

Modal indefinites and semantic variation: Lessons from Chuj*

Luis Alonso-Ovalle
McGill University

Justin Royer
Université de Montréal

Abstract Recent work proposes that modal auxiliaries project their domains from an event variable, their ‘anchor’ (Hacquard 2006, 2010, Kratzer 2013). Based on the Spanish modal indefinite *uno cualquiera*, Alonso-Ovalle & Menéndez-Benito (2018) conclude that modal indefinites do too. This paper argues that *yalnhej* DPs, a type of modal indefinite in Chuj, an understudied Mayan language, support this conclusion. These DPs are existential quantifiers that convey an at-issue modal component, like *uno cualquiera*. They pattern with *uno cualquiera* in conveying random choice modality with volitional verbs, but only when they are tied to internal argument positions. *Yalnhej* DPs depart from *uno cualquiera* in that they can also convey epistemic modality. They also depart from other epistemic modal indefinites insofar as they can, but do not have to, describe situations where the speaker knows that the whole domain satisfies the existential claim. Our analysis of *yalnhej* DPs builds upon the analysis of *uno cualquiera* in Alonso-Ovalle & Menéndez-Benito 2018, from which it departs in assuming that *yalnhej* DPs tolerate anchors with epistemic content. Furthermore, in line with other Chuj DPs, *yalnhej* DPs are not upper bounded. This results in an epistemic component that does not convey speaker ignorance when the whole domain satisfies the existential claim. Finally, unlike *uno cualquiera*, *yalnhej* DPs do not have an interpretation conveying that the witness of the existential claim is unremarkable. We link this fact to a lack of predicative uses, in support of the view that the random choice and ‘unremarkable’ interpretations stem from an ambiguity, as anticipated in Alonso-Ovalle & Menéndez-Benito 2018 and Alonso-Ovalle & Royer 2021.

Keywords: Modal indefinites, modal anchors, random choice modality, Chuj

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1 Introduction

Modality spans across syntactic categories (Kratzer 1981), but most work in semantic theory has traditionally focused on the verbal domain. Recently, however, modal expressions from other syntactic categories have started to receive considerable attention, and the recent shift towards the study of semantics in a wider set of languages has enabled important findings into our cross-linguistic understanding of modality (see, for instance, Arregui et al. 2017). These trends have led to deep questions about the nature of modal expressions in general, as well as the kinds of modal distinctions that can be observed both within and across languages. Focusing on modals in the nominal domain, the following are some of the big picture questions that still call for responses:

- (1) Q1. What types of modal flavour can DPs express?
- Q2. How is the modal flavour of modal DPs determined?
- Q3. What are the sources of semantic variation in the expression of DP modals?

In the verbal domain, modals can express a wide range of flavours. The extent to which the modal flavours of modal DPs parallel those found in the verbal domain is an open question. Likewise, in the verbal domain, modal flavour seems to correlate with syntactic position: epistemic modals seem to scope higher than circumstantial ones (Brennan 1993, Hacquard 2006). It remains to be determined whether the syntactic position of modal DPs also affects their possible interpretations and, if so, whether modal flavours are determined uniformly across categories.

Within the class of modal DPs, modal indefinites have been reasonably well studied (see Alonso-Ovalle & Menéndez-Benito 2015, and references therein), and are therefore well suited to make progress in establishing crosscategorical comparisons. This paper looks at modal indefinites with the aim of making progress on the questions posed above. We focus on *yalnhej* DPs, a type of modal indefinite found in Chuj, an understudied Mayan language spoken by approximately 80,000 speakers in Guatemala and Mexico (Piedrasanta 2009, Buenrostro 2013; see also Kotek & Erlewine 2019 and Royer 2021 for previous descriptions of *yalnhej* DPs).

Like other modal indefinites, we show in this paper that *yalnhej* DPs convey (a) existential quantification over individuals, and (b) a modal component. The sentence in (2), for instance, conveys (a) that Xun bought a book or a group of books, and (b) that he *could* have bought *any* book or group of books.¹

¹ Detailed contexts supporting our claims will be provided in the discussion of the data in Section 3. Since there are no appropriate translations of *yalnhej*-DPs in English, we do not attempt to provide a full English translation in examples; we rely instead on indirect paraphrases. We use the following

- (2) [**Yalnhej tas** libro'-al] ix-s-man waj Xun.
YALNHEJ WHAT book-NML PFV-A 1 S-buy CLF Xun
'Xun bought *yalnhej what* book(s).'

In responding to Q1 above, we show that *yalnhej*-DPs can convey two modal flavours. The first type, which we call 'random choice modality' (Alonso-Ovalle & Menéndez-Benito 2018), conveys information about the intentions of an agent: (2) can convey that Xun bought a book at random. When the sentence conveys random choice modality, the speaker may know which book Xun bought. The second type of modal flavour, which we will call 'epistemic', conveys information about what an individual believes. Consider, for instance, the sentence in (3) below:

- (3) [**Yalnhej mach**] ix-chanhalw-i t'a k'inh.
YALNHEJ who PFV-dance-IV PREP party
'*Yalnhej who* danced at the party.'

The sentence in (3) can describe three types of situations: (i) situations where a single contextually relevant person danced, (ii) situations where a group of people not containing all contextually relevant people danced, and (iii) situations where all contextually relevant people danced. In the first two types of situations, but not on the third, the sentence conveys that the speaker does not know who danced.

Other modal indefinites also express random choice and epistemic modality. Some, like Spanish *uno cualquiera* can only express random choice modality. Others, like German *irgendein*, can express both types of modality, like *yalnhej*-DPs do. The paper situates *yalnhej*-DPs with respect to other modal indefinites with similar modal components. We will see that there are similarities and differences. The discussion will be relevant to all questions in (1) above.

First, we show that the modal component of *yalnhej* DPs (under any of its flavours) is at-issue. In this respect, *yalnhej* DPs pattern with other modal indefinites that also convey random choice modality, like Spanish *uno cualquiera* (Alonso-Ovalle & Menéndez-Benito 2018), but contrast with Spanish *algún* (Alonso-Ovalle & Menéndez-Benito 2010) or German *irgendein* (Kratzer & Shimoyama 2002), whose modal component is not at-issue, and possibly also with the modal component of English *wh-ever* free relatives under their epistemic interpretation (von Stechow 2000).

abbreviations in glosses: A: "Set A" (ergative/possessive); ADV: adverbial particle; ALGÚN: Spanish *algún*; B: "Set B" (absolute); CLF: noun classifier; CUALQUIERA: Spanish *cualquiera*; DEM: demonstrative; DIR: directional light verb; DTV: derived transitive; EMPH: emphatic marker; FOC: focus marker; FUT: future; INDF: indefinite; NML: nominal suffix; IPFV: imperfective; IRR: irrealis; IRGEND: German *irgend*; IV: intransitive; NEG: negation; NML: nominal suffix; PASS: passive; PFV: perfective; PL/P: plural; PREP: preposition; PRON: pronoun; PROSP: prospective aspect; S: singular; TV: transitive; 1: first person; 2: second person; 3: third person.

Second, the flavour of modality that *yalnhej* DPs express depends on their syntactic position, making them an ideal testing ground for Q2 above. When they are linked to internal arguments of volitional verbs, as in (2), *yalnhej* DPs can convey either random choice modality or epistemic modality, but when they are linked to external arguments, as in (3), they can only convey epistemic modality. Recent work proposes that modal auxiliaries project their domains of quantification from an event or an entity (a ‘modal anchor’) (Hacquard 2006, 2009, 2010, Kratzer 2013). Under Hacquard’s proposal, the modal anchor of modal auxiliaries is an event variable, which can get different values in different syntactic positions, explaining the correlation between syntactic position and interpretation. We propose that the same is true for *yalnhej* DPs. This follows Alonso-Ovalle & Menéndez-Benito’s analysis of the random choice component of *uno cualquiera*. However, as we will see, *yalnhej* DPs contrast with *uno cualquiera* in that they impose fewer restrictions on their anchors and can thus express more modal flavours in more syntactic configurations. That difference sets *yalnhej* DPs apart from *uno cualquiera*.

As anticipated in the discussion above, we will see that the existential claim made by *yalnhej* DPs is not upper-bounded, which sometimes gives the impression that they convey universal quantification: as mentioned above, sentences like (3), for example, are compatible with a scenario in which the speaker is aware that all people performed the action expressed by the verb, in this case dancing. The fact that *yalnhej* DPs are not upper-bounded sets them apart from other modal indefinites described in the literature, like *uno cualquiera*, *algún* or *irgendein*.

Finally, *yalnhej* DPs depart from *uno cualquiera* in one other respect. Besides expressing random choice modality, *uno cualquiera* can convey that the entity that satisfies the existential claim is unremarkable. Alonso-Ovalle & Menéndez-Benito (2018) argue that this stems from the fact that *uno cualquiera* is ambiguous. Alonso-Ovalle & Royer (2021) show that the Chuj modifier *komon*—also sometimes used to convey random choice modality—can likewise have an unremarkable interpretation, but that this interpretation is restricted to predicative positions or attributive uses within the DP (i.e., only semantic predicates give rise to the unremarkable interpretation). We show that *yalnhej* DPs do not have the ‘unremarkable’ interpretation of *uno cualquiera* or *komon* and hypothesize that this correlates with the fact that *yalnhej* DPs cannot be predicates. This provides support to the view that the two interpretations of *uno cualquiera* and *komon* derive from an ambiguity.

The paper is organized as follows: Section 2 provides some basic background on Chuj, Section 3 lays out the main empirical generalizations, Section 4 presents the analysis, Section 5 comments on the lack of ‘unremarkable’ interpretations, Section 6 identifies some points of crosslinguistic variation in the expression DP modality, and Section 7 concludes.

2 Background on Chuj

The data discussed in this paper are drawn from original fieldwork on Chuj, an under-documented Mayan language spoken in Guatemala and Mexico. Unless otherwise attributed, the data come from two principle sources: (i) elicitation, using standard methodology for semantic fieldwork, including mostly context-based acceptability judgements tasks (see e.g., Matthewson 2004, Bochnak & Matthewson 2020), as well as (ii) a corpus of Chuj texts available on the Archive of the Indigenous Languages of Latin America (ailla.utexas.org) (Mateo Pedro & Coon 2017).² The elicited data were collected over a period of seven years (2017-2024) in Guatemala, Mexico and Canada, with speakers of the San Mateo Ixtatán dialect of Chuj. All of the data contained in the paper were further corroborated with three speakers after its completion.

Like other Mayan languages, Chuj is a head-marking ergative-absolutive language that shows no case morphology on nominals. Following the tradition in Mayan linguistics (England 2001; Bennett et al. 2016; Aissen et al. 2017), we indicate ergative and absolutive marking with Set A and Set B morphemes on the verb stem. Set A (ergative) morphemes crossreference transitive subjects, as seen in (4a), whereas Set B (absolutive) morphemes crossreference transitive objects (4a) and intransitive subjects (4b). Note that third person Set B morphemes are null in Chuj and are thus not represented in glosses (see e.g., (5) below).

- (4) a. Ol-**ex-in**-k'ayb'ej ...
 PROSP-B2S-A1S-teach
 'I'll teach y'all ...'
- b. ... ol-**ex**-och t'a jun munlajel tik.
 PROSP-B2S-enter PREP one work DEM
 '... and you'll enter into this work.' (txt, CD300715)

In discourse neutral contexts, Chuj patterns with other Mayan languages (England 1991, Aissen 1992; Coon 2010, Clemens & Coon 2018, Little 2020) in showing verb-initial word order, generally instantiated as VOS (though VSO is possible under certain circumstances; see Royer 2022a). An example is provided in (5).³

² Contexts were provided in Spanish to speakers; translations from Spanish to English are our own.

³ For additional background on Chuj, including descriptive grammars of the language, see Hopkins 1967, 2021, Maxwell 1981, García Pablo & Domingo Pascual 2007, Buenrostro 2013, and Royer et al. 2022.

- (5) V O S
 Ix-y-il [winh icham] [ix ix].
 PFV-A3-see CLF elder CLF woman
 ‘The woman saw the elder.’

While VOS is the basic word order, Chuj arguments frequently appear in a preverbal position. As discussed in [Bielig 2015](#), [Royer 2021](#), and [Royer, Buenrostro & Jenks 2024](#) for Chuj, and [Aissen 1992, 2017b](#) more generally for other Mayan languages, preverbal arguments are associated with topics (6) and foci (7). While both topics and foci trigger the presence of the marker *ha*, glossed as “EMPH” here, the two are easily differentiated in Chuj. Topics trigger obligatory pronominal resumption postverbally (6). Foci, on the other hand, trigger no such resumption, and focused transitive subjects trigger obligatory agent focus morphology (*-an*) on the verb stem (7a) (see [Stiebels 2006](#), [Coon et al. 2014](#), [Aissen 2017a](#), [Coon et al. 2021](#) for more details on the agent focus construction).

- (6) a. *Subject topic*
 [_{Top} Ha ix ix] ix-y-il winh icham *(**ix**).
 EMPH CLF woman PFV-A3-see CLF elder PRON
 ≈ ‘As for the woman, she saw the elder.’
- b. *Object topic*
 [_{Top} Ha winh icham] ix-y-il *(**winh**) ix ix.
 EMPH CLF elder PFV-A3-see PRON CLF woman
 ≈ ‘As for the elder, the woman saw him.’
- (7) a. *Focused transitive subject*
 [_{Foc} Ha ix ix]_i ix-il-**an** winh icham *t_i*.
 EMPH CLF woman PFV-see-AF CLF elder
 ≈ ‘It’s the woman that saw the elder.’
- b. *Focused object*
 [_{Foc} Ha winh icham]_i ix-y-il *t_i* ix ix.
 EMPH CLF elder PFV-A3-see CLF woman
 ≈ ‘It’s the elder that the woman saw.’

In this paper, we will focus on *yalnhej*-DPs, a quantificational modal DP which always contains a *wh*-expression (*yalnhej+wh*). Quantification in Chuj, and Mayan languages more generally ([Henderson 2016](#)), remains relatively understudied. However, one interesting property of a subset of Chuj nominal quantifiers is that they tend to appear in preverbal position ([Royer et al. 2024](#)). Indeed, as main arguments of the verb (external or internal arguments), these quantificational DPs are strongly

preferred in the focus position, as is the case with *masanil* ‘all’ in (8). Furthermore, contrary to regular DPs (7) in focus/topic positions, such quantificational DPs do not appear with the emphatic marker *ha* ‘EMPH’, despite appearing preverbally (8a).

- (8) a. [**Masanil** heb’ winh winak] ix-il-an nok’ tz’i’ .
 all PL CLF man PFV-see-AF CLF dog
 ‘All of the men saw the dog.’
 b. ?? Ix-y-il nok’ tz’i’ [**masanil** heb’ winh winak].
 PFV-A3-see-AF CLF dog all PL CLF man

Wh-phrases in questions (9), as well as nominal expressions modified by *nhej* ‘only’ (10), also obligatorily pattern as foci (see Coon et al. 2021 for discussion):⁴

- (9) a. ¿[**Mach**] ix-h-il-a’?
 who PFV-A2S-see-TV
 ‘Who did you see?’
 b. * ¿Ix-h-il [**mach**]?
 PFV-A2S-see who
 Intended: ‘You saw who?’
 (10) a. [**Ha-nhej** waj Xun] ix-w-il-a’.
 FOC-only CLF Xun PFV-A1S-see-TV
 ‘I only saw Xun.’
 b. * Ix-w-il [**nhej** waj Xun].
 PFV-A1S-see only CLF Xun
 Intended: ‘I only saw Xun.’

Finally, since this will be relevant for the analysis of *yalnhej* DPs in Section 4, we note that in the absence of explicit plural marking, *wh*-phrases are semantically number neutral in Chuj: (11a) can be given any of the answers in (12), and (11b) and (11c) any of the answers in (13).⁵

⁴ Kotek & Erlewine (2019: 70-71) report the possibility of *wh-in situ* for echo questions. This, however, runs counter to the judgements reported here, and for other Mayan languages, where *wh-in situ* in questions is commonly reported as impossible (Aissen 1996; Curiel Ramírez del Prado 2017; AnderBois & Chan Dzul 2021; Can Pixabaj 2021; Coon et al. 2021; Vázquez Álvarez & Coon 2021; Mateo Toledo 2021; Polian & Aissen 2021). Note, though, that certain *wh*-expressions can be used as *wh*-indefinites, as also reported by Kotek & Erlewine (2019) (see also Royer 2021). In such cases, *wh*-words are possible in postverbal positions.

⁵ *Wh*-phrases can be pluralized with the suffix *-tak* (Royer 2021, Buenrostro 2023), in which case they only tolerate plural answers.

- (11) a. ¿**Mach** ix-il-an winh icham?
 who PFV-see-AF CLF elder
 ‘Who saw the elder?’
 b. ¿**Tas** (libro’-al) ix-a-man-a’?
 what (book-NML) PFV-A2S-buy-TV
 ‘What (book) did you buy?’
 c. ¿**Mach** libro ix-a-man-a’?
 which book PFV-A2S-buy-TV
 ‘Which book did you buy?’

- (12) a. Kixtup.
 b. Kixtup, Xun, and Malin.
- (13) a. This book.
 b. This book and that book.

Having introduced the necessary background regarding Chuj clause structure and quantificational expressions, we now turn to a description of the syntactic and semantic distribution of *yalnhej*-DPs.

3 *Yalnhej* DPs

This section is divided into three subsections. We discuss the morphosyntactic distribution of *yalnhej*-DPs in Section 3.1, the interpretations that *yalnhej* DPs can give rise to in Section 3.2, and the semantic status of the modal component of *yalnhej* DPs in Section 3.3.

3.1 Morphosyntactic distribution

Yalnhej DPs are composed of the (potentially) complex morpheme, *yalnhej*, as well as a *wh*-phrase. The *wh*-phrase can either appear without a nominal complement, as in (14), or with a nominal complement, as in (15).⁶

- (14) [**yalnhej mach**]
 YALNHEJ WHO
- (15) [**yalnhej tas libro’-al**]
 YALNHEJ WHAT book-NML

⁶ There is some variation with regards to the form *yalnhej+wh* takes. While all speakers consulted in this work offer *yalnhej+wh* as the form for the relevant expression, they recognize and accept *yala+wh* as an alternative form. As far as we can tell, this is a dialectal difference, and there is no semantic distinction between the two forms. Moreover, *yala+wh* has the same distribution as *yalnhej+wh* with respect to Table 1. We will therefore only provide examples with *yalnhej+wh* in this paper, all while noting that all are likely interchangeable with *yala+wh*, as far as we can tell.

Table 1 shows that almost all types of *wh*-expressions can combine with *yalnhej* to form a modal DP (see Royer 2021, Section 4.1.3 for examples). The only exception is *tas yuj* ‘why’.⁷

	<i>wh</i> -expression	modal DP
‘what’	<i>tas</i> (+N)	✓ <i>yalnhej tas</i> (+N)
‘who’	<i>mach</i>	✓ <i>yalnhej mach</i>
‘which’	<i>mach</i> (+N)	✓ <i>yalnhej mach</i> (+N)
‘where’	<i>b’aj/b’ajt’il/ajt’il</i>	✓ <i>yalnhej b’aj/b’ajt’il/ajt’il</i>
‘when’	<i>b’ak’inh</i> (future)	✓ <i>yalnhej b’ak’inh</i>
‘when’	<i>b’ak’nitaxo</i> (past)	✓ <i>yalnhej b’ak’nitaxo</i>
‘how’	<i>tas</i> + light verb	✓ <i>yalnhej tas</i> + light verb
‘how much’	<i>jantak</i>	✓ <i>yalnhej jantak</i>
‘how many’	<i>jay</i> -NUM.CLF	✓ <i>yalnhej jay</i> -NUM.CLF
‘what time’	<i>janik</i>	✓ <i>yalnhej janik</i>
‘why’	<i>tas yuj</i>	✗ <i>yalnhej tas yuj</i>

Table 1 List of *wh*-expressions and corresponding *yalnhej* forms (adapted from Royer 2021)

Yalnhej-DPs pattern with *wh*-items in that, in the absence of explicit plural marking, they are number neutral: the sentence in (16), for instance, can describe a situation in which Malin read only one book, but also one where she read several.

- (16) [**Yalnhej tas** libro’-al] ix-y-awtej ix Malin
 YALNHEJ WHAT book-NML PFV-A3-read CLF Malin
 ‘Malin read *yalnhej what* book.’

Above, we described *yalnhej* as a (potentially) ‘complex’ morpheme. This is so because *yal* functions as a modal auxiliary when appearing as a free morpheme with aspect marking, as seen in (17a) (Buenrostro 2009, Kotek & Erlewine 2019). The morpheme *nhej*, on the other hand, is usually glossed as ‘only’ when it appears on its own, as in (10a) above or as in (17b) below.

- (17) a. Ix/tz/ol-**yal** ha-lolon w-et’ok.
 PFV/IPFV/PROSP-MODAL A2S-speak A1S-with
 ‘You were/are/will.be allowed to speak with me.’

⁷ Table 1 involves an additional *wh*-item that was not described in Royer 2021: *janik*, a specialized *wh*-item for ‘what time’. As indicated in Table 1, *yalnhej* DPs can also be combined with *janik*.

- b. [Ha-**nhej** waj Xun] ix-in-il-**an-i**.
 EMPH-only CLF Xun PFV-B1S-see-AF-IV
 ‘Only Xun saw me.’

Yet, it is unclear at the present stage whether there are truly two interpretable pieces to consider, as also discussed in [Kotek & Erlewine 2019](#). For one, the possibility of inserting material between *yal* and *nhej* is highly restricted; only second position clitics like *xo* ‘now’ can appear in that position.⁸

- (18) [Yal-**xo**-nhej b’aj] tz-k-il juntzanh y-ik mejikano.
 YAL-ADV.now-NHEJ where IPFV-A1P-see some A3-by mexican
 ≈ ‘Now we see Mexican things (anywhere).’ (txt, CP010815)

Second, the segment *yal* is never inflected with aspect marking when it appears within *yalnhej*-DPs. Finally, *yalnhej* DPs do not pattern in distribution with interrogative phrases or *only*-phrases. Recall that those *must* categorically appear preverbally (see (9) and (10) above), but *yalnhej* DPs pattern with quantificational DPs like *masanil* in merely showing a *preference* for appearing in a preverbal position:⁹

- (19) a. [**Yalnhej tas**] ol-s-man waj Xun.
 YALNHEJ what PROSP-A1S-buy CLF Xun
 ‘Xun will buy anything.’
 b. ??Ol-s-man [**yalnhej tas**] waj Xun.
 PROSP-A1S-buy YALNHEJ what CLF Xun

Moreover, in contrast to oblique interrogative phrases, which also require fronting (20), oblique phrases containing *yalnhej* DPs are judged perfectly acceptable in postverbal position (21b). This is also the case with other quantificational DPs, such as *masanil* DPs, which are perfectly acceptable as postverbal obliques (see discussion in [Royer et al. 2024](#)).

- (20) a. ¿[**B’aj**] ol-ach-b’at-i?
 where PROSP-B2S-go-IV
 ‘Where will you go?’
 b. *¿Ol-ach-b’at [**b’aj**]?
 PROSP-B2S-go where

⁸ It is possible that the insertion of this clitic is in fact a surface phenomenon, motivated not by morphosyntactic but phonological requirements.

⁹ There is speaker variation in the judgements, specifically when the *yalnhej*-DP is a principle argument of the verb. Out of a scale from 1 to 5, 1 being unacceptable and 5 being perfectly natural, two speakers we consulted judged (19a) as 5/5 and (19b) as 3/5. One speaker rejected (19b).

- (21) a. Ol-in-b’at [t’a **yalnhej tas** chonhab’-il].
 PROSP-B1S-go PREP YALNHEJ what town-NML
 ≈ ‘I will go any town.’
- b. Ol-in-b’at [t’a **masanil chonhab’**].
 PROSP-B1S-go PREP all village
 ‘I will go to all villages.’

For now, we will leave open the issue of the internal composition of *yalnhej* DPs, glossing and treating the combination of *yal* and *nhej* as a unit, as also assumed in Kotek & Erlewine 2019.

3.2 Interpretation and syntactic position

While typically fronted, we show here that the modal meaning of *yalnhej* DPs depends on their base position. We start by discussing the possible interpretations of *yalnhej* DPs in external argument position (Section 3.2.1), showing that these generally give rise to epistemic modality. We then turn to *yalnhej* DPs in object position (Section 3.2.2) and in other syntactic positions (Section 3.2.3), where random-choice modality can also arise. Finally, we compare *yalnhej* DPs and *wh*-free relatives in English (Section 3.2.4), arguing that despite showing similarities, they differ in a number of respects.

3.2.1 *Yalnhej* DPs as external arguments: epistemic modality

As anticipated, *yalnhej* DPs in external argument position can contribute epistemic modality. For instance, sentence (22) with a *yalnhej*-DP as an intransitive subject could be uttered in context (23a) where (i) the speaker knows that some (but not all) people danced, but (ii) they do not know exactly who danced.¹⁰ However, it cannot be used in context (23b) where (i) the speaker knows that some (but not all) people danced, and (ii) they know who exactly it was that danced.

¹⁰ Chuj features another type of epistemic indefinite, again consisting of a *wh*-item, and the expression *xomlaj*. An example is provided below. While we leave this type of modal indefinite aside for the moment, we note that it could also be used to describe the scenario in (23a). However, it differs from *yalnhej* DPs in that it cannot describe a scenario like (24), where all contextually relevant people danced, nor can it describe random choice scenarios (see section 3.2.2 below).

- (i) **Mach-xomlaj** ix-chanhalw-i.
 who-XOMLAJ PFV-dance-IV
 ≈ ‘Someone danced but I don’t know who.’

- (22) [**Yalnhej mach**] ix-chanhalw-i t'a k'inh.
 YALNHEJ who PFV-dance-IV PREP party
 'A person or group of people danced, I don't know who (maybe all did).'
- (23) a. *You were at a party; you know for a fact that not everyone danced, but, because the lights were off, you don't know who exactly danced.* (22) = ✓
 b. *You know that only Kixtup and Xun danced at the party.* (22) = ✗

Importantly, the sentence in (22) can also be used in the context in (24), where the speaker knows that everybody danced. The comment in (25), which we received from one consultant about (22), highlights this.

- (24) Context 3: *You were at a party and you saw that everyone there danced.* (22) = ✓
 (25) "When you hear that (i.e., the utterance in (22)), it could be that just some people danced (and the speaker doesn't know who), or that everybody danced."

Transitive subjects give rise to the same type of interpretation: the sentence in (26) is felicitous in the two first contexts in (27), but infelicitous in the third.

- (26) [**Yalnhej mach**] ix-chi'-an chi'b'ej t'a k'inh.
 YALNHEJ who PFV-eat-AF meat PREP party
 'A person/some people (maybe all) ate meat at the party.'
- (27) a. *There was a town party, and meat was served to everyone who wanted it. You know that at least some people ate meat, but since you weren't there, you couldn't tell who.* (26) = ✓
 b. *There was a town party and meat was served; you noticed that everyone was happy about that, and so everyone asked for some.* (26) = ✓
 c. *There was a town party, with 20 attendees, and meat was served to everyone who wanted it. But you noticed that, in the end, only Kixtup and Xun ate meat.* (26) = ✗

3.2.2 *Yalnhej* DPs as objects: epistemic and random choice modality

Like in external argument position, *yalnhej* DPs in internal argument position can convey epistemic modality. For example, the sentence in (28) is appropriate in the context in (29a), where the speaker is not certain that Xun liked all dishes, but not in a context where the speaker knows which dish(es) Xun liked and knows that he

didn't like all of them (29b). Moreover, the sentence in (28) can again also be used in a situation where the speaker is certain that Xun liked all dishes (29c).

- (28) [**Yalnhej tas tek-al**] ix-s-nib'-ej waj Xun.
 YALNHEJ what dish-NML PFV-A3-like-DTV CLF Xun
 ≈ 'Xun liked some dish or some group of dishes, maybe all dishes.'
- (29) a. *Xun went to a market and tried a few dishes. You know that Xun liked at least one dish (maybe more), but you're not sure which.* (28) = ✓
 b. *Xun went to a market, tried a few dishes, but didn't like them all. You know exactly which dishes Xun liked, namely soup and tamales.* (28) = ✗
 c. *Xun went to the market and tried a few dishes. You know for a fact that he liked all dishes.* (28) = ✓

Relatedly, note that speakers can use *yalnhej* DPs to *pretend* to be ignorant, while they are not truly so, replicating the 'teasing' effects described for English *whatever* in von Fintel 2000. This is illustrated in (30) below.¹¹

- (30) a. *Your child bought lots of candy, even though you told him not to. You ask him what he bought. He answers:*
 b. [**Yalnhej tasi**] < ix-in-man-a' >
 YALNHEJ what PFV-A1S-buy-TV
 ≈ 'Something, and anything is a possibility.'

When *yalnhej* DPs are in the internal argument position of a volitional transitive verb, they can also convey random choice modality. The sentence in (31) can convey (i) that Xun bought a book, and (ii) that he was indifferent about what book to buy. The sentence can felicitously describe the context in (32a), but not the one in (32b).

- (31) [**Yalnhej tas libro'-al**] ix-s-man waj Xun.
 YALNHEJ what book-NML PFV-A3-buy CLF Xun
 'Xun bought a random book / some random books.'
- (32) a. *Xun wanted to read, but didn't have any specific book in mind. He went to the bookstore and bought one at random.* (31) = ✓
 b. *Xun wanted to read a specific book, the Popol Wuj, went to the bookstore and bought it.* (31) = ✗

¹¹ The forms *tas* and *tasi* are allomorphs that alternate depending on their position in the clause, in particular, whether they are at the right-edge of an intonational phrase; see Royer 2022b for details.

As was the case with the epistemic component, under the random choice interpretation, the sentence in (31) can describe a situation where all individuals of the relevant type satisfy the existential claim.

- (33) *Xun is very wealthy, and a bit insane. He goes to a bookstore, and he starts buying books indiscriminately, to the point where he ends up buying all books.* (31) = ✓

In (31), the *yalnhej*-DP is the internal argument of a *volitional* predicate. This distinction is important, since with non-volitional predicates, only epistemic interpretations are possible. For instance, the sentence in (28), repeated in (34), can only convey that either the speaker does not know which dish or dishes Xun liked, or that he liked them all (see contexts in (29) above).

- (34) [**Yalnhej tas tek-al**] ix-s-nib'-ej waj Xun.
 YALNHEJ what dish-NML PFV-A3-like-DTV CLF Xun
 ‘Xun liked some dish(es) or other.’ / ‘Xun liked all dishes.’
 Not: ‘Xun liked a dish at random.’

3.2.3 *Yalnhej* DPs in other syntactic positions

Epistemic and random choice interpretations of *yalnhej* DPs also arise in syntactic positions other than the external or internal arguments. Passive subjects, for example, can admit both epistemic or random choice interpretations. This is expected if, like direct objects, passive subjects are internal arguments of the verb (as widely assumed; Chomsky 1981, Alexiadou 2017).

To illustrate this point, consider the sentence in (35) in the three contexts given in (36):

- (35) [**Yalnhej tas anh-il**] ix-k'ok-chaj yuj ik'.
 YALNHEJ what plant-NML PFV-break-PASS by wind
 ‘*Yalnhej plants* were broken by the wind.’
- (36) a. *There were strong winds. You know that the wind must have broken many plants, but since you haven't left your house yet, you're not sure which.* (35) = ✓
- b. *There were very strong winds. You noticed that all plants are broken.* (35) = ✓
- c. *There were mild winds, which broke only a few fragile plants. You went to check out the plants after the windstorm, and saw which plants were broken.* (35) = ✗

The sentence in (35) can felicitously describe a scenario like (36a), where the speaker is uncertain about which plants were broken by the wind, or a scenario like (36b), where the speaker knows that all plants broke. The sentence in (35) cannot, however, felicitously describe the scenario in (36c), where the speaker knows that not all plants were broken by the wind and knows which plants, out of many, were broken by the wind. This is exactly what we saw above in cases where *yalnhej* DPs were external arguments and direct objects: when *yalnhej* DPs do not convey a random choice interpretation in those positions, they are not felicitous in scenarios where the speaker knows which entities in the domain of quantification satisfy the existential claim (as long as the speaker knows that not all did).

When appearing as passive subjects of volitional verbs, *yalnhej* DPs can also convey random choice modality. This is the case in (37), which can be felicitously uttered in the context in (38a), involving a random choice on the part of the oblique agent, the jury, but not in the context in (38b), which does not involve the jury making a random choice.

- (37) [**Yalnhej mach**] ix-sik'-chaj yuj heb'.
 YALNHEJ who PFV-select-PASS by them
 'Yalnhej who was selected by them.'

- (38) a. *A jury needs to select someone in a competition. All participants to the competition are equally good, so they decide to choose one at random.* (37) = ✓
 b. *A jury needs to select someone in a competition. One participant stands out as the best, so they select them.* (37) = ✗

Both epistemic and random choice interpretations also arise when *yalnhej* DPs are contained within an adjunct. Consider first an example with the epistemic interpretation, together with the scenarios in (40a-40c).

- (39) [**Yalnhej b'ajt'il**] y-ak' nhab' ewi.
 YALNHEJ where A3-do rain yesterday
 'There was rain yalnhej where yesterday.'

- (40) a. *You saw on the news that it rained somewhere in your region yesterday, but you're not sure where.* (39) = ✓
 b. *You saw on the news that it rained everywhere in your region yesterday.* (39) = ✓
 c. *While you know from the news that it didn't rain everywhere in your region yesterday, you saw it rained in specific places.* (39) = ✗

The sentence in (39) does not contain a volitional predicate, so we do not expect it to have a random choice interpretation. However, we see that it can convey epistemic modality: while it can be felicitously uttered in the context in (40a), it cannot be uttered in the context in (40c), where (i) the speaker knows where it rained, and (ii) it rained in some but not all contextually relevant places. As expected, the sentence is also appropriate in the scenario in (40c), where the speaker knows that it rained in *all* contextually relevant places.

Finally, an example of a random choice interpretation of a *yalnhej*-DP within an adjunct is provided in (41), as exemplified by the felicitous scenario in (42a) and the infelicitous scenario in (42b).

- (41) [**Yalnhej b'ajt'il**] ix-wa' ix Malin.
 YALNHEJ where PFV-eat CLF Malin
 'Malin ate *yalnhej* where.'

- (42) a. *Malin didn't know where to eat, so she chose a place to eat at random.* (41) = ✓
 b. *Malin chose to go try out a new restaurant she heard about.* (41) = ✗

3.2.4 *Yalnhej* DPs do not convey maximality

Having established the types of modal flavours that *yalnhej* DPs can express, we briefly turn to a comparison of *yalnhej* DPs with *wh*-free relatives in English. The reason is that the modal flavours expressed by *yalnhej*-DPs are highly reminiscent of those expressed by English *wh-ever* free relatives, which also convey agent indifference or speaker ignorance (von Fintel 2000). This parallelism is further strengthened by the observation in Table 1 that neither *yalnhej* DPs nor *wh-ever* free relatives have *why*-forms.

There are, however, reasons not to equate *yalnhej* DPs with *wh-ever* free relatives. For one, unlike *wh-ever* free relatives (Jacobson 1995), *yalnhej* DPs do not convey maximality: the sentence in (43) can felicitously describe the context in (44).

- (43) [**Yalnhej tas** yamk'ab'-il] ix-s-yam ix.
 YALNHEJ what tool-NML PFV-A3-grab PRON
 'She grabbed some tool(s) at random.'

- (44) *There are ten tools in a box in front of Malin. Malin doesn't need one in particular. She grabs only three at random.* (43) = ✓ / (45) = ✗

This is not the case with English free relatives, which do convey maximality: the sentence in (45) cannot describe the scenario in (44).

(45) Malin grabbed whatever tools were in the toolbox.

The same is true for the epistemic interpretation. The Chuj sentence in (46) can felicitously describe the context in (47), but the *wh*-free relative in (48) cannot.

(46) [**Yalnhej tas** ix-s-b'o' ix Telex ewi], ix-y-ab'l-ej
 YALNHEJ what PFV-A3-make CLF Telex yesterday PFV-A3-eat-DTV
 ix Xuwan.
 CLF Xuwan
 ≈ ‘Xuwan ate things that Telex made yesterday, but I don’t know what exactly.’

(47) *Telex cooked 10 meals yesterday, five of which Xuwan tasted. Since you weren’t there when she cooked, you don’t know what meals Telex cooked.*

(48) Xuwan ate whatever Telex cooked yesterday.

A second important difference is that *yalnhej* DPs do not require relativization. Again, this is unlike *wh*-ever free relatives, which are degraded without relativization (see Jacobson 1995). Indeed, the English utterances in (45) and (48) without relativization—*Malin grabbed whatever tools* and *Xuwan ate whatever*—sound degraded.¹²

Given this state of affairs, we will not seek to adapt previous analyses of English *wh*-free relatives to Chuj *yalnhej* DPs.

3.3 The status of the modal component

Before moving on to the analysis, we establish one last empirical fact about the status of *yalnhej* DPs’ modal component: that the modal component of *yalnhej* DPs is at-issue. We illustrate this both with the random choice component and the epistemic component, starting with the former.

The random choice component is embedded under negation and in the antecedent of conditionals, as seen in (50b) and (51b), judged as felicitous continuations of the context in (49).

(49) *You’re playing a board game, and as part of the rules you must first pick one card at random (with your eyes closed). Some cards give you a clear advantage, others put you at disadvantage. If you don’t respect this rule, you’re cheating . . .*

(50) a. . . . *Xun didn’t close his eyes and selected a specific card, that of course, gave him an advantage. I ask you, how did Xun cheat?*

¹² *Yalnhej*-DPs can nonetheless be relativized to form what Royer (2021) describes as “free choice free relatives”.

- b. Man **yalnhej tas** karta-ok laj ix-s-yam winh.
 NEG YALNHEJ what card-IRR NEG PFV-A3-grab CLF
 ‘He didn’t grab a card at random.’
- (51) a. ... *You’re explaining how not to cheat, using Xun as an example player, you say:*
- b. Tato **yalnhej tas** karta’-il ix-s-yam waj Xun, wach’
 if YALNHEJ what card-NML PFV-A3-grab CLF Xun, good
 tz-tajn-i winh.
 IPFV-play-IV CLF
 ‘If Xun grabs a card at random, he’s playing well.’

The epistemic modal component is also embedded under negation (52a), as indicated by the possible continuation in (52b), and under the antecedent of conditionals (53b).

- (52) a. [**Yalnhej tas** wa’el-al] maj s-cha laj s-k’ol
 YALNHEJ what dish-NML NEG.PFV A3-receive NEG A3-stomach
 waj Xun.
 CLF Xun
 ‘It’s not the case that Xun liked some dish and I don’t know what dish.’
- b. Ha tas maj s-cha laj s-k’ol heb’ masanil chi’,
 FOC what NEG.PFV A3-receive NEG A3-stomach PL everyone DEM
 ha-chi’ ix-y-ab’l-ej winh.
 FOC-DEM PFV-A3-eat-DTV PRON
 ‘The dish that everybody didn’t like, that’s the one he ate.’
- (53) a. *You’re a firefighter, so you know how to stop fire. If you know where the fire is coming from, you don’t get worried. You only get worried if you do not know where the fire is coming from.*
- b. Tato tz’-och k’ak’ [t’a **yalnhej b’ajt’i’il**], tz-in-och
 If PFV-enter fire PREP YALNHEJ where IPFV-B1S-enter
 il-k’ol-al y-u’uj.
 see-stomach-NML A3-for
 ‘If fire starts in some place and I don’t know where, I get worried.’

If the modal component of *yalnhej* DPs were a presupposition, we would expect it to project when embedded under negation or in the antecedent of conditionals. If it were a quantity-based implicature, we would expect it to disappear in these two environments. If it were a conventional implicature, we would predict it to resist embedding. Since none of these expectations are borne out, we conclude that the modal component of *yalnhej* DPs is at-issue.

3.4 Summary

In this section, we have shown that *yalnhej* DPs make an existential claim and contribute an at-issue modal component. While they can only contribute epistemic modality as external arguments, they can contribute either epistemic or random choice modality when internal arguments (objects or passive subjects) or adjuncts of volitional verbs.

In the next section, we provide an analysis of *yalnhej* DPs. As we will show, *yalnhej* DPs pattern with other modal indefinites, like Spanish *uno cualquiera*, in conveying a random choice modal component truth-conditionally. We take this parallelism at face value and take as a starting point of our analysis the analysis of *uno cualquiera* presented in [Alonso-Ovalle & Menéndez-Benito 2018](#), from which we will depart to capture the epistemic component of *yalnhej* DPs.

4 A modal quantifier

Yalnhej DPs pattern with other modal indefinites described in the literature in some respects. [Alonso-Ovalle & Menéndez-Benito \(2018\)](#) show that the Spanish random choice modal indefinite *uno cualquiera* conveys random choice modality. To illustrate, consider the example in (54):

- (54) Juan compró **un libro cualquiera**.
Juan buy-PFV-3S a book CUALQUIERA
'Juan bought a random book.' ([Alonso-Ovalle & Menéndez-Benito 2018: 2](#))

As the English translation indicates, the sentence conveys (i) that Juan bought a book, and (ii) that he could have bought any other book—that his choice of book was a random one.

The sentence in (54) can also describe scenarios where Juan's choice was not random and he bought a particular book, but only as long as the book that Juan bought was an unremarkable one. To explain this, [Alonso-Ovalle & Menéndez-Benito \(2018\)](#) argue that *uno cualquiera* is actually ambiguous: the expression can either convey random choice modality, or an 'unremarkable' interpretation, under which the witness of the existential claim is not remarkable. The first interpretation is not available in cases where *uno cualquiera* combines with a non-volitional predicate, such as those in (55), which only have the 'unremarkable' interpretation.

- (55) Juan es **un estudiante cualquiera**.
Juan be-3S a student CUALQUIERA
'Juan is an unremarkable student.'
([Alonso-Ovalle & Menéndez-Benito 2018: 3](#))

- (56) Ayer Juan tropezó con **un** objeto **cualquiera**.
 yesterday Juan stumble-PFV-3S with an object CUALQUIERA
 ‘Yesterday, Juan stumbled on an unremarkable object.’
 (Alonso-Ovalle & Menéndez-Benito 2018: 3, cited from Choi & Romero 2008)

We will get back to the ‘unremarkable’ interpretation in Section 5. Leaving aside this interpretation for the time being, we note now that *uno cualquiera* patterns with *yalnhej* DPs in that its random choice interpretation is at issue. The example in (57) shows that this meaning component is part of the at issue contribution of the *if*-clause in which *uno cualquiera* is embedded. In (58), this meaning component is also part of what the nuclear scope of the quantifier *nadie* (‘nobody’) contributes.¹³

- (57) Si Juan compró **un** libro **cualquiera**, se arrepentirá pronto.
 If Juan buy-PFV-3S a book CUALQUIERA, SE repent-FUT-3S soon
 ‘If Juan bought a random book, he will regret it soon.’
- (58) Nadie compró **un** libro **cualquiera**.
 no.one buy-PFV-3S a book cualquiera
 ≈ ‘Nobody bought a random book.’

Given this parallelism between *uno cualquiera* and *yalnhej* DPs, we will take as our starting point for the analysis of *yalnhej* DPs the analysis of *uno cualquiera* presented in Alonso-Ovalle & Menéndez-Benito 2018. We propose, as schematized in (59), that *yalnhej* DPs combine with an event argument and convey as part of their truth-conditions i) a non-modal existential claim, and ii) a modal component that hardwires a free choice effect and states, roughly, that every individual in the extension of the *wh*-phrase is involved in the relation expressed by the VP in some world in a domain of accessible worlds.¹⁴

13 The ‘unremarkable’ interpretation of *uno cualquiera* also seems embeddable: (57) can also convey that Juan will regret it if he bought an unremarkable book, and (58) that nobody grabbed an unremarkable book.

14 We will assume explicit quantification and abstraction over worlds and events in the object language. We use boldface type to indicate the value of a variable, as opposed to the variable itself. We assume that VPs denote relations between individuals, events and worlds (have type $\langle e, \langle v, st \rangle \rangle$, using v as the type of events), and we give *wh*-NPs a predicative type $\langle \langle e, st \rangle \rangle$, assuming that the extension of *wh*-NPs that are not inflected in the plural is closed under sum formation. We take “ \approx ” to convey that e is maximally similar to e with respect to its spatiotemporal location. The role of this condition in deriving the right truth-conditions is discussed below when illustrating the truth-conditions predicted for example (61.)

$$(59) \quad \llbracket [\text{yalnhej wh-NP}] e_1 \rrbracket^g = \lambda P_{\langle e, \langle v, st \rangle \rangle} . \lambda e . \lambda w .$$

$$\underbrace{\exists x \left[\begin{array}{l} P_w(x)(e) \ \& \\ \llbracket \text{wh-NP} \rrbracket(x)(w) \end{array} \right]}_{\text{existential component}} \ \& \ \underbrace{\forall y \left[\begin{array}{l} \llbracket \text{wh-NP} \rrbracket(y)(w) \rightarrow \\ \exists w' \in f(\mathbf{e}_1) \exists e' [e' \approx e \ \& \ P_{w'}(y)(e')] \end{array} \right]}_{\text{modal component}}$$

Before moving forward, we note that assigning *yalnhej* DPs a high quantificational type immediately captures two of the properties of these DPs discussed above: (i) that *yalnhej* DPs pattern with *wh*-phrases and other quantificational elements in showing a preference for appearing in a preverbal position, and (ii) that these DPs are ruled out in predicative positions, as shown below:¹⁵

- (60) a. ***Yalnhej tas** anima'-il waj Xun.
 YALNHEJ what person-NML CLF Xun
 b. ***Yalnhej b'ajt'il** jun chonhab' tik.
 YALNHEJ where one village DEM

The upcoming discussion will mostly focus on the modal domain of *yalnhej*-DPs. In line with [Alonso-Ovalle & Menéndez-Benito 2018](#), we hypothesize that the set of accessible worlds that *yalnhej* DPs range over is determined in much the same way it is determined for modal auxiliaries. Recent work defends that modal auxiliaries project their domain of quantification from an eventuality (their ‘modal anchor’; [Hacquard 2006, 2009, 2011, Kratzer 2013](#)). In (59), we assume that *yalnhej* DPs also project their modal domain out of the value of an event variable, via a domain fixing function *f* that maps events to sets of possible worlds, as in [Alonso-Ovalle & Menéndez-Benito 2018](#).

In the next section, we will see that this analysis covers the random choice interpretation of *yalnhej* DPs, quite unsurprisingly, since this is the only modal flavor of *uno cualquiera*, for which the analysis is tailored. But recall that *yalnhej* DPs are less restricted than *uno cualquiera* with respect to the modal flavor that they can express (besides random choice, they can also convey epistemic modality). Since *yalnhej* DPs can also express epistemic modality, the analysis of *uno cualquiera* cannot be extended directly to *yalnhej* DPs. Yet, the analysis leaves room to account for the difference. We will assume a lexical difference between the two items: while *uno cualquiera* requires as anchors events described by volitional predicates which have agents, *yalnhej* DPs can combine with that type of anchor or with events from which propositional content can be determined, like assertions. We will also see that, as in the case of *uno cualquiera*, possible anchors and projection modes differ depending on syntactic position.

¹⁵ According to (59), *yalnhej* DPs operate over functions of type $\langle e, \langle v, st \rangle \rangle$. We assume that this blocks them from copular sentences. See [Poole 2017](#) against type shifting traces to predicative type.

We will start in the next section with the discussion of the random choice interpretation of *yalnhej* DPs and move after that into a discussion of the epistemic interpretations of these DPs. In Section 5 we will focus on a further contrast between *yalnhej* DPs and *uno cualquiera*: that these DPs do not have an ‘unremarkable’ interpretation.

4.1 Random choice modality

We follow [Alonso-Ovalle & Menéndez-Benito \(2018\)](#) in assuming that random choice interpretations correspond to modal projection from the type of event described by the VP, as in the LF of (61) in (62), where the modal anchor of the *yalnhej* DP is co-bound with the event argument of the VP.¹⁶

- (61) [**Yalnhej tas** libro'-al] ix-s-man waj Xun.
 YALNHEJ what book-NML PFV-A3-buy CLF Xun
 ‘Xun bought a random book / group of books.’

- (62) $[\lambda w_1 [\exists e [{}_{vP} \text{Xun} [{}_v \text{Agent} [{}_{vP} \lambda e_1 [[[yalnhej \text{ what book } e_1] \lambda x_1 \text{ bought } t_1] e_1] w_1]]]]]$

In (62) *yalnhej what book*, when combined with its modal anchor, operates over the relation in (63), and returns a relation between events and worlds (type $\langle v, st \rangle$). After saturation with an event and a world variable, and after abstraction over the event variable, we get a property of events, which combines with the agent via Event Identification. Ignoring temporal and aspectual information, and assuming external Existential Closure over the event argument, the LF in (62) denotes the proposition in (64), which conveys i) the existence of an event *e* of buying one or more books by Xun, and ii) information about a set of possibilities that project from *e*.

- (63) $[[\lambda x_1 \text{ bought } t_1]] = \lambda x_e \lambda e_v \lambda w_s. \text{BUY}_w(x)(e)$

- (64) $\lambda w. \exists e \left[\underbrace{\left[\begin{array}{c} \text{BUY}_w(x)(e) \ \& \\ * \text{BOOK}_w(x) \ \& \\ \text{AGENT}(\text{XUN})(e) \end{array} \right]}_{\text{existential component}} \ \& \ \forall y \left[\underbrace{\left[\begin{array}{c} * \text{BOOK}_w(y) \rightarrow \exists w' \in f(e) \\ \exists e' \left[\begin{array}{c} e' \approx e \ \& \\ \text{BUY}_{w'}(y)(e') \end{array} \right] \end{array} \right]}_{\text{modal component}} \right] \right]$

¹⁶ In the LF in (62) we have explicit quantification and abstraction over event and world variables. We assume that external arguments are introduced by a voice head, in this case *Agent*, as proposed in [Kratzer 1996](#). *Agent* denotes a relation between individuals and events ($\lambda x. \lambda e. \text{AGENT}(x)(e)$). Its sister denotes a property of events. *Agent* and its sister combine via a semantic composition principle that Kratzer dubbed ‘Event Identification.’ This principle yields the relation $\lambda x. \lambda e. \text{AGENT}(x)(e) \ \& \ P(e)$ from the relation that *Agent* denotes and the property of events *P* that the sister of *Agent* denotes.

We now discuss the second (modal) meaning component. [Alonso-Ovalle & Menéndez-Benito \(2018\)](#) assume that any volitional event e is caused by a decision to act on the part of its agent (d_e), that d_e is part of the preparatory stage of e (see [Grano 2011](#)), and that a decision to act d_e by an agent a establishes a goal, which is fulfilled by events performed by a . We follow them in assuming that when e is a volitional event, such as a buying event, $f(e)$ yields a set of worlds that have a duplicate of d_e and where the goal established by d_e is fulfilled (by an event with the same spatiotemporal location as e). The modal component in (64) provides information about the actual decision: it looks at the worlds compatible with Xun’s actual decision where that decision is fulfilled and conveys that for any book or group of books y , there is a world compatible with Xun’s actual decision where that decision is fulfilled and y is bought. For this to be the case, Xun’s actual decision must be one that does not discriminate between types of books, since a decision to buy one particular book or group of books cannot be fulfilled by buyings of other books (see [Figure 1](#)). This captures the random choice interpretation: the sentence in (61) excludes the possibility that the agent decided to only buy one particular book or one particular group of books. The modal component would be satisfied in a situation where the agent decided to buy all books. In that case, the agent buys all books in all worlds compatible with their decision, so, for every book y there is at least one accessible world where the agent buys y . We discuss this possibility on page 30 below. As we will see, this prediction is borne out. The role of \approx , which requires the possible events to share the same spatio-temporal location with the actual event, is to capture the intuition that the possible events evoked count as alternatives to the actual event. Without \approx , possible events too distant in the future could satisfy the modal component, contrary to intuitions.

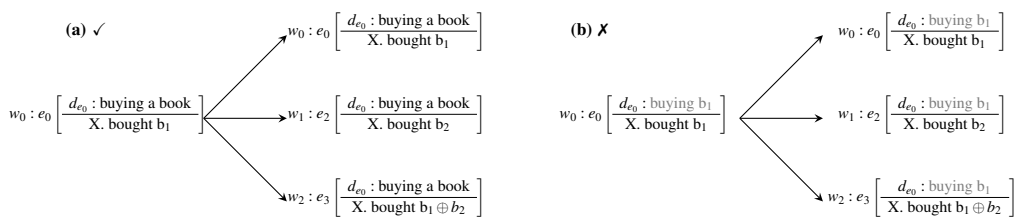


Figure 1 Actual decisions consistent (a) and inconsistent (b) with random choice modal component, assuming that the set of atomic books in the world of evaluation is $\{b_1, b_2\}$.

Now, recall that *yalnhej* DPs as objects of non-volitional verbs, as in (28), cannot have a random choice interpretation. This follows from the current set-up: if the

anchor is co-bound with the event argument, as in (66), f cannot project from the agent's decision of e , since when the verbal predicate does not describe a volitional event, e will not contain a decision subevent (see Figure 2 below).

- (65) [**Yalnhej tas tek-al**] ix-s-nib'-ej waj Xun.
 YALNHEJ what dish-NML PFV-A3-like-DTV CLF Xun
 'Xun liked some dish or group of dishes, I don't know which one, maybe all.' / Not: 'Xun liked a dish at random.' (repeated from (28))
- (66) [$\lambda w_1 [\exists_e [_{vP}$ Xun [v Experiencer [$\lambda e_1 [[[yalnhej$ what dish e_1] λx_1 liked t_1] e_1] w_1]]]]]

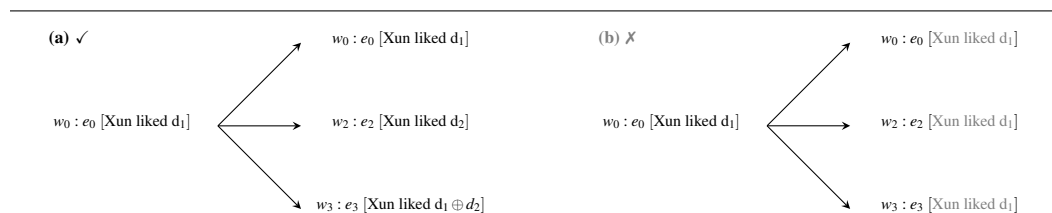


Figure 2 Belief states compatible (a) and incompatible (b) with epistemic content.

Having seen how to capture the random choice interpretation of *yalnhej* DP, we turn now to their epistemic interpretation. As anticipated above, *yalnhej* DPs contrast with *uno cualquiera* in this respect. *Uno cualquiera* does not convey ignorance. We can illustrate this by contrasting *uno cualquiera* with a modal indefinite that expresses ignorance, such as Spanish *algún* (Alonso-Ovalle & Menéndez-Benito 2010). The dialogue in (67) is deviant because by using the epistemic indefinite *algún*, A conveys that they do not know which student María married. This preempts B's question, which, predictably, is deviant in this context. The dialogue in (68), in contrast, is not deviant.

- (67) a. A: María se casó con algún estudiante del
 María SE marry-PFV-3S with ALGÚN student of the
 departamento de lingüística.
 department of linguistics
 'María married a linguistics student.'
- b. B: # ¿Con cuál?
 with which one?

- (68) a. A: Juan entró en la tienda y compró un libro
 Juan enter-PFV-3S in the store and buy-PFV-3S a book
 cualquiera.
 CUALQUIERA
 ‘Juan entered the store and bought a random book.’
- b. B: ¿Qué libro compró?
 which book buy-PFV-3S
 ‘Which book did he buy?’

To account for the lack of epistemic interpretations of *uno cualquiera*, [Alonso-Ovalle & Menéndez-Benito \(2018: 21\)](#) propose that the anchor of *uno cualquiera* is required to be a volitional event that is associated with certain fulfillment conditions. A decision to act in a particular way is fulfilled by certain actions. A decision to buy a book, for instance, is fulfilled by events of buying a book. [Alonso-Ovalle & Menéndez-Benito \(2018\)](#) call these fulfillment conditions ‘normative conditions’, following [Kratzer \(2015\)](#), and propose that the modal projection function f that *uno cualquiera* introduces comes with a definedness condition: for any event e , $f(e)$ is defined only if e has a (possibly improper) part d that establishes normative conditions. To capture the epistemic interpretations of *yalnhej* DPs, we need to depart from this assumption, as we will do next.

4.2 Epistemic interpretations

To capture the epistemic interpretations of *yalnhej* DPs, we hypothesize that, on top of projecting their domain from the event argument of the main verb, *yalnhej* DPs have a second option: to project their domain from the assertion made by the speaker of the utterance, as suggested in [Hacquard 2006](#) for non-root auxiliaries. To illustrate, we assume that event variables can be restricted such that they only range over the assertion, by using the predicate of events in (69).

- (69) $\llbracket \text{ASSERTION} \rrbracket^c = \lambda e_v : e$ is the assertion made by the speaker of c . e

When the event argument of the *yalnhej* DP is restricted to the assertion, it cannot be cobound with the event argument of the VP, as in (70): in (70), ASSERTION (e_1) requires e_1 to be an assertion, but for e_1 to be in the relation denoted by *like*, e_1 cannot be an assertion. Alternatively, the event argument can be left free, in which case f can project from the assertion, as in (71), deriving the proposition in (72).¹⁷

¹⁷ [Hacquard \(2006\)](#) proposes that anchors must be bound by the closest binder. We depart from her in assuming that anchors can be left free when binding would yield an anomaly, as discussed above. The motivation for this is the observation that *yalnhej* DPs in object position can have epistemic

(70) $[\lambda w_1 [\exists_e [{}_{\text{VP}} \text{Xun} [{}_{\text{v}} \text{Exp} [{}_{\text{VP}} \lambda e_1 [[[\text{yalnhej what dish ASSERTION}(e_1)] \lambda x_1 \text{ liked } t_1] e_1] w_1]]]]]$

(71) $[\lambda w_1 [\exists_e [{}_{\text{VP}} \text{Xun} [{}_{\text{v}} \text{Exp} [{}_{\text{VP}} \lambda e_1 [[[\text{yalnhej what dish ASSERTION}(e_2)] \lambda x_1 \text{ liked } t_1] e_1] w_1]]]]]$

$$(72) \lambda w. \exists e \left[\underbrace{\exists x \left[\begin{array}{l} \text{LIKE}_w(x)(e) \ \& \\ * \text{DISH}_w(x) \ \& \\ \text{EXPERIENCER}(\text{XUN})(e) \end{array} \right]}_{\text{existential component}} \ \& \ \forall y \left[\underbrace{\begin{array}{l} * \text{DISH}_w(y) \rightarrow \\ \exists w' \in f(\mathbf{e}_{\text{ASSERTION}}) \\ \exists e' \left[\begin{array}{l} e' \approx e \ \& \\ \text{LIKE}_{w'}(y)(e') \end{array} \right] \end{array}}_{\text{modal component}} \right] \right]$$

When f projects from the assertion (and, more generally, from an eventuality with informational content), we assume that it yields the set of worlds compatible with the speaker's beliefs (more generally, the holder of the information state) (cf. [Hacquard 2006](#)). The modal component is compatible with situations where, as far as the speaker believes, Xun might have liked any dish or group of dishes, and incompatible with situations where the speaker knows that Xun didn't like all dishes and knows which dish or groups of dishes Xun liked (see [Figure 2](#) above).

For *yalnhej* DPs to be able to project from the assertion, we need to assume that the modal projection function f does not come with a definedness condition that requires its arguments to be associated with normative conditions, unlike the case of *uno cualquiera*, as discussed above.

The assumption that *yalnhej* DPs project their modal domains from an event variable will allow us to explain why random choice interpretations are restricted. We will assume that when *yalnhej* DPs are in external argument position, their event anchors are too high to be cobound with the VP event argument (contrary to internal arguments and adjuncts). In such cases, the modal anchor is necessarily free, and thus restricted to refer to the assertion.

(73) [**Yalnhej mach**] ix-chanhalw-i.

YALNHEJ who PFV-dance-IV

‘A person or group of people danced, I don't know who, maybe all did.’

(74) $[\lambda w_1 [\exists_e [[\text{yalnhej what person ASSERTION}(e_2)] \lambda_1 [{}_{\text{VP}} t_1 [{}_{\text{v}} \text{Ag} [{}_{\text{VP}} \lambda e_1 \text{ danced } e_1] w_1]]]]]]]$

$$(75) \lambda w. \exists e \left[\underbrace{\exists x \left[\begin{array}{l} \text{DANCE}_w(x)(e) \ \& \\ * \text{PEOPLE}_w(x) \ \& \\ \text{AGENT}(x)(e) \end{array} \right]}_{\text{existential component}} \ \& \ \forall y \left[\underbrace{\begin{array}{l} * \text{PEOPLE}_w(y) \rightarrow \exists w' \in f(\mathbf{e}_{\text{ASSERTION}}) \\ \exists e' \left[\begin{array}{l} e' \approx e \ \& \ \text{AGENT}(y)(e) \ \& \\ \text{DANCE}_{w'}(y)(e') \end{array} \right] \end{array}}_{\text{modal component}} \right] \right]$$

interpretations, which would not be expected if locality were enforced. Modal flavor is still restricted by syntactic position, since *yalnhej* DPs in subject positions cannot access the event argument of the VP, as we will discuss next.

The epistemic modal component in (75) is compatible with different degrees of ignorance: complete ignorance (Figure 3(a) below), partial ignorance (Figure 3(b)), and no ignorance, if all individuals satisfy the existential claim (Figure 3(c)).

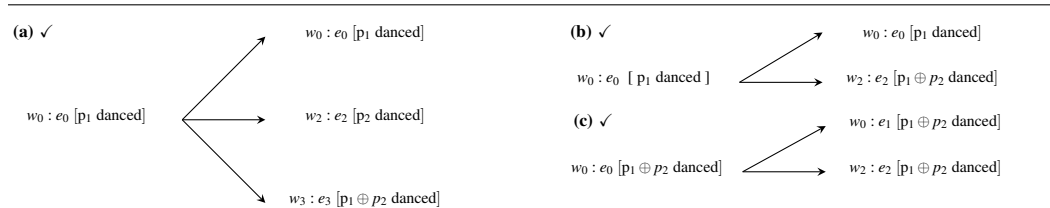


Figure 3 Degrees of ignorance

This captures the Chuj consultant’s comment in (25), repeated in (76), and the fact that the random choice interpretation of (61) is compatible with the agent deciding to buy *all* books.

- (76) “When you hear that (i.e., the utterance in (22)), it could be that just some people danced (and the speaker doesn’t know who), or that everybody danced.”

It is important to note at this point that *yalnhej* DPs are not the only quantificational expressions that seem to lack an upper bound in Chuj. One such quantifier is *junjun*, which can receive a non-modal existential interpretation (plural ‘some’) or a distributive universal interpretation (‘each’) depending on the context (Royer 2022a, 36; see also Henderson 2014, 47-49 for similar facts reported for the cognate form *jujun* in Kaqchikel). Examples extracted from texts are provided below. In an existential construction, as in (77a), the only possible interpretation is that of a ‘weak’ existential quantifier. In cases like (77b), the context can imply either that the relevant people visited *each* of the salient villages—which was the case in the text from which this example was drawn—or *a subset* thereof. Indeed, as verified with Chuj consultants, (77b) is compatible with both scenarios in (78).

- (77) a. Ay **junjun** komunida juntira ix-lajw el-i.
 EXT JUNJUN community at.once PFV-finish DIR.leave-IV
 ‘There are some communities that were destroyed in one hit.’
 (txt, CP200715)

- b. B'at-nak heb' winh **junjun** k'alum tik.
 go-PFV PL CLF.PRON JUNJUN village DEM
 'They (the men) left each of these villages.' (txt, CX200715)
 Could also mean (elicited): 'They left each community.'

- (78) a. *There are 20 villages. The men visited the 20 villages.* (77b) = ✓
 b. *There are 20 villages. The men visited 5 of the 20 villages* (77b) = ✓

The same is true of the quantifier *jantak*. As described in Royer, Buenrostro & Jenks (2024), *jantak* can be used, depending on the context, to convey high-value existential quantification ('many'), interrogative quantification ('how many'), or universal quantification ('every'). An example from a text, which in this particular case was interpreted universally, is provided in (79). Leaving the interrogative interpretation aside for the moment (which requires placement of *jantak* in the pre-verbal field), we see that the sentence at hand, with a *jantak* DP, is compatible with both scenarios in (80).

- (79) Tz-s-mol-b'-ej s-b'a **jantak** heb' winh el-nak elelal
 IPFV-A3-gather-INCHO-DTV A3-self JANTAK PL CLF leave-PFV escape
 chi'.
 DEM
 'All those who escaped gathered.' (txt, CP190715)
 Could also mean (elicited): 'Many of those who escaped gathered.'

- (80) a. *95 of the 100 people who escaped gathered.* (79) = ✓
 b. *100 of the 100 people who escaped gathered.* (79) = ✓

While the lack of upper bound interpretations for quantifiers in Mayan remains an understudied topic, the above facts show that *yalnhej* DPs are not alone in the language as quantificational expressions that lack an upper bound. Therefore, from a language-internal perspective, their apparent ability to convey 'universal' interpretations—in addition to their existential modal interpretations—is not entirely unexpected.

Cross-linguistically, modal indefinites contrast with respect to whether or not they convey an upper bound. *Uno cualquiera* describes situations where a unique witness satisfies the existential claim. *Algún* conveys a weaker upper bound: sentences containing *algún* can describe situations where more than one entity satisfies the existential claim, as the examples below illustrate.

- (81) a. Mi coche tiene algún abollón.
My car have-3S ALGÚN dent
'My car has some dents.'
(Alonso-Ovalle & Menéndez-Benito 2011a)
- b. Juanito todavía tiene algún diente de leche.
Juanito still have-3S ALGÚN tooth of milk
'Juanito still has some baby teeth.'
(Alonso-Ovalle & Menéndez-Benito 2011a)

Contrasts of this nature raise the question of what is responsible for the presence or absence of an upper bound. In the case of *algún*, Alonso-Ovalle & Menéndez-Benito (2011a) assume that the upper bound is due to a quantity implicature. In the same vein, for the potential Italian counterpart of *uno cualquiera* (the 'numeral N *qualsiasi*' series), Chierchia assumes a scalar competition (Chierchia 2013) tied to the numeral. More recently, however, Martí (2015) defended that the upper bound component of *algún* is tied to the semantics of number. She proposes that *algún* is a paucal determiner. That means that its number features restrict its domain of quantification to entities with a *small* number of atomic parts. Since *algún* ranges over entities with a small number of atomic parts, it cannot describe situations where *all* contextually relevant entities in its domain satisfies the existential claim.

Martí's proposal opens an interesting line of approach to the cross-linguistic contrasts between modal indefinites regarding the nature and presence or absence of an upper-bound. This is so because, as discussed above, *yalnhej* DPs are semantically number neutral. If the presence or absence of an upper-bound is tied to the interpretation of the number inflection that each modal indefinite requires, the absence of an upper bound for *yalnhej* DPs would be completely expected. We simply note this possibility here, but we will leave its exploration, which requires probing into the interpretation of number marking, to further research.¹⁸

4.3 Prediction: 'Harmonic' interpretations

We conclude with a prediction. If other modal expressions project their possibilities from an anchor, then the modal anchors of *yalnhej* DPs that are embedded under external modals could be coindexed with the modal anchor of these external modals, deriving interpretations (which Alonso-Ovalle & Menéndez-Benito (2018) call 'harmonic') where the external modal and the *yalnhej* DP share a modal domain.

¹⁸ Thanks to Louise McNally (p.c.) for suggesting the possibility that the lack of an upper bound in the case of *yalnhej* DPs may be tied to their being semantically number neutral.

Alonso-Ovalle & Menéndez-Benito (2018) derive this interpretation by letting *uno cualquiera* project from a modal anchor coindexed to the modal anchor of the imperative, as *yalnhej tas karta'il* does in (87). They assume, as we do, that the modal anchor of the imperative operator picks up an order (cf. Hacquard 2006 on performative modals) and that *uno cualquiera* projects its modal domain from that order. The worlds in the modal domain are those worlds consistent with the decision leading to the order where the addressee obeys the order. Following their approach, we can assume that the modal component *yalnhej tas karta'il* in (87) invokes the worlds where the decision leading to the order is fulfilled. The resulting truth-conditions convey (i) that the addressee is required to pick a card, and (ii) that picking any card is compatible with the order. There is no requirement to pick a card at random.

(87) $[\lambda w_1 [\Box_{e_2} [\exists_e [\text{VP you } [\text{v Ag } [\text{VP } \lambda e_1 [[\text{yalnhej what card NP } e_2] \lambda x_1 \text{ grab } t_1 e_1 w_1]]]]]]]]]$

(88) $\lambda w. \forall w' \in f_{\text{imp}}(\mathbf{e}_2) \exists e \left[\exists x \left[\begin{array}{l} \text{GRAB}_{w'}(x)(e) \ \& \\ * \text{CARD}_{w'}(x) \ \& \\ \text{AGENT}(\text{XUN})(e) \end{array} \right] \ \& \ \forall y \left[\begin{array}{l} * \text{CARD}_{w'}(y) \rightarrow \\ \exists w'' \in f(\mathbf{e}_2) \\ \exists e' \left[\begin{array}{l} e' \approx e \ \& \\ \text{GRAB}_{w'}(y)(e') \end{array} \right] \end{array} \right] \right]$

Epistemic ‘harmonic’ interpretations are also possible for *yalnhej* DPs, as in (90) below, which could be uttered by a speaker who (i) knows who danced at the party and (ii) knows that not all people danced:

(89) Context: *Xun thinks that some people danced at the party, but he doesn't know exactly who. As far as he can tell, it could be anyone.*

(90) Tz-s-na' waj Xun to [**yalnhej mach**] ix-chanhalw-i t'a k'inh.
 PFV-A3-think CLF Xun C YALNHEJ who PFV-dance-IV PREP party
 ‘Xun thinks that a person or people danced, and any person is a possibility.’

Assuming projection of the attitude’s modality from an anchor (Kratzer 2006), these can be treated as cases where the anchor of *yalnhej* is coindexed with the attitude’s anchor. In these cases, *f* could project from the modal anchor of the *yalnhej* DP the set of worlds consistent with Xun’s belief state:

(91) $[\lambda w_2 \text{ Xun believes}_{w_2}(e_2) [\lambda w_1 [\exists_e [\text{yalnhej mach } (e_2)] \lambda_1 [\text{VP } t_1 [\text{v Ag } [\text{VP } \lambda e_1 \text{ danced } e_1 w_1]]]]]]]]]$

(92) $\lambda w. \forall w' \in f_{\text{belief}}(\mathbf{e}_2) \exists e \left[\exists x \left[\begin{array}{l} \text{DANCE}_{w'}(x)(e) \ \& \\ * \text{PEOPLE}_{w'}(x) \ \& \\ \text{AGENT}(x)(e) \end{array} \right] \ \& \ \forall y \left[\begin{array}{l} * \text{PEOPLE}_{w'}(y) \rightarrow \\ \exists w'' \in f(\mathbf{e}_2) \\ \exists e' \left[\begin{array}{l} e' \approx e \ \& \ \text{AG}(y)(e) \\ \ \& \ \text{D}_{w''}(y)(e') \end{array} \right] \end{array} \right] \right]$

As shown in (93), this possibility is not attested for *uno cualquiera*, which, as discussed above, does not have epistemic interpretations in unembedded contexts either.

- (93) Juan tiene que haber ido a ver **una** película **cualquiera**.
 Juan have-3s that have gone to see a film CUALQUIERA.
 ‘Juan must have gone to see a movie at random.’
 Not: ‘Juan must have gone to watch a movie, any movie is a possibility for me.’

(Alonso-Ovalle & Menéndez-Benito 2018)

This is, of course, in line with the assumption that *uno cualquiera* constrains the type of modal anchors that it can take, excluding anchors with informational content, and, on the other hand, that *yalnhej* DPs are more permissive in this respect.

With this observation, we conclude the overview of the modal component of *yalnhej* DPs. In the next section, we comment on a further difference between *yalnhej* DPs and *uno cualquiera*: the lack of ‘unremarkable’ interpretations for the former.

5 Random choice with no ‘unremarkable’ interpretation

We have noted above that *yalnhej* DPs differ from *uno cualquiera* DPs in an important respect. On top of their random choice component, *uno cualquiera* can convey a non-modal ‘unremarkable’ interpretation (Alonso-Ovalle & Menéndez-Benito 2018). This is best seen in cases like (55), repeated in (94) below, where *uno cualquiera* is in predicative position and cannot express random choice in the absence of a volitional predicate. The Spanish sentence in (94) conveys that Juan is a student that does not stand out in any relevant respects.

- (94) Juan es **un** estudiante **cualquiera**.
 Juan be-3S a student CUALQUIERA
 ‘Juan is an unremarkable student.’

(Alonso-Ovalle & Menéndez-Benito 2018, 3)

Similar observations can be made for German *irgendein*, as seen below, and noted in Alonso-Ovalle & Royer 2021.

- (95) Hans ist (nur) **irgend**-ein Student.
 Hans be-3S only IRGEND-one student
 ≈ ‘Hans is an unremarkable student.’¹⁹ (German)

¹⁹ We thank Michael Wagner for judgments on German.

A similar situation obtains with other expressions in Chuj, too. [Alonso-Ovalle & Royer \(2020\)](#) and [Alonso-Ovalle & Royer \(2021\)](#) discuss the case of the Chuj modifier *komon*. This modifier can be DP-internal, as in the example in (96), where *komon* is internal to an indefinite DP and apparently conveys a random choice modal component.

- (96) Ix-s-man [DP jun **komon** libro] waj Xun.
 PFV-A3-buy INDF KOMON book CLF Xun
 ≈ ‘Xun bought a random book.’ (Alonso-Ovalle & Royer 2021, 485)

The example in (97) below shows that *komon* can also be part of the verbal complex. In this case, *komon* also seems to contribute random choice modality, as the translation in (97) shows.

- (97) Ix-s-**komon**-man-ej jun libro waj Xun.
 PFV-A3-KOMON-buy-DTV INDF book CLF Xun
 ≈ ‘Xun randomly bought a book.’ (Alonso-Ovalle & Royer 2021, 485)

With unaccusatives, VP-internal *komon* expresses the unexpectedness of an event, as illustrated in (98):

- (98) Ix-**komon**-k’och ix Malin.
 PFV-KOMON-arrive CLF Malin
 ≈ ‘Malin randomly/unexpectedly arrived.’
 (Alonso-Ovalle & Royer 2021, 485)

Interestingly, *komon* can also convey an ‘unremarkable’ interpretation in addition to random choice modality, but only when it modifies an NP argument, as in (96), and not the verb, as in (97) or (98). This is best seen when *komon* is in predicative position, as in the sentence in (99), which conveys that Xun is an unremarkable student, in parallel to the Spanish facts discussed above.

- (99) **Komon** k’uyb’um waj Xun.
 KOMON student CLF Xun
 ≈ Xun is an unremarkable student.’

[Alonso-Ovalle & Menéndez-Benito \(2018\)](#) assume that *uno cualquiera* is actually ambiguous between the random choice and unremarkable interpretation. [Alonso-Ovalle & Royer \(2021\)](#) make the same assumption for *komon* in the nominal domain. Nevertheless, the fact that the ‘unremarkable’ interpretation surfaces in typologically-unrelated languages casts doubt on this assumption, and raises the issue of whether there are modal indefinites that can express random choice modality but not an unremarkable interpretation. *Yalnhej* DPs turn out to be such expressions.

While, as discussed throughout the paper, *yalnhej* DPs can convey random choice modality, they cannot convey an unremarkable interpretation. For instance, the utterance in (100) is deemed acceptable if Xun, the agent, bought a book at random; but it is deemed unacceptable in a context where Xun bought a book on purpose, and the book is simply unremarkable.

- (100) [**Yalnhej tas** libro'-al] ix-s-man waj Xun.
 YALNHEJ what book-NML PFV-A3-buy CLF Xun
 ≈ 'Xun bought a random book.'
 Not: 'Xun bought an unremarkable book.'

Further consider the following context from [Alonso-Ovalle & Royer 2021](#), which blocks random choice and epistemic interpretations of *komon*, all while making an unremarkable interpretation salient.

- (101) *Only two students applied for an award. While one of the two students is prolific, the other is just an ordinary student with ordinary grades. Xun is the corrupt person who decides which student gets the award. The ordinary student happens to be in his family. He chooses that ordinary student as the recipient of the award.* (Alonso-Ovalle & Royer 2021, 502)

Neither (102a) or (102b) can felicitously describe the scenario in (101). This makes sense if *yalnhej* DPs are modal indefinites that are not ambiguous with an item expressing unremarkability: the context blocks both the random choice interpretation (Xun chose a specific person as the recipient of the award) and the epistemic interpretation (there is only one recipient, and the speaker knows who it is).

- (102) Acceptability judgements given the context in (101)
- a. ✗ [**Yalnhej tas** k'uyb'um-al] ix-s-sikl-ej waj Xun.
 YALNHEJ what student-NML PFV-A3-choose-DTV CLF Xun
 Intended: 'Xun chose an unremarkable student.'
- b. ✗ [**Yalnhej tas** k'uyb'um-al] ix-cha'-an premio chi'.
 YALNHEJ what student-NML PFV-receive-AF prize DEM
 Intended: 'An unremarkable student received the prize.'

DPs modified with *komon*, on the other hand, *can* describe this scenario. This is shown below:

- (103) Acceptability judgements given the context in (101)
- a. ✓ Ix-s-sikl-ej [jun **komon** k'uyb'um] waj Xun.
 PFV-A3-choose-DTV INDF KOMON student CLF Xun
 'Xun chose an unremarkable student.'

- b. ✓ *Ix-s-cha'* premio *chi'* [*jun komon k'uyb'um*].
 PFV-A3-receive prize DEM INDF KOMON student
 'An unremarkable student received the prize.'

Clearly, then, *yalnhej* DPs lack an 'unremarkable' interpretation, lending some credibility to the hypothesis that the two interpretations of some other modal indefinites with a random choice component derives from an ambiguity.

Furthermore, the behaviour of *yalnhej* DPs casts some light on the nature of the forms that convey unremarkability and, hence, on the nature of the ambiguity. Here is why. Unremarkability is a property of individuals. Accordingly, we expect the forms expressing this meaning to be predicates of individuals. This is, in fact, what we assumed in [Alonso-Ovalle & Royer 2021](#) for DP-internal *komon*. There, we proposed that DP-internal *komon* phrases, in examples such as (103a - 103b), are predicative. *Komon* itself is treated as a predicate modifier that is true of those individuals in the extension of the predicate that it modifies that count in the context as unremarkable. The interpretation of DP-internal *komon* references a ranking of individuals based on a contextually determined set of properties that determine equivalence classes in the extension of the predicate that the modifier applies to. DP-internal *komon* indicates that the argument of the DP does not fall in a high-ranked equivalence class. We refer the reader to [Alonso-Ovalle & Royer \(2021: §3.4 and Appendix\)](#) for details.

It is interesting in this context to observe that *yalnhej* DPs do not have predicative uses. The examples in (60) above, repeated below, show this. As expected, the Chuj counterpart of the copular sentences discussed above, in (105), is equally ungrammatical.

- (104) a. **Yalnhej tas* anima'-il waj Xun.
 YALNHEJ what person-NML CLF Xun
 b. **Yalnhej b'ajt'il* jun chonhab' tik.
 YALNHEJ where one village DEM

- (105) **Yalnhej tas* k'uyb'um-al waj Xun.
 YALNHEJ what student-NML CLF Xun
 Intended: 'Xun is an unremarkable student.'

Yalnhej DPs are furthermore impossible in other typical predicative positions in the language, as recently identified in [Royer, Buenrostro & Jenks 2024](#). For instance, in contrast to other predicational quantifiers in Chuj, they may not serve as the predicates of possessive 'have' constructions (which in Mayan are derived by combining an existential predicate with a possessed DP; [Coon 2016](#)). This is shown in (106a). Example (106b), with *tzijtum* 'many', is also provided to show that other quantifi-

cational expressions in Chuj can serve as predicates that form possessive ‘have’ constructions (see Royer et al. 2024 for further details).²⁰

(106) Quantifiers as predicates of possessive-have constructions

- a. * **Yalnhej mach** heb’ s-nulej ix Katal
 YALNHEJ who PL A3-sibling CLF Katal
 Intended: ‘Katal has some siblings, but I don’t know who they are.’
- b. ✓ **Tzijtum** heb’ s-nulej ix Katal.
 many PL A1S-sibling CLF Katal
 ‘Katal has many siblings’ (Lit: ‘Katal’s siblings are many’).

Another diagnostic for predicate status in Chuj comes from the ability for an expression to appear in a secondary predicate construction. In such constructions, a nonverbal predicate is combined with an aspectless clause (see e.g., Mateo Toledo 2012 on closely-related Q’anjob’al). Again, while quantificational expressions like *tzijtum* may serve as secondary predicates (107b), this is not the case for *yalnhej* DPs (107a). (Again, see Royer et al. 2024 for further details.)

(107) Quantifiers as predicates of secondary predicate constructions

- a. * [PredP **Yalnhej mach**] [vP y-ek’ heb’ paxyalwum t’atik].
 YALNHEJ who A3-pass PL visitor here
 Intended: ≈ ‘Some visitors come here, and I don’t know who they are.’
- b. ✓ [PredP **Tzijtum**] [vP y-ek’ heb’ paxyalwum t’atik].
 many A3-pass PL visitor here
 ‘Many visitors come here.’
 Lit: ‘The visitors come many here.’ (Royer et al. 2024, 15)

Finally, turning to predicate status within the nominal domain, it is also possible to show that *yalnhej* DPs cannot serve as attributive modifiers lower in the DP structure, which might be expected if they were able to serve as predicates. As shown in (108a), it is not possible to stack *yalnhej* DPs under other adjectival modifiers. Crucially, this behavior runs counter to that of *komon* in Chuj, which *can* be stacked

²⁰ The string of words in (106a) is not in and of itself ill-formed, but it does not result in a complete sentence. The following, for example, does form a full sentence, and could be uttered, for instance, if a speaker is uncertain about the identity of Katal’s siblings.

- (i) ✓ **Yalnhej mach** heb’ s-nulej ix Katal ix-k’och-i.
 YALNHEJ who PL A3-sibling CLF Katal PFV-arrive-IV
 ≈ ‘Some of Katal’s siblings arrived, but I’m not sure which.’
 / or ≈ ‘All of Katal’s siblings arrived.’

under other attributive modifiers (108b). In such cases, only an unremarkable interpretation is possible, which [Alonso-Ovalle & Royer](#) interpret as support for the idea that *komon* is ambiguous.

- (108) a. * **K’ank’an yalnhej tas** silab’-il ix-s-yam waj Xun.
 yellow YALNHEJ what gift-NML PFV-A3-grab CLF Xun
- b. ✓ **Ix-s-yam jun k’ank’an komon** silab’ waj Xun.
 PFV-A3-grab INDF yellow KOMON gift CLF Xun
 ≈ ‘Xun grabbed a yellow average gift.’

(Alonso-Ovalle & Royer 2021, 507)

Yalnhej DPs cannot serve as predicates, then, and, as discussed, they cannot have ‘unremarkable’ interpretations. This contrasts with the observation that both *komon* and *uno cualquiera* can serve as predicates and that they have ‘unremarkable’ interpretations. *Yalnhej* DPs therefore strongly suggest that unremarkability and predicativity go hand in hand.

We will conclude by situating the behavior of *yalnhej* DPs in the landscape of modal indefinites in the next section.

6 Crosslinguistic outlook

To summarize: we have seen in the previous sections that *yalnhej* DPs conventionally encode an at-issue modal component, that this component can be either epistemic or random choice, and that the difference depends in part on the syntactic position that *yalnhej* DPs occupy: as external arguments, *yalnhej* DPs convey epistemic modality; as internal arguments or adjuncts of volitional verbs, they can convey either epistemic or random choice modality.

While *yalnhej* DPs share properties with other modal indefinites, the constellation of properties that characterize these DPs also separate them from other modal indefinites described in the literature. This section seeks to contribute to the growing development of a typology of modal indefinites by briefly commenting on the extent to which these DPs either overlap with or differ from other existential DPs that also convey a modal component. The section thus aims to contribute to the third question (Q3) posed at the outset of this paper, namely: what are the sources of semantic variation in the expression of DP modals?

We will first look at the status of the modal component, then at its content.

6.1 On the status of the modal component

We have defended that the status of the modal component of *yalnhej* DPs is at-issue (see Section 3.3). The modal component of some previously identified modal

indefinites, such as Spanish *algún* or German *irgendein*, is not. *Algún* contributes an epistemic component, and *irgendein*, like *yalnhej*-DPs, can contribute either an epistemic or a random choice component. The examples in (109) and (110) show that these components do not survive embedding under a downward entailing operator. This is illustrated for *algún* with the conditional in (109), and for negative adverbs of quantification in (110), from Buccola & Haida 2017. Buccola & Haida (2017) further point that in the absence of prosodic prominence on *irgendein*, (110) simply conveys that Hans never bought any book. For the random choice component to survive embedding, *irgendein* needs to be stressed.

- (109) Si Juan compró **algún** libro, hablaré con su padre.
 if Juan buy-PFV-3S ALGÚN book, talk-FUT-3S to his father
 ‘If Juan bought a book / books, I will talk to his father.’
 Not: ‘If Juan bought a book / books and I don’t know which one(s) ...’
 (Spanish)
- (110) Hans hat nie **irgend**-ein Buch gekauft.
 Hans have-3S never IRGEND-a book bought
 ‘Hans never bought any book.’
 Not: ‘It was never the case that Hans bought a book and I didn’t know which book.’ Not: ‘It was never the case that Hans bought a random book.’
 (German: Buccola & Haida 2017)

In light of these facts, the modal component of *algún* and *irgendein* has been taken to be a quantity implicature (Kratzer & Shimoyama 2002, Alonso-Ovalle & Menéndez-Benito 2011b).

Moreover, as already discussed briefly in Section 3.2.4, the modal component of *yalnhej* DP’s also differs from that of English *wh*-free relatives. Indeed, von Stechow (2000) shows that the modal component of *wh*-free relatives projects like a presupposition when they are epistemic, but not when it conveys agent indifference.²¹

Yalnhej DP’s are not alone in conveying an at issue modal component. We have noted above that Alonso-Ovalle & Menéndez-Benito (2011b) argue that *uno cualquiera*, does too. Evidence for this claim also comes from the behaviour of this item in downward entailing contexts. Even in the absence of any special prosodic prominence on *un libro cualquiera*, the sentence in (111) conveys that nobody grabbed a book a random. The same seems to be true of the French *n’importe-wh* series, as (112) illustrates.

21 But see also Condoravdi 2015 for doubts about the presuppositional status of *wh-ever* free relatives.

- (111) Nadie cogió **un libro cualquiera**.
 no.one grab-PFC-3S a book cualquiera
 ≈ ‘Nobody grabbed a random book.’ (Spanish)
- (112) Personne n’-a apporté **n’importe quel** livre.
 no.one NEG-have-3S brought N’IMPORTE what book
 ≈ ‘No one brought along a random book.’ (French)

The at issue status of the modal component of *yalnhej* DPs finds parallels within Chuj, too. We introduced in the preceding section the Chuj modifier *komon* (Alonso-Ovalle & Royer 2020, 2021). This expression patterns with *uno cualquiera*, the *n’importe-wh* series and *yalnhej* DPs in that its modal component survives in downward entailing environments without any special prosodic marking. This is shown in (113) for DP-internal *komon*, where it is embedded under *malaj mach* (‘nobody’): (113) conveys that nobody brought along a random or unexpected book. The same is also true for VP-internal *komon*, as seen in (114).

- (113) Malaj mach ix-ik’-an kot jun **komon** libro.
 NEG.EXT who PFV-bring-AF DIR.along INDF KOMON book
 ≈ ‘No one brought along a book at random.’
 (Alonso-Ovalle & Royer 2021, 512)
- (114) Malaj mach ix-**komon**-ik’-an kot jun libro.
 MALAJ who PFV-KOMON-bring-DTV DIR.along INDF book
 ≈ ‘No one randomly brought along any book.’
 (Alonso-Ovalle & Royer 2021, 512)

Embedding *komon* in the antecedent of a conditional expression yields the same results. The example in (115), for instance, is a felicitous description in the scenario in (116), where the rules of a game require that participants make a random choice. The antecedent describes worlds where the addressee picks a card at random (or an unremarkable card) and it is not compatible with the addressee picking a card carefully (or picking an important one).

- (115) Tato tz-a-yam jun **komon** karta, lan ha-k’anab’aj-an
 if IPFV-A2S-grab INDF KOMON card, PROG A2S-comply.with-DEP
 s-tz’olal tajnel tik.
 A3-rule game DEM.
 ‘If you pick a random card, you’re complying with the rules of the game.’
 (Alonso-Ovalle & Royer 2021, 512)

- (116) *We're playing a board game, and as part of the rules, you must first pick one card at random. Some cards give you a clear advantage, others put you at disadvantage, so you can't just pick any card you desire, i.e. it's important you pick one at random. At this stage of the game, you ask me what you need to do to respect the rules of the game.*

(Alonso-Ovalle & Royer 2021, 512)

In sum, by zooming in on the status of the modal component of modal indefinites in different languages, we have identified one important source of semantic variation regarding the status of their modal component. That is, comparable epistemic and random choice modals in other languages do not necessarily involve an at-issue modal component, as is the case in Chuj.

6.2 On the content of the modal component

A second important point of variation concerns how selective modal indefinites are with respect to the type of modality they convey, or more generally the range of interpretations that they may give rise to. Some modal indefinites seem to specialize in only one modal flavour; others tolerate more than one. We will also discuss in this section the fact that *yalnhej* DPs, contrary to other modal indefinites, convey existential force but no upper bound.

Starting with modal indefinites that allow for more than one modal flavour, we have seen that *yalnhej* DPs can convey either epistemic or random choice modality. In this respect, they pattern with other modal indefinites, like German *irgendein*. In (117), *irgendein* can either convey an epistemic modal component (that the speaker does not know which book Hans bought) or, as noted above, a random choice component (roughly, that Hans was indifferent to the issue of which book to buy).

- (117) Hans hat irgend-ein Buch gekauft.
 Hans have-3S IRGEND-INDF book bought
 ≈ 'Hans bought some book or other / a random book.'

(German: Buccola & Haida 2017)

On the other hand, other modal indefinites are more selective. *Algún* only conveys epistemic modality, and *uno cualquiera* and *n'importe-wh* only convey random choice modality, as the examples below illustrate.

- (118) Juan compró **algún** libro.
 Juan buy-PFV-3S ALGÚN book
 ≈ 'Juan bought some book or other.'
 Not: 'Juan bought a random book.'

(Spanish)

- (119) Juan compró **un libro cualquiera**.
Juan buy-PFV-3S a book CUALQUIERA
≈ ‘Juan bought a random book.’
Not: ‘Juan bought some book or other.’ (Spanish)
- (120) Marie a acheté **n’importe quel** livre.
Marie have-3S bought N’IMPORTE which book
≈ ‘Marie bought a random book.’
Not: ‘Marie bought some book or other.’ (French)

Likewise, according to the description presented in [Chierchia 2013](#) (§5.3.2) Italian *un qualsiasi*, which can express random choice, does not seem to be able to express speaker ignorance in unembedded contexts.

- (121) a. Chi ha telefonato?
who have:3S telephoned
b. ?? Un ragazzo qualsiasi
a boy QUALSIASI

The attested diversity with respect to which modal flavours are expressed is naturally accommodated within the type of analysis that we presented, as different modal indefinites can impose different constraints on the types of anchors that they take as arguments or allow for different functions projecting modal domains from those anchors.

Finally, we comment on the fact that *yalnhej* DPs are not upper bounded. In this, they contrast with other modal indefinites. As illustration, we can consider Spanish *algún* and *uno cualquiera*: the sentence in (122) cannot felicitously describe a situation where the speaker knows that *all* contextually relevant people are dancing; likewise, the sentence in (123) cannot felicitously describe a situation where Juan bought *all* contextually relevant books.

- (122) **Alguna** persona está bailando.
ALGUNA person be-3S dancing.
‘Some person or other is dancing.’ (Spanish)
- (123) Juan compró **un libro cualquiera**.
Juan grab-PFV-3S a book CUALQUIERA
‘Juan bought a random book.’ (Spanish)

The deviance of these examples in such ‘universal’ contexts contrasts with the acceptability of *yalnhej* DPs in similar contexts. We noted before that the Chuj collaborators on this project accept the sentence in (22) above, repeated in (124)

below, in the context in (23), repeated in (125) below. Likewise, they accept the sentence in (31), repeated in (126), in the context in (33), repeated in (127).

- (124) [**Yalnhej mach**] ix-chanhalw-i t'a k'inh.
 YALNHEJ who PFV-dance-IV PREP party
 'A person or group of people danced, I don't know who (maybe all did).'
- (125) Context 3: *You were at a party and you saw that everyone there danced.*
 (124) = ✓
- (126) [**Yalnhej tas libro'al**] ix-s-man waj Xun.
 YALNHEJ what book PFV-A3-buy CLF Xun
 'Xun bought a random book / some random books.'
- (127) *Xun is very wealthy, and a bit insane. He goes to a bookstore, and he starts buying books indiscriminately, to the point where he ends up buying all books.*
 (126) = ✓

In sum, cross-linguistic comparison in the content of modal indefinites allows us to identify important points of semantic variation with regards to the core nature of these expressions. On one hand, there is clear variation with respect to the modal flavours that the relevant expressions may convey (epistemic, random choice, or both). On the other hand, this paper shows that there may be variation in whether a modal expresses quantification *with* or *without* an upper bound, the former being compatible scenarios in which all contextually relevant entities satisfy the existential claim made by the modal expression (leading to the apparent absence of modality).

7 Conclusion

We started this paper with three general questions about the crosscategorical nature of modality:

- Q1. What modal flavours do DPs express?
- Q2. How is the modal flavour of modal DPs determined?
- Q3. What are the sources of semantic variation in the expression of DP modals?

With respect to the first question, we showed that, in the absence of external modals, the modal component of *yalnhej* DPs can be epistemic or random choice. These modal flavours are common within the class of modal indefinites. While there are clear parallels of the epistemic interpretation in the verbal domain, it is less clear

whether there exist parallels of the random choice modal flavour outside of the nominal domain. Although random choice construals of modal auxiliaries seem to be inexistent, [Martin & Schäffer \(2012\)](#) and [Martin & Schäfer \(2017\)](#) discuss a type of main verb ('defeasible causatives') with a modal component that tracks *agent goals*. Perhaps, this is a point of cross-categorial parallelism between the nominal and verbal domain with respect to random choice modality.

As for the second question, we have seen that the type of modal flavour expressed by *yalnhej* DPs correlates with their syntactic position. We captured this by assuming, in line with recent proposals for modal auxiliaries (e.g. [Hacquard 2006, 2009, 2010](#); [Alonso-Ovalle & Menéndez-Benito 2018](#)), that *yalnhej* DPs project their modal domains from the value of an event argument.

Finally, in seeking answers to the third question, Section 6 identified two sources of variation in the expression of DP modality. As in the verbal domain, we saw that the same DP modal, like *yalnhej* and *irgendein*, can convey different modal flavours (epistemic and random choice modality). At the same time, some DP modals, like *algún* (epistemic) and *uno cualquiera* (random choice), seem to be dedicated to expressing only one modal flavour. We also observed variation in the status of the modal component: some make at-issue contributions, like *yalnhej* and *uno cualquiera*, whereas others, like *irgendein* and *algún*, do not. Clearly, these points of semantic variation are only a subset of the factors that contribute to the rich diversity of modal indefinites across languages. Nonetheless, we believe that they represent an important point of departure for the typological characterization of modality in the nominal domain.

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