitting, and remain agnostic as to its actual status and function. The affix goes by various names in existing Me'phaa literature: “dependent” (Carrasco Zúñiga & Weathers 1988), “marked form” (Marlett 2011), for example. Wichmann (2007: 801) treats it as a given vs. new distinction, which functions to mark something that “shares characteristics between obviation and switch-reference, but is different from both.” We simply mark when it occurs, and, to our knowledge, the status of what we here label “3AN.SUBJ” for convenience does not affect our analysis of relative clauses.

<sup>7</sup> There is one exception to not marking inanimate objects on verbs: the internal arguments of transitive verbs that bear the semantics of inherently directed motion on a path can trigger number-based suppletion. See Suárez (1983) and Duncan (2017) for details.

	Inanimate forms	Animate forms
(5)	a. mbá INDEF.INAN 'a'	a'. mbá- <b>a</b> INDEF-AN 'a'
	b. atsú three.INAN 'three'	b'. atsú- <b>un</b> three-AN 'three'
	c. xugíí all.INAN 'all'	c'. xugíí- <b>n</b> all-AN 'all'

Demonstratives are also marked for animacy, but with a prefix:<sup>8</sup> either *ts-* for animate demonstratives (6a-b), or *r-* for inanimate ones (6c-d).<sup>9</sup>

- (6) a. xəbo/xtíla      **ts-íge'**  
           person/chicken    AN-DEM.PROX  
           'this person/(living) chicken'
- b. xəbo/xtíla      **ts-ú'kho**  
           person/chicken    AN-DEM.DIST  
           'that person/(living) chicken'
- c. lápe/xtíla      **r-íge'**  
           pen/chicken    INAN-DEM.PROX  
           'this pen/chicken (meat)'
- d. lápe/xtíla      **r-ú'kho**  
           pen/chicken    INAN-DEM.DIST  
           'that pen/chicken (meat)'

<sup>8</sup> Carrasco Zúñiga (2006: 112) proposes that the Me'phaa demonstratives are historically derived from "relative pronouns" with adverbs of place. Thus, *tsige'/tsú'kho* = *tsí* + *gee~gejió'/ a'kho* 'who + here/there', and *ríge'/rú'kho* = *ri* + *gee/ a'kho* 'that which + here/there.' Similarly, Carrasco Zúñiga & Weathers (1988: 52) note that "demonstrative pronouns are formed by combining the relative pronouns *ri* and *tsí* with the adverbs of place" (translation ours, as are other direct citations of this source here). This suggests that demonstratives share at some level an affinity with relative clauses, particularly a variety of headless relative clause that has neither a *wh*-expression nor a light head (see Section 4.2). For some initial arguments that Me'phaa "relative pronouns" may, in fact, be complementizers, see Section 3.

<sup>9</sup> Note that the agreement on demonstratives is prefixal, while in most other instances agreement is suffixal (cf. the forms in (5)).

Consideration of word order, patterns of alignment, and grammatical encoding of animacy are all relevant for the discussion of relative clauses because Me'phaa exhibits some ergative properties and manifests ergative alignment in two ways. However, the language does not place any restrictions on questioning or relativizing transitive subjects, for example, which is a hallmark property of many ergative languages (one type of “syntactic ergativity;” see Dixon 1972, 1979, Deal 2015, 2016, Aissen 2017, Polinsky 2017, a.o.). Animacy informs the morphophonological shape of complementizers in Me'phaa, which surface in various relative clause constructions; moreover, animacy interacts with definiteness and word order, and the inanimate argument *wh*-expression seems to resist functioning as a relative pronoun.

## 2. Interrogative Clauses in Me'phaa

In Me'phaa, interrogative elements appear at the left edge of the clause (Suárez 1983, Carrasco Zúñiga 2006). In yes/no interrogative clauses, then, the Q particle *á* occurs on the left:<sup>10, 11</sup>

- |     |  |                      |
|-----|--|----------------------|
| (7) | a. Né'-kho        guma        Pedro.<br>PFV -eat.3SG    tortilla    Pedro<br>‘Pedro ate tortillas.’              | Declarative          |
|     | b. Á    né'-kho        guma        Pedro.<br>Q    PFV-eat.3SG    tortilla    Pedro<br>‘Did Pedro eat tortillas?’ | Yes/No Interrogative |

Me'phaa uses two strategies to form *wh*-interrogative clauses. Both place the *wh*-expression clause-initially. In one strategy, the *wh*-expression simply occurs at the

<sup>10</sup> The most natural reading for (7a) is ‘Pedro ate tortillas’, as indicated. However, in different contexts, this could be interpreted ‘Pedro ate a tortilla’ or ‘Pedro ate the tortilla’, since bare nominals can be interpreted as either definite or indefinite, a point to which we return below. A similar principle applies for (7b), which can be interpreted as ‘Did Pedro eat tortillas/a tortilla/the tortilla?’ For (7b), an alternative and perhaps more natural reading would be ‘Did Pedro eat a meal?’.

<sup>11</sup> In this paper, we follow Me'phaa community norms regarding punctuation and use of Spanish proper names. According to these norms, question marks are not used for interrogative clauses, and Spanish names are rendered in accordance as they are in Spanish and without tone marking. In terms of spelling we largely follow the Me'phaa norms except in cases where we aim to reflect some of the unique phonetic/phonological properties of the variety under focus here.

left edge of the clause.<sup>12</sup> In the other, the *wh*-expression is clefted. We discuss each strategy in turn, starting from the one in which only *wh*-fronting occurs, without any clefting. Examples of this strategy are given in (8a-n).

- (8) a. Ne-'ne mójóon ya'duun máján Julieta.  
          PFV-3SG-make well.3SG soup good Julieta  
          ‘Julieta made the mole.’
- b. **Tsáa** ne-'ne mójóon yá'duun máján.  
       who PFV-3SG-make well.3SG soup good  
       ‘Who made the mole?’
- c. **Díne** ne-'ne mójóon Julieta.  
       what PFV-3SG-make well.3SG Julieta  
       ‘What did Julieta make?’
- d. **Náá** ne-'ne mójóon ya'duun máján Julieta.  
       where PFV-3SG-make well.3SG soup good Julieta  
       ‘Where did Julieta make the mole?’
- e. **Náá (nákí) mbi'i** ne-'ne mójóon ya'duun máján Julieta.  
       which PST day PFV-3SG-make well.3SG soup good Julieta  
       ‘When did Julieta make the mole?’
- f. **Nguáná/Nákí** ndi-y-aa'.  
       when PFV-see.1SG>2SG  
       ‘When did I see you?’
- g. **Nguáná/\*Nákí** mbə-y-aa'.  
       when IRR-see.1SG>2SG  
       ‘When will I see you?’
- h. **Nóra** ni'-ts-ii xtíla Félix.  
       when PFV-3SG-buy-3SG.AN.OBJ chicken Félix  
       ‘When did Félix buy the chicken?’
- 

<sup>12</sup> A small set of adverbs, including ‘well’, inflect for person and number in Me'phaa. See Carrasco Zúñiga & Weathers (1988: 81) and Carrasco Zúñiga (2006: 165) for discussion and a full paradigm. Note that the verb meaning ‘make’ in the sense of ‘cook’/‘prepare food’ here is phrasal, with a literal rendering of ‘do/make well’. This verb/phrase can also mean ‘prepare’, ‘fix’, ‘arrange something’, and ‘build’. Similarly, ‘mole’ in Me'phaa is phrasal, with a literal rendering of ‘good soup’ (*ya'duun* ‘soup’ further comes from *iya* ‘water’ and *duun* ‘chile’). An alternative word/phrase for ‘mole’ that appears in some examples below is *ya'duun waboo* ‘sticky soup’.

- i. **Xáni** ne'-ne mójóon ya'duun máján Julieta.  
how PFV-3SG-make well.3SG soup good Julieta  
'How did Julieta make the mole?'
- j. **Nguáth-a** ya'duun máján ne'-ne mójóon Julieta.  
how.much-INAN soup good PFV-3SG-make well.3SG Julieta  
'How much mole did Julieta make?'
- k. **Nguáth-iin** xabó ne-ne mójóón ya'duun máján.  
how.many-AN person PFV-3PL.make well.3PL soup good  
'How many people made mole?'
- l. **Ndéjngó** ne'-ne mójóon ya'duun máján Julieta.  
why PFV-3SG-make well.3SG soup good Julieta  
'Why did Julieta make the mole?'
- m. **Náá rí** ya'duun máján ne'-ne mójóon Julieta.  
which COMP.INAN soup good PFV-3SG-make well.3SG Julieta  
'Which mole did Juliette make?'
- n. **Náá tsí** xabó ne'-ne mójóon yá'duun máján.  
which COMP.AN person PFV-3SG-make well.3SG soup good  
'Which person/people made the mole?'

As seen in (8d-e) and (8m-n), the *wh*-words meaning ‘where’ and ‘which’ are homophonous.<sup>13</sup> The *wh*-expression for *which* agrees with its nominal restriction in animacy: *náá rí* is inanimate (8m) and *náá tsí* (8n) is animate. Of the various ways to express ‘when’, (8e-h), *nóra* is a contracted form of *náá órga* ‘which hour’, and its full form can also be used in some contexts. The distribution of *nákí* is exclusive to perfective clauses (8e-f); independently, *nákí* has the meaning ‘previously’.<sup>14</sup> Thus, it is not possible to use *nákí* with an irrealis-marked verb (8f). In our data, the word for ‘why’, *ndéjngó*, is sometimes pronounced as *ndé'ngó* (i.e., with a glottal stop word-medially instead of a glottal fricative). The *wh*-expressions corresponding to amount are also marked for animacy, as (8j-k) indicate.

<sup>13</sup> At least, that is the position we assume herein. Given that their phonological form is the same, we have glossed these as ‘where’ or ‘which’ depending on the meaning in a particular context.

<sup>14</sup> *Nákí* also can appear as an element in some complex, non-interrogative adverbials. For example, ‘yesterday’ in Me'phaa can either be *ríxíí* or *nákí ríxíí* (cf. (20a) below).

Leftward movement of the *wh*-expression is obligatory for all types of *wh*-interrogative clauses. The examples in (9-10) show this, based on an elicited paradigm where arguments and adjuncts either move (9) or remain *in situ* (10).

- (9) a. Ni-d-ee' yuska.  
     PFV-3SG.throw-3AN.SUBJ trash  
     ‘S/he threw out the trash.’

b. Tsáa ni-da yuska. Subject *wh*- interrogative  
     who PFV-3SG.throw trash  
     ‘Who threw out the trash?’

c. Díne ni-d-ee'. Object *wh*- interrogative  
     what PFV-3SG.throw-3AN.SUBJ  
     ‘What did s/he throw out?’

d. Náá ni-d-ee' yuska. Adjunct *wh*- interrogative  
     where PFV-3SG.throw-3AN.SUBJ trash  
     ‘Where did s/he throw the trash?’

e. Ndéjngó ni-d-ee' yuska. Adjunct *wh*- interrogative  
     why PFV-3SG.throw-3AN.SUBJ trash  
     ‘Why did s/he throw out the trash?’

Though the *in situ* forms in (10) cannot be interpreted as genuine information-seeking questions, they are permissible as echo questions.

- (10) a. \*Ni-d-ee' (tsáa) yuska (tsáa)  
          PFV-3SG.throw-3AN.SUBJ who trash who  
          (Intended: 'Who threw out the trash?')

b. \*Ni-d-ee' **díne**.  
          PFV-3SG.throw-3AN.SUBJ what  
          (Intended: 'What did s/he throw out?')

c. \*Ni-d-ee' yuska **náá**.  
          PFV-3SG.throw-3AN.SUBJ trash where  
          (Intended: 'Where did s/he throw out the trash?')

d. \*Ni-d-ee' yuska **ndéjngó**.  
          PFV-3SG.throw-3AN.SUBJ trash why  
          (Intended: 'Why did s/he throw out the trash?')

The full inventory of Me'phaa *wh*-expressions is provided in Table 1.

Table 1  
Wh-Expressions in Iliatenco Me'phaa

	Iliatenco Me'phaa
<i>who</i>	tsáa
<i>what</i>	dí(ne)~ndí(ne)~dé
<i>where</i>	náá
<i>which/what N</i>	náá rí + N <sub>[INAN]</sub> náá tsí + N <sub>[AN]</sub>
<i>when</i>	nguáná/náá mbi'i/nóra
<i>when</i> [+PST]	náki
<i>how</i>	xáni
	xó <sup>15</sup>
<i>why</i>	ndéjngó
<i>how much,</i>	nguátha
<i>how many</i> [INAN]	
<i>how much,</i>	nguáthiin
<i>how many</i> [AN]	

The other strategy Me'phaa uses to form *wh*- interrogative clauses appears to involve clefting, as it makes use of a copular element *ñajuun* ‘be’. The examples in (11) show copula clauses with a third singular (11a) and first person plural (11b) subject for illustration.<sup>16</sup> Examples with clefted *wh*- interrogative clauses follow.

- (11) a. Pédro **ñajuun** xabo (tsí) na-'-sngáá.  
 Pedro COP.3SG person COMP.AN IPFV-3SG-teach  
 ‘Pedro is a teacher.’
- b. Ra'-khiin xabo tsí nu-sngáá **ñajuan=ló'**.  
 NEG-3PL person COMP.AN IPFV.PL-teach.3PL COP.1PL=1PL.INCL  
 ‘We aren’t teachers.’

<sup>15</sup> Xó is not typically used in *wh*- interrogative clauses, but it is used on occasion:

(v) Xó ni-tha-ne majáan'.  
 how PFV-2SG-do good.2SG  
 ‘How did you prepare it?’

<sup>16</sup> The phrase translated as ‘teacher’ in these examples is a headed relative clause. See Section 3 for discussion of headed relative clauses.

Like the simple *wh*- interrogative clauses in (8-9), clefted *wh*- interrogative clauses involve clause-initial placement of a *wh*-element.

- (12) a. **Tsáa ñajuun (tsí)** ni'-khuu xtíla.  
           who   COP.3SG COMP.AN PFV-3SG-eat chicken  
           ‘Who is it that ate this chicken?’
- b. **Díne ñajuun (rí)** ne-tso.  
       what COP.3SG COMP.INAN PFV-2SG.eat  
       ‘What is it that you ate/What did you eat?’
- c. **Náá ñajun \*(rí)** ni-ra-tse kuti-áan'.  
       where COP COMP.INAN PFV-2SG-buy blouse-2SG  
       ‘Where is it that you bought your blouse?’
- d. **Nóra/Nguáná ñajun \*(rí)** ni-ra-tse kuti-áan'.  
       when COP COMP.INAN PFV-2SG-buy blouse-2SG  
       ‘When is it that you bought your blouse?’
- e. **Tsá=jun ne'-ne.**  
       who=COP PVF-3SG-do  
       ‘Who did it?’
- f. **Xáni ñajuun (rí)** ni-ra-xmí kuti-áan.  
       how COP.3SG COMP.INAN PFV-2SG-sew blouse-2SG  
       ‘How is it that you sewed your blouse?’

However, whereas the data in (8-9) appear simply to involve displacement of the *wh*-element, the questions in (12) differ in that they each contain a copula. Argument *wh*-questions of this type can be optionally followed by a complementizer, either *tsí* or *rí* depending on animacy. The adjunct *wh*-question forms, on the other hand, must be followed by the complementizer, which always surfaces as *rí*. A third point of variance arises because the copula can either occur in full (*ñajuun*), or as a reduced clitic (=*jun/jo*) that attaches to the *wh*-expression, as in (12e).<sup>17</sup>

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<sup>17</sup> The literature on verb-initial orders has long noted that one correlate of verb-initial languages is the absence of a copula (see, e.g., Clemens & Polinsky 2017, though they footnote exceptions to this correlate, particularly in Otomanguean languages). In light of previous V1 literature, then, the existence of these forms in a verb-initial language like Me'phaa might be seen as notable; however, this is not the case, as copulas are present across Mesoamerican languages. (Note that Me'phaa also has a verb for ‘have’, which likewise runs contrary to expectations based on previously claimed V1 correlates.)

The expression *ndéjngó* ‘why’ seems to be synchronically decomposable into *ndé* ‘what’ and *jngó* ‘because’.<sup>18</sup> Carrasco Zúñiga & Weathers (1988: 108) record the following *why*-question in the Malinaltepec variety in the story *Ege tsí nikhuáa* ‘The fox that was trapped’.

- (13) Ndí=jun jngó ni-ts-íí xtíl-e'?  
 what=COP because PFV-2SG.eat-3sg chicken-1SG  
 ‘Why did you eat my chicken?’

Note that (13), like the example in (12e), contains a reduced copula that surfaces as an enclitic on the *wh*-word *ndí* ‘what’. Tentatively, then, we treat *ndéjngó* in the Iliatenco variety as a grammaticalized version of ‘what (is the) because’ (i.e., ‘what is the reason’).<sup>19</sup>

Embedded interrogative clauses appear postverbally, and have the same form as matrix ones. When complementizers occur in embedded clauses, they are on the left edge:

- (14) Nq-jom-o' rí ni'- tháán María mbá iyee'.  
 IPFV-think-1SG COMP.INAN PFV-3SG-write María INDF.INAN letter  
 ‘I think that María wrote a letter.’

In embedded yes/no interrogative clauses, the Q particle occurs on the left edge:<sup>20</sup>

- (15) a. Á nq-ka Juan.  
 Q PFV.AFF-go.3SG Juan  
 ‘Did Juan go?’
- 

<sup>18</sup> Marlett (2013b: 15) footnotes personal communication between him and Abad Carrasco Zúñiga, who treats ‘why’ as “a contraction of an interrogative expression that (literally) means ‘what word’.” In Malinaltepec Me’phaa (including Me’phaa from Iliatenco), the word for ‘word’ is *ajngáa*.

<sup>19</sup> It is possible that *jngó* is a possessed noun (with the full form as *ajngóo* ‘it’s word’) (Mark Weathers, p.c.). When one of the speakers who consulted with us talked with their parents (also from Iliatenco) about words meaning ‘why’, the mother mentioned that she used *náá jngó* (Lit. ‘which because’). An example of this is seen below:

(vi) Náá jngó ajngáa guéño tha-ne?  
 which because word much 2SG-do  
 ‘Why do you cause so much trouble?’ (Lit., ‘Which because word much you do?’)

<sup>20</sup> The example in (15b) is also grammatical without the reflexive, in which case it has the meaning ‘I asked whether Juan left’.

- b. Ni-rax-i mína' [ á ni-ka Juan].  
 PFV-ask-1SG myself Q PFV-go.3SG Juan  
 'I wondered whether Juan left.'

Accordingly, nearly all of the *wh*-interrogative clauses listed in (8) and (12) can be embedded without changes, with the *wh*-expression fronted to the left edge of the embedded interrogative clause:

- (16) Tsé-yo... / Ni-rax-e ... / Ni-rax-e mína'...  
 NEG.PFV-1SG.know PFV-ask-1SG PFV-ask-1SG myself  
 'I don't know...' / 'I asked...' / 'I wondered...'
- a. ... **tsáa** (ñajuuñ) ni-da yuska.  
 who be.3SG PFV-3SG.throw trash  
 '...who threw out the trash.'
  - b. ... **náá** (ñajun) ni-d-ee' yuska.  
 where be PFV-3SG.throw-3AN.SUBJ trash  
 '...where s/he threw out the trash.'
  - c. ... **ndéjngó** (ñajun) ni-d-ee' yuska.  
 why be PFV-3SG.throw-3AN.SUBJ trash  
 '...why s/he threw out the trash.'
  - d. ... **ná óra** (ñajun) ni-d-ee' yuska.  
 which hour be PFV-3SG.throw-3AN.SUBJ trash  
 '...when s/he threw out the trash.'
  - e. ... **xáni** (ñajun) ni-d-ee' yuska.  
 how be PFV-3SG.throw-3AN.SUBJ trash  
 '...how s/he threw out the trash.'

Notably, though, the *wh*-expression *díne* 'what' cannot introduce embedded interrogative clauses Instead, the relativizer *rí* is used.<sup>21</sup>

- (17) Tsé-yo rí/\*{dí(ne) (ñajun)} ni-d-ee'.  
 NEG.PFV-1SG.know COMP.INAN/\*{what (be)} PFV-3SG.throw-3AN.SUBJ  
 'I don't know what s/he threw out.'
- 

<sup>21</sup> Mark Weathers (p.c.) comments that *Tséyo díne najuun rí nidee'* 'I don't know **what** it is that s/he threw out' is, in fact, possible. The speakers we have worked with have consistently rejected such constructions, however. We leave open as to whether this might be an area of variation that remains to be explored, even among varieties of Me'phaa that fall under the banner Malinaltepec Me'phaa.

Finally, Me'phaa also possesses *wh*-the-hell questions, which are “aggressively non-D-linked” (Pesetsky, 1987), meaning that they are strongly dissociated with elements in prior discourse. In Me'phaa, questions of this type are formed by pairing a *wh*-expression with, and (commonly) pied-piping, *gixaa* ‘devil’.

- (18) a. **Tsáa gixaa ne'-ne.**  
           who    devil PFV-3SG-do  
           ‘Who the hell did it?’
- b. **Díne/Nguáná/Xáni/Náá gixaa ni-thá-ne.**  
       what/when/how/where    devil PFV-2SG-do  
       ‘What/when/how/where the hell did you do it?’

However, *gixaa* is not pied-piped obligatorily; instead, it can be stranded in postverbal position for subject, object, and adjunct questions in Me'phaa (19), unlike, say, in English (cf. \**What did you do the hell?*).

- (19) a. **Tsáa ne'-ne gixaa.**  
           who PFV-3SG-do devil  
           ‘Who the hell did it?’
- b. **Díne/Nguáná/Xáni/Náá ni-thá-ne gixaa.**  
       what/when/how/where PFV-2SG-do devil  
       ‘What/when/how/where the hell did you do (it)?’

### 3. Headed Relative Clauses in Me'phaa

As is common among VO languages (Lehmann 1973, 1978), Me'phaa headed relative clauses are externally-headed and postnominal (Marlett, 2012). Like *wh*-interrogative clauses in the language, headed relative clauses are formed by movement, leaving a gap at the extraction site. In the examples that follow we label “RC” the portion of a relative clause that does not include the nominal head and any determiner-like material that may precede it.

- (20) a. Ma-ni'g-ú                      gajm-i' [NP **xabo** [RC **tsí**  
           IRR-get.married.M-1SG with-1SG person COMP.AN  
           ni-t-iy-áá                      nákí rixíí] ].  
           PFV-2SG-see-3SG PST yesterday  
           ‘I'll get married to the person that you saw yesterday.’

- b. María ne'-kho mbá rauwín [NP **ganitsu(n)** [RC **rí**  
           María PFV-3SG-eat INDEF.INAN piece food                   REL.INAN  
           ne'-ne mójón Eduardo ].  
           PFV-3SG-make well.3SG Eduardo  
           ‘María ate a little of the food that Eduardo prepared.’

When an argument is relativized, the head noun linearly precedes a complementizer whose morphological exponent is sensitive to the animacy of the relativized head, similar to the pattern in clefted *wh*-interrogative clauses seen above. The complementizer *tsí* is thus used if the head noun is animate, such as *xabó* ‘person’ in (20a), or *rí* if it is inanimate, such as *ganitsu(n)* ‘food’ in (20b) (Suárez 1983, Carrasco Zúñiga & Weathers 1988, Carrasco Zúñiga 2006).<sup>22</sup>

The elements *rí* and *tsí*, which we gloss as complementizers, have been labeled relative pronouns in previous work on Me'phaa (Carrasco Zúñiga & Weathers 1988: 51, Carrasco Zúñiga 2006: 110). Presumably, one reason for this is that *rí* and *tsí* encode an animacy distinction; while animacy is not typically included in the set of phi-features (such as person, number, gender), phi-feature marking is often treated as a hallmark feature of relative pronouns (de Vries 2002, 2018). However, although they occur in relative clauses, there is evidence to suggest that the subordinators/relativizers *tsí* and *rí* are actually complementizers, not relative pronouns.<sup>23</sup> In a nutshell, a relative pronoun is expected to correspond to some argument or adjunct in a clause. However, there are a number of cases in Me'phaa where the *rí* occurs on the left edge of a clause, but does not seem to represent or be linked to any argument or adjunct. These include (a subset of) temporal clauses:<sup>24</sup>

<sup>22</sup> Relativizers, i.e., complementizers, thus bear morphophonological affinity to demonstratives (Suárez 1983), where the *ts* ~ *r* alternation is likewise marked on the left edge of the word and encodes the animate-inanimate distinction (see (6) above).

<sup>23</sup> Although we acknowledge more work needs to be done in this area and that the status of these elements remains unclear at present, we gloss and refer to such elements as complementizers throughout this work.

<sup>24</sup> The sentence in (21) was judged by a consultant to be fine, but better if *ídq* ('when') or *inu* ('face', also 'at the moment', 'just ahead') is added, as in *Pedro na'gu ídq rí nidxá'nú*. While (21) may be slightly odd for some without these elements, there is a precedent for treating cases like this as grammatical. Suárez (1983), working with a speaker from Malinaltepec, records the following:

- (vii) Pedro na'gu [ rí ni-dxa'nú ].  
       Pedro IPFV-sleep.3SG COMP.INAN PFV-2SG.arrive  
       ‘Pedro was sleeping when you arrived.’ (adapted from Suárez 1983)

- (21) Pedro na'-gu [ **rí** ni-dxa'nú ].  
 Pedro IPFV-sleep.3SG COMP.INAN PFV-2SG.arrive  
 'Pedro was sleeping, when you arrived.'

Some adverbial clauses are also introduced by *rí*.<sup>25</sup>

- (22) Na'-gu Pedro inu [ **rí** ni-dxa'nú ].  
 IPFV-sleep.3SG Pedro nearly COMP.INAN PFV-2SG.arrive  
 'Pedro was sleeping when you arrived.'

The *rí* also occurs introduces (a subset of) purposive clauses:

- (23) Ni-ndxawá [ **rí** ma-gixii Juan ].  
 PFV-1SG.shout COMP.INAN IRR-wake.up.3SG Juan  
 'I screamed so (that) John would wake up.'

Further, *rí* also occurs in (a subset of) causative clauses:

Notably, elements like *ido/inu* are absent, and the temporal clause is simply introduced by *rí*. This is not common, and may involve ellipsis (Mark Weathers, p.c.). Texts also show that at least for some speakers of the Malinaltepec variety, temporal clauses can be introduced simply by *rí*:

- (viii) Nika akuijn indi'i [ **rí** nidxauun ].  
 go.PFV.3SG. heart.3SG jaguar COMP.INAN hear.PFV.3SG  
 'The Jaguar was surprised when he heard it.' (adapted from Weathers, Weathers, & Marlett 2014, line 5)

Suárez (1983) also provides the following example of an *until* clause with *rí*:

- (ix) Na'-gu Pedro ajndo [ **rí** ni-dxá'nú ].  
 IPFV-sleep.3SG Pedro until REL.INAN PFV-2SG.arrive  
 'Pedro was sleeping until you arrived.' (adapted from Suárez 1983, ex. 566)

The speakers we have worked with do not allow for *ajndo* 'until' to select for *rí*, though.

Taken together, this suggests that Me'phaa has adverbial-like elements that select for complementizers. This is strongly reminiscent of the complex "conjunctions" in languages like Spanish such as *así que* 'so; as soon as', *para que* 'so that', *antes (de) que* 'until', etc., which consist of an adverbial/prepositional element followed by the complementizer *que*, which introduces embedded declaratives.

<sup>25</sup> The precise status of *inu* in these types of clauses is unclear. It seems to be an adverb in (22) and the examples below:

- (x) Inu ni-dxa'nú.  
 nearly PFV-2SG.arrive  
 'You've (only) just arrived.'  
 (xi) Inu ma-dxá'nu.  
 nearly IRR-2SG.arrive  
 'You are just about to arrive.'

The point we are trying to make here is simply that *rí* seems to be able to occur independent of a relativized item.

- (24) a. Ni-guáxoon'=ló'.  
PVF-wake.up.1PL=1PL.INCL  
‘We (INCL) woke up.
- b. Marta ne'-ne [ **rí** ni-guáxoon'=ló' ].  
Marta PFV-3Sg-make COMP.INAN PVF-wake.up.1PL=1PL.INCL  
‘Marta made us wake up.’

The *rí* also appears with various sentential conjunctions or connectives (which are most natural in connected discourse):

- (25) a. A'kho [ **rí** ni-prú'-úun ] rá.  
then COMP.INAN PFV-3SG.kick-1SG.3AN.SUBJ RA  
‘Then, he kicked me.’
- b. Xúgi' [ **rí** mi-gú ].  
now COMP.INAN POT-sleep.1SG  
‘Now, indeed I’m going to sleep.’/‘Now I’m really going to sleep.’

In addition, *rí* introduces a subset of complement clauses selected by *verba dicendi* and attitude predicates, where, as in the previous cases, it does not correspond to any apparent arguments or adjuncts in either clause.<sup>26</sup>

- (26) a. Tsí-nemb-o' [<sub>CP</sub> **rí** ikhaa ne-guxno mbá ].  
NEG.IPFV-believe-1SG COMP.INAN 3SG PFV-3SG.count INDF.INAN  
‘I don’t believe that he read anything/one of them.’
- b. Ni-wá'-th-áan' [<sub>CP</sub> **rí** ma-rigá mbá ndxaa ikhaa  
PFV-PASS-say-3SG>2SG COMP.INAN IRR-EXIST INDF.INAN party DEM  
mbro'on r-igé ].  
night INAN-DEM.PROX  
‘You were told that there would be a party tonight.’

It is more difficult to find evidence for the complementizer status of *tsí*. However, both *rí* and *tsí* can be iterated under long-distance relativization. Note that in the cases below, the first relativizer is obligatory, while the second one is optional.

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<sup>26</sup> The translational options for *mbá* in (26a) stem from the fact that *mbá* has a basic meaning of ‘one’ and that the indefinite pronoun paradigm in Me’phaa is largely ‘one’-based (Duncan 2013).

- (27) a. Né-tse **lápe** [RC **rí** ni-ra-th-ún' (**rí**)  
PFV.1SG-buy pen COMP.INAN PFV-2SG-say-1SG COMP.INAN  
ma-tse ].  
IRR.1SG-buy  
'I bought the pen(s) that you told me to buy.'
- b. Ni-ts-**ii** **xtíla** [RC **tsí** ni-ra-th-ún'  
PFV.1SG-buy-3SG.AN.OBJ chicken COMP.AN PFV-2SG-say-1SG  
(**tsí**) ma-ts-**ii** ].  
COMP.AN IRR.1SG-buy-3SG.AN.OBJ  
'I bought the chicken that you told me to buy.'
- c. Ni-ts-**iin** **xtíla** [RC **tsí** ni-ra-th-ún' (**tsí**)  
PFV.1SG-buy-3PL chicken COMP.AN PFV-2SG-say-1SG COMP.AN  
ma-ts-**iin** ].  
IRR.1SG-buy-3PL  
'I bought the chickens that you told me to buy.'

If the relativizers are relative pronouns, it is unexpected that they would be iterable across clauses. This is, however, exactly the behavior that we expect of complementizers.

For argument relativization, the use of *wh*-expressions as relative pronouns is possible. However, in our experience, when eliciting such forms via direct elicitation, the speakers we have worked with preferentially provide the *tsí* forms in headed relative clauses.

- (28) a. Catalina nde-'y-oo [NP a'go [RC **tsí**/%**tsáa**  
Catalina PFV-3SG-see-3SG woman COMP.AN/who  
ne-xk-ó' ].  
PFV-1SG.chase-3SG  
'Catalina saw the woman who I chased.'
- b. Juan na-nd-oo [NP a'go [RC **tsí**/%**tsáa** na-nd-oo  
Juan IPFV-want-3SG woman COMP.AN/who IPFV-want-3SG  
ja'yoo Eduardo ].  
in.relation.to Eduardo  
'Juan likes the woman that Eduardo likes.'

At this stage of investigation, it is unclear what accounts for the variation in judgements concerning *tsáa* ‘who’ as a relative pronoun.<sup>27</sup>

In contrast, speakers consistently judge headed relative clauses with the *wh*-expressions *dí(ne)* ‘what’ and *ndéjngó* ‘why’ as ungrammatical.

- (29) a. \*Na-kha [NP numuu [RC **ndéjngó** na-dxo' ] ].  
           IPFV-1SG.go reason why IPFV-2SG.go  
           (Intended: ‘\*I’m going (for) the reason why you’re going.’)
- b. \*María ne-'-kho mbá rauwín [NP ganitsuu(n) [RC **dí(ne)** what  
           María PFV-3SG-eat INDEF.INAN piece food  
           ne-'-ne mójón Eduardo ] ].  
           PFV-3SG-do well.3SG Eduardo  
           (Intended: ‘María ate a little of the food that Eduardo prepared.’)

Each of these becomes acceptable if the *wh*-expression is replaced with *rí*, however, as in (20b) above and in (30) below.

- (30) Na-ka numuu [RC **rí** na-dxo' ].  
       IPFV-1SG.go reason COMP.INAN IPFV-2SG.go  
       ‘I’m going because you’re going.’

The *wh*-item *náá* ‘where’ and the expressions *nákí* ‘when/Previously’ and *ídø* ‘when’ also function as relative pronouns in headed relative clauses:<sup>28</sup>

- (31) a. Na-ka [NP xuájen [RC **náá** na-dxo' ] ].  
       IPFV-1SG.go town where IPFV-2SG.go  
       ‘I’m going to the town where you’re going.’

<sup>27</sup> In fact, we have some instances where *tsáa* is judged to be ungrammatical:

(xii) Ndè-y-oo [NP xabø [RC **tsí/\*tsáa** ne-'-ne=ne] ].  
           PFV.1SG-see-3SG person REL.AN/who PFV-3SG-do=OBJ.INAN  
           ‘I saw the person that/\*who did it.’

<sup>28</sup> In (31b), we have labeled *ikhaa* 3SG.INAN. This may, in fact, be a focus construction, as *ikhaa* can introduce a focused constituent (Navarro Solano 2012).

- b. Ni-ka=lo' ikhaa [NP óra [RC **nákí/ido (rí)** PST/when COMP.INAN  
 PFV-1SG.go=1SG.EMPH 3SG.INAN hour COMP.INAN  
 ni-ganu-u Daniel ].  
 PFV-3SG.arrive-ITER Daniel  
 'I left when Daniel arrived.'

With the possible exception of *nákí* and *ido* in (31b), headed relative clauses that are introduced by a *wh*-expression generally cannot co-occur with the relativizers as well:

- (32) a. Catalina nde-'y-oo [NP a'go [RC **tsáa (\*tsí)** ni-gáyu ].  
 Catalina PFV-3SG-see-3SG woman who COMP.AN PFV-3SG.run  
 'Catalina saw the woman who ran.'
- b. Na-ka [NP xuájen [RC **náá (^%rí)** na-dxo' ].  
 IPFV-1SG.go town where COMP.INAN IPFV-2SG.go  
 'I'm going to the town where you're going.'
- c. Na-ka (má') [NP numuu [RC (\*ndéjngó) **rí** na-dxo' ].  
 IPFV-1SG.go MA reason why COMP.INAN IPFV-2SG.go  
 'I'm going because you're going.'

Under the view we introduced above that Me'phaa relativizers are complementizers, the pattern in (32) is reminiscent of the one found in English, where relative pronouns cannot co-occur with the complementizer (cf. *man who (\*that) baked cookies* and *man (\*who) that baked cookies*).

In contrast to *náá* 'where', *nákí* 'when/Previously', and *ido* 'when,' the *wh*-expressions *náá rí/tsí* 'which' and *nguátha/nguáthiin* 'how many/much' cannot serve as relative pronouns in a headed relative clause:

- (33) a. \*Ni-guxnu [NP libro [RC **náá rí** ni-rá-tse ].  
 PFV-1SG.count book which COMP.INAN PFV-2SG-buy  
 (Intended: 'I read the book which you bought.')  
 b. \*Ni-guxnun (mba'a) [NP libro [RC **nguáth-a** ni-rá-tse ].  
 PFV-1SG.count many.INAN book how.many-INAN PFV-2SG-buy  
 (Intended: \*'I read the books how many you bought')

Table 2 summarizes the distribution of *wh*-words that are permissible in headed relative clauses in Me'phaa.

Table 2  
Distribution of *wh*-words in headed relative clauses in Iliatenco Me'phaa

	who	what	where	when	how	why	what + N/ which + N	how much/ how many
Me'phaa	✓/*	*	✓	✓	✓	*	*	*

#### 4. Headless Relative Clauses in Me'phaa

Me'phaa possesses two main types of headless relative clauses: those that are introduced by *wh*-expressions, which we call *free relative* clauses (FRs), and those that lack any *wh*-expressions, but are introduced by a complementizer.

**4.1. Headless Relative Clauses introduced by wh-words: Free Relative Clauses**  
 Me'phaa exhibits all the main three types of free relative clauses (FRs) that are attested crosslinguistically, although with different degrees of productivity. Maximal FRs can be introduced by most *wh*-expressions, Existential FRs are possible with very few *wh*-expressions, and Free Choice FRs, whose *wh*-expressions are immediately preceded by the free choice marker *ajndo*, which also have a high degree of productivity. We discuss each in turn below.

##### 4.1.1. Maximal Free Relative Clauses in Me'phaa

In terms of morphosyntactic properties of the surface strings, Me'phaa Maximal FRs (Max-FRs) look the same as *wh*-interrogative clauses.<sup>29, 30</sup>

- (34) a. *Na-nig-u'* (e'ne/jayoo) [<sub>FR</sub> %**tsáa** (\*tsí) ndi-y-áa' ].  
 IPFV-please-1SG by/in.relation.to who COMP.AN PFV-receive-2SG  
 'I like the person you married.'
- 

<sup>29</sup> The verb 'have' as seen in (34f) is complex, and appears to be bipartite, but forming a single verb complex.

<sup>30</sup> The following shows an ungrammatical attempt to form a FR involving *náá rí* 'which' with restriction:

(xiii) \*Ni-guxnuñ [<sub>FR</sub> **náá** **rí** libro ni-rá-tse ].  
 PFV.1SG-count which COMP.INAN book PFV-2SG-buy  
 (Intended: 'I read which book(s) you bought.')

The fact that (vii) is not licit may suggest that *náá rí* 'which' in (34g) is actually distinct from the *wh*-expression that can take a noun complement.

*where*

- b. Ni-ka [FR **náá** (\*rí) ni-gom-áá].  
 PFV-1SG.go where COMP.INAN PFV-be.born-2SG  
 'I went where you were born.'

*when*

- c. Ma-ká=lo' [FR **ído**/**{náá óra}** (rí)  
 AFF.IRR-go.1SG-1SG.EMPH when/which hour (COMP.INAN)  
 na-ganú Juan ].  
 IPFV-arrive.3SG Juan  
 'I will leave when Juan arrives.'

*how*

- d. Na-nig-u' [FR **xáni** (\*rí) na-ra-sian].  
 IPFV-please-1SG how COMP.INAN IPFV-2SG-dance  
 'I like how you are dancing.'
- e. Ni-sian **xó** (jayu) (rí) ni-ra-sian.  
 PFV.1SG-dance how exactly COMP.INAN PFV-2SG-dance  
 'I danced (exactly) how you danced.'

*how many/much*

- f. G-ú'-d-iin [FR **nguáth-iin** (xtíla) (\*tsí) xtá'-d-iin ].  
 have-1SG-have-3PL how.many-AN chicken COMP.AN have.2SG-have-3PL  
 'I have as many (chickens) as you have.'

*which*

- g. Na-xig-u' **ná** **rí** ne'-ne máján Julieta.  
 IPFV-covet-1SG which COMP.INAN PFV-3SG-do good Julieta  
 'I hate the thing Julieta cooked.'

*why*

- h. Ikhúún nanguá ni-nig-u' [FR **ndéjngó** ni-th-áne  
 1SG NEG PFV-please-1SG why PFV-2SG.AGT-make.2SG  
 májáan ya'duun xuwi ].<sup>31</sup>  
 good.2SG soup meat  
 'I didn't like (the reason) why you prepared the salsa.'

<sup>31</sup> For unknown reasons, when the matrix verb is affirmative, the result is judged ungrammatical:

(xiv) \*Na-nig-u' [FR **ndéjngó** ni-thá-ne májáan ya'duun xuwi ].  
 IPFV-please-1SG why PFV-2SG-make well.2SG soup meat  
 (Intended: 'I like the reason you made the salsa')

As these data show, virtually all *wh*-expressions participate in this construction. The only *wh*-element that never occurs in a Max-FR is *dí(ne)* ‘what’, which may not be surprising since *dí(ne)* does not occur in embedded *wh*-interrogative clauses either, and Max-FRs are embedded clauses by definition.

- (35) \*Nde-yo/Na-nig-u' [FR **dí(ne)** ni-thá-ne ].  
 PFV-1SG.see/IPFV-please-1SG what PFV-2SG-do  
 (Intended: ‘I saw/like what you did.’)

Max-FRs can also make use of the clefted strategy we already saw for *wh*-interrogative clauses, although in a much more restricted way, as shown below.

- who*
- (36) a. Na-nig-u' [FR **tsáa** **ñajun** (\***tsí**) ndí-y-áa'].  
 IPFV-please-1SG who COP.3SG COMP.AN PFV-receive-2SG  
 ‘I like who you married.’
- where*
- b. \*Ni-ka [FR **náá** **ñajun** (**rí**) ni-gom-áa].  
 PFV-1SG.go where COP COMP.INAN PFV-be.born-2SG  
 (Intended: ‘I went where you were born.’)
- how many*
- c. G-ú'-d-iin [FR **nguáth-iin** **ñajun** **xtíla** (**tsí**)  
 have-1SG-have-PL how.many-AN COP chicken COMP.AN  
 xtá'-d-iin ].  
 have.2SG-have-3PL  
 ‘I have as many chickens as you have.’
- when*
- d. \*Ni-ka [FR **nákí** **ñajun** ni-ka Eduardo ].  
 PFV-1SG.go when COP PFV-3SG.go Eduardo  
 (Intended: ‘I went when Eduardo went.’)
- which*
- e. Na-nig-u' [FR **náá** **rí** **ñajun** (**rí**) ne'-ne  
 IPFV-please-1SG which COMP.INAN COP COMP.INAN PFV-3SG-make  
 mójóon ].  
 well.3SG  
 ‘I like the thing s/he cooked.’

- f. Na-nig-u' [FR náá tsí ñajun ne'-ne mójóon  
 IPFV-please-1SG which COMP.AN COP PFV-3SG-make well.3SG  
 ya'duun waboo ].  
 soup thick  
 'I like the person that cooked the mole.'
- g. \*Na-nig-u' [FR díne ñajun (rí) ne-tso ].  
 IPFV-please-1SG what COP COMP.INAN PFV-2SG.eat  
 'I like what it is that you ate.'
- h. Ikhúún nanguá ni-nig-u' [FR ndéjngó ñajun (rí)  
 1SG NEG PFV-please-1SG why COP COMP.INAN  
 ni-thá-ne májáan ya'duun xunwí ].  
 PFV-2SG-make well.2SG soup meat  
 'I didn't like the reason why you prepared the salsa.'

The words for *how* are also ungrammatical in a cleft Max-FR:

- (37) a. \*Na-nig-u' [FR xáni/xó ñajun (rí) na-ra-sian ].  
 IPFV-please-1SG how COP COMP.INAN IPFV-2SG-dance  
 (Intended: 'I like how you are dancing.')
- b. \*Xáni/xó ñajun (rí) na-ra-sian.  
 how COP COMP.INAN IPFV-2SG-dance  
 (Intended: 'How are you dancing?')

However, as (37b) shows, *xani/xó* 'how' are independently ungrammatical in the corresponding clefted *wh*-interrogative clause for unknown reasons.

As we might expect, *dí(ne)* 'what' is also illicit in a cleft Max-FR, just as it is in the non-cleft construction:

- (38) \*Ne'-kho [FR díne ñajun (rí) ni-ráka ].  
 PFV-1SG.eat what COP COMP.INAN PFV-fall.from.high  
 (Intended: 'I ate what it was that fell (from up high).')

Table 3 summarizes the distributional properties of Me'phaa Max-FRs.

Table 3  
Distribution of *wh*-words in Max-FRs in Me'phaa

	who	what	Where	when	how	why	what/ which	how much/ how many
			NP/PP	NP/PP	NP/PP	NP/PP		
Me'phaa	✓	*	✓	✓	✓	✓	✓	✓

As for their meaning, Max-FRs in Me'phaa exhibit the same semantic properties that are attested in Max-FRs cross-linguistically: they are referential and refer to the maximal individual of a set. The referentiality of Max-FRs can be demonstrated by the fact that they can serve as antecedents for pronominal elements (see Caponigro & AnderBois this volume), as in (39).

- (39) Na-ka [FR **náá ni'-th-ín'** Marta]<sub>i</sub>. Maphú kuitsúun<sub>i</sub>.  
 IPFV-go.1SG where PFV-3SG-say-1SG Marta very be.beautiful  
 'I'm going [where Marta told me (to go)]<sub>i</sub>. It<sub>i</sub>'s very beautiful.'

As seen in this example, the null pronominal element that serves as the argument of the predicate *kuitsúun* 'it is beautiful' has its reference established by the preceding free relative *náá ni'thín' Marta* 'where Marta told me to go'. The Max-FR here thus has the properties of a definite expression, in contrast to a universally quantified constituent, which cannot establish reference for subsequent pronominal elements.

Max-FRs can be replaced and paraphrased by definite NPs. In Me'phaa, testing this is not as straightforward as in some languages, because (overt) definite determiners are not a feature of Me'phaa grammar. As seen in (40), then, a decontextualized bare NP in the language is ambiguous with respect to (in)definiteness (Duncan 2013).

- (40) Ne-tse xtíla.  
 PFV-1SG.buy chicken  
 'I bought the/a chicken.'

Still it can be shown that Max-FRs are referential and maximal by creating a scenario like the following (see Caponigro & AnderBois this volume):

- (41) Context: There is a dance festival and a group of five kids are dancing. Four of the kids are Me'phaa, and one of them is Mixtec.

- a. #Xugíin [NP ejen [RC tsí nu-sian ]] ñajuuñ ejen  
all.AN children COMP.AN IPFV.PL-dance be.3PL children  
  
me'phaa.  
Me'phaa  
'All of the children who are dancing are Me'phaa.'
- b. Kási xugíin [NP ejen [RC tsí nu-sian ]] ñajuuñ ejen  
almost all.AN children COMP.AN IPFV.PL-dance be.3PL children  
  
me'phaa.  
Me'phaa  
'Almost all of the children who are dancing are Me'phaa.'
- c. Chím̪ba'iin [NP ejen [RC tsí nu-sian ]] ñajuuñ ejen  
some.AN children COMP.AN IPFV.PL-dance be.3PL children  
  
me'phaa.  
Me'phaa  
'Some of the children who are dancing are Me'phaa.'
- d. #[<sub>FR</sub> Tsáa ñajuuñ nu-sián ] ñajuuñ ejen me'phaa.  
who be.3SG IPFV.PL-dance be.3PL children Me'phaa  
'Those who are dancing are Me'phaa.' (Lit., 'Who is dancing are Me'phaa.')
- e. [<sub>FR</sub> Tsáa ñajuuñ nu-sian ] ñajuuñ ejen me'phaa  
who COP.3SG IPFV.PL-dance be.3PL children Me'phaa  
  
gajm-í ejen rene.  
with-3PL children Mixtec  
'Those who are dancing are Me'phaa and Mixtec.' (Lit., 'Who is dancing are Me'phaa and Mixtec.')

The utterance in (41a) is infelicitous because the universal quantifier *xugíin* 'all.an' triggers a maximal interpretation whose condition is not met given this particular context. The utterance can be rescued by adding a modifier like *kási* 'almost' to restrict the quantification (41b), or to use an existential quantifier like *chím̪ba'iin* 'some' (41c), which does not carry a maximal reading. Notably, the Max-FR in (41d) patterns like (41a) in that it is also infelicitous in this specific context. This is because it must be interpreted maximally. If the context were to change, however, and all five of the children dancing in the festival were Me'phaa, then the utterance in (41d) would be

perfectly appropriate. Similarly, this is why the Max-FR given in (41e) is felicitous: the conjunct *ejen me'phaa gajmí ejen rene* ‘Me'phaa and Mixtec children’ provides the grounds for the constituent *tsáa ñajuun nusián* ‘(those) who are dancing’ to be interpreted maximally.

As is also common with FRs cross-linguistically, Me'phaa Max-FRs have a definite interpretation. Evidence for this comes from coreference under ellipsis (see Caponigro & AnderBois this volume).

- (42) a. Ni-ndxákhon jm-áa Márta [NP táta [RC tsí ni-t-iy-áa]].  
PFV-3SG.talk with-3SG Marta man COMP.AN PFV-2SG-see-3SG  
Xkua'nii má' Félix mangaa.  
so MA Félix do.too  
‘Marta talked with the man that you saw. So did Félix.’ (= Marta and Félix spoke with the same man)
- b. Ni-ndxákhon jm-áa Márta **mbáa** [NP táta [RC tsí ni-t-iy-áa]]. Xkua'nii má' Félix mangaa.  
PFV-3SG.talk with-3SG Marta INDF-AN man COMP.AN  
PFV-2SG-see-3SG so MA Félix do.too  
‘Marta talked with a man that you saw. So did Felix.’ (= Marta and Félix each spoke with a different man)
- c. Ni-ndxákhon jm-áa Márta [FR **tsáa** ni-t-iy-áa]. Xkua'nii má'  
PFV-3SG.talk with-3SG Marta who PFV-2SG-see-3SG so MA  
Félix mangaa.  
Félix do.too  
‘Marta talked with who you saw. So did Félix.’ (= Marta and Félix spoke with the same person)

The examples in (42) all involve verb phrase ellipsis (VPE). In Me'phaa, VPE is signaled by replacing the elided constituent with *mangaa* ‘do too’. The rationale for using VPE as a diagnostic for definiteness is as follows. Since VPE (like other forms of ellipsis) triggers ellipsis identity, the interpretation of the components in the elided constituent in each example above should depend on the material in the antecedent. Thus, in a context where the headed relative clause in (42a) has a definite interpretation, the meaning of *Xkuá'ni má' Félix mangaa* ‘So did Félix’ is that Félix talked to the very person that Marta conversed with. In other words, the headed relative clause is coreferential with the elided

constituent corresponding to the person Félix talked to. On the other hand, the addition of the indefinite article in (42b) triggers a different reading, which blocks coreference. That is, in (42b) Marta talked to a person that you saw and Felipe talked to a person that you saw, but the individuals talked to are nonetheless different people. Thus, the (in)definiteness in the antecedent provides the basis for interpreting the referent in VPE. This is significant for establishing that Max-FRs are definite because in (42c), the Max-FR *tsáa nityáa* ‘who you saw’ patterns semantically like a definite: in this case, just as with (42a), the only available interpretation is that the person that Félix spoke with is the same as the person that Marta talked to.

#### 4.1.2. Existential Free Relative Clauses in Me'phaa

Existential FRs (Ex-FRs) are present in Me'phaa, but they are limited. The language has existential predicates asserting existence like the inanimate existential *rígaa* or non-existence with the negative inanimate existential *ndqaa*. They usually take bare nominals as their complements and existentially quantify over them, as shown in (43) below.

- (43) a. Xó **rígaa** ya'duun waboo drégoó rundú xí na-xkidx-aa'.  
 but EXIST.INAN soup sticky POSS turkey if IPFV-be.hungry.2SG  
 ‘There’s still turkey mole if you’re hungry.’
- b. A-thá-ne mbá akiqan'. {**Nanguá rígaa**}/**Ndaa**  
 IMPER-2SG-do INDF.INAN heart NEG EXIST.INAN/NEG.EXIST.INAN  
 ya'duun waboo drégoó rundú. Ne-phónē=xo' xúgíi.  
 soup sticky POSS turkey PFV-PL.eat=1PL.EXCL all  
 ‘I’m sorry. There’s no more turkey mole. We ate it all.’
- c. **Ndaa** kafé.  
 NEG.EXIST.INAN coffee  
 ‘There’s no coffee.’

Existentials involving animates can be introduced by one of four markers, depending upon the status of the elements as affirmative/negative and singular/plural:

- Affirmative Animate: *xtáa*
- (44) a. **Xtáa** (mbá-a) migi-á' (tsí) na-ndo'  
 EXIST.AN INDF-AN friend-2SG COMP.AN IPFV-3SG.want  
 ga-'y-áa'.  
 POT-3SG-see-2SG  
 ‘There’s a friend of yours who wants to see you.’

- Negative Animate: *ndawaa*
- b. **Ndawaa** ni-*mbá-a*<sup>32</sup> gejío.  
 NEG.EXIST.AN NEG-INDF-AN here  
 'There's no one here.'
- Affirmative Animate Plural: *jíwga'*
- c. **Júwa'** wípí.  
 EXIST.AN.PL butterfly  
 'There's butterflies.'
- Negative Animate Plural: *ndawiin*
- d. **Ndawiin** wípí.  
 NEG.EXIST.AN.PL butterfly  
 'There aren't any butterflies.'

Only a very restricted subset of *wh*-expressions can form Ex-FRs, i.e., can introduce FRs occurring in the complement position of existential predicates or with existential markers: the *wh*-word for ‘where’ (45a), the one for ‘which’ (45c), and the one for ‘how many/much’ (45b) although with further restrictions. For example, (45b) is a polar interrogative clause containing an Ex-FR requiring a yes/no response.

- (45) *where*
- a. Ríga [Ex-FR **náá** me-dxo'].  
 EXIST.INAN where IRR-2SG.go  
 'There's somewhere you can go/ are going.'
- how many*
- b. (Á) Jówee' [Ex-FR **nguáth-iin** xtíla xtá'-d-iin rá].  
 EXIST.AN.PL how.many-AN chicken 2SG-have-3PL RA  
 'Are there a few chickens that you have?'  
 \*'There is some number of chickens that you have.'
- which*
- c. Ríga [Ex-FR **náá rí** ne'-ne mójón Julieta ].  
 EXIST.INAN which COMP.INAN PFV-3SG-make good Julieta  
 'There is something that Julieta made.'

Other *wh*-expressions in the language, however, such as *ndénjgo* ‘why’, cannot form Ex-FRs:

<sup>32</sup> See Duncan (under review) for detailed discussion of Me'phaa indefinites.

- (46) *\*Ríga why [Ex-FR ndéjngó me-dxó' ].*  
 EXIST.INAN why IRR-2SG.go  
 (Intended: 'There is a reason why you can go.')

The form in (46) can be recovered, however, if the argument of the existential is a headed relative.<sup>33</sup>

- (47) Ríga [Ex-FR numuu me-dxó' ].  
 EXIST.INAN reason IRR-2SG.go  
 'There is a reason you can go/for you to go.'

As with headed relative clauses and Max-FRs, *dí(ne)* 'what' is illicit in an Ex-FR:

- (48) *\*Ríga what [Ex-FR dí(ne) nandoo ma-r-a'-dá ].*  
 EXIST.INAN what can IRR-2SG-2SG-have  
 'There is something you can have.'

And, as also seen above with-FRs, we find mixed judgments on Ex-FRs with *tsáa* 'who':

- (49) a. *\*Xtáa who [Ex-FR tsáa (tsí) na-ka ].*  
 EXIST.AN who COMP.AN PFV-go.3SG  
 (Intended: 'There is someone who left.')  
 b. Xtáa [Ex-FR tsáa ni-'-ni ni-kix-úún ].  
 EXIST.AN who PFV-3SG-do.3AN.SUBJ PFV-jump-1SG  
 'Someone made me jump.' (Lit. 'There is who made me jump.')

In addition to the existential predicates listed above, it is also possible for an Ex-FR to serve as the argument for the possessive predicate (Izvorski 1998) 'have', as seen in (50).

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<sup>33</sup> We take (47) to be a headed RC without a complementizer.

- (50) G-ú'-d-aq [Ex-FR] tsáa na-ndxákhuun gajm-é' ído  
 have-1SG-have-3SG who IPFV-talk with-1SG>3SG when  
 rí jína áku-in']. Xkuá'nii má' Juan mangaa.  
 REL.INAN dark heart-1SG so MA Juan do.too  
 'I have someone to talk to when I'm sad. Juan does too.' (= I have a person that I talk to when I'm sad, and Juan has a different person that he talks to when he is sad.)

Even though fewer *wh*-expressions occur in Ex-FRs in Me'phaa, the above examples all show that Ex-FRs bear a formal affinity to Max-FRs and *wh*-interrogative constructions. Semantically, though, Max-FRs and Ex-FRs diverge with respect to (in)definiteness: whereas we established above that, as with other langauges, Max-FRs have a definite interpretation, Ex-FRs are indefinite. Again, VPE can be a useful diagnostic for this, as (50) shows. In this example, coreferentiality does not obtain, which is what we expect for indefinite antecedents. Accordingly, the meaning of (50) is such that both Juan and "I" each have potentially different people they talk to when they are sad. This interpretation is forced by the fact that Ex-FRs must be treated as indefinite expressions, a topic deserving further investigation in future work.

The distributional data for *wh*-expressions in Ex-FRs are summarized in Table 4 below.

Table 4  
 Distribution of *wh*-words in Ex-FRs in Me'phaa

	who	what	where	when	how	why	what/ which	how much/ how many
Me' phaa	*/✓	*	✓	*	*	*	✓	✓

#### 4.1.3. Free Choice Free Relative Clauses in Me'phaa

Me'phaa also possesses free choice free relatives (FC-FRs), which appear in argument and adjunct positions as do other FRs. FC-FRs are introduced by the free choice (FC) marker *ajndo*, which has three variants: *ajndo*, *asndo*, and *a'ndo*. These forms appear to be in free variation, with *ajndo* and *asndo* occurring most commonly in the data we have collected. *Ajndo* can aslo be used as an independent word outside FC-FRs with the meaning of 'until' (cf. example (ix) in fn. 25 above, which shows such use in Me'phaa

from Malinaltepec). Most *wh*-expressions can combine with *ajndo* and introduce a FC-FR. Examples are given in (51a-f).

- where*
- (51) a. Na-ka [FC-FR **asndo** náá i-dxo'].  
     IPFV-1SG.go FC where I-2SG.go  
     'I'm going wherever you go.'
- which*
- b. Ma-xn-aa [FC-FR **ajndo** náá rí na-nd-áa'].  
     IRR-1SG-give-2SG FC which COMP.INAN IPFV-want-2SG  
     'I'll give you whichever (one) you want.'
- c. [FC-FR **Ajndo** náá tsí ndá'-yo ma'gá náá gu'wa  
     FC which COMP.AN IPFV-3SG-need IRR -go.3SG PREP house  
     rí nangujwá ] mä-gajnáa nachá.  
     COMP.INAN sell IRR-3SG.leave quickly  
     'Whoever needs to go to the store should leave quickly.'
- how many*
- d. Juan na-ndoo [FC-FR **ajndo** nguátha guma gúkhó  
     Juan IPFV-want.3SG FC how.many.INAN tortilla hard  
     rí g-é'-do María ].  
     COMP.INAN have-3SG-have Mary  
     'Juan wants however many tacos Maria has'
- who*
- e. [FC-FR **Ajndo** tsáa ndá'-yo ma'gá náá gu'wa  
     FC who IPFV-3SG-need IRR -go.3SG PREP house  
     rí nangujwá ] mä-gajnáa nachá.  
     COMP.INAN sell IRR-3SG.leave quickly  
     'Whoever needs to go to the market should go quickly.'
- f. Mu'-gua=ló' [FC-FR **ajndo** náá óra i'-théen ikháa ].  
     IRR-leave=1PLINCL FC which hour POT-3SG-say 3SG  
     'We can go whenever she says (so).'

We note in passing that it is possible to form FC-FRs based on the cleft construction, too (52b):

- (52) a. Me'-kho má' [FC-FR **asndo** náá rí na-ra-tse ].  
     IRR-1SG.eat MA FC which COMP.INAN IPFV-2SG-buy  
     'I'll eat whatever you're buying.'

- b. Me'-kho má' [FC-FR **ando** náá ñajun rí na-rá-tse ].  
 IRR-1SG.eat MA FC which COP COMP.INAN IPFV-2SG-buy  
 'I'll eat whatever it is that you're buying.'

Me'phaa also has “free adjunct clauses” that look like FC-FRs (Izvorski 2000). They occur in the periphery of the matrix clause and are not linked to any element in the matrix clause (e.g., demonstrative or resumptive pronoun):

- (53) a. [FC-FR **Ajndo** náá ma'-ga Catalina] ma-táanga náchá.  
 FC where IRR-go.3SG.AN Catalina IRR-return.3SG.AN quickly  
 'Wherever Catalina goes, she will return quickly.'
- b. [FC-FR **Ajndo** ndé'jngó rí ná-ka Catalina] g-é'-doo  
 FC why COMP.INAN IPFV-go.3SG Catalina have-3SG-have  
 juma rí ma'-n-ii.  
 idea COMP.INAN IRR-3SG-do-3AN.SUBJ  
 'For whatever reason Catalina leaves, she has reason to do it.' (Lit., 'Whyever  
 Catalina leaves, she has a reason to do it.')

In addition, it is also possible for a FC wh-expression to occur on its own without introducing a relative clause, for example, as an argument (54a) or as a standalone response to a question (54b):

- (54) a. Ikhúún ma-goxnúun **ajndo** náá rí.  
 1SG IRR-1SG.count FC which COMP.INAN  
 'I'll read whatever.'
- b. Q: Náá magoo ma'-gá.  
 where it.is.possible IRR-go.1SG  
 'Where can I go?'
- R: **Ajndo** náá.  
 FC where  
 'Wherever.'

As with headed relative clauses and other FR types, we again find that *ndíne* ‘what’ has a more restricted distribution. As noted above, FC *wh*-expressions such as *ajndo ná rí* ‘whichever’ can occur in either a non-cleft or cleft FC-FR. This contrasts with the distribution of *ajndo ndíne* ‘whatever’, which cannot surface in a non-cleft construction. For some speakers we have worked with, *ajndo ndíne* can indeed be used in a FC-FR, but

only if it occurs in a cleft, regardless of whether it is in argument position (55a) or functioning as a standalone response (55b).

- (55) a. Me'-kho [FC-FR **asndo** **ndíne** \*(**ñajun**) (rí) na-tso ikháan ].  
           IRR-1SG.eat     FC      what     COP     COMP.INAN IPFV-2SG.eat 2SG  
           'I'll eat whatever you're eating.'
- b. **Ajndo** **ndíne** \*(**ñajun=né**).  
       FC      what     COP=OBJ.INAN  
       'Whatever.'

The fact that *ndíne* can occur in an FC-FR at all is of interest given its prohibition in other FR types in the language, and its inability to occur in embedded contexts.

A key semantic property of FC-FRs cross-linguistically is that they can be used to convey ignorance or indifference inferences (Dayal 1997, von Fintel 2000, Caponigro 2003, Tredinnick 2005). FC-FRs in Me'phaa exhibit the same inferential pattern. For example, consider the following utterance in context:

- (56) Context: The speaker walks into a friend's house and notices that the friend must be cooking, but does not know what is being cooked.

i[FC-FR **Ajndo** **náá** **rí** na-tra-jii ] phú ndatauun!  
       FC      which COMP.INAN IPFV-2SG-cook/boil very smell.sweet  
       'Whatever you're cooking smells great!' (ignorance)

Here, the FC-FR *ajndo náá rí* 'whichever' corresponds to an ignorance reading because it indicates that the speaker has no knowledge of what the friend is cooking. On the other hand, the exclamation in (56) becomes infelicitous if the speaker either knows exactly or even has some idea about what is being cooked. In such a context, the following would be used instead.

- (57) i[RC (\*Anjdo **náá**) Rí na-tra-jii ] phú ndatáun!  
       FC      which COMP.INAN IPFV-2SG-cook very smell.sweet  
       'What you're cooking smells great!'

In (57), *ajndo náá* must be obligatorily absent. The indifference reading can be seen in (58):

- (58) Context: The speaker sends one of their friends to get something at a nearby village and tells the friend the following.

A-ra-tháan [FC-FR (**ajndo**) tsáa/tsí gini na-ta-y-áa].  
 IMPER-2SG-say FC who/COMP.AN first IPFV-2SG-see-3SG  
 ‘Talk to whoever you see first.’ (indifference)

One point of interest regarding our experience eliciting indifference readings is that the free-choice marker *ajndo* is either not required (as indicated in (58)), or simply is not given at all. In contexts where the ignorance reading should be most salient, *ajndo* freely surfaces; on the other hand, when a context is constructed that expects an indifference reading, *ajndo* is generally absent. In addition to (58), the following example shows an utterance interpreted as “free-choice” with an indifference reading, though the FC-FR morpheme *ajndo* is not present to contribute to such a reading.

- (59) Ndi-yá [RC rí nde-yo gini ].  
 PFV-1SG-take/receive COMP.INAN PFV-1SG.see first  
 ‘I grabbed what I saw first.’ (indifference)

Returning to the point of *wh-the-hell* questions introduced above in (18-19), we also find that *ajndo*-marked *wh*-expressions can form *the-hell* constructions, such as the following imperative:

- (60) ¡A-yú **ajndo** náá gixa!  
 IMPER-go FC where devil  
 ‘Go wherever the hell [you want]!’

In cases like (60), beyond the added force of the utterance *gixa!* ‘devil’ provides, there is a flavor of indifference, as is the case in a language like English. Importantly, what this suggests is that *ajndo* can indeed contribute to both the semantics of free-choice as well as an indifference reading.

In summary, we find that, among FRs, *wh*-expressions have the most liberal distribution in FC-FRs, and *ajndo* can essentially occur with the most of the words in the *wh*-paradigm (see Table 5). The one restriction again seems to involve *ndi(ne)* ‘what’; in this case, ‘what’ is permissible in a cleft FC-FR, but impermissible in a non-cleft FC-FR. Semantically, *ajndo* most saliently triggers an ignorance reading, and speakers tend to resist associating an indifference reading with *ajndo* FC-FRs, though it does seem possible.

Table 5  
Distribution of *wh*-words in FC-FRs in Me'phaa

	who	what	where	when	how	why	what/ which	how much/ how many
Me'p haa	✓	* (non- cleft) ✓ (cleft)	✓	?	✓	✓	✓	✓

#### 4.1.4. Interim Conclusions

We have shown that Me'phaa has all three main kinds of FRs that are found crosslinguistically—Max-FRs, Ex-FRs, and FC-FRs, although with different degrees of productivity, as summarized in Table 6 below. Some *wh*-expressions are attested in all kinds of FRs—*náá* ‘where’ is an example. Others, like *dí(ne)* ‘what’, are much more restricted. This heterogeneous distribution may be related to the heterogeneous morphology that is found in the *wh*- paradigm, or the fact that animacy factors so significantly in Me'phaa grammar, with inanimate arguments not always being available for certain morphosyntactic processes (e.g., verbal agreement). But, we leave this topic for future exploration.

Table 6  
Distribution of *wh*-words across *wh*- clauses in Me'phaa

	who	what	where	when	how	why	what / which (+ N)	how much /how many
Max-FR	✓	*	✓	✓	✓	✓	✓	✓
Ex-FR	*/✓	*	✓	*	*	*	✓	✓
FC-FR	✓	* (non- cleft) ✓ (cleft)	✓	?	✓	✓	✓	✓
<i>wh</i> - interrogative	✓	✓	✓	✓	✓	✓	✓	✓
Headed relative	✓/*	*	✓	✓	✓	*	*	*

## 4.2. Other headless relative clause types

In this section, we briefly touch upon the issue of headless relative clauses other than FRs, meaning those that have no (overt) nominal head, nor are they introduced by a *wh*-expression. Me'phaa has Light-headed Relative Clauses (Light-headed RCs), but is very restrictive in the set of elements that can serve as light heads. Me'phaa has indefinite, but not definite determiners; thus, it lacks Light-headed RCs introduced by definite determiners. We have not encountered any instances of Light-headed RCs introduced by demonstratives; grammaticality judgments based on constructed examples in elicitations suggest that these are also not possible in the language. An example of this is seen with the pair of sentences in (61), where (61a) shows an object relative clause, (61b) shows a failed attempt at replacing the head noun and complementizer with a demonstrative, and (61c) shows a failed attempt at placing a demonstrative following the relative clause.

- (61) a. Ikhúún ni-ts-ii xtíla tsí ni-ngojw-aa ikhaaq.  
       1SG PFV-1SG.buy-3SG chicken COMP.AN PFV-3SG.sell-3SG 3SG  
       'I bought the/that chicken that she sold.'
- b. \*Ikhúún ni-ts-ii **ts-úkho** (tsí) ni-ngojw-aa  
       1SG PFV-1SG.buy-3SG AN-DEM.DIST COMP.AN PFV-3SG.sell-3SG  
       ikhaaq.  
       3SG  
       (Intended: 'I bought that<sub>DEM</sub> s/he sold.')
- c. \*Ikhúún ni-ts-ii (tsí) ni-ngojw-aa ikhaaq  
       1SG PFV-1SG.buy-3SG COMP.AN PFV-3SG.sell-3SG 3SG  
       ts-úkho.  
       AN-DEM.DIST  
       (Intended: 'I bought that<sub>DEM</sub> s/he sold.')

On the other hand, Me'phaa does have Light-headed RCs introduced by indefinite determiners, which have both animate and inanimate forms:

- (62) a. **Mbá-a** nána ni-ganú.  
       INDEF-AN woman PFV-arrive.3SG  
       'A woman arrived.'
- b. **Mbá** iyee' ni-ganú.  
       INDEF.INAN paper PFV-arrive.3SG  
       'A letter arrived.'

Indefinite articles may also occur without an overt nominal restriction:

- (63) Ni-'-tháán María **mbá**.  
 PFV-3SG-write María INDF.INAN  
 'María wrote something.'

Examples of Light-headed RCs with indefinite article heads include:

- (64) a. Rígá mbá [RC \*(rí) ni-xn-úu María ].  
 EXIST.INAN INDF.INAN COMP.INAN PFV-give.3SG María  
 'There is something that hit María.'
- b. Xtáa mbá-a [RC tsí ndá'-ñ-áa ].  
 EXIST.AN INDF-AN COMP.AN IPFV-3SG-see.APPL-2SG  
 'There is someone looking for you.'

An additional point of interest is that the string *mbá-a+tsí* can occur *without* a following relative clause:<sup>34, 35</sup>

- (65) Ni-'-thán **mbá-a** tsí mbá.  
 PFV-3SG-say INDF-AN COMP.AN INDF.INAN  
 'Someone said something.'

This suggests that, in this case, the string *mbá-a+tsí* is a frozen form. This is further supported by the fact that the string seems to be able to move as a constituent and appear in preverbal position:

- (66) **Mbá-a** tsí ni-'-thán mbá.  
 INDF-AN COMP.AN PFV-3SG-say INDF.INAN  
 'Someone said something.'
- 

<sup>34</sup> Steve Marlett (p.c.) has remarked that the string *mbáa tsí* may involve an elided relative clause.

<sup>35</sup> The examples in (65) and (66) may seem odd out-of-the-blue, both for the Me'phaa sentence and the English equivalence. The context for eliciting these was as follows:

A parent is trying to put their children to bed, and has told the children numerous times that they need to be quiet, not talk, and go to sleep. Later, the parent hears at least one of the children talking. Upon entering the children's room, the parent asks, *Tsáa ni'than* 'Who talked?'. One of the children responds: *Nimbáa* 'No one'. After a while, the children persist in saying that no one talked and the parent, frustrated, says, 'Someone said something'.

An alternative way to say this would be *Xtáa mbáa tsí nithán* 'There is someone who spoke', which illustrates a similar point even though *mbáa tsí* would be introduced by an existential.

We leave it as an open problem here, but if examples like (65-66) above do involve a frozen indefinite form like *mbá-a+tsí*, they are still exceptional in that they are the only cases of headed RCs we know of where the relativizer can be dropped (without a relative pronoun).<sup>36</sup>

In this same family of Light-headed RCs are those introduced by the negative indefinite, which has a *ni-* prefix.<sup>37</sup>

- (67) a. Ikhaa khafé (r-íge') ríphu ndaskó' **ni-*mbá***  
           FOC coffee INAN-DEM.PROX very delicious NEG-INDF.INAN  
           [ rí                         ní-ñä                         nakí ].  
           COMP.INAN PFV-taste.1SG PST  
           ‘This coffee is more delicious than any I have tasted before.’
- b. Thá-yo           **ni-*mbá-a***           [ tsí                         ni'-tó'-oo                 gu'wá ].  
           NEG-see.1SG NEG-INDF-AN COMP.AN PFV-enter-3SG house  
           ‘I didn’t see anyone who entered the house.’

At this point, it is unclear whether the negative indefinites are derived from the *mbá* indefinites or whether they merely have the same base, an issue that we leave for future investigation.

In addition to Light-headed RCs, Me'phaa has headless relative clauses without either a *wh*-expression or a light head. These are introduced solely by the inanimate relativizer/complementizer *rí* or the animate relativizer/complementizer *tsí*. In terms of surface strings, then, headless relative clauses of this type simply look like headed relative clauses without an overt head noun. Examples are given in (67) and (68).

- Inanimate*
- (68) a. Ma-xn-aa [RC \*(*rí*) na-nd-áa' ].  
           IRR.1SG-give-2SG COMP.INAN IPFV-want-2SG  
           ‘I’ll give you what you want.’
- 

<sup>36</sup> There is much more to say about indefinites in Me'phaa. See Duncan (2013) and Duncan (under review) for further details.

<sup>37</sup> Mark Weathers (p.c.) suggests that (67a) is biclausal. If so, a more appropriate translation might be ‘This coffee is delicious. Nothing that I’ve tasted before...’.

- b. Ni-xka=má=xo' [RC \*(rí) ni-ngáteg-a'].  
 PFV-find=MA=1PL.EXCL COMP.INAN PFV-lose-2SG  
 'We found what you lost.'
- (69) *Animate*
- a. Ni-ts-i [RC \*(tsí) ni-ra-th-ún' mä-ts-i ].  
 PFV.1SG-buy-3SG COMP. AN PFV-2SG-say-1SG IRR.1SG-buy-3SG  
 'I bought what (animate) you told me to buy.'
- b. Ni-ts-iin [RC \*(tsí) ni-ra-th-ún' mä-ts-iin ].  
 PFV.1SG-buy-3PL COMP. AN PFV-2SG-say-1SG IRR.1SG-buy-3PL  
 'I bought what (animate) you told me to buy.'
- c. Ni-rax-ii [RC \*(tsí) ni-to'-oo ].  
 PFV.1SG-greet-3AN.SUBJ COMP. AN PFV-enter-3SG  
 'I greeted who entered.'

The previous examples of this last kind of headless relative clauses are all interpreted as referential and maximal, like Max-FRs. However, these are episodic, past tense clauses. These headless relatives can also be interpreted as indefinite when they occur in existential clauses:

- (70) Xtáa [RC tsí na-ka ].  
 EXIST.AN COMP. AN IPFV-3SG.go  
 'There is someone who is leaving.'

Examples from texts in the Malinaltepec variety further show that these headless relative clauses in Me'phaa can be interpreted as non-specific indefinites:

- (71) a. Mbá mi'tsú ika indií' ágá'yá [ rí  
 INDF.INAN time PROG.go.3AN.SUBJ tiger IRR.look.for COMP.INAN  
 mékho ].  
 IRR.eat.3AN.SUBJ  
 'One time the tiger was looking for something to eat.' (adapted from Weathers et al. 2014, line 1)
- b. Ndäa [ rí me'kho gajmí' ijin' ].  
 NEG.EXIST COMP.INAN eat.IRR.3SG with.1SG>3PL children.1SG  
 'I don't have anything that I can eat with my children.' (adapted from Weathers, Weathers, and Marlett 2012, line 33)

In this section, we have shown that Me'phaa has both Light-headed RCs and headless RCs without a light head or a *wh*-expression. For Light-headed RCs, we have only found

cases in which the light head is a type of indefinite determiner. Headless relative clauses consisting of just the relativizers followed by the rest of the clause (with a gap) have been shown to be compatible with both definite and indefinite interpretations. This highlights the issue of exactly how the interpretation of these constructions is determined.

## 5. Conclusions

In this chapter, we have taken a broad look at a number of distinct, but related RCs in Me'phaa. We began by examining *wh*-interrogative clauses and headed RCs. Me'phaa headed RCs only allow a subset of *wh*-items to function as relative pronouns. We then turned to varieties of headless RCs and showed that, overall, Me'phaa has two headless RC types. The first type—FRs—are introduced by *wh*-items. Within these, Me'phaa has Maximal, Existential, and Free-choice FRs. Each of these is morphologically, syntactically, and semantically distinct. Maximal FRs are formally identical to *wh*-interrogative clauses. The Existential FRs are almost identical to *wh*-interrogative clauses except that they must serve as arguments of existential or possessive predicates, with existential predicates occurring at the left edge of the clause. Semantically, Existential FRs are interpreted as indefinites. This contrasts with Maximal FRs in the language, which were shown to be interpreted maximally, like definites. The third type of FR, Free-choice FRs, are morphologically complex and license both ignorance and indifference inferences found for constructions of this type in other languages. Me'phaa also possesses a second type of headless RC, which does not involve *wh*-expressions. These Light-headed RCs were shown to be restricted to indefinite expressions. Me'phaa also has headless RCs introduced only by the relative markers, which we have suggested are complementizers as opposed to relative pronouns in all RC constructions where they occur. The interpretation of the very headless RCs was shown to vary according to context, in that they could be interpreted as definite or narrow-scope/non-specific indefinites. In terms of the distribution of *wh*-expressions across these relative clause types, we find that only ‘where’ occurs in all relative clause types; other *wh*-expressions are available to varying degrees depending on the specific construction under investigation. Regarding the ordering of RC type based on the availability of *wh*-expressions, we find the following (from increased to decreased availability): Maximal FRs > Free-choice FRs > Headed RCs | Existential FRs. One common pattern across all RC types is that ‘what’ seems robustly impermissible. While we have not yet identified an explanation for this pattern, we suspect that it has to do with the unique role

that animacy plays in Me'phaa grammar. Me'phaa thus presents a wide variety of relative clause constructions that vary in linguistically interesting ways, while also sharing key properties that are cross-linguistically attested.

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