Modal effects in the nominal domain: Lessons from Chuj

Justin Royer
McGill University
justin.royer@mail.mcgill.ca
(presenting joint work with Luis Alonso-Ovalle)

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1 Context

Modality cuts across syntactic categories (Kratzer 1981), but most work in formal semantics has focused on verbal auxiliaries.

The focus has recently broadened beyond the verbal/inflectional domain (e.g Arregui, Rivero & Salanova 2017) and cross-categorial questions arise, e.g.:

Q1 What modal flavors can DPs express?
Q2 To what extent do they mirror those of VP modals?
Q3 To what extent is the modal component of modal expressions tied to their syntactic position?

Goal

Focus on a DP modal flavour, random choice modality (RCM), and bring data from Chuj with relevance to Q1-Q3.

Random choice modality.

- Random choice indefinites are modal indefinites (Alonso-Ovalle & Menéndez-Benito 2015, now AO & MB), e.g. Spanish un NP cualquiera (AO & MB 2011, 2013, 2018):

  (1) SPANISH
  María compró un regalo cualquiera.
  María bought a gift CUALQUIERA
  ≈ ‘María bought a random gift.’\(^1\)
  ▶ María bought a gift (like standard indefinite)
  ▶ She could have bought any gift (RC modality)

\(^1\)Abbreviations in glosses are as follows: A: ergative/possessive; AG: agentive suffix; B: absolutive; ALGÚN: Spanish algún; CLF: noun classifier; CUALQUIERA: Spanish cualquiera; DEM: demonstrative; DIV: derived intransitive suffix; DTV: derived transitive suffix; INDEF: indefinite; IRGEND: German irgend-; KOMON: Chuj komon; IV: intransitive status suffix; PFV: perfective; TOP: topic.

Here, and throughout the handout, 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.
• Similar items have been identified cross-linguistically (Italian *uno qualsiasi* and *un qualunque* (Chierchia 2013), Romanian *un oarecare* (Fălăuş 2014, 2015), German *irgendein* (Kratzer & Shimoyama 2002, Buccola & Haida 2017), the Korean *-na* indeterminates (Choi 2007, Kim & Kaufmann 2007, Choi & Romero 2008), a.o.).

(2) **GERMAN**

Hans hat irgend-ein Buch gekauft.
Hans has IRGEND-INDF book bought
≈ ‘Hans bought a random book.’  
(Buccola & Haida 2017)

(3) **KOREAN**

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

**What exactly is random choice modality?** There’s no consensus.

• Chierchia (2013): *uno qualsiasi* and *irgendein* are interpreted under the scope of a covert *bouletic* modal. So (2) ≈ Hans’ desires did not favour any specific book.

• AO & MB (2018): *un NP cualquiera* is interpreted relative to the *decision* of the agent. (1) ≈ María decided to buy a book and that decision didn’t favour any specific book.²

• Buccola & Haida (2017): *RC* arises when *irgendein* combines with the adverb *einfach* (‘simply’), which can be covert. *Irgendein* contributes (i) the proposition that Hans bought a book in a set *D* and (ii) the alternative propositions that Hans bought a book in *D’ ⊆ D*. *Einfach* conveys that buying a book in any of these subset domains would not have been simpler for Hans.³

noticed that these three accounts are tightly connected to *agentivity*. Without an agent, RC cannot arise.

• Choi (2007) and Choi & Romero (2008): *RCI* convey counterfactual modality (von Fintel 2000), (3) conveys that John picked a card and that he would have also picked one if the set of actual cards had been different.⁴

**Limited sample of languages.** The sample of languages studied remains modest, and our understanding of the attested variation in the expression of RCM is limited.

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²Unlike the bouletic account, the modal condition can be true in cases where the agent wanted to pick a particular book, but did not decide to do so.

³This excludes situations where Hans wanted to take a particular book, since, in that case, picking a book from a subset of books containing the desired book would have been simpler than picking a book from the whole set of books (less books would have to be discarded.

⁴This condition is true in RC scenarios, but not only there (AO & MB 2018).
Chuj

Today: new data relevant to RCM from Chuj, a Q’anjob’alan Mayan language spoken by ≈ 70,000 speakers primarily in Guatemala and Mexico (Piedrasanta 2009).

- All Chuj data come from original fieldwork conducted with speakers of the Nentón and San Mateo Ixtatán variants of Chuj. Data were collected in Huehuetenango, Guatemala and Chiapas, Mexico, as well as with a consultant in Montreal, using a hypothesis-driven fieldwork methodology (Matthewson 2004, Davis, Gillon & Matthewson 2014).
Why Chuj?

**Reason 1.** A language with DPs that can convey RCM:

(4) *Komon* in the DP

\[
\text{Ix-s-man } \quad \text{[DP jun } \quad \text{komon libro } \quad \text{] waj Xun} \\
\text{PFV-A3-buy } \quad \text{INDF KOMON book } \quad \text{CLF Xun} \\
\approx \text{‘Xun bought a random book.’}
\]

- Xun bought a book (like standard indefinite)
- He could have bought any book (RC modality)

(Nb. the counterpart of (4) without *komon* only conveys a standard non-modal indefinite meaning.)

**Reason 2.** Different enough from other RC modals to draw interesting comparisons.

- The modifier *komon* can also be part of the verbal complex:

(5) *Komon* in the VP

\[
\text{Ix-s-komon-man-ej } \quad \text{[DP jun libro ] waj Xun.} \\
\text{PFV-ALS-KOMON-buy-DTV } \quad \text{INDF gift } \quad \text{CLF Xun} \\
\approx \text{‘Xun randomly bought a book.’}
\]

- Both (4) with “DP-komon” and (5) with “VP-komon” can describe RC scenarios, where the agent was indifferent to the book.

(6) **SCENARIO 1 (RANDOM CHOICE):** *Xun had to buy a book a week ago for school. He rarely reads and so decided to buy a book at random. The book ended up to being really special for him.*

Both (4) and (5) are true in this scenario.

**Reason 3.** *Komon* can also convey a **likelihood** modal component (which we will link RC modality to), made salient in sentences without agents (since RCM modality require an agent that acts upon a theme):

(7) *Ix-komon-k’och ix Malin.

PFV-KOMON-arrive CLF Malin

\approx \text{‘Malin unexpectedly arrived.’}

- Malin’s arrival was not expected (likelihood component)

The distribution of *komon* seems to provide an ideal testing ground to probe into RC modality and more generally into Q2 and Q3 above, repeated below.

**Q2** To what extent do DP modals mirror VP modals?

**Q3** To what extent is the modal component of modal expressions tied to their syntactic position?

In light of these questions, we’ll set to solve the following puzzles related to *komon*:

**Puzzle 1:** Why can VP-*komon* lump together the expression of random choice and low likelihood? (§2)

**Puzzle 2:** How do the modal components of VP- and DP-*komon* relate to each other? (§3)
2 Komon in the verbal domain (VP-komon)

2.1 Distribution: The Chuj verbal complex

- Chuj is an ergative-absolutive, head-marking language.
- Fully inflected verbs exhibit the template in (8).

\[ \text{(8) Transitive verb template in Chuj} \]
\[ \text{TAM} \rightarrow \text{Set B} \rightarrow \text{Set A} \rightarrow \underline{\text{ADV}} \rightarrow \text{ROOT} \rightarrow \text{STATUS SUFFIX} \]

- TAM = tense-aspect-mood marking.
- Set B = absolutive marking
- Set A = ergative marking (also used as possessive marking)
- Status suffix = marks verbs for transitivity

- A limited set of adverbs \[\underline{\text{ADV}}\] surface within the verbal complex (other Mayan languages allow adverbs in this position too, see e.g. Vázquez Álvarez 2011 on Ch’ol).

\[ \text{(9) Ix-ko-} \underline{\text{mol}} \text{-man-ej jun libro.} \]
\[ \text{PFV-A1P-together-buy-DTV INDF book} \]
\[ \text{‘We bought a book together.’} \]

\[ \text{(10) Ix-ko-} \underline{\text{te}} \text{-man-ej jun libro.} \]
\[ \text{PFV-A1P-INTS-buy-DTV INDF book} \]
\[ \text{‘We repeatedly bought a book.’} \]

- Distributionally, VP-komon patterns with these adverbs.

\[ \text{(11) Ix-ko-} \underline{\text{komon}} \text{-man-ej jun libro.} \]
\[ \text{PFV-A1P-KOMON-buy-DTV INDF book} \]
\[ \approx \text{‘We randomly bought a book.’} \]

2.2 Interpretation

In addition to conveying RCM, VP-komon can also convey ‘low likelihood’ of an event.\(^5\)

- With verbs other than agentive transitive verbs, komon only conveys low-likelihood.
- Unaccusative verb:

\[ \text{(12) Ix-} \underline{\text{komon}} \text{-k’och ix Malin.} \]
\[ \text{PFV-KOMON-arrive CLF Malin} \]
\[ \approx \text{‘Malin unexpectedly arrived.’} \]

\[ \text{(13) a. Malin lives far away and she didn’t tell us she’d visit, but she just arrived. (12) = ✓} \]
\[ \text{b. Malin told me she’d come visit at 2:00pm. It’s 2:00pm and she just arrived. (12) = #} \]

\(^5\)There has been some work on modality in Mayan, but most work has focused exclusively on irrealis marking (see e.g. Polian 2007, Mateo-Toledo 2008, Buenrostro 2015, Henderson 2016). To my knowledge, this is the first semantic proposal for komon in Chuj.
• Unergative verbs:

(14) Ix-komon-chanhal-w-i waj Xun.
PFV-KOMON-dance-SUF-IV CLF Xun
≈ ‘Xun unexpectedly danced.’

(15) a. Xun is waiting for the bus with other people seriously. He starts dancing. (14) = ✓
b. Xun is at a venue where everyone is expected to perform the same dance, and so he dances it. (14) = #

In sum: komon in the verbal domain can generally convey that the event was not expected (for more examples, see Alonso-Ovalle & Royer 2020).

Agentive transitive verbs. Consider sentence (16), which like (5) is ambiguous:

(16) Ix-s-komon-yam-ej jun regalo ix Malin.
PFV-A1S-KOMON-grab-DTV INDF gift CLF Malin
≈ ‘Malin randomly/unexpectedly grabbed a gift.’

• As previous examples, (16) can convey unexpectedness. In the scenario below, Malin’s picking a gift is not expected—because it was not her turn to choose.

| 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 her turn to choose, but she notices that one of the gifts is wrapped in blue, while the other three in red. Even though it’s not her turn, she runs to the blue gift and unwraps it. It’s the jackpot! | (16) = ✓ |

• But (16) can also felicitously describe the scenario below, where a random choice was made, just like counterpart sentences with Spanish un NP cualquiera.

| 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! | (16) = ✓ |

Key points:
• In the unexpected event scenario, the event of Malin picking a gift is less expected than any of the most expected events (which, given the facts, are events where she doesn’t pick a gift).

• In the random choice scenario, Malin was expected to pick a gift, but the picking of the actual gift that she picked was no more expected than the event of picking any of the other gifts that she could have picked.

Our hypothesis:

VP-komon conveys that, given the circumstances, the most expected worlds where the described event happens are no more expected than the most expected worlds where the event does not happen.
2.3 A modal adverb conveying unexpectedness

Puzzle 1: Why can VP-<i>komon</i> lump together the expression of random choice and low likelihood?

Background assumptions.

- We assume that transitive and unaccusative verbs express relations between individuals (their internal arguments), events, and worlds.

\[
\begin{align*}
(17) \quad & \text{a. } \llbracket \text{grab} \rrbracket = \lambda x. \lambda e. \lambda w. \text{GRAB}_w(x)(e) \\
& \text{b. } \llbracket \text{arrive} \rrbracket = \lambda x. \lambda e. \lambda w. \text{ARRIVE}_w(x)(e)
\end{align*}
\]

- Agents get added via Event Identification (Kratzer 1996); vPs express relations between eventualities and worlds:

\[
(18) \quad \llbracket [vP \text{ Xun grab that book }] \rrbracket = \lambda e. \lambda w. \text{GRAB}_w(B)(e) \land \text{AGENT}(e)(XUN)
\]

- We will ignore the contribution of temporal and aspectual (TAM) markers and assume external existential closure of properties of eventualities:

\[
(19) \quad \llbracket [\exists e [vP \text{ Xun grab that book }]] \rrbracket = \lambda w. \exists e [\text{GRAB}_w(B)(e) \land \text{AGENT}(e)(XUN)]
\]

The modal condition.

- We treat VP-<i>komon</i> as a vP modifier that adds to the event description expressed by vP the modal condition in (20):\(^6\)

\[
(20) \quad \llbracket \text{komon}_vP \cdot f_{w(i,st)} \rrbracket^v = \lambda R_{(i,st)} \cdot \lambda e. \lambda w. R_w(e) \land \left( \begin{array}{l} \text{Max}_{g(w)} \left( \{ w' : \text{HAPPEN}_w(e) \} \cap f(e) \right) \\
\text{Max}_{g(w)} \left( \{ w' : \neg \text{HAPPEN}_w(e) \} \cap f(e) \right) \end{array} \right) \text{modal condition}
\]

In words:

- In the modal condition <i>komon</i> considers the circumstances (f(e) or “the modal base”) around the event described by vP, and compares two types of worlds.

  i. Worlds where the circumstances hold and the event happens.

  ii. Worlds where the circumstances hold and the event doesn’t happen.

- And the modal condition is satisfied iff the most expected worlds where the event happens are no more (\(\leq\)) expected then the most expected worlds where the event doesn’t happen.

  Critically: this condition is met in cases where <i>e</i> is as likely to occur as any other likely event AND in cases where <i>e</i> is expected not to happen.

\(^6\)We use \(i\) as the type of eventualities, and \(e\) or \(s\) as variables ranging over eventualities. We assume a Lewisian ontology (Lewis 1968), where individuals and events are world-bound. \(\text{HAPPEN}_w(e)\) is true if a counterpart of \(e\) (event maximally similar to \(e\)) is part of \(w'\).
We abbreviate the modal condition in (20) as (21):

\[
\begin{align*}
\text{komon}_r & f_{\text{komon}(i,t)} \]
\end{align*}
\]

(21) \[
\begin{align*}
&\lambda R_{(i,t)}. \lambda e. \lambda w. R_w(e) & \& & \neg f_{\text{-EXPECTED}}_w(e)
\end{align*}
\]

Formal details explained:

- The possibilities that the modal component of VP-komon invokes are projected from the type of events described by the vP (Hacquard 2006).

- \(f_{\text{komon}(i,t)}\) is a variable ranging over functions mapping events to sets of worlds and \(f\) its value—\((v(f), \text{where} \ "v" \text{stands for the variable assignment})\).

- As is the case with other low modals, \(f\) 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.

- \(g\) is a stereotypical ordering source: \(g(w)\) returns a set of propositions describing the most natural course of events in \(w\).

  for any worlds \(w', w'', w' > g(w) w''\) iff \(w'\) gets closer to what is expected given the normal course of events in \(w\) than \(w''\).

  The ordering is defined with respect to \(g(w)\):

  \[
  w' \geq g(w) w'' \iff \{ p : w' \in p \& p \in g(w) \} \supseteq \{ p : w'' \in p \& p \in g(w) \} \quad \text{(Kratzer 1991)}
  \]

  We make the Limit Assumption: that there are worlds ranked higher than any others.

- In an abuse of terminology, where \(p, q\) are sets of possible worlds, we write ‘\(p \geq g_w q\)’ 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.

 Basic illustration. The modal condition covers basic “unexpected” cases.

(14) \text{Ix-komon-}chanhal-w-i \text{ waj Xun.}

\text{PFV-KOMON-dance-SUF-IV CLF Xun}

\approx \text{‘Xun unexpectedly danced.’}

\text{\textbf{\textcolor{BrickRed}{\text{\textbullet{}}} Felicitous if, e.g., Xun is waiting for the bus with other people seriously. He starts dancing.}}

(22) a. \text{LF: } \exists_e \ [ \text{komon } f_{\text{komon}(i,t)} \] \text{[vP Xun danced]}\]

b. \[
\begin{align*}
\lambda w. \exists e [ \text{AGENT}(e)(\text{XUN}) \& \text{DANCE}_w(e) \& \neg f_{\text{-EXPECTED}}_w(e)]
\end{align*}
\]

c. True in \(w\) iff (i) there is an event \(e\) of Xun dancing 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 in \(w\) than the most expected worlds where those circumstances hold and \(e\) does not happen.

(ii) = \text{false} if Xun was expected to dance (see Fig. 2).
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Illustration with agentive transitives. With transitives, like (16), the modal condition will be satisfied in both the unexpected event and the random choice scenarios.

\[ \text{Figure 2: Context: Xun komon-danced} \]

(16) \text{Ix-s-komon-yam-ej jun regalo ix Malin. PFV-A1S-KOMON-grab-DTV INDF gift CLF Malin} \approx \text{‘Malin \{randomly/unexpectedly\} grabbed a gift.’} \\
(23) a. LF: \exists_e \text{ a gift } \lambda_1 [\text{komon } _{e_1(i,t)} [\text{Malin grabbed } t_1]] \\
b. \left[ (23a) \right]^w = \\
\lambda_w. \exists e \exists x \left[ \text{GIFT}_w(x) \& \text{AGENT}(e)(M) \& \text{GRAB}_w(e)(x) \& \neg f-\text{EXPECTED}_w(e) \right] \\
c. True in \ w \ \text{iff (i) there’s an event } e \ \text{in } w \ \text{such that there’s a gift } x \ \text{& } \text{e is an event of Malin grabbing } x \ \text{& (ii) given the relevant circumstances around the preparatory stage of } e, \ \text{the most expected worlds in } w \ \text{where } e \ \text{happens are no more expected than the most expected worlds in } w \ \text{where } e \ \text{doesn’t happen.}}

Unexpected event scenario w.r.t. (16) and (23):

\begin{quote}
**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 her turn to choose, but she notices that one of the gifts is wrapped in blue, while the other three in red. Even though it’s not her turn, she runs to the blue gift and unwraps it. It’s the jackpot! \ \text{(16) = \checkmark}
\end{quote}

- Here, \( f(e) \) picks up worlds where it wasn’t Malin’s turn to choose.
- As shown in Figure 3, in the unexpected event scenario, the most expected worlds where Malin does not pick the jackpot (i.e. worlds where the event doesn’t happen) are worlds where no gift is picked at all (since it’s not Malin’s turn), and those are more expected than worlds where the jackpot is picked.
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Figure 3: Unexpected event scenario: Malin komon-grabbed a gift

\[ \therefore (16) = \text{true} \text{ in the unexpected event scenario.} \]

Random choice scenario w.r.t. (16) and (23).

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! (16) = ✓

- Here, \( f(e) \) picks up worlds where it was Malin’s turn to choose.
- As shown in Figure 6, the most expected worlds where Malin does not grab gift\(_1\) and the relevant circumstances obtain are not worlds where Malin didn’t grab a gift (unlike the unexpected event scenario), but worlds where Malin grabbed a different gift. In the scenario, those worlds are as likely as the worlds where the gift with the jackpot is grabbed.

\[ \therefore (16) = \text{true} \text{ in the random choice scenario.} \]
Modal condition not satisfied. A scenario where VP-*komon* is infelicitous:

*Other 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 in red. Malin grabs the blue gift. It’s a cheap gift.

(16) = #

- The target sentence in (16) is correctly predicted to be false in this scenario.
- Given the circumstances (Malin wants to pick the jackpot and it’s her turn), picking the gift wrapped in blue was more expected than not picking the gift in blue:

![Diagram](image)

Figure 5: Unremarkable scenario: *Malin komon-grabbed a gift*

\[ \therefore (16) = \text{false} \] in this scenario.

2.4 Summary

- VP-*komon* is a circumstantial modal that adds to the denotation of the vP that the most expected worlds where the described event happens are no more expected than the most expected worlds where the event does not happen.
- The modal condition comes out as true in both the unexpected event and random choice scenarios.

Next: We turn to the contribution of *komon* in the nominal domain.

- We’ll see that *komon* in the nominal domain can also convey a likelihood component, but crucially needs to compare events with events that involve the individuals in the extension of the NP argument.
3 Komon in the nominal domain

3.1 Background on the Chuj DP

• Chuj exhibits no case morphology on nominals. A set of classifiers are used as definite articles, and jun is the SG indefinite article (Buenrostro et al. 1989, García Pablo & Domingo Pascual 2007, Royer 2019).

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

• A limited set of adjectives (e.g. colour, size, terms and komon) appear immediately before the nominal (Maxwell 1976; Coon 2018).

    PFV-A1s-buy INDF white big KOMON book CLF Malin
    ‘Malin bought a white/big/random book.’

• Adjectives can sometimes be stacked. In such cases, komon can appear on either side of other adjectives:

(26) Ix-s-man [DP jun {komon} saksak {komon} libro] ix.
    PFV-A1s-buy INDF KOMON white KOMON book CLF
    ≈ ‘She bought a {random} white {random} book.’

3.2 Two interpretations for nominal komon

3.2.1 ‘Unremarkable’ uses

In the nominal domain, komon can convey that the satisfier of the NP does not stand out compared to other individuals in the NP extension.

• Hopkins (2012): komon comes from Spanish común ‘common/average’.7

• Still today, komon can convey “unremarkability”:  

(27) [Komon k’ayb’um] waj Xun.
    KOMON student CLF Xun
    ≈ ‘Xun is an average/unexceptional student.’

So is nominal komon always about ‘unremarkability’?

No! Sometimes nominal komon conveys something about the likelihood of the event described (even with “remarkable” referents), just like VP-komon.

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7 Mateo-Toledo (2008) also translates Q’anjob’al komon as ‘common’
3.2.2 ‘Unexpectedness’ uses

Nominal *komon* in intransitives can convey that an event was unexpected:

(28) Context: *A deer showed up in the village out of the blue.*

\[\text{Ix-jaw} \quad [\text{jun} \quad \text{komon} \quad \text{sakchej}] \]

\[\text{PFV-come} \quad \text{INDF KOMON deer} \]

\[\approx \text{‘A deer unexpectedly appeared.’} \]

- The sentence could be felicitously followed with the claim that the individual that satisfies the existential claim is remarkable:

(29) Felicitous continuation of (28)

\[\text{Te’} \quad \text{niwak nok’ te’-ay y-ib’ nok’}.\]

\[\text{INTS big CLF INTS-EXT A3-strength CLF.} \]

\[\approx \text{‘It (the deer) was very big and strong.’} \]

**Random choice.** And (30) is true in the *random choice scenario* (where the gift is remarkable since it’s the jackpot).

(30) Ix-s-yam \[\text{[DP jun komon regalo] ix Malin.} \]

\[\text{PFV-A3-grab INDF KOMON gift CLF Malin} \]

\[\approx \text{‘Malin grabbed an average/unremarkable gift.’} \]

**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! (30) = ✓

- We will assume an ambiguity between an NP modifier (expressing unremarkability) and a D-modifier (expressing a likelihood component).

  - See appendix for some evidence, and Alonso-Ovalle & Royer 2020 for more on the ‘unremarkable’ use of nominal *komon*.

  - Note that *komon*’s different semantic interpretations in the nominal domain is comparable to other “non-local” modifiers identified in the semantic literature, which can also sometimes appear inside DP but require accessing the vP (Larson 1999, Zimmermann 2003, Schwarz 2006, Morzycki 2016).

(31) An occasional sailor strolled by.

  - Someone who sails occasionally strolled by (NP-modifier)

  - Occasionally, a sailor strolled by (vP-modifier)
3.3 Accounting for DP-komon

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

**Try 1.** Treat DP-komon just like VP-komon.
- We can manipulate komon’s semantic type such that it syntactically appears inside DP but scopes over the vP:

\[
\begin{align*}
\lambda P(e, st) & \lambda R_{(e, (i, st))} \cdot \lambda e. \lambda w. \exists x [P_w(x) \land \exists \lambda [\text{komon}_v P][f_{(i, st)}(R_w(x))](e)(w)] \\
\end{align*}
\]

**Some correct predictions:**
- E.g.: Right interpretation in *random choice scenarios.*

\[(30) \text{I}x\text{-s-yam } \frac{\text{DP jun komon regalo}}{\text{PDV-A1S-grab INDF KOMON gift CLF Malin}} \approx '\text{Malin randomly grabbed a gift}.'\]

\[(33) \begin{align*}
a. \text{LF: } & \exists_e \text{ a komon gift } \lambda 1 \text{ Malin grabbed } t_1 \\
b. \ [ (33a) ] = \lambda w. \exists e \exists x & \left[ \text{GIFT}_w(x) \land \text{AGENT}(e)(M) \land \text{GRAB}_w(e)(x) \right] \\
c. \text{True in } w \text{ iff there is an event } e \text{ such that there is a gift } x \land e \text{ is an event of Malin grabbing } x \land \text{given the circumstances around the preparatory stage of } e, \text{ the most expected worlds where } e \text{ happens are no more expected than the most expected worlds where } e \text{ does not happen.} \\
\end{align*} \]

**But at least two issues:**

1. DP-komon is expected to be true, like VP-komon, in the *unexpected event scenario.*

\[(30) \text{I}x\text{-s-yam } \frac{\text{DP jun komon regalo}}{\text{PDV-A1S-grab INDF KOMON gift CLF Malin}} \approx '\text{Malin randomly grabbed a gift}.'\]

*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 her turn to choose,* but she notices that one of the gifts is wrapped in blue, while the other three in red. Even though it’s *not her turn,* she runs to the blue gift and unwraps it. It’s the jackpot!

- Unlike its counterpart with VP-komon, speakers judge (30) false in this scenario.
  - 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. This is not the case in the unexpected event scenario.
2. Contrary to VP-\textit{komon}, the likelihood interpretation of DP-\textit{komon} is not available with all determiners.

- Definite determiners (classifiers):

\begin{enumerate}
\item \textit{Ix-s-sikl-ej} \textit{DP winh \textit{komon} k’ayb’um} waj Xun.
\hspace{1cm} PFV-A3-choose-DTV CLF(=DEF) KOMON student CLF Xun

Cannot mean: ‘Xun chose the student at random.’

\item \textit{Ix-s-\textbf{komon}-sikl-ej} \textit{DP winh} \textit{k’ayb’um} waj Xun.
\hspace{1cm} PFV-A3-KOMON-choose-DTV CLF(=DEF) student CLF Xun

Can mean: ‘Xun chose the student at random.’
\end{enumerate}

- Universal quantifier:

\begin{enumerate}
\item \textit{Junjun} \textbf{\textit{komon}} libro \textit{ix-in-man-a’}.
\hspace{1cm} \forall \text{ KOMON book PFV-A1S-buy-TV}

Cannot mean: ‘I bought every book at random.’

\item \textit{Junjun} libro \textit{ix-in-\textbf{komon}-man-ej}.
\hspace{1cm} \forall \text{ book PFV-A1S-KOMON-buy-DTV}

Can mean: ‘I bought every book at random.’
\end{enumerate}

(for context used for (34) and (35), see Alonso-Ovalle & Royer 2020)

- These examples show that the indefinite determiner plays an important role in deriving the modal component of DP-\textit{komon}.

\textbf{Try 2.} Comparing events and individuals.

Proposal: DP-\textit{komon} does not compare a particular event with the most expected worlds where this event does not happen, but hardwires a comparison of events that only differ with respect to individuals in the extension of the NP.

- DP-\textit{komon} essentially creates a complex determiner, along the lines of (some of) the nonlocal modifiers discussed Larson 1999 and Zimmermann 2003.

\begin{equation}
\begin{array}{c}
\text{DP} \\
\text{NP} \\
\text{D} \\
\text{komon}_{DP} \text{f}_{\text{comp}(i, st)}
\end{array}
\end{equation}

\begin{align*}
\lambda R_{\{e, (i, st)\}} \cdot \lambda e \cdot \lambda w.
\end{align*}
Let’s unpack this:

- **DP-*komon** takes a D and an NP as arguments to yield a DP denotation.
  
  (a function from a relation \( R \) between individuals, events and worlds to a relation between events and worlds)

- The DP denotation combines with its argument \( R (vP) \).

**DP-*komon** also conveys a **modal condition**: 

- This condition looks at all individuals in the NP extension that are not related to the described event \( e \) by \( R \) in the world of evaluation \( \mathfrak{w} \).

- It compares the likelihood of the event \( e \) with the likelihood of other events \( e' \) of the same type involving those individuals. The condition conveys that the most expected worlds where \( e \) happens are no more \(( \leq )\) expected than the most expected worlds where \( e' \) happens \( \mathfrak{w} \).  

**Illustration.**

(30) Ix-s-yam \[DP \text{jun } \text{komon regalo} \] ix Malin.  

PFV-A1S-grab INDF KOMON gift CLF Malin  

\( \approx \) ‘Malin grabbed a random gift.’

**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! (30) = ✓

(37) LF: \( \exists e[\text{(jun) komon}_{DP} f](gift) \lambda 1 \text{ Malin grabbed } t_1 \)

(38) \[ [[(37)]] = \lambda w. \exists e \left[ \exists x[\text{GIFT}(x) \& \text{GRAB}(x)(e) \& \text{AG}(e)] \& \begin{array}{l} \text{GRAB}(y) \& y \not\in \{z : \text{GRAB}(z)(e) \& \text{AG}(e)\} \end{array} \right] \]

(39) True in \( w \) iff (i) there’s 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 relevant circumstances obtain) are no more expected than the most expected worlds in \( w \) where Malin grabs \( x \).

---

8To make the formula easier to read, we omit from it a condition stating that those events \( e' \) are continuations of the preparatory stage of \( e \).
‘Unexpected event’ interpretation expected to be false.

- And (30) is predicted to be false in the unexpected event scenario, since Malin was expected to grab the blue gift (see Figure 7).

*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 her turn to choose, but she notices that one of the gifts is wrapped in blue, while the other three in red. Even though it’s not her turn, she runs to the blue gift and unwraps it. It’s the jackpot!

∴ (30) = false in unexpected event scenario

• Because it wasn’t Malin’s turn to grab a gift, the events that we are comparing are still less expected than Malin not grabbing a gift, but DP-*komon* now hardwires a comparison between individuals.
Taking stock:

• Apparent equivalence between VP- and DP-komon in the *random choice scenario*:
  
  ▶ VP-komon—compares likelihood of the actual event with other events.
  
   In the *random choice scenario*, the actual grabbing with alternative grabbings of other gifts is accidental: the most expected worlds where Malin doesn’t grab the gift that she grabbed happen to be worlds where she grabs another gift.
  
  ▶ DP-komon—compares events with events and individuals in the extension of the NP.
  
   In the *random choice scenario*, it compares the actual grabbing of a gift with alternative grabbings of gifts, but this time the comparison of alternative grabbings is hardwired in the semantics.

• This explains why VP-komon is compatible with the *unexpected event scenario* but not DP-komon, since DP-komon hardwires a comparison of events that only differs with respect to the individuals contained in the extension of its NP argument.

3.4 Determiner restriction explained

Recall that DP-komon can only combine with certain determiners:

(34a) Ix-s-sikl-ej

\[ \text{[DP winh } \text{komon k’ayb’um ] waj Xun.} \]

\[ \text{PFV-A3-choose-DTV CLF(=DEF) KOMON student CLF Xun} \]

\[ \approx \text{‘Xun chose the unremarkable student.’ (cannot mean: ‘Xun chose the student at random’) } \]

• We can now explain this.

• The definite classifier will trigger a uniqueness presupposition (that there’s only one student) and the non-modal condition will convey that Xun chose that unique student.

• In the modal condition, there is only one individual that can satisfy the first conjunct in the antecedent of the conditional in (40) —if the presupposition is satisfied, there will only be one salient student.

\[
(40) \forall y \left[ \text{[STUDENT}_w(y) \ & \ y \notin \{z : \text{CHOOSE}_w(z)(e) \ & \ AG(XUN)(e)\}] \rightarrow \text{Max}_{\leq g} \left( \{w' : \text{HAPPEN}_w'(e)\} \cap f(e) \right) \right] \]

• But that student is in the set of things that the speaker chose in the described event, so the second conjunct in the conditional’s antecedent is false. The modal condition holds vacuously and so komon contributes nothing.

• To the extent that adding vacuous materials can result in deviancy, we explain why only ‘unremarkable’ komon is perceived here.

• The same line of explanation extends to cases with \( \forall \) determiners like (35a): the modal condition will also be trivially true, since all books are in the set of things that the speaker grabbed and, again, DP-komon will contribute nothing.
4 Conclusion

We started the talk with three questions:

Q1 What modal flavors can DPs express?
Q2 To what extent do DP modals mirror those of VP modals?
Q3 To what extent is the modal component of modal expressions tied to their syntactic position?

Q1 → We focused on random choice modality. We saw that RCM in Chuj derives from a likelihood component (casting doubt on a unified account of RCM)

Q2 → We saw that DP-
komon can convey the same modal flavour as VP-
komon (they both convey a likelihood component).

Q3 → We saw that 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 differ with respect to its event participants.

Remaining questions:

• How does 
komon differ from other random choice indefinites, and should we revisit previous accounts?
• Can we unify the ‘unremarkable’ interpretation with random choice modality? Or has the modal component of 
komon been grammaticalized?

References

URL: http://semanticsarchive.net/sub2012/
Appendix: Evidence for an ambiguity between two nominal komons?

• When conveying unlikelihood, komon doesn’t tolerate any material intervening between D and komon. This is not the case when komon only conveys unremarkability.

(41) Ix-s-yam [DP jun yax komon regalo] waj Xun.  
PFV-A3-grab INDF green KOMON gift CLF Xun  
‘Xun grabbed a green random gift.’

▶ Felicitous in unremarkable scenario.
▶ Infelicitous in random choice scenario.

(42) Ix-s-yam [DP jun komon yax regalo] waj Xun.  
PFV-A3-grab INDF KOMON green gift CLF Xun  
‘Xun grabbed a green random gift.’

▶ Felicitous in unremarkable scenario.
▶ Felicitous in random choice scenario.

• This supports the view of komon as ambiguous.