Random Choice from Likelihood: The Case of Chuj (Mayan)

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Abstract

Abstract: Research on modality has recently broadened beyond the verbal domain, unearthing questions about the cross-categorial nature of modality (Arregui et al., 2017), for instance: To what extent do DP and VP modals mirror each other? Chuj, an understudied Mayan language, provides an ideal vantage point to answer this question with respect to random choice modality. Random choice indefinites convey, roughly, that an agent made an indiscriminate choice. In Chuj, random choice indefinite DPs involve a morpheme (*komon*) that can also appear as a verbal modifier (Royer and Alonso-Ovalle 2019), inviting a comparison between categories. We argue that both in DPs and VPs, *komon* conveys information about the likelihood of the event described, but that the modal component of *komon* is nevertheless tied to its syntactic position. VP-*komon* conveys that the most expected worlds where the described event happens are no more expected that the most expected worlds where it does not. DP-*komon* conveys a similar modal component, but hardwires a comparison between the likelihood of the event described, which involves an individual in the extension of the NP, and that of alternative events determined by considering alternative individuals in the extension of that NP. The characterization of the modal component of *komon* contributes to the characterization of random choice modality and brings into question whether this type of modality should be taken to be a unified category, since none of the previous proposals on the nature of random choice modality tie it to the expression of likelihood.

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1 Introduction

While the expression of modality cuts across syntactic categories (Kratzer, 1981), most work within formal semantics has traditionally focused on the modal component of verbal auxiliaries. The focus of research on modal expressions has recently broadened beyond the verbal domain, though, unearthing questions about the cross-categorial nature of modality (Arregui et al., 2017), for example:

(i) What modal flavours can DPs express?

(ii) To what extent do they mirror those of VP modals?

(iii) To what extent is the modal component of expressions tied to their syntactic position?

This paper brings new data with relevance to these questions. The data come from Chuj, an understudied Mayan language spoken by approximately 70,000 speakers in Guatemala and Mexico (Piedrasanta, 2009).[1]

One modal flavour that DPs can express crosslinguistically is random choice modality. Random choice indefinites convey, roughly, that an agent made a random choice. For instance, the Spanish sentence in (1), which includes the random choice indefinite *un NP cualquiera*, makes an existential claim—that María bought a gift—just like its counterpart with a standard indefinite. On top of that, the sentence can also make a modal claim, which conveys, roughly, that María could have bought any other gift (Alonso-Ovalle and Menéndez-Benito 2011, 2013, 2018). This is its random choice component.[2]

(1) María compró un regalo cualquiera.
María buy.PFV a gift CUALQUIERA
≈ 'María bought a random gift.' (Spanish)

Several other indefinites that can convey random choice modality have been identified across languages. These include Italian *un qualsiasi* and *un qualunque* (Chierchia, 2013), Romanian *un oarecare* (Fălăuş, 2014, 2015), German *irgendein* (Kratzer and Shimoyama 2002; Buccola and Haida 2017), and the Korean *na* indeterminates (Choi, 2007; Kim and Kaufmann, 2007; Choi and Romero, 2008).

In this paper, we will see that Chuj provides a vantage point for the study of questions (ii-iii) above with respect to random choice modality. This is so for three reasons. The first is that Chuj is similar enough to other previously studied languages to allow for a direct comparison, extending the small sample of random choice indefinites that have been studied. The language features DPs that can convey random choice modality. For instance, example (2), with the modifier *komon* within an indefinite DP, can convey (i) that Xun bought a book, and (ii) that he could have bought any book, in parallel to its Spanish counterpart in (1) above.

(2) Ix-s-man [$_{DP}$ jun **komon** libro] waj Xun.
PFV-A3-buy INDF KOMON book CLF Xun
≈ 'Xun bought a random book.'

[1] All data, unless otherwise attributed, come from original fieldwork conducted with speakers of the San Mateo Ixtatán dialect of Chuj, spoken in the municipalities of San Benito Nentón and San Mateo Ixtatán. Data were collected in Huehuetenango, Guatemala, Chiapas, Mexico, and with two consultants in Montréal, Canada. We used a theoretically-informed, hypothesis-driven fieldwork methodology (see Matthewson 2004, Davis et al. 2014).

[2] We use the following abbreviations in glosses: A: "Set A" (ergative/possessive); ALGÚN: Spanish *algún*; AG: agentive suffix; B: "Set B" (absolutive); CLF: noun classifier; CUALQUIERA: Spanish *cualquiera*; DEM: demonstrative; DIV: derived intransitive suffix; DTV: derived transitive status suffix; INDF: indefinite; IRGEND: German *irgend-*; KOMON: Chuj *komon*; IV: intransitive status suffix; N'IMPORTE: French *n'importe* WH series; NML: nominal suffix; PFV: perfective; QUALSIASI: Italian *qualsiasi*; TOP: topic; YALNHEJ: Chuj *yalnhej* WH series. We use *random* and, later on, *unexpectedly* in the translations of sentences with *komon*. This is just a rough approximation. We are not assuming that *komon* and *random* or *unexpectedly* are equivalent.

The second reason is that Chuj is different enough from other languages for a comparison to have the potential to cast new light on the nature of random choice modality. As (3) illustrates, the modifier *komon* can also be part of the verbal complex:

(3) Ix-s-**komon**-man-ej jun libro waj Xun.
PFV-A3-KOMON-buy-DTV INDF book CLF Xun
≈ 'Xun randomly bought a book.'

When *komon* is VP-internal, as in (3), it can also convey random choice modality. As we will see, the sentence in (3) could be used, like (2), to convey that the agent (*Xun*) was indifferent about which book to buy. This provides an opportunity to probe into the semantics of random choice modality and into the potential differences between DP and VP-level modality, thus contributing to answering question (iii) above.

Moreover, we will see that VP-internal *komon* ('VP-*komon*') can also convey a modal component expressing the likelihood of an event. This becomes apparent in sentences without agents, such as those with unaccusative verbs like (4):

(4) Ix-**komon**-k'och ix Malin.
PFV-KOMON-arrive CLF Malin
≈ 'Malin randomly/unexpectedly arrived.'

In (4), VP-*komon* signals that the event of Malin arriving was not expected. The contrast between cases like (3) and (4) poses two questions: a) How does the likelihood component of (4) relate to the expression of random choice modality in cases like (3), and b) How does it relate to the modal component of DP-internal *komon* ('DP-*komon*')? Probing into these two questions will contribute to answering question (ii) above, and will ultimately shed light into question (i), too. This is the third reason why Chuj is well positioned to cast light on the expression of random choice modality. There is currently no consensus in the literature about the precise nature of random choice modality (Alonso-Ovalle and Menéndez-Benito, 2018), and previous proposals offer little insight into why the expression of random choice and low likelihood should be lumped together with VP-*komon*, as we will discuss in Section 4.

The paper sets up to explore two particular puzzles about *komon*:

Puzzle 1: Why can VP-*komon* lump together the expression of random choice and low likelihood? What is the relation between these two notions?

Puzzle 2: How do the modal components of VP-*komon* and DP-*komon* relate to each other?

The main claims that the paper makes are the following. With respect to Puzzle 1, we will propose that VP-*komon* and DP-*komon* uniformly convey a likelihood component. Both expressions are analyzed as circumstantial modals. In line with recent research on modal auxiliaries (Hacquard, 2006, 2009), we will assume that these modals project their domain of quantification from a particular: the type of event described by the VP. In projecting their modal domain, the two types of *komon* take into consideration a set of circumstances that obtain around the preparatory stage of the event that the sentence that they are contained in describes, and they convey information about the extent to which this event was expected, given those circumstances.[3]

Both VP-*komon* and DP-*komon* compare the likelihood of the event described to a set of events that could have happened, given those circumstances. We will see that this modal component comes out as true in scenarios where an agent made a random choice, but not only in those: it is also true in scenarios where

[3]We take the preparatory stage of an event e to be the point in time where all the circumstances are satisfied so that the event can take place. We follow Alonso-Ovalle and Menéndez-Benito 2018, who extend the usage in Grano 2011

an agent gets involved in an unexpected action, and in scenarios where a non-agentive event is unexpected, given the circumstances. With respect to Puzzle 2, we will propose that the modal component that *komon* expresses depends on its syntactic position: in the case of DP-*komon*, the set of alternative events that the expression invokes is crucially determined by accessing the extension of the NP.

The two puzzles that the paper explores do not exhaust those that *komon* poses. While showing differences with other random choice expressions, *komon* also shows some striking commonalities. Like its counterpart with Spanish *un NP cualquiera* (Alonso-Ovalle and Menéndez-Benito, 2018), the sentence in (2) can appropriately describe scenarios like (5), where the random choice component is false.

(5) *'Unremarkable' scenario:* Xun went to the bookstore. He wanted to buy *The Unbearable Lightness of Being*, and did so. I don't think this book is special in any way.

In scenarios like (5), the sentence in (2) is true because it can convey that the book that Xun bought was an ordinary one, one that does not outrank other books in any respect. In this, DP-*komon* contrasts with VP-*komon*: the sentence in (3) is false in the scenario in (5).

The paper shows that the cases where DP-*komon* conveys the scalar meaning described above should be kept apart from the cases where it conveys a likelihood component. This poses the question of why the modal and scalar meanings go together across languages. We will not attempt to answer this question here. We will simply note that the association between the random choice and unremarkable components is not universal. The French *n'importe 'wh'* DP series, for instance, convey random choice modality. The French counterpart of Spanish (1) and Chuj (2), in (6), is true in the random choice scenario (and false in scenarios where the agent did not make an indiscriminate choice), but cannot describe the 'unremarkable' scenario in (5).

(6) J'ai acheté **n'importe quel** livre.
I.have bought N'IMPORTE which book
≈ 'I bought a random book.'[4] (French)

Understanding why the random choice and 'unremarkable' meanings are lumped together in some, but not all languages, requires a closer (re-)examination of the modal component of other random choice DPs, a project that we cannot embark on within the limits of this paper. We see our proposal to answer the two puzzles outlined above as a first step towards this project, which we choose to leave to future research.

The paper is organized as follows. Section 2 provides a description of the distribution and interpretation of *komon* in the verbal domain ('VP-*komon*'), and a solution to Puzzle 1. As anticipated above, we will see that VP-*komon* contributes information about the likelihood of the event described by the sentence that contains it and will point out that this meaning component is also satisfied in random choice scenarios. Section 3 will then focus on DP-internal *komon* ('DP-*komon*') and address Puzzle 2. We will see that DP-*komon* can also convey a likelihood component, one that differs from that of VP-*komon* in that it hardwires a comparison between the likelihood of alternative events determined with respect to the individuals in the extension of the NP. In section 4, we situate the modal component of *komon* in the landscape of other expressions that convey random choice modality, concluding that random modality is likely not best treated as a unified category. We also discuss the 'unremarkable' interpretations associated with a subset of random choice expressions across languages, and sketch a preliminary account of these readings. Section 5 concludes.

[4] Jayez and Tovena (2005) report that *n'importe 'wh'* is not possible in episodic sentences. Our French consultants, however, which include mostly speakers of Québec French but also speakers of European French, disagree with these judgments. Like us, Vlachou (2003), working on European French, reports *n'importe 'wh'* indefinites as grammatical in episodic sentences.

2 VP-*komon*

We start by considering VP-*komon*. Section 2.1 discusses its distribution and interpretation. The section starts with some minimal background on the Chuj VP and the distribution of VP-*komon*. It turns next to its interpretation. We will see that VP-*komon* conveys information about the likelihood of the event that its sentence describes and that it is also used in scenarios where an agent made a random choice. This poses a first puzzle: Why can VP-*komon* lump together the expression of random choice modality and low likelihood? In section 2.2, we propose a unified semantics for VP-*komon*. We take VP-*komon* to be a low circumstantial modal, which hardwires a comparison of events with respect to a likelihood ranking, and show that the modal condition imposed by *komon* will not only be satisfied in scenarios where an event is perceived as unlikely, but also in scenarios where an agent makes an indiscriminate choice. Our description of the modal condition of VP-*komon* will set the stage for a comparison between VP-*komon* and DP-*komon*, the goal of Section 3.

2.1 Distribution and interpretation

Fully inflected verbs in Chuj exhibit the templates in (7-a) and (8-a) below, exemplified in (7-b) and (8-b), respectively.[5] The verbal root is preceded by tense/aspect/mood (TAM) morphemes and case morphology. In Mayanist literature, agreement morphemes are traditionally called 'Set A' and 'Set B', a convention we adopt in this paper. Set A (ergative) morphemes cross-reference transitive subjects (as well as possessors in the nominal domain) and Set B (absolutive) morphemes cross-reference intransitive subjects and transitive objects, revealing an ergative-absolutive alignment pattern.[6] Finally, a set of so-called 'status suffixes' (SS), which encode information about transitivity and aspect (Coon 2016, Aissen et al. 2017), appear last in the verb stem.

(7) a. *Intransitive verb template in Chuj*
TAM – Set B (ABS) – **ADV** – ROOT – SS
b. Ix - onh - b'at - i.
PFV - B1P - go - IV
'We went.'

(8) a. *Transitive verb template in Chuj*
TAM – Set B (ABS) – Set A (ERG) – **ADV** – ROOT – SS
b. Ix - ach - w - il - a'.
PFV - B2S - A1S - see - TV
'I saw you.'

A very limited class of adverbial modifiers can appear internal to the verb stem, immediately before the root in the position indicated by the boxes in (7-a) and (8-a). This includes adverbs such as *wach'* 'more' and *te'* 'a lot/repeatedly'. Intransitive and transitive examples with *te'* are provided in (9) and (10) (see Vázquez Álvarez 2011 for similar stem-internal adverbs in the related Mayan language Ch'ol).

(9) Ix-ach-**te'**-way-i.
PFV-B2S-INTS-sleep-IV
'You slept a lot.'

(10) Ix-ko-**te'**-il-ej jun pelikula.
PFV-A1P-INTS-saw-DTV INDF movie
'We watched a movie a lot (repeatedly).'

[5] For grammars of Chuj, see Hopkins 1967, Maxwell 1981, García Pablo and Domingo Pascual 2007, and Buenrostro 2013.

[6] Progressive aspect, which we will avoid in this paper, shows a split in the alignment pattern (see Buenrostro 2013, Coon and Carolan 2017, and Coon and Royer 2020). As in other Mayan languages, there are no overt Set B markers for third person arguments.

The position left-adjacent to the root is also the position occupied by *komon*. This is shown with an intransitive and transitive verb in (11) and (12) below.[7]

(11) Ix-ach-**komon**-k'och-i.
PFV-B2S-KOMON-arrive-IV
≈ 'You randomly arrived.'

(12) Ix-ko-**komon**-man-ej jun libro.
PFV-A1P-KOMON-buy-DTV INDF book
≈ 'We randomly bought a book.'

Having provided some basic information about the Chuj verbal complex, we turn now to describing the interpretation of VP-*komon*.[8] We have seen in the introduction that when VP-*komon* appears internal to the verbal complex in a transitive sentence, it can describe scenarios where the agent made a random choice. For instance, the sentence in (13) can be felicitously used to describe the scenario in (15), where Malin grabbed a book at random, much like its counterpart with DP-*komon* does in (14).

(13) Ix-s-**komon**-yam-ej jun silab' ix Malin.
PFV-A3-KOMON-grab-DTV INDF gift CLF Malin
≈ 'Malin randomly grabbed a gift.'

(14) Ix-s-yam [jun **komon** silab'] ix Malin.
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random gift.'

(15) *Random choice scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose. All of the gifts are wrapped the same, *so Malin just picks one at random.* It's the jackpot!

At the same time, we saw that with non-agentive predicates, VP-*komon* conveys that the described event was not expected. Consider, for instance, (16), where *komon* combines with an unaccusative verb. This sentence can felicitously describe the scenario in (17-a), where Xun was not expected to arrive, but not the scenario in (17-b), where his arrival was expected.

(16) Ix-**komon**-k'och ix Malin.
PFV-KOMON-arrive CLF Malin
≈ 'Malin unexpectedly arrived.'

(17) a. Malin lives far away and she didn't tell us she'd visit, but she just arrived. ✓
b. Malin told me she'd come visit at 2:00pm. It's 2:00pm and she just arrived. ✗

Other non-agentive predicates, such as verbs of perception, also naturally combine with *komon* to describe events that are not expected. For instance, consider the sentence in (18), which can felicitously describe the scenario in (19-a), but not the scenario in (19-b):

(18) Ix-s-**komon**-ab'-ej s-ya'il waj Kixtup.
PFV-A3-KOMON-feel-DTV A3-pain CLF Kixtup
≈ 'Kixtup unexpectedly felt pain.'

[7] As seen in (10) and (12), the presence of an adverbial modifier within a transitive verb stem triggers a different status suffix than the one observed for the unmodified transitive verb stem in (8-b). The derived transitive status suffix *-ej*, glossed below as "DTV", appears with all transitive stems that derive from roots of other categories (e.g. nominal roots), or which have been modified by the addition of stem-internal adverbs (see e.g. Hopkins 1967).

[8] Though there has been some work on modality in Mayan, most work has focused exclusively on irrealis marking (see e.g. Polian 2007, Mateo-Toledo 2008, Buenrostro 2015, Henderson 2016). To our knowledge, this is the first semantic proposal for *komon* in Chuj, or of any cognates of *komon* in other related Mayan languages. According to Pedro Mateo Pedro (p.c.), Q'anjob'al, a close relative of Chuj, features a cognate of *komon*, also written as *komon*.

(19) a. Kixtup never complains and very rarely feels pain. He's sitting calmly, when all of the sudden he feels a harsh pain. ✓
b. Kixtup is a daredevil. While trying to pull a stunt, he fell and hurt himself. ✗

Finally, we also find this interpretation with predicates overtly marked as statives through the (past) stative suffix *-nak*. To illustrate, the sentence in (20), which conveys that Xuwan was not expected to be asleep, can felicitously describe the scenario in (21-a), but not the one in (21-b).

(20) **Komon**-way-nak uch Xuwan.
KOMON-sleep-STAT CLF Xuwan
≈ 'Xuwan was unexpectedly asleep.'

(21) a. 5 year-old Xuwan is usually very excited in the morning, but this morning she was asleep. (20) = ✓
b. 5 year-old Xuwan has been running around all day. (20) = ✗

In sum, with non-agentive predicates, the presence of *komon* in the verbal complex unambiguously adds to the denotation of the predicate the information that, given the set of circumstances surrounding the event described by the predicate, this event was not expected.

We now turn to agentive predicates, which when modified with *komon* can describe scenarios in which an agent made an indiscriminate choice and thus convey random choice modality. First, however, it is important to mention that agentive verbs can describe—as was just seen for non-agentive verbs—scenarios in which the event was not expected given the circumstances. For instance, consider the following agentive intransitive (i.e. unergative) sentence:

(22) Ix-**komon**-chanhal-w-i waj Xun.
PFV-KOMON-dance-SUF-IV CLF Xun
≈ 'Xun unexpectedly danced.'

As was seen in the previous examples with non-agentive verbs, (22) can felicitously describe the scenario in (23-a), where Xun was not expected to dance. However, it is not compatible with the scenario in (23-b), where his dancing was expected.

(23) a. Xun is waiting for the bus with other people seriously. He starts dancing. (22) = ✓
b. Xun is at a venue where everyone is expected to perform the same dance, and so he dances it. (22) = ✗

Crucially, however, (22) can also be used to describe a scenario like (24-a), where Xun's dancing was not unexpected given the circumstances—since he was expected to perform one of three actions including dancing—but where his decision to dance was made at random.[9]

(24) a. Everyone had to perform one of three actions: dancing, singing or painting. Xun was indifferent about what to do since he is equally good in all three arts. So he just chose one at random. (22) = ✓
b. Everyone had to perform one of three actions: dancing, singing or painting. Xun is way better at dancing than singing or painting, so he decides to dance. (22) = ✗

The ability for random choice modality to arise with unergatives is particularly interesting, since previous literature tend to discuss random choice modality in the context of *transitive* agentive verbs (e.g. Alonso-Ovalle and Menéndez-Benito 2018, Buccola and Haida 2017).

[9]We thank Jakub Dotlačil for providing us with this context.

Finally, let us consider agentive transitive sentences like (13), repeated below, where we observe a similar pattern as with unergatives.

(25) Ix-s-**komon**-yam-ej jun silab' ix Malin.
PFV-A3-KOMON-grab-DTV INDF gift CLF Malin
≈ 'Malin randomly/unexpectedly grabbed a gift.'

As was the case with the other predicate types discussed above (those which are non-agentive), the presence of *komon* in (25) can convey that the described event was not expected. For instance, (25) is judged felicitous in the scenario in (26), where the event of Malin grabbing a gift was not expected, because it was not her turn to choose. Notice that in this scenario, Malin did not grab a gift at random, since she wanted the blue gift.

(26) *Unexpected event scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. *It's not Malin's turn to choose*, when she notices that one of the gifts is wrapped in blue, while the other three are identically wrapped in red. *Even though it's not her turn*, Malin suspects that the jackpot is in the blue gift, and so runs over to it and unwraps it. It's the jackpot! (25) = ✓

In addition, as we have seen in (15) above, repeated in (27), the sentence in (25) can also felicitously describe a scenario where Malin did grab a gift at random. In this scenario, also notice that her grabbing a gift was expected, because it was her turn to choose.

(27) *Random choice scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose. All of the gifts are wrapped the same, *so Malin just picks one at random*. It's the jackpot! (25) = ✓

In sum, it seems that while *komon* can uniformly convey that the event described was not expected (across all predicate types), it can only convey random choice interpretations with a specific class of predicates: agentive predicates (be them transitive or instransitive). We are thus left with the following question: Why is the expression of random choice lumped together with the expression of low likelihood?

The answer that we will provide is based on the following observations regarding the felicitous scenarios surrounding the agentive transitive sentence in (25). In the unexpected event scenario in (26), the event of Malin grabbing a gift is *less* expected than any of the most expected events. Given the facts, the most expected events would not be events of grabbing a gift at all, but events where Malin waits for her turn. In the random choice scenario in (27), Malin was expected to grab a gift, but the grabbing of the actual gift that she grabbed was no more expected than the grabbing of any of the other gifts that she could have grabbed. We therefore propose that what unifies the felicity conditions on VP-*komon* is a modal component that conveys that, given the circumstances, the most expected worlds where the described event happens are no more expected than the most expected worlds where that event does not happen. As we will see, this meaning component is satisfied in the scenarios discussed above in connection with the sentences with intransitive verbs and statives, but also with volitional transitive verbs that describe random choice scenarios. The next subsection presents an analysis along these lines.

2.2 Analysis: VP-*komon* as a low circumstantial modal

We start by making some background assumptions. We will assume that transitive and unaccusative verbs express relations between individuals, events, and worlds, as in (28).

(28) a. $[\![\text{ grab }]\!] = \lambda x.\lambda e.\lambda w.\text{GRAB}_w(x)(e)$ b. $[\![\text{ arrive }]\!] = \lambda x.\lambda e.\lambda w.\text{ARRIVE}_w(x)(e)$

We further assume that agents get added via Event Identification (Kratzer, 1996) and that *vP*s express relations between eventualities and worlds:

(29) a. $[\![[_{vP} \text{ Xun grab that book }]]\!] =$
$\lambda e.\lambda w.\text{GRAB}_w(\text{B})(e)$ & $\text{AGENT}(e)(\text{XUN})$

b. $[\![[_{vP} \text{ Xun sleep-STAT}]]\!] =$
$\lambda s.\lambda w.\text{SLEEP}_w(s)$ & $\text{HOLDER}(s)(\text{XUN})$

For convenience, we ignore the contribution of temporal and aspectual markers and assume external existential closure of properties of eventualities:

(30) a. $[\![[\exists_e [_{vP} \text{ Xun grab that book }]]]\!] =$
$\lambda w.\exists_e[\text{GRAB}_w(\text{B})(e)$ & $\text{AGENT}(e)(\text{XUN})]$

b. $[\![[\exists_e [_{vP} \text{ Xun sleep-STAT }]]]\!] =$
$\lambda w.\exists_s[\text{SLEEP}_w(s)$ & $\text{HOLDER}(s)(\text{XUN})]$

With these assumptions in place, we will treat VP-*komon* as a *vP* modifier that adds a modal condition to the event description that the *vP* denotes. This modal condition conveys that among the worlds that share the relevant circumstances with the actual world, the most expected ones where (a counterpart of) the described event happens are no more expected than the most expected worlds where (a counterpart of) the described event does not happen.

The modal condition of VP-*komon* is given in symbols in (31):

(31) $[\![\text{ komon}_{vP} \text{ f}_{\text{circ}_{\langle i,st\rangle}}]\!]^v = \lambda R_{\langle i,st\rangle}.\lambda e.\lambda w.R_w(e) \& \underbrace{\begin{pmatrix} \text{Max}_{\leq_{g(w)}}(\{w' : \text{HAPPEN}_{w'}(e)\} \cap \mathbf{f}(e)) \\ \leq_{g(w)} \\ \text{Max}_{\leq_{g(w)}}(\{w' : \neg\text{HAPPEN}_{w'}(e)\} \cap \mathbf{f}(e)) \end{pmatrix}}_{\text{modal condition}}$

In (31), we assume a Lewisian ontology (Lewis, 1968), where individuals and events are world-bound: $\text{HAPPEN}_{w'}(e)$ is true if a counterpart of e (an event maximally similar to e) is part of w'.[10]

In line with recent work on verbal modals, we also assume that *komon* projects the possibilities that its interpretation invokes from a particular. The possibilities that the modal component of VP-*komon* invokes are projected from the type of events described by the *vP* (Hacquard, 2006). We assume that *komon* takes a covert variable setting up its modal domain: $\text{f}_{circ_{\langle i,st\rangle}}$ is a variable ranging over functions mapping events to sets of worlds, and $\mathbf{f}$ is its value ($v(f)$, where v is the variable assignment). Like other low modals, VP-*komon* is a circumstantial modal. $\mathbf{f}$ provides a certain type of *circumstantial* modal base: it projects from e the set of worlds w' where a set of circumstances (true facts) around the preparatory stage of e are true.

$\text{Max}_{\leq_{g(w)}}$ takes a set of worlds and returns those worlds within the set that are ranked at the top of an ordering ($\leq_{g(w)}$) that ranks worlds with respect to how close they get to what is the most natural course of events in the world of evaluation w (we assume that there are always worlds ranked higher than any others). g is the *stereotypical ordering source* determining this ordering: $g(w)$ is a set of propositions describing the most natural course of events in w. For any worlds $w, w', w'', w' >_{g_{(w)}} w''$ if and only if w' gets closer to what

[10] We assume that events are particulars, parts of worlds, and endorse a Lewisian ontology (Lewis, 1986) where worlds cannot share parts. An event, therefore, will be world-bound. Our truth-conditions make reference to alternative worlds where a particular actual event e happens. Within the ontology that we are assuming, an actual event e can literally only happen and be part of the actual world. In a Lewisian ontology, we can still identify particulars across worlds (Lewis, 1983, 1986). Trans-world identification is done by appealing to similarity relations between counterparts. Instead of talking about e happening in a different world w, we need to talk about a *counterpart* of e happening in w. Counterparts resemble each other closely, but they can do so in different ways: the similarity relation used in determining counterparts is vague. In the limiting case, similarity can correspond to duplication. We won't have much to say about what particular type of similarity relation determines whether two events are counterparts, though it is conceivable that when determining counterparts of events we stick to a similarity relation in which the spatio-temporal properties of the events match, as Arregui (2006) suggests. For the use of similarity relations between parts of worlds, see Arregui (2005).

is expected given the normal course of events in w than w''. The ordering is defined with respect to $g(w)$ in the standard way: $w' \geq_{g(w)} w''$ just in case $\{p : w' \in p \ \& \ p \in g(w)\}$ is a (possibly improper) superset of $\{p : w'' \in p \ \& \ p \in g(w)\}$ (Kratzer, 1991). In an abuse of terminology, we write '$p \geq_{g(w)} q$', where p, q are sets of possible worlds, to convey that any p-world is at least as close to what is expected given the normal course of events in w than any q-world.

To improve readability, we will abbreviate the modal condition in (31) as in (32):

(32) $[\![\text{komon}_{vP} \ \text{f}_{\text{circ}\langle i,st\rangle}]\!]^v = \lambda R_{\langle i,st\rangle}.\lambda e.\lambda w.\ R_w(e) \ \& \ \neg\textbf{f}\text{-EXPECTED}_w(e)$

This modal condition covers the basic cases with intransitives and statives where *komon* conveys that the described event was not expected. To illustrate, consider (16) again, repeated below in (33), which as seen above can describe the scenario in (34).

(33) Ix-**komon**-k'och ix Malin.
PFV-KOMON-arrive CLF Malin
≈ 'Malin unexpectedly arrived.'

(34) Malin lives far away and she didn't tell us she'd visit, but she just arrived. ✓

The sentence in (33) has the LF in (35-a), which is interpreted as in (35-b): the sentence is predicted to be true in a world w if and only if (i) there is an event e of Malin arriving in w and (ii) the most expected worlds in w where the relevant circumstances at the preparatory stage of e hold and e happens are no more expected than the most expected worlds where those circumstances hold and e does not happen.

Figure 1 represents the main properties of the world corresponding to the scenario in (34). In this case, **f** projects possibilities from Malin's arrival event. There are two types of possibilities: those where that arrival does not happen (represented by the top box), and those where the arrival happens. The most expected worlds of the first type (represented by the shaded box within the top box) are worlds where Malin does not arrive. The most expected worlds of the second type (represented by the shaded box within the bottom box) are of course worlds where Malin arrives. The arrow indicates that the former type of world is more expected than the second. The modal component is true in the scenario in (34).

(35) a. LF: $\exists_e$ [komon $\text{f}_{\text{circ}\langle i,st\rangle}$ $[_{vP}$ Malin arrived]]
b. $[\![$ (35-a) $]\!]^v = \lambda w.\exists e[\text{ARRIVE}_w(e) \ \& \ \text{AGENT}(e)(\text{MALIN}) \ \& \ \neg\textbf{f}\text{-EXPECTED}_w(e)]$

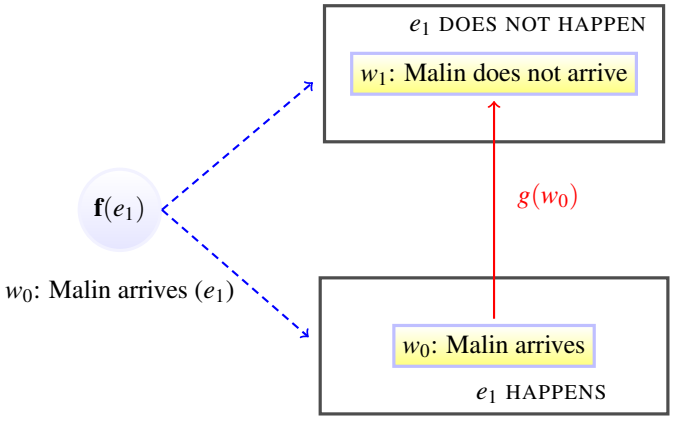

Figure 1: Context: *Malin komon-arrived*

We now turn to agentive predicates such as the transitive sentence in (13), repeated in (36), for which the modal condition should be satisfied in both the unexpected event scenario in (26) and the random choice

scenario in (27).

(36) Ix-s-**komon**-yam-ej jun silab' ix Malin.
PFV-A3-KOMON-grab-DTV INDF gift CLF Malin
≈ 'Malin randomly/unexpectedly grabbed a gift.'

The sentence in (13) has the LF in (37-a), which is interpreted as in (37-b): (37-a) is predicted to be true in a world w if and only if (i) there is an event e in w such that there is a gift x and e is an event of Malin grabbing x, and (ii) given the relevant circumstances around the preparatory stage of e, the most expected worlds in w where e happens are no more expected than the most expected worlds in w where e does not happen.

(37) a. LF: $\exists_e$ [a gift]$_{\langle e,\langle i,st\rangle\rangle}$ $\lambda 1$ [komon $f_{circ_{\langle i,st\rangle}}$ [Malin grabbed t_1]]

b. $[\![\text{(37-a)}]\!]^v = \lambda w.\exists e \exists x \left[\begin{array}{c} \text{GIFT}_w(x) \ \&\ \text{AGENT}(e)(\text{M}) \ \&\ \text{GRAB}_w(e)(x) \\ \&\neg\textbf{f}\text{-EXPECTED}_w(e) \end{array} \right]$

The modal condition in (37-b) is satisfied in the unexpected event scenario in (26). Figure 2 represents the main properties of the type of world represented by the unexpected event scenario.

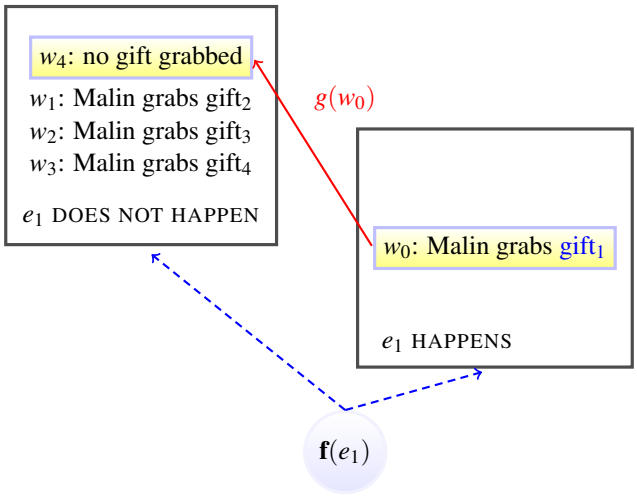

Figure 2: Unexpected event scenario : *Malin komon-grabbed a gift*

In this scenario, the modal base ($\mathbf{f}(e_1)$) contains worlds where it was not Malin's turn to choose. The most expected worlds where Malin does not grab the gift that she grabbed (which we will call 'gift$_1$') are worlds where no gift is grabbed at all, since it is not her turn to choose. Crucially, those worlds are more expected than the most expected worlds where Malin grabs gift$_1$.

The modal condition is also true in the random choice scenario in (27). There, the modal base picks up worlds where it was Malin's turn to choose. As represented in Figure 3, this time the most expected worlds where Malin does not grab the gift that she actually grabbed ('gift$_1$') and the relevant circumstances obtain are worlds where Malin grabs a different gift, given that she was expected to grab a gift (it was her turn to choose a gift). In the scenario, those worlds are as likely to occur as worlds where Malin grabs the gift that she actually grabbed.[11]

[11] As a reviewer points out, the modal condition of *komon* is also predicted to be met in a scenario where Malin was expected to grab a gift, but where the grabbing of the gift that she grabbed was *less* expected than the grabbing of the other gifts present in the context. This is indeed the case, with one caveat, discussed in section 3.3.

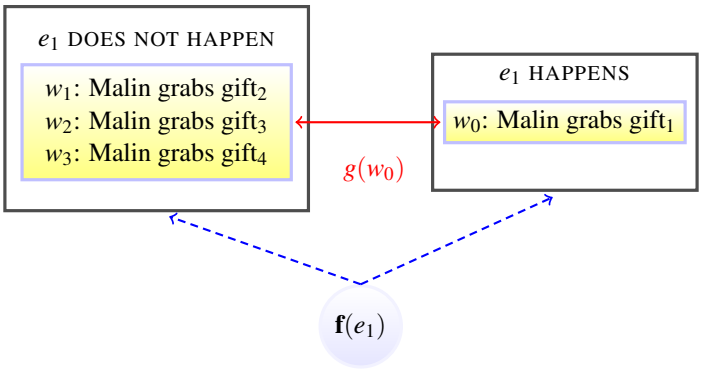

Figure 3: Random choice (right) scenarios : *Malin komon-grabbed a gift*

Finally, let us now consider the scenario in (38), where the modal condition of VP-*komon* is not satisfied (we call this scenario the "*unremarkable* scenario" for reasons that will be made clear in section 3):

(38) *Unremarkable scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose, when she notices that one gift is wrapped in blue, while the other three are all identically wrapped in red. Suspecting that the jackpot must be in the only gift that's wrapped differently, Malin grabs the blue gift. *It's a cheap gift!*

The target sentence in (13) is correctly predicted to be false in this scenario, since, given the circumstances (Malin wants to grab the jackpot and it is her turn), grabbing the gift wrapped in blue is more expected than not grabbing the gift in blue, as shown in Figure 4.

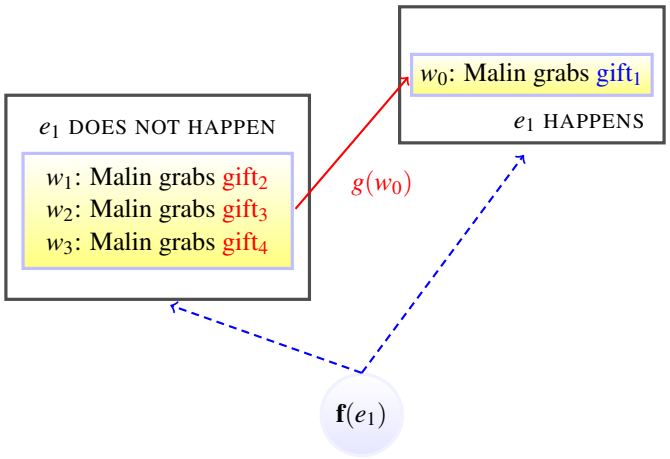

Figure 4: Unremarkable scenario: *Malin komon-grabbed a gift*

To summarize: We treat VP-*komon* as a (syntactically) low circumstantial modal that adds to the denotation of the *vP* a modal condition. This modal condition, which hardwires a comparison of events with respect to a likelihood ranking, is predicted to come out as true in both the unexpected and random choice scenarios.

With the previous background on the interpretation of VP-*komon*, we will move now to consider the interpretation of *komon* in the nominal domain. Our goal is to provide an answer to the question of how the modal components of VP- and DP-*komon* relate to each other—the second puzzle that we set up to explore.

3 How does DP-*komon* differ from VP-*komon*?

In this section, we will see that DP-*komon* can convey a modal component, and that, when it does, this modal component also conveys information about the likelihood of the event described, just like the modal component of VP-*komon*. This sets the stage to investigate the extent to which the modal component of VP-*komon* differs from that of DP-*komon*.

The section is organized as follows. We will start with some information on the interpretation of DP-*komon* by providing some minimal background on the structure of DPs in Chuj. We then show that DP-*komon* can have a non-modal and a modal meaning. This will lead us to hypothesize that when nominal *komon* expresses a non-modal meaning, it is an NP modifier, and when it expresses a modal meaning, it modifies a determiner to form a complex determiner—along the lines of (some of) the nonlocal modifiers discussed in Larson 1999, Zimmermann 2003, and Morzycki 2016. We will then show that the modal component of DP-*komon* minimally differs from that of VP-*komon* in requiring that the comparison between the likelihood of alternative events be determined with respect to the individuals in the extension of the NP.

3.1 Two interpretations of nominal *komon*

We start with a minimal discussion of the DP-internal distribution of *komon*. Chuj exhibits no case morphology on nominals. Noun classifiers are used as definite determiners and *jun* is used as the singular indefinite determiner (Buenrostro et al. 1989; García Pablo and Domingo Pascual 2007; Royer 2019, to appear). An example is provided in (39).

(39) Ix-y-il [**jun** tz'i'] [**winh** winak].
PFV-A3-see INDF dog CLF man
'The man saw a dog.'

At the end of this section, we will discuss the use of DP-*komon* in combination with the universal quantifier *junjun* 'every/each'. Strong quantifiers in Chuj, such as *junjun*, generally require fronting to a preverbal position. An example is provided below:

(40) [**Junjun** tz'i'] ix-y-il t_i winh winak.
∀ dog PFV-A3-see CLF man
'The man saw every dog.'

Given the absence of previous work on nominal quantification in Chuj, and more generally the limited work on quantification across Mayan (Henderson 2016), we will only present examples of the co-occurrence of *komon* with *junjun*, and leave for future work its co-occurrence with other types of quantifiers.

A limited set of adjectives appear immediately before nominals, including colour terms or adjectives referring to sizes (Maxwell 1976; Coon 2018). This is also the position occupied by DP-internal *komon*, as illustrated below:

(41) Ix-s-man [$_{DP}$ jun **saksak / niwan / komon** libro] ix Malin.
PFV-A3-buy INDF white big KOMON book CLF Malin
'Malin bought a white/big/random book.'

When *komon* co-occurs with another prenominal adjective, it can appear on either side of that adjective, always preceding the noun:

(42) Ix-s-man [$_{DP}$ jun {**komon**} saksak {**komon**} libro] ix.
PFV-A3-buy INDF KOMON white KOMON book CLF
≈ 'She bought a {random} white {random} book.'

Hopkins (2012) suggests that *komon* grammaticalized from Spanish *común* ('common/average'). In fact, when *komon* appears in predicative position with no overt determiner, it conveys that the argument of the NP does not stand out compared to other individuals in the NP extension, as the paraphrase in (43) indicates.

(43) [**Komon** k'uyb'um] waj Xun.
KOMON student CLF Xun
≈'Xun is an average/unexceptional student.'

This 'unremarkable' interpretation of *komon* is also present with full DPs in object position. Example (44), for instance, can describe the unremarkable scenario in (38), repeated in (45) :

(44) Ix-s-yam [$_{DP}$ jun **komon** silab'] ix Malin.
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random/average/unremarkable gift.'

(45) *Unremarkable scenario*: Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose, when she notices that one gift is wrapped in blue, while the other three are all identically wrapped in red. Suspecting that the jackpot must be in the only gift that's wrapped differently, Malin grabs the blue gift. *It's a cheap gift!*

We will assume that, in cases like this, *komon* is a non-modal NP modifier that conveys information about where its argument stands in a contextually determined ranking of equivalence classes of individuals in the extension of the NP. This 'NP-*komon*' conveys that the argument of the NP is ranked around the middle of the contextually relevant scale, and that most individuals in the extension of the NP are in the same equivalence class than the argument of the NP. For instance, the sentence in (43) is naturally interpreted with respect to a ranking of equivalence classes of students that groups together all students that are as good students as others, as determined, for instance, by how good their grades are. *Komon* conveys that the equivalence class that Xun belongs to is at the middle of the ranking, and that it contains most students.

The ranking of sets of individuals that *komon* invokes can vary. For instance, in (46), the ranking seems to be grouping students with respect to the social status of their parents.

(46) Man **komon** k'uyb'um-ok laj waj Xun, y-unin waj Justin Trudeau winh.
NEG KOMON student-IRR NEG CLF Xun, A3-child CLF Justin Trudeau CLF
'Xun is not just any student, he's Justin Trudeau's son.'

In line with these observations, we note that NP-*komon* is deviant with nouns that describe entities that are hard to rank with respect to each other, or with singleton nouns, whose extension do not allow for non-trivial rankings, as shown in (47) and (48).

(47) ? **Komon** tumin jun k'en tik.
KOMON money one CLF DEM
?'This is average money.'

(48) # Ix-w-il k'en **komon** uj.
PFV-A1S-see CLF KOMON moon
#'I looked at the average moon.'

If NP-*komon* must rank individuals in the extension of the NP with respect to other individuals, than the oddity of the sentences in (48) is expected: it is difficult to imagine how instances of money could be ranked, and since there is only one moon (on Earth), it cannot be ranked with respect to other moons.

Nominal *komon* does not only convey an 'unremarkable' interpretation, though. While *komon* can convey an unremarkable interpretation in the first sentence in (49), the second sentence, which can naturally follow the first, blocks this interpretation. With the continuation in (49), we see that DP-*komon* can contribute, like VP-*komon*, a likelihood component conveying that the event described—the appearance of the deer—was not expected.

(49) Ix-jaw [jun **komon** k'ultakilchej]. Te' niwan nok', te'-ay y-ib' nok'.
PFV-come INDF KOMON deer INTS big CLF INTS-EXT A3-strength CLF.
≈ 'A deer unexpectedly appeared. It (the deer) was very big and strong.'

In object position, we can also see that DP-*komon* can convey more than the 'unremarkable' interpretation. The volitional transitive sentence in (44), repeated in (50), where *komon* appears in the object of a transitive verb, is perceived as ambiguous in the random choice scenario provided in (27), repeated below. It can be taken to be false, under its unremarkable interpretation, since Malin grabbed an outstanding gift; but also true, under its random choice interpretation, because Malin grabbed a gift at random. This shows that a second interpretation, related to VP-*komon* and appropriate in scenario (27), repeated in (51), is available.

(50) Ix-s-yam [$_{DP}$ jun **komon** silab'] ix Malin.
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random gift.'

(51) *Random choice scenario:* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose. All of the gifts are wrapped the same, so Malin just picks one at random. It's the jackpot!

Given these facts, we assume that there are two possible contributions of *komon* in the nominal domain. First, *komon* can contribute a non-modal 'unremarkable' interpretation, where it requires accessing a set of individuals (the NP extension). Second, like VP-*komon*, it can convey that the event described is not likely; this contribution requires accessing the denotation of the *vP*, an argument of the DP.

We will assume that these different contributions of *komon* in the nominal domain result from an ambiguity. In section 4.4, we will provide several pieces of evidence that support this assumption. However, our central interest in this paper is to explore how the likelihood component of DP-*komon* relates to that of VP-*komon*, a question which we turn to in the next subsection. Because of our goal, we will mainly focus on the use of nominal *komon* as a D-modifier (DP-*komon*), and leave the discussion of the NP-modifier (NP-*komon*) for future work, only sketching a possible starting point in the Appendix.

3.2 Unifying DP-*komon* and VP-*komon*?

We focus now on the second puzzle that we set up to explore:

Puzzle 2: How do the modal components of VP- and DP-*komon* relate to each other?

A possible answer to the question that Puzzle 2 poses is that VP- and DP-*komon* convey the same meaning component. Since the denotation of DPs relate that of NPs and *vP*s, we could conceive of DP-

komon as simply 'plugging in' the semantics of VP-*komon* onto the *vP* argument of the DP, as illustrated in (52) for a case where the DP is headed by the indefinite determiner *jun*.

(52) $[\![\text{ jun [komon } \text{f}_{\text{circ}\langle i,st\rangle}]]\!] =$
$\lambda P_{\langle e,st\rangle}.\lambda R_{\langle e,\langle i,st\rangle\rangle}.\lambda e.\lambda w.\exists x[P_w(x)\ \&\ [[\![\text{komon}_{vP}]\!](\mathbf{f}_{\text{circ}\langle i,st\rangle})(R(x))](e)(w)]$

In (52), *komon* combines, as we hypothesized for VP-*komon*, with a function projecting a set of possible worlds from an event. The result of combining *komon* with a determiner is essentially a complex determiner that modifies the relation expressed by the *vP* by adding to it the modal component of VP-*komon* (Larson 1999, Zimmermann 2003, and Morzycki 2016). Under this view, VP-*komon* and DP-*komon* are essentially the same. VP-*komon* is a *vP* modifier, and DP-*komon* contains one. We essentially find VP-*komon* in two positions: within the verbal complex, where it can directly modify the relation expressed by the *vP*; and at the DP level, where it can also modify the relation expressed by the DP, since DPs express a relation between the denotation of NPs and *vP*s.

This analysis has some advantages. First, it predicts the right interpretation for DP-*komon* in subject position, as in (49) or (53) below. The LF of (53), in (54-a), is predicted to be true in the world of evaluation *w* if and only if there is an event *e* and a deer *x* in *w* such that *e* is an appearing of *x* and, given the circumstances around the preparatory stages of *e*, the most expected worlds where *e* happens are no more expected than the most expected worlds where *e* does not happen. The sentence is predicted to be true in worlds where the appearance of the deer was not expected to happen.

(53) Ix-jaw [jun **komon** k'ultakilchej].
PFV-come INDF KOMON deer
≈ 'A deer unexpectedly appeared.'

(54) a. LF: $\exists_e$ a komon (f) deer $\lambda 1$ [t_1 appeared]
b. $[\![\text{(54-a)}]\!] = \lambda w.\exists e\exists x[\text{DEER}_w(x)\ \&\ \text{APPEAR}_w(x)(e)\&\neg\mathbf{f}\text{-EXPECTED}_w(e)]$

Second, under this analysis, (50), repeated in (55), with DP-*komon* in object position, also comes out true in the random choice scenario. The sentence has the LF in (56-a), which is predicted to be true in a world *w* if and only if there is an event *e* and a gift *x* in *w* such that *e* is an event of Malin grabbing *x* and, given the circumstances around the preparatory stage of *e*, the most expected worlds where *e* happens are no more expected than the most expected worlds where *e* does not happen. As we saw before, these truth-conditions are satisfied in the random choice scenario, where the most expected worlds where the event does not happen are still worlds where a gift is grabbed.

(55) Ix-s-yam [$_{\text{DP}}$ jun **komon** silab'] ix Malin.
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random gift.'

(56) a. LF: $\exists_e$ a komon gift $\lambda 1$ Malin grabbed t_1
b. $[\![\text{(56-a)}]\!] = \lambda w.\exists e\exists x \left[\begin{array}{c} \text{GIFT}_w(x)\ \&\ \text{AGENT}(e)(\text{M})\ \&\ \text{GRAB}_w(e)(x) \\ \&\neg\mathbf{f}\text{-EXPECTED}_w(e) \end{array} \right]$

While these results are promising, the current analysis overgenerates. Under the current proposal, we expect sentences containing DP-*komon* to be true in the unexpected event scenario in (26), repeated in (57), where sentences containing VP-*komon* are true.

(57) *Unexpected event scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. *It's not Malin's turn to choose*, when she notices that one of the gifts is wrapped in blue, while the other three are

identically wrapped in red. *Even though it's not her turn*, Malin suspects that the jackpot is in the blue gift, and so runs over to it and unwraps it. It's the jackpot!

This prediction is not borne out: the sentence in (55) is judged *false* in (57). DP-*komon* seems to be blind to the fact that the actual grabbing—the fact that Malin grabbed a gift in the first place—was not expected. Rather, it requires that the actual grabbing be no more expected than the potential grabbings of *any of the other gifts*.[12] This is not the case in the unexpected event scenario.

At the same time, the current analysis fails to predict that the likelihood component of DP-*komon*, as opposed to that of VP-*komon*, is also not available when the DP is headed by certain types of determiners, including definite determiners and universal quantifiers. In such cases, only the unremarkable interpretation is perceived. For instance, consider the example in (58), where *komon* is used within a DP that is headed by a noun classifier, which recall are used as definite determiners in Chuj. This sentence can only be felicitously uttered if it describes a scenario where the theme that the agent acts upon is unremarkable (59-b), but not one in which the speaker made a random choice (59-a).

(58) Ix-s-sikl-ej [$_{DP}$ winh **komon** k'uyb'um] waj Xun.
PFV-A3-choose-DTV CLF(=DEF) KOMON student CLF Xun
≈ 'Xun chose the unremarkable student.'

(59) a. Only two candidates made it to the final stages of a contest to receive funding. One is a prolific artist, while the other is a prolific student. Since both of them are equally prolific, Xun, who is in charge of choosing the winner, decides to choose the winner at random by drawing one of their names out of a hat. He picks the student. ✗

b. 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. ✓

The random choice interpretation is also impossible when the DP is headed by a universal quantifier, as illustrated in the example (60), felicitous in the unremarkable scenario in (61-b), but not in the random choice scenario in (61-a).

(60) [Junjun **komon** libro] ix-in-man-a'.
∀ KOMON book PFV-A1S-buy-TV
≈ 'I bought every average book.'

(61) a. The speaker went to a bookstore, and bought a bunch of books at random. Each and one of them turned out to be very special books for her. ✗

b. The speaker is doing an art project, and she will have to recycle books. To avoid using good books, she goes to a second hand bookstore and buys all of what she judges are the uninteresting, ordinary books. ✓

Furthermore, our Chuj consultants note that the counterparts of (58) and (60) with VP-*komon*, provided below, could be used to describe the respective random choice scenarios in (59-a) and (61-a), suggesting that the limitation on random choice interpretations with certain determiners only applies to DP-*komon*.

[12] In the random choice scenario in (27), Malin's grabbing of the gift that she grabbed is *equally* expected to the grabbing of any of the other gifts present in the context. Note, however, that (55) with DP-*komon* can also felicitously describe a scenario where Malin's grabbing of the gift that she grabbed is *less* expected than the grabbing of any of the other gifts in the context. We will come back to such examples in section 3.3.

(62) Ix-s-**komon**-sikl-ej winh k'uyb'um waj Xun
PFV-A3-KOMON-choose-DTV CLF(=DEF) student CLF Xun
'Xun unexpectedly/randomly chose the student.' (cf. (58))

(63) [Junjun libro] ix-in-**komon**-man-ej.
∀ book PFV-A1S-KOMON-buy-DTV
≈ 'I randomly bought every book.' (cf. (60))

The above examples therefore show that the indefinite determiner plays an important role in deriving the modal component of DP-*komon* (and not with VP-*komon*). It would be good to understand why.

In sum, VP-*komon* and DP-*komon* differ in important respects, summarized in Table 1. In particular, DP-*komon* appears to be more limited in its distribution than VP-*komon*: it cannot convey that the actual grabbing—the fact that Malin grabbed a gift in the first place—was not expected. Rather, it requires that the actual grabbing be no more expected than the potential grabbings of *any of the other gifts*, as is the case in the random choice scenario. Finally, contrary to VP-*komon*, DP-*komon* can only arise with indefinite determiners.

Table 1: Differences between VP-*komon* and DP-*komon* in transitive sentences

Scenario in paper	VP-*komon*	DP-*komon*
Felicitous in unexpected event scenario (26)	✓	✗
Felicitous in random choice scenario in (27)	✓	✓
Possible with definite determiners and universals	✓	✗

We will thus abandon the hypothesis that VP- and DP-*komon* convey identical modal components, and endorse a different analysis for DP-*komon*.

3.3 DP-*komon*: Event comparison based on the NP

Given the adjacency requirement discussed above, we will still assume that *komon* combines with a D to essentially derive a complex determiner. We will also retain the assumption that DP-*komon* conveys information about the likelihood of the event described. We will nevertheless take the modal component of DP-*komon* to differ with respect to the modal component of VP-*komon*. Rather than comparing a particular event with the most expected worlds where this event does not happen (as VP-*komon* does), we propose that DP-*komon* hardwires a comparison of events that only differ with respect to the event participants that the DP ranges over.

In (64), DP-*komon* takes as its first argument a covert variable ranging over functions from events to sets of worlds, just as it did before. As was the case with VP-*komon*, this function will also set up the modal domain. Then DP-*komon* combines, also as it did before, with a D and an NP to yield a DP denotation (a function from a relation R between individuals, events, and worlds to a relation between events and worlds). Under our analysis, DP-*komon* essentially creates a complex determiner, along the lines of (some of) the nonlocal modifiers discussed in Larson 1999, Zimmermann 2003, Morzycki 2016 and Schwarz 2020. The resulting DP denotation does two things: first, it conveys what the DP without *komon* would have conveyed; this meaning component is marked as ① in (64). On top of that, a modal condition is added; it looks at all individuals in the NP extension that are not related to the described event e by R in the world of evaluation (②), and compares the likelihood of the event e with the likelihood of other events e' of the same type involving those individuals (③). The whole condition conveys that the most expected worlds where e happens are no more expected than the most expected worlds where those alternative events e' happen.

(64) $[\![[_{\text{DP}}[_{\text{D}}\ \text{D}\ [\text{komon}\ \text{f}_{\text{circ}_{\langle i,st\rangle}}]]\ \text{NP}]]\!]^{v} = \lambda R_{\langle e,\langle i,st\rangle\rangle}.\lambda e.\lambda w.$

$$\text{①}\ [\![\text{D}]\!]([\![NP]\!])(R)(e)(w)\ \&\ \underbrace{\forall x \left[\begin{array}{c} \text{②}[[\![\text{NP}]\!](w)(x)\ \&\ x \notin \{y : R_w(y)(e)\}] \\ \rightarrow \\ \text{③} \left(\begin{array}{c} \text{Max}_{\leq_{g(w)}}(\{w' : \text{HAPPEN}_{w'}(e)\} \cap \mathbf{f}(e)) \\ \leq_{g(w)} \\ \text{Max}_{\leq_{g(w)}}(\{w' : \exists e'[R_{w'}(x)(e')]\} \cap \mathbf{f}(e)) \end{array} \right) \end{array} \right]}_{\text{modal condition}}$$

Let us illustrate what these truth-conditions predict for the use of DP-*komon* in our familiar volitional transitive sentence, repeated in (65), for the random choice scenario, repeated in (66).

(65) Ix-s-yam [$_{\text{DP}}$ jun **komon** silab'] ix Malin.
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random gift.'

(66) *Random choice scenario.* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. There are four gifts left, one must be the jackpot. It's Malin's turn to choose. All of the gifts are wrapped the same, so Malin just picks one at random. It's the jackpot!

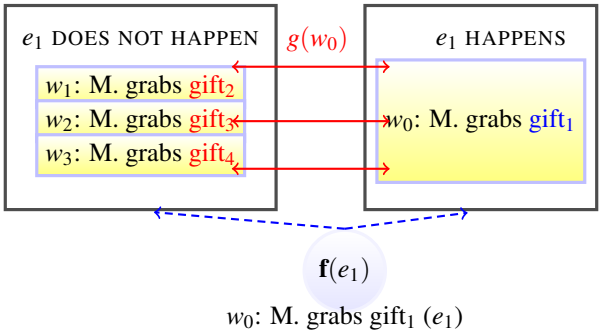

Figure 5: Random choice scenario : *Malin grabbed a komon gift*

The interpretation of the LF for (65), in (67-a), is in (67-b): the sentence is predicted to be true in a world w if and only if (i) there is an event e such that e is a grabbing of a gift by Malin, and (ii) for every gift x in w that Malin did not grab, it holds that the most expected worlds in w where e happens (and the relevant circumstances obtain) are no more expected than the most expected worlds in w where Malin grabs x.

(67) a. LF: $\exists_e$[[jun komon$_{\text{DP}}$ f]gift] λ 1 Malin grabbed t_1

b. $$[\![(67)]\!] = \lambda w.\exists e \left[\underbrace{\forall y \left[\begin{array}{c} [\text{GIFT}_w(y)\ \&\ y \notin \{z : \text{GRAB}_w(z)(e)\ \&\ \text{AG(M)}(e)\}] \\ \rightarrow \\ \left(\begin{array}{c} \text{Max}_{\leq_{g(w)}}(\{w' : \text{HAPPEN}_{w'}(e)\} \cap \mathbf{f}(e)) \\ \leq_{g(w)} \\ \text{Max}_{\leq_{g(w)}}(\{w' : \exists e'[\text{GRAB}_{w'}(y)(e')]\} \cap \mathbf{f}(e)) \end{array} \right) \end{array} \right]}_{\text{modal condition}} \right]$$

In the random choice scenario in (66), this modal condition is true. As illustrated in Figure 5 at the top of this page, none of the most expected worlds where Malin grabs an alternative gift are more expected than the most expected worlds where Malin grabs the gift that she actually grabbed. Because all the gifts are

wrapped the same, Malin is as likely to grab the gift that she grabbed as any of the other gifts. Since Malin grabbed a gift in that scenario, the sentence is correctly predicted to be true.

The sentence in (65) is now correctly taken to be false in the unexpected event scenario, since, in this scenario, the grabbing of the blue gift was in fact more expected than any of the potential alternative grabbings, as represented in the diagram in Figure 6.[13]

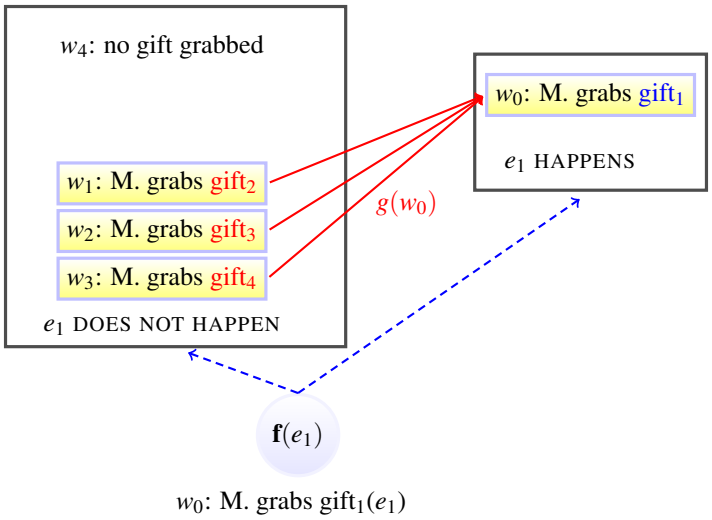

Figure 6: Unexpected scenarios : *Malin grabbed a komon gift*

The predicted truth conditions are thus confirmed.

In sum, we have proposed that *komon*, be it in the nominal or verbal domain, contributes a modal condition that compares the likelihood of the described event with alternative events. However, DP-*komon* critically differs from VP-*komon* in hardwiring a comparison of events that only differs with respect to the individuals contained in the extension of the NP. As made salient in Figure 6, this explains why DP-*komon* can describe the random choice scenario, but also why it cannot describe the unexpected event scenario. In the random choice scenario, where the described event is as likely as the most likely alternative events, the modal conditions of both DP-*komon* and VP-*komon* are predicted to be satisfied.

So far, we have focused on scenarios where the described event is as likely as the most expected alternative events. However, our analysis of DP- and VP-*komon* predicts that their modal condition should also be satisfied in cases where the described event is *less* likely than the most expected alternative events. This was confirmed when VP-*komon* appeared with intransitives (see examples (33)– above), but it can also be confirmed with transitive sentences with the help of the following scenario:

(68) *Unexpected gift scenario:* Malin is at a gift exchange. She knows there's a jackpot of $1,000 and that the other gifts are cheap. It's Malin's turn to choose and there are five gifts left to choose from. Two are yellow, and three are red. However, right before Malin's turn, the information leaked to everyone that the jackpot is in one of the red gifts. Despite having heard this information, Malin grabs one of the yellow gifts.

In the scenario in (68), Malin's picking of the yellow gift was less expected than her picking of any of the red gifts, since she presumably knows that the jackpot is in one of the red gifts. The Chuj speakers we consulted judge the sentence in (69) with DP-*komon* as true in this scenario, confirming the prediction of the analysis.

[13] Notice that because it was not Malin's turn to grab a gift, the events that we are comparing are still less expected than any event of Malin not grabbing a gift.

(69) Ix-s-yam [jun **komon** silab'] ix Malin
PFV-A3-grab INDF KOMON gift CLF Malin
≈ 'Malin grabbed a random gift.'

Now what about the counterpart of (69) with VP-*komon*, as in (70)?

(70) Ix-s-**komon**-yam-ej jun silab' ix Malin.
PFV-A3-KOMON-grab-DTV INDF gift CLF Malin
≈ 'Malin randomly/unexpectedly grabbed a gift.'

The Chuj consultants did not explicitly reject (70), but mentioned a clear preference for the variant in (71) with the addition of the adjective *k'ank'an* 'yellow', as a description of the scenario in (68).

(71) Ix-s-**komon**-yam-ej jun *k'ank'an* silab' ix Malin.
PFV-A3-KOMON-grab-DTV INDF yellow gift CLF Malin
≈ 'Malin randomly/unexpectedly grabbed a yellow gift.'

While the acceptability of (71) shows that the analysis does not overgenerate, the preference for a DP modifier in (71), but not in (69) is interesting. We believe that this preference can be explained by noting that, under our analysis, DP-*komon* always compares events of grabbing gifts, while VP-*komon* has more freedom. In the context above, the colour of the gift that Malin grabs becomes highly relevant and the context induces a comparison of gift grabbings. If what is at stake is the comparison of alternative grabbings, there is a form, namely DP-*komon*, that can be unambiguously used to do this. We should then expect some pragmatic pressure against using the form in (70) to express this, since the form can also be used to express other comparisons (for instance to compare the actual grabbing with other alternative actions, not just grabbings). The use of a modifier in (71) seems to bias the interpretation towards a comparison of alternative grabbings of gifts, which perhaps explains the speakers' preference to use (71) as a description of the scenario in (68) with VP-*komon*. We take this to be a welcome consequence of our proposal of the formal distinction between VP- and DP-*komon*: VP-*komon* merely compares events with events, whereas DP-*komon* forces a comparison of events that only differ with respect to the individuals in the NP extension.

3.4 Predictions: Adjacency and domain restriction

Finally, we point out two predictions of the analysis, showing that they are borne out.

First, under the current analysis of DP-*komon*, *komon* combines directly with a determiner to form a complex determiner. This kind of account is reminiscent of similar data discussed in the context on nonlocal modification (see e.g. Bolinger 1967; Stump 1981; Larson 1999; Zimmermann 2003; Schwarz 2006, 2020; Morzycki 2016). In short, it is well-known from this literature that adjectives can sometimes be interpreted as though they were adverbs (i.e. as if they were interpreted "nonlocally"). For example, Morzycki (2016) notes that the English sentence in (72) is ambiguous between the expected reading in (73-a) and the unexpected adverbial reading in (73-b).

(72) An **occasional** sailor strolled by. (Morzycki 2016, (1))
a. Someone who sails occasionally strolled by.
b. Occasionally, a sailor strolled by.

As further noted in this literature, when other adjectives intervene between the determiner and the relevant adjective, the nonlocal reading is no longer available:

(73) A *happy* **occasional** sailor strolled by.

a. Someone who sails occasionally strolled by.

b. #Occasionally, a sailor strolled by.

Previous proposals have taken this restriction to be indicative of the fact that nonlocal modifiers compose directly with determiners to form complex determiners (see e.g. Zimmermann 2003, Morzycki 2016). This means that if DP-*komon* forms a complex determiner with *jun*, then we predict that it should in principle be subject to similar adjacency effects.

This predication is borne out. When conveying random choice, *komon* does not tolerate any material intervening between the determiner and *komon*. For instance, the sentence in (74) is felicitous in the unremarkable scenario (45), but not in the random choice scenario in (51). This means that if *komon* is not immediately adjacent to the determiner, it can only be an NP modifier, exclusively contributing the 'unremarkable' reading. This is expected if *komon* must form a complex determiner with a determiner in order to convey a likelihood component.

(74) Ix-s-yam [$_{\text{DP}}$ jun k'ank'an **komon** silab'] waj Xun.
PFV-A3-grab INDF yellow KOMON gift CLF Xun
≈ 'Xun grabbed a yellow average gift.'

A second prediction made by our account regards the extent at which the likelihood component of DP-*komon* should be available with different determiners. That is, the current analysis gives us a possible way to account for the determiner restriction imposed on the likelihood interpretation of DP-*komon*.[14] Consider as illustration the sentence in (58), repeated below in (75):

(75) Ix-s-sikl-ej [$_{\text{DP}}$ winh **komon** k'uyb'um] waj Xun.
PFV-A3-choose-DTV CLF(=DEF) KOMON student CLF Xun
≈ 'Xun chose the unremarkable student.'

In this sentence, *komon* combines with a noun classifier, used as a definite determiner (Buenrostro et al. 1989; Royer 2019, to appear). The classifier triggers a uniqueness presupposition, conveying that there is only one student. Let us assume that this uniqueness presupposition is true in the world of evaluation and call that unique student s_1. The sentence asserts that the agent, Xun, grabbed s_1. On top of that, it conveys the modal condition in (76). This modal condition makes a claim about any students that were not actually chosen. For any such student, the modal condition conveys that it has to be the case that its choosing is as expected or more expected than the choosing of s_1. Given the uniqueness presupposition, there is only one entity that can satisfy the first conjunct in the antecedent of the conditional in (76), namely s_1. Since the speaker chose s_1, the second conjunct in the antecedent of the conditional will fail to be true, and, so, the whole antecedent will be false. This means that the modal condition will hold vacuously, and *komon* will therefore contribute nothing more than what the DP without *komon* would have contributed.

(76) $$\forall y \left[\boxed{[\textsc{student}_w(y) \;\&\; y \notin \{z : \textsc{choose}_w(z)(e) \;\&\; \textsc{Ag}(\textsc{Xun})(e)\}]} \rightarrow \left(\begin{array}{c} \textsc{Max}_{\leq_{g(w)}}(\{w' : \textsc{happen}_{w'}(e)\} \cap \mathbf{f}(e)) \\ \leq_{g(w)} \\ \textsc{Max}_{\leq_{g(w)}}(\{w' : \exists e'[\textsc{choose}_{w'}(y)(e')]\} \cap \mathbf{f}(e)) \end{array} \right) \right]$$

To the extent that adding vacuous material can result in deviancy, we explain why DP-*komon* is de-

[14] Determiner restrictions are also observed in the literature on nonlocal modification (see e.g. the discussion in Morzycki 2016). We take this to be additional evidence in favour of the current proposal.

viant in (75). There is, however, the possibility of having NP-*komon*, contributing the non-modal meaning component. This explains why only the unremarkable interpretation is perceived in (75).

The same line of explanation can be extended to cases where *komon* co-occurs with a universal quantifier, as in (77), repeated from (60) above.

(77) [Junjun **komon** libro] ix-in-man-a'.
∀ KOMON book PFV-A1S-buy-TV
≈ 'I bought every average book.'

In this case, the non-modal component in the predicted truth-conditions will convey that the speaker grabbed all books. For an entity to satisfy the antecedent of the conditional in the modal condition, it will have to be a book that was not bought by the speaker. There is then no entity that satisfies the antecedent of the conditional in the modal condition, and as was the case with the example with the definite determiner in (75), the modal condition is trivially satisfied. The appearance of *komon* in a DP headed by a universal quantifier contributes nothing beyond what the DP without *komon* would have contributed.

In sum, our proposal of the modal component expressed by DP-*komon* naturally captures the absence of random choice interpretations when *komon* appears in DPs headed by certain types of determiners, namely definite determiners and the universal quantifier *junjun*. Since there is no work on nominal quantification in Chuj, and given the very limited amount of work on quantification across Mayan languages (Henderson 2016), we leave it to future work to establish the full range of quantifiers compatible, and incompatible, with random choice interpretations of nominal *komon*.

We will conclude, nevertheless, by providing some preliminary evidence for the analysis above based on the behaviour of a type of DP that we have not discussed above.

In Chuj, DPs containing a noun classifier or the indefinite *jun* can combine with *tik*, traditionally described as a demonstrative (García Pablo and Domingo Pascual 2007), as in the examples below:

(78) Yam [*ch'anh* libro **tik**].
grab CLF book DEM
'Grab this book.'

(79) Yam [*jun* libro **tik**].
grab one libro DEM
'Grab this (one) book.'

We will not provide an analysis of *tik* here. We simply note that *tik*-DPs containing a noun classifier, as in (78), behave like definite DPs in that they trigger a uniqueness presupposition, whereas *tik*-DPs containing the indefinite *jun*, as in (79), behave like other indefinite DPs in that they do not trigger a uniqueness presupposition (see Royer (to appear) for further information on such alternations). For instance, (78) is judged felicitous by speakers in a setting like (80-a), where there is only one salient book, but infelicitous in a setting like (80-b), where there is more than one book. The sentence in (79), on the other hand, is felicitous with both the settings in (80-a) and (80-b):

(80) a. Only one book is placed on a table in front of a person. You ask that person to grab that book. (78) = ✓ | (79) = ✓
b. Two books are placed on a table in front of a person. You ask that person to grab one of the two books. | (78) = ✗ | (79) = ✓

Strikingly, the presence or absence of a uniqueness presupposition correlates with the presence or absence of a random choice interpretation. When nominal *komon* appears in "CLF-N-DEM" DPs, only the unremarkable interpretation is perceived. When it appears in "*jun*-N-DEM" DPs, on the other hand, both the unremarkable and random choice interpretations are possible. This is illustrated in the examples in (81) and (82), with the different scenarios in (83).

(81) Ix-in-man [ch'anh komon libro tik].
PFV-A1S-buy CLF KOMON libro DEM
≈ 'I bought this average book.'

(82) Ix-in-man [jun komon libro tik].
PFV-A1S-buy one KOMON libro DEM
≈ 'I bought this (average) book (at random).'

(83) a. I went to the library. Not knowing which book to buy, I chose one at random. It turned out to be an absolutely amazing book. The book is now in front of me and you, and there's no other book. I tell you (81) / (82). | (81) = ✗ | (82) = ✓

b. I went to the library, and bought a specific book that was recommended to me. It turned out to be an ordinary book; there is nothing special about it. The book is now in front of me and you, and there's no other book. I tell you (81) / (82). | (81) = ✓ | (82) = ✓

In sum, though a more thorough understanding of the semantics of demonstratives in Chuj is in order, these preliminary data corroborate the analysis of DP-*komon* advanced in the previous subsection.

4 Discussion and crosslinguistic outlook

In the last two sections, we have described the modal component of *komon*. We have seen that the modal contribution of *komon* is compatible with a variety of scenarios, including (but not being limited to) those in which an agent made a random choice. After observing that *komon* can be used to convey the low likelihood of an event, we proposed that the expression of random choice derives from a general modal component that conveys that the event described is no more likely than other events that could have taken place, given the circumstances around its preparatory stage.

As discussed in the introduction, *komon* is not alone in being able to describe scenarios where an agent makes a random choice: a number of other expressions have been described in the literature as conveying random choice modality, too. Having described the modal component of *komon*, we are now ready to discuss how it compares to that of other random choice modal expressions, a question that we have remained silent about for the most part in the previous sections. The discussion will focus on random choice indefinites, since, while understudied, they are still the expressions conveying random choice modality that have received the most attention in the previous literature and for which explicit analyses exist.

The section is organized as follows. A first point of variation among random choice expressions concerns the status of the random choice component. We have assumed, without argument, that the modal component of *komon* is truth-conditional. This is also the case for some expressions conveying random choice, but not for all of them. Section 4.1 contrasts the behaviour of the modal component of *komon* with that of other expressions conveying random choice and presents evidence consistent with its truth-conditional status. A second point of variation, which, following Alonso-Ovalle and Menéndez-Benito (2018), we call 'Modal Selectivity', concerns whether or not random choice expressions can express other modal flavours. Section 4.2 shows that *komon* is more selective than other expressions that can express random choice modality, and that it keeps its own modal flavour even when embedded under other external modal expressions. This is also consistent with our analysis, which hardwires the type of modal flavour that *komon* conveys. Finally, we zoom in on the characterization of the random choice modal component. Existing analyses of modal indefinites, which were motivated by the behaviour of specific expressions, differ with respect to how they analyze random choice modality. Section 4.3 shows that previous analyses of the random choice component of modal indefinites do not extend in a straightforward way to *komon*, given our discussion in previous sections. To conclude, in section 4.4, we return to the unremarkable interpretation of *komon*. We will see that while some random choice expressions also convey this meaning, others do not. The existence of

typologically unrelated random choice expressions that also convey the unremarkable interpretation casts doubt on our decision to treat the difference between the modal meanings of *komon* and its unremarkable interpretation as stemming from an ambiguity. While we will ultimately leave open how to best analyze the unremarkable interpretation, section 4.4 presents some suggestive evidence for the ambiguity that we posited.

The picture that emerges from the discussion presented in this section suggests that random choice modality should probably not be treated as a unified category, and that it most likely derives from varying sources.

4.1 On the truth-conditional status of the modal component

As we mentioned in the introduction, random choice modality was previously discussed in the literature on modal indefinites. Some of the indefinite DPs discussed in previous work that can express random choice modality include Spanish *un NP cualquiera* (Alonso-Ovalle and Menéndez-Benito, 2011, 2013, 2018), Italian *un qualsiasi* and *un qualunque* (Chierchia, 2013), Romanian *un oarecare* (Fălăuş, 2015, 2014), German *irgendein* (Kratzer and Shimoyama 2002; Buccola and Haida 2017), and the Korean *-na* indeterminates (Choi, 2007; Kim and Kaufmann, 2007; Choi and Romero, 2008).

We have assumed that the modal component of *komon* is truth-conditional. Other expressions conveying random choice modality differ with respect to whether their modal components are also truth-conditional. Consider the case of *irgendein*. Buccola and Haida (2017) show that this indefinite can convey random choice modality: in (84), *irgendein* can either convey an epistemic modal component (that the speaker does not know which book Hans bought) or a random choice component (roughly, that Hans was indifferent to the issue of which book to buy).

(84) Hans hat **irgend**-ein Buch gekauft.
Hans has IRGEND-INDF book bought
≈ 'Hans bought some book or other / a random book.' (German: Buccola and Haida 2017)

In downward entailing contexts, neither of these modal components survive. Buccola and Haida (2017) show that in the absence of prosodic prominence on *irgendein*, (85) simply conveys that Hans never bought any book. For the random choice component to survive embedding, *irgend-ein* needs to be stressed. This behaviour is reminiscent of quantity implicatures.

(85) Hans hat *nie* **irgend**-ein Buch gekauft.
Hans has never irgend-a book bought.
≈ 'Hans never bought any book.' (German: Buccola and Haida 2017)

The empirical landscape is distinct in other languages. Alonso-Ovalle and Menéndez-Benito (2018) analyze the modal contribution of Spanish *uno cualquiera* as truth-conditional. Unlike that of *irgendein*, the modal component of *uno cualquiera* does not disappear in downward entailing environments. Even in the absence of any special prosodic prominence on *un libro cualquiera*, the sentence in (86) conveys that nobody grabbed a book a random.[15] The same seems to be true of the French *n'importe-wh* series, as (87) illustrates.

(86) Nadie cogió un libro **cualquiera**.
no.one grabbed a book CUALQUIERA
≈ 'Nobody grabbed a random book.' (Spanish)

[15] Like *komon*, *uno cualquiera* also has an unremarkable interpretation, which also survives embedding under negation: (85) can also mean that nobody grabbed an unremarkable book.

(87) Personne a apporté **n'importe quel** livre.
no.one has brought NIMPORTE what book
≈ 'No one brought along a random book.' (French)

Komon behaves like *uno cualquiera* or the *n'importe-wh* series, rather than like *irgendein*. Like that of *uno cualquiera* or the *n'importe-wh* series, the modal component of *komon* survives in downward entailing environments without requiring any special prosodic marking. This is shown in (88) for DP-*komon*, where DP-*komon* is embedded under *malaj mach* ('nobody'): (88) conveys that nobody brought along a random or unexpected book.[16]

(88) 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.'

Embedding *komon* in the antecedent of a conditional expression yields the same results. The example in (89), for instance, is a felicitous description in the scenario in (90), 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).

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

(90) *Scenario:* 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.

As far as we have been able to determine, the modal component of *komon* always survives embedding. The polar question in (91) provides a last example. The question asks whether Xun bought a book a random (or an unremarkable one), showing that the modal component of *komon* and its unremarkable meaning component are at issue.[17]

(91) Tom ix-s-man [jun **komon** libro] waj Xun?
YNQ PFV-A3-buy INDF KOMON book CLF Xun
≈ 'Did Xun buy a random book?'

In all the cases surveyed above, the modal (or the unremarkable) component of *komon* seems to be part of the *at-issue* material. This is consistent with our analysis, under which *komon* contributes its own truth-conditional modal component. We will see in the next section that the modal component of *komon* also

[16] The same is true for VP-*komon*, as seen in (i).

(i) Malaj mach ix-**komon**-ik'-an kot jun libro.
MALAJ who PFV-KOMON-bring-DTV DIR.along INDF book
≈ 'No one randomly brought along a book.'

[17] Again, the same is true for VP-*komon*:

(i) Tom ix-s-**komon**-man-ej jun libro waj Xun?
YNQ PFV-A3-KOMON-buy-DTV INDF book CLF Xun
≈ 'Did Xun randomly buy a book?'

survives embedding under other external modal operators.

4.2 Modal selectivity

A second point of variation is the degree at which expressions conveying random choice modality are specialized in doing so or admit different modal flavours. We have seen above, for instance, that in the sentence in (84), repeated as (92) below, German *irgendein* can convey an epistemic modal component, signalling that the speaker is ignorant about the identity of the book that Hans bought (Kratzer and Shimoyama, 2002; Aloni and Port, 2015).

(92) Hans hat **irgend**-ein Buch gekauft.
Hans has IRGEND-INDF book bought
≈ 'Hans bought some book or other / a random book.' (German: Buccola and Haida 2017)

Other modal indefinites are more selective. The sentence in (93), with Spanish *algún*, can only convey speaker ignorance, and (93) with Spanish *uno cualquiera* can only convey random choice modality.

(93) Juan compró **algún** libro.
Juan bought ALGÚN book
≈ 'Juan bought some book or other.'

(94) Juan compró un libro **cualquiera**.
Juan bought a book CUALQUIERA
≈ 'Juan bought a random book.'

Along the same lines, according to the description presented in Chierchia 2013, §5.3.2, Italian *un qualsiasi*, for instance, does not seem to be able to express speaker ignorance in unembedded contexts.

(95) a. Chi ha telefonato? (Who called?)
b. ??Un regazzo **qualsiasi**
a boy QUALSIASI

Komon can never express speaker ignorance. This is consistent with our analysis, under which *komon* essentially contributes circumstantial modality.

Interestingly, the type of modality that *komon* expresses remains constant even when the expression is embedded under other external modal operators. In that, *komon* contrasts with *uno cualquiera*. Alonso-Ovalle and Menéndez-Benito (2018) show that the modal component of *uno cualquiera* survives embedding under epistemic modals. The sentence in (96), for instance, with an epistemic construal of the necessity modal *tener que* ('have to'), conveys that it follows from what the speaker believes that Juan went to see a film at random. The sentence can also convey that it follows from what the speaker believes that Juan went to see an unremarkable film.

(96) Juan tiene que haber ido a ver una película cualquiera.
Juan must that have gone to see a film CUALQUIERA
'Juan must have gone to see a random movie.'
(Spanish: Alonso-Ovalle and Menéndez-Benito 2018)

These two readings are expected: *uno cualquiera* can either convey a random choice or an 'unremarkable' interpretation, and the contributions of these two interpretations are here embedded under the epistemic modal. Under imperatives and deontic modals, however, a third interpretation arises. Like (96), the sentence in (97) can have an interpretation that results from embedding the random choice interpretation of *uno*

cualquiera: under this interpretation, the sentence conveys that the addressee must bring a book at random. The sentence can also have an interpretation that results from embedding the unremarkable interpretation of *uno cualquiera*: under this interpretation, the sentence conveys that the addressee must bring an unremarkable book. There is now a third possible interpretation, under which the sentence asks the addressee to bring a book and any book is a permitted possibility. Under this interpretation, the modality that *uno cualquiera* conveys is that of the imperative. Because of this, Alonso-Ovalle and Menéndez-Benito (2018) call this interpretation a 'harmonic' interpretation.

(97) ¡Tráeme un libro cualquiera!
bring.me a book CUALQUIERA
'Bring me any book!'

With Chuj *komon*, a 'harmonic' interpretation never seems to be possible. First, consider a case in which *komon* is embedded under the epistemic modal *tekan* 'possible'.

(98) Ha tas w-ojtak, **tekan**-to ix-s-sikl-ej [jun **komon** pelikula] waj Kixtup.
TOP what A1S-know, possible-COMP PFV-A3-choose-DTV INDF KOMON movie CLF Kixtup
≈ 'For what I know, it's possible that Kixtup chose a random movie.'

Just like with Spanish *uno cualquiera*, *komon* cannot interact with higher epistemic modals. To see this, consider the scenario in (99). In this scenario, a random choice/unexpected interpretation should not arise, since Kixtup carefully selected the movie he watched. The scenario is constructed so as to make a potential harmonic epistemic interpretation. Under that interpretation, the sentence would convey that for any movie *x*, Kixtup might have watched *x*, according to what the speaker believes. Chuj consultants judge (98) as infelicitous given the scenario in (99).

(99) *Scenario:* Kixtup told me he went to the movie theatre, after carefully selecting a movie to watch. However, he didn't tell me which movie he chose. I'm curious, so I look at what movies are offered at the movie theatre. In my opinion, all of the movies currently under screening are movies that Kixtup could want to watch. (98) = ✗.

The scenario in (100), on the other hand, gives rise to the possibility that Kixtup made a random choice. Accordingly, Chuj consultants judge (98) as felicitous in this scenario.

(100) *Scenario:* When he goes to the movies, Xun sometimes chooses a specific movie, but other times he also likes to pick a movie at random. I just heard Xun went to the movies, but I have no idea whether this time he selected a specific one, or just picked one at random. (98) = ✓

The absence of a harmonic interpretation with epistemic modals might not be completely surprising since, as we discussed before, *komon* does not express epistemic modality. Like *komon*, *uno cualquiera* does not convey epistemic modality and does not have epistemic harmonic readings either.

Now, let us consider cases where *komon* is embedded under imperatives or deontic modals, where a harmonic interpretation does arise with Spanish *uno cualquiera*. First consider the following scenario:

(101) *Scenario:* We're playing a board game, and as part of the rules, you must choose a card at the beginning of the game. Depending on your strategy, some cards are better than others for you. The cards are all face up in front of you. You ask me: What should I do now?

A harmonic interpretation of the sentences in (102) and (103) would convey that, according to what the speaker wants, the addressee is permitted to grab any card. Under this interpretation, the sentences in (102) and (103) are expected to be felicitous in this scenario. While the Spanish sentence with *uno cualquiera*

in (102) is indeed felicitous in this scenario, our consultants judge the imperative in (103) as infelicitous in (101). The sentence is interpreted either as an invitation to grab a card at random (a strategy that would not be in the best interest of the addressee, since some cards are better than others for them) or as an invitation to grab an *unremarkable* card (also not in the best interest of the addressee). These are the two interpretations that we expect from embedding *komon* under the imperative.

(102) ¡Coge una carta **cualquiera**!
grab a card CUALQUIERA
'Grab any card!' → felicitous in scenario (101) (Spanish)

(103) ¡Yam jun **komon** karta!
grab INDF KOMON card
'Grab a random card!' → *in*felicitous in scenario (101)

Similar facts are observed with deontic uses of possibility modals. For instance, the Chuj sentence in (105) with the modal auxiliary *yal* is infelicitous given the scenario in (104). Under a harmonic interpretation (conveying that the addressee can grab any card) the sentence would be expected to be felicitous and true.

(104) *Scenario:* We're playing a board game, and as part of the rules, you can choose a card at the beginning, but it's not obligatory. Depending on your strategy, some cards might be better for you. The cards are all face up in front of you. You ask me: What should I do now?

(105) Tz-*yal* ha-yam-an jun **komon** karta.
IPFV-can A2S-grab-DEP one KOMON karta.
'You're allowed to grab a random card.' → infelicitous in (104)

Further evidence that harmonic interpretations are not possible with imperatives and deontic modals in Chuj comes from the infelicitous continuations in (106) and (107). In both cases, consultants mention that the addition of the relative clause inside the parentheses leads to a contradiction. That is, for someone to comply with the order in (106), they would need to both grab a card at random and choose the one they want. These two orders are not consistent with respect to each other.

(106) ¡Yam jun **komon** karta (# tz-a-nib'-ej)!
grab a KOMON card IPFV-A2S-want-DTV
Intended: 'Grab any card you want!'

(107) Tz-*yal* ha-yam-an jun **komon** karta (# tz-a-nib'-ej).
IPFV-can A2S-grab-DEP one KOMON karta IPFV-A2S-want-DTV.
Intended: 'You're allowed to grab any card that you want.'

To summarize: the behaviour of the modal component of *komon* differs from that of other expressions conveying random choice in that (i) it survives embedding, and (ii) it is more specialized, excluding epistemic construals. Both properties are consistent with our analysis, according to which, *komon* contributes its own (non-epistemic) modality.

The contrast with *uno cualquiera*, which also seems to contribute its own modal component and which can have certain harmonic readings, is interesting. Under the analysis presented in Alonso-Ovalle and Menéndez-Benito (2018), the possibility of having harmonic interpretations correlates with the modal expression projecting its modal domain from an event variable, which can be co-bound with the event variable from which modal auxiliaries project their domains. Under our current analysis, *komon* is hardwired to project its modal domain from the type of event described by the VP, so no harmonic interpretation is expected.

In the previous subsections, we have seen that there are reasons to believe that *komon* contributes its own modal component. We now turn to the question of the particular characterization of the type of modality that *komon* contributes by contrasting it with the modal component of other expressions that have been described as conveying random choice modality.

4.3 Characterizing random choice

Many of the previous discussions of random choice modality established a formal connection between this type of modal flavour and agentivity. We discuss three such accounts below.

Chierchia (2013) suggests, mostly in passing, that Italian *uno qualsiasi* and German *irgendein* are interpreted under the scope of a covert bouletic modal. For instance, under this proposal, the German sentence in (84), repeated below, is predicted to convey that Hans' desires did not favour buying any specific book.[18]

(108) Hans hat irgend-ein Buch gekauft.
Hans has IRGEND-INDF book bought
≈ 'Hans bought some book / a random book.' (German: Buccola and Haida 2017)

Given that the bouletic modal must take into consideration the particular desires of an agent, the presence of an agent under the random choice construal of *irgendein* and *uno qualsiasi* is central to this approach.

Another account which ties random choice modality to agentivity is put forth by Alonso-Ovalle and Menéndez-Benito (2018), who propose that the modality that *un NP cualquiera* contributes actually *presupposes* agentivity. Unlike under Chierchia's analysis, the modal component of *un NP cualquiera* does not depend on an external modal, but it is part of the meaning of the modal indefinite. Like Chierchia, the modal component of *un NP cualquiera* is tied to agentivity. Under their account, the modal domain of *un NP cualquiera* projects from an event: the decision of the agent leading to the described event. What *un NP cualquiera* conveys, roughly, is that this decision was not specific enough to discriminate between different potential themes of that event. For instance, the sentence in (1), repeated below, conveys that María decided to buy a book and that that decision did not favour buying any specific book over the others.

(109) María compró un regalo cualquiera.
María buy.PFV a gift CUALQUIERA
≈ 'María bought a random gift.' (Spanish)

The predicted modal component under the decision-based analysis is weaker than that predicted under the bouletic account. This is so because, unlike what the bouletic account predicts, the decision-based modal condition can be true in situations where the agent wanted to pick a particular book, as long as he did not decide to do so.

Buccola and Haida (2017), focusing on German *irgendein*, also assume that random choice modality presupposes agentivity. Like Chierchia, they propose that the source of the modal component is external to the indefinite. Under their proposal, the random choice interpretation of *irgendein* arises when this indefinite is interpreted under the scope of the adverb *einfach* ('simply'), which they assume can be covert. The interpretation of *irgendein* involves a simplicity-based comparison of alternative possible actions. The basic idea is that *irgendein* contributes two components: (i) the proposition that Hans bought a book in a set D, and (ii) for any D' that is a subset of D, the alternative proposition that Hans bought a book in D'. *Einfach*, on its turn, conveys the modal component that any alternative action described by the alternative propositions that *irgendein* contributes (buying a book in any of the subset domains) would not have been

[18] Given our discussion in section 4.1 above, an open question, under this account, is why the bouletic modal flavour does not seem to be retained in downward entailing contexts. The absence of a free choice component in this environment is expected, but the disappearance of the modality, to the extent that this is well-established, is not.

simpler for the agent. Like the bouletic account, this account excludes situations where Hans wanted to take a particular book, given that picking a book from a subset of books containing the desired book would have been "simpler" for Hans than picking a book from the whole set of books—this is so because, he would have to discard less books in that case. Since the modal contribution in Buccola and Haida 2017 is evaluated with respect to how simple it would have been for an agent to undertake alternative actions, it follows that it should not be satisfied in the absence of an agent.

None of the above proposals extend in a straightforward way to *komon*. The reason for this should be clear by now: As we saw in the previous sections, the modal component of *komon* does not require agentive events. In the sentences in (110)-(111), for instance, we find VP-*komon* in sentences with non-agentive verbs; and in (112) we find DP-*komon* as the subject of a non-agentive verb.

(110) Ix-**komon**-telw-i jun te' yib'an jun pat.
PFV-KOMON-fall-IV INDF tree over INDF house
≈ 'A tree unexpectedly fell on a house.'

(111) Ix-**komon**-k'och ix Malin.
PFV-KOMON-arrive CLF Malin
≈ 'Malin unexpectedly arrived.'

(112) Ix-jaw [jun **komon** k'ultakilchej].
PFV-come INDF KOMON deer
≈ 'A deer unexpectedly appeared. '

In order to extend these proposals to the Chuj data, we would have to detach the likelihood contribution of *komon* in examples (110)-(112) from its random choice contribution, by assuming that *komon* can ambiguously convey different modal meanings. Since this is clearly an undesired outcome, we conclude that none of the previous accounts that connect random choice modality to agentivity can be extended to the Chuj data.

Likewise, because it is not tied to agentivity, our account for *komon* does not extend in a straightforward way to the modal indefinites discussed above, to the extent that the description presented in the literature is correct. For instance, as discussed in Alonso-Ovalle and Menéndez-Benito (2018), *uno cualquiera* can only have an unremarkable interpretation when it is the subject of a non-volitional predicate, as in (113). Unlike the sentence in (112), (113) cannot describe the unexpected appearance of a remarkable deer.

(113) Un ciervo cualquiera apareció en el cerro a las 6 de la mañana.
a deer *cualquiera* appeared on the hill at the 6 of the morning
'An unremarkable deer appeared on the hill at 6 am.'

Finally, we discuss one last proposal, which contrary to the above accounts, does not link random choice modality to agentivity. Choi (2007) and Choi and Romero (2008) propose, in the spirit of von Fintel 2000 for English *wh-ever* free relatives, that random choice modality is actually counterfactual modality. Under their analysis, the sentence (114) conveys that John picked a card and that he would have also picked a card if the set of actual cards had been different. This modal component is satisfied in cases where the agent did not care about the identity of the cards, but also in other scenarios, as discussed in Alonso-Ovalle and Menéndez-Benito 2018.

(114) John-un amwu-khadu-na cip-ess-e.
John-TOP AMWU-card-OR take-PAST-DEC
≈ 'John picked a random card.' (Korean: Choi 2007)

This approach does not extend to *komon* in a straightforward manner either. Under the counterfactual approach, the sentence in (110), for example, would be predicted to convey (i) that a tree fell on an actual house, and (ii) that if the set of actual houses would have been different, a tree would have fallen on a house, too. This interpretation would be satisfied in a situation where the falling of the tree on a house was completely expected, contrary to fact. Likewise for the sentence in (112): this sentence would be predicted to be true if (i) a deer appeared, and (ii) if the set of actual deers would have been different, a deer would have appeared, too. This interpretation predicts the identity of the deer that appeared to have been irrelevant, but it would be satisfied in a situation where the appearance of a deer was expected.

In sum, we have shown that previous accounts cannot be adopted to capture the modal contribution of *komon* in Chuj.

4.4 On the 'unremarkable' interpretation

We conclude the comparison of *komon* with other expressions conveying random choice modality by looking at its 'unremarkable' interpretation, discussed in the introduction and in Section 3.1. As noted above, the sentence in (2), repeated in (115) below can describe a situation where Xun expectedly bought a specific book, as long as the book that Xun bought was not a remarkable one.

(115) Ix-s-man [$_{DP}$ jun **komon** libro] waj Xun.
PFV-A3-buy INDF KOMON book CLF Xun
≈ 'Xun bought a random book.'

Other expressions conveying random choice modality can also convey this interpretation. The case of *uno cualquiera* is discussed in Alonso-Ovalle and Menéndez-Benito 2018. They note that the 'unremarkable' interpretation of *uno cualquiera* stands out in copular sentences, since the relevant random choice interpretation is not available in such sentences, where an agent is not available:

(116) Juan es un estudiante **cualquiera**.
Juan is a student CUALQUIERA
'Juan is an unremarkable student.' (Spanish: Alonso-Ovalle and Menéndez-Benito 2018, (4b))

Similar observations can be made for German *irgend-* and Chuj *komon*:

(117) Hans ist (nur) **irgend**-ein Student.
Hans is only IRGEND-one student
≈ Hans is an unremarkable student.'[19] (German)

(118) **Komon** k'uyb'um waj Xun.
KOMON student CLF Xun
≈ Xun is an unremarkable student.' (repeated from (43))

The fact that the 'unremarkable' interpretation surfaces in typologically-unrelated languages casts doubt on the assumption made above that DP-*komon* is ambiguous between a modal and non-modal meaning. Despite this, we would like to note that there is some support for such a hypothesis. We go over the main evidence in the next three subsections.

[19] We thank Michael Wagner for judgments on German.

4.4.1 Modification

As already discussed in section 3.4, the likelihood component of *komon* in the nominal domain is subject to an adjacency requirement. As seen in (74), repeated below, only NP-*komon* (the 'unremarkable' use) is perceived when an adjective intervenes between *komon* and the indefinite determiner:

(119) Ix-s-yam [$_{DP}$ jun k'ank'an **komon** silab'] waj Xun.
PFV-A3-grab INDF yellow KOMON gift CLF Xun
≈ 'Xun grabbed a yellow average gift.'

For the likelihood component to arise, *komon* must appear adjacent to the indefinite:

(120) Ix-s-yam [$_{DP}$ jun **komon** k'ank'an silab'] waj Xun.
PFV-A3-grab INDF KOMON yellow gift CLF Xun
≈ 'Xun grabbed a random/unremarkable yellow gift.'

In other words, (119) with an intervening adjective is only felicitous in the unremarkable scenario in (45), but not in the random choice scenario in (51). On the other hand, (120) is felicitous in both the unremarkable and random choice scenarios. This is consistent with the assumption that we have two lexical elements with a different distribution: while the linear order in (120) is consistent with *komon* being either an NP modifier or a D modifier (taking the D to its left as its argument), the string in (119) is not compatible with *komon* taking a D as its argument, leaving the NP-modifier *komon* as the only possibility.

4.4.2 Ellipsis

A second piece of evidence in favour of an ambiguity comes from the interpretation of elliptical constructions, which provide a classic test for ambiguity (Zwicky and Sadock, 1975). Ellipsis is subject to an identity condition, thus, when an elided constituent copies a constituent containing an ambiguous element, only matching understandings (Zwicky and Sadock, 1975) are possible. Chuj VP-ellipsis behaves as expected in terms of identity conditions on lexical items: elided items must be semantically identical to the items in the antecedent. For instance, the word *k'ak'* can mean both 'fire' or 'heat' (Hopkins 2012). This means that if *k'ak'* is elided under VP ellipsis, its meaning must be identical to the *k'ak'* of the linguistic antecedent. This is illustrated below:

(121) a. Tz-nib'-ej **k'ak'** waj Xun, pax ix Malin.
IPFV-like-DTV heat CLF Xun, also CLF Malin
'Xun likes *heat*, and Malin also <likes heat/*fire>.'
b. Tz-nib'-ej **k'ak'** waj Xun, pax ix Malin.
IPFV-like-DTV fire CLF Xun, also CLF Malin
'Xun likes *fire*, and Malin also <likes fire/*heat>.'

The same type of identity conditions extend to random choice versus unremarkable uses of *komon* in the nominal domain. To illustrate, first consider the following sentence:

(122) Ix-s-man jun **komon** libro waj Xun, pax ix Malin.
PFV-A3-buy INDF KOMON book CLF Xun, also CLF Malin
≈ 'Xun bought a random/unremarkable book, and Malin also.'

For the sentence in (122) to be felicitous, it is not possible for *komon* to express random choice in the first conjunct, but unremarkability in the second conjunct. This is illustrated in the following three scenarios:

(123) a. Context 1: Xun and Malin each wanted to buy a book, but they didn't know which book to buy. They both separately went to the library. Xun randomly bought one book, Malin randomly bought another book. Both Xun and Malin found the books that they bought very special. (122) = ✓

b. Context 2: Xun wanted to buy a specific book. Malin wanted to buy a different specific book. They both separately went to the library, and bought their book. Both Xun and Malin didn't find that their book was particularly interesting. (122) = ✓

c. Context 3: Xun wanted to buy a book, but he didn't know which to buy, so he just bought one at random. It turned out to be a very special book for him. Malin also wanted to buy a book, and she knew exactly which one she wanted. She bought it, but it turned out to be a very average book. (122) = ✗

Context 1 in (123) describes a scenario where both Xun and Malin made a random choice, whereas context 2 describes one in which both bought an unremarkable book. As seen below, both scenarios can describe (122). Context 3, however, describes a scenario where Xun made a random choice, but not Malin, and where Malin bought an unremarkable book, but not Xun. As indicated, this scenario *cannot* describe (122). If both the unremarkable and random choice interpretations of *komon* were to fall out of a non-ambiguous lexical item, it would be difficult to explain why (123-c) would be considered infelicitous.[20]

4.4.3 Not all random choice expressions convey unremarkability

Finally, we would like to mention that not all random choice expressions also have unremarkable readings. To see this, copular clauses are especially useful, since the absence of agents in such clauses renders random choice readings impossible. French *n'importe-wh*, for instance, seems to lack unremarkable readings altogether: copular sentences with *n'importe quel* are simply judged ungrammatical:[21]

(124) *Jean est **n'importe quel** étudiant.
Jean is NIMPORTE what student.
Intended: 'Jean is an unremarkable student.'

Chuj features an additional modal expression, *yalnhej-wh*, that can be used to express agent indifference, or random choice modality (as reported in Kotek and Erlewine 2019 and Royer 2020).[22] An example is provided below with a rough translation signalling its modal contribution:

(125) **Yalnhej tas** libro'-al ix-s-man waj Xun.
YALNHEJ what book-NML PFV-A3-buy CLF Xun
≈ 'Xun bought a random book.'

Though we refer readers to Kotek and Erlewine (2019) and Royer (2020) for a more detailed description of the modal contribution of *yalnhej-wh* items, of particular relevance here is the fact that *yalnhej-wh* items cannot trigger unremarkable interpretations. Accordingly, speakers judge copular clauses with *yalnhej-wh* as ungrammatical:

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

[20] Alonso-Ovalle and Menéndez-Benito (2018) show that this test yields the same results for Spanish.
[21] The French judgments were corroborated with both speakers of European French and Québec French.
[22] *Yalnhej* can be decomposed as *yal* 'can' and *nhej* 'only' (Buenrostro 2009).

These data suggest that the existence of unremarkable readings is not necessary for random choice modality to arise. This, we believe, is further support in favour of positing an ambiguity.

4.5 Summary

In this section, we have compared the modal component of *komon* with that of other expressions that have been described in the literature as conveying random choice modality.

We have seen that the modal component of *komon* survives embedding and remains constant, even when embedded under other external operators. This is consistent with our analysis, which hardwires the modal component of *komon*.

Komon shares with other expressions conveying random choice a second 'unremarkable' interpretation. We have seen that there are reasons to assume that this second interpretation could be due to an ambiguity. The discussion of the 'unremarkable' interpretation in Section 3.1 lays out some properties of this reading that any analysis would have to capture: the reading seems to invoke a contextually determined ranking of types of individuals in the extension of the NP, with some ('exceptional') individuals ranked at the top and bottom of the ranking, and the argument of the NP being ranked around a middle, average value in the scale. We do not attempt a fully-fledged analysis of this reading of *komon* here, but, for the sake of completeness, we sketch in the Appendix a possible way to start exploring an analysis. The remarks in the Appendix will remain very tentative for now.

In the absence of a deeper understanding of the 'unremarkable reading' of other items, we also leave open the question of why the ambiguity between a modal interpretation and the 'unremarkable reading' seems to arise in different languages, with other items with meanings related to—though not identical to—the modal component of *komon*. The answer to this question might be ultimately rooted in a possible historical meaning shift from the unremarkable interpretation to the different attested modal component.[23] Perhaps (but only perhaps) the modal readings that we observe stem from the 'unremarkable' interpretation, which stands as a fossil in an evolutionary chain, to borrow a metaphor from Morzycki (2016) [p. 16], who, talking about the peculiar existence of "nonlocal" meanings associated with idiosyncratic classes of nominal modifiers across languages, notes that:

> [Nonlocal] adjectives are indeed odd, but in a precise and interesting sense. They are odd in the way that platypuses and lungfish are odd: they are transitional forms in an evolutionary progression, unusual because they combine features of two distinct categories that we normally regard as mutually exclusive. Over succeeding generations of speakers, certain adjectives may emerge from the swampy depths of the inner NP to which they are usually confined, and tentatively make their way onto the dry land of the determiner domain. They can't be expected to make this leap in a single stride, so we can observe them in the midst of their evolutionary journey and thereby discover more about both their origin and their destination. Like platypuses and lungfish, they are important and analytically revealing not despite their strangeness, but because of it.

5 Conclusion

We started this paper with three questions: (i) What modal flavours can DPs express? (ii) To what extent do they mirror those of VP modals? (iii) To what extent is the modal component of modal expressions tied to their syntactic position? As we saw, Chuj provided an ideal testing ground to probe into these questions.

[23] Recall that, as Hopkins (2012) suggests, *komon* was likely borrowed from Spanish *común*, which means 'common/average'.

For question (i), the paper zoomed in on the expression of random choice modality. We saw that, in Chuj, random choice modality derives from a modal component that conveys information about the likelihood of the type of event described. With respect to question (ii), we found that the likelihood modal component associated with random choice modality can arise both at the VP and the DP levels. However, with respect to question (iii), we saw that the modal components expressed by VP- and DP-*komon* were not perfectly parallel: VP-*komon* and DP-*komon* differ in that the former conveys information about the likelihood of an event, while the latter compares the likelihood of an event with alternative events that only differ with respect to the individuals in the extension of the NP argument.

A lesson that we learn from Chuj, along with a comparison of other random choice modals identified in the literature, is that random choice modality might not be a uniform category. That is, we saw in section 4 that the modal component associated with the expression of random choice in Chuj differs from that of other expressions previously discussed in the literature for a number of reasons. Nonetheless, we believe that our analysis could be extended to account for the distribution of other expressions conveying random choice across languages. Though we leave this endeavour for the future, one obvious candidate is English *random(ly)*, which to our knowledge has received close to no attention in the formal semantic literature, and which at first glance appears to parallel Chuj *komon* in many respects.

Appendix: NP-*komon*

The interpretation of both VP-*komon* and DP-*komon* are sensitive to a likelihood ordering of events. As we have seen before in 3.1, the interpretation of NP-*komon* seems to require a contextually determined ordering of types of individuals in the extension of the NP.

One possible way to capture this context dependency would be to assume that NP-*komon* takes a covert free variable f ranging over a pre-order (a reflexive, transitive, and connected relation) whose field is the NP extension. Possible values for this preorder could be 'getting at least as good grades as', 'behaving at least as well as', or 'having parents at least as socially important as.' Pre-orders are not orders, since they are not anti-symmetric (two different individuals a, b can have (at least) as good grades as each other), but from a preorder we can determine an order ($\leq_{f_{equivalence}}$) between *sets* of individuals (Cresswell (1976); Bale (2008), Partee et al. (1990, 208)). For instance, for the preorder f 'getting at least as good grades as', we can consider the equivalence relation ($f_{equivalence}$) (reflexive, transitive, symmetric) 'getting as good grades as,' and order the equivalence classes determined by this relation (the set of individuals with same grades) by considering the preorder between individuals in those classes (a class of individuals having grade x is ranked at least as high as a class of individuals having grade y if the individuals in the former class have at least as good grades as the individuals in the latter). Given a preorder f, f_{eq} is defined as in (127-a). The equivalence classes determined by f_{eq} can be ordered on the basis of the preorder, as in (127-b):

(127) a. $f_{eq}(a,b)$ iff $\forall x[(f(a,x) \leftrightarrow (b,x)) \;\&\; (f(x,a) \leftrightarrow (x,b))]$
b. $[a]_{f_{eq}} \geq_{f_{eq}} [b]_{f_{eq}}$ iff $\exists x,y[x \in [a]_{f_{eq}} \;\&\; y \in [b]_{f_{eq}} \;\&\; f(x,y)]$

(Cresswell, 1976; Bale, 2008)

As a first approximation, NP-*komon* seems to require a particular type of ordering of sets of individuals where most individuals (the non-exceptional individuals) fall around the middle range of the ranking and less individuals are ranked at the top or bottom of the ranking (NORM($\geq_{f_{eq}}$) in (128) below). NP-*komon* conveys that the equivalence class that its argument is in ($[x]_{f_{eq}}$) is where most individuals rank (around the middle range of the ranking), and contains more individuals than any other class around the middle of the ranking (MOST-MIDDLE$_{\geq_{f_{eq}}}([x]_{f_{eq}}$ below). In symbols:

(128) $[\![komon_{NP}\ f_{\langle e,e\rangle}]\!]^v = \lambda P_{\langle e,st\rangle}$:

$$\text{PREORDER}(\mathbf{f}) \;\&\; \text{FIELD}(\mathbf{f}) = \{x : P_w(x)\} \;\&\; \text{NORM}(\geq_{f_{eq}}).$$
$$\lambda x.\lambda w.P_w(x) \;\&\; \underbrace{\text{MOST-MIDDLE}_{\geq_{f_{eq}}}([x]_{f_{eq}})}_{\text{scalar condition}}$$

Consider, as illustration, the example in (129-b):

(129) a. *Context*: *Xun is a student with average grades.*
b. [**Komon** k'uyb'um] waj Xun.
KOMON student CLF Xun
≈'Xun is an average/unexceptional student.'

The LF of (129-b), in (130-a), is predicted to be associated with the presupposition in (130-b) and the assertion in (130-c):

(130) a. LF: [komon $\text{f}_{\langle e,e\rangle}$ student] Xun
b. Defined iff **f** is a preorder on the set of students in *w*, and most individuals are clustered around the middle of the order $\geq_{\mathbf{f}_{eq}}$. When **f** is 'has at least as good grades as', $\geq_{\mathbf{f}_{eq}}$ is a ranking of sets of students with same grades. The cells in the middle range of the ranking are required to contain the most students.
c. True in *w* when **f** is 'has at least as good grades as' iff (i) Xun is a student in *w*, and (ii) Xun's grades are in the middle range of the grade scale (and most students in the middle of the range are like him in that respect.)

This type of analysis would capture (i) the deviance of NP-*komon* with types of nouns that describe entities for which contextually determined rankings are not easy to determine and with nouns whose extension is a singleton, and (ii) the fact that the dimension of comparison is contextually determined and can shift, as described in Section 3.1. The scalar condition that we appeal to above seems in line with reported intuitions, but it remains to be seen if it is accurate enough.

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