

Building (in)definites: A Chuj perspective

Justin Royer
UC Berkeley



Today's topic: (in)definiteness

1. I saw **the** child. (definite)
2. I saw **a** child. (indefinite)
3. *I saw **a the** child

- What is the core difference between definiteness and indefiniteness?
 - Semantic type?
 - Presuppositionality?
 - Uniqueness vs non-uniqueness?
 - Novelty vs familiarity? (see Heim 2012)
- Increasingly clear that definiteness is not 'one' thing (Schwarz 2009, Jenks 2018)

Today

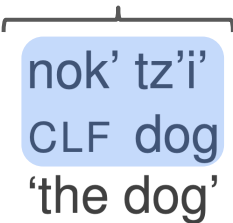
- Lessons on (in)definiteness from Chuj (Mayan)
- Why Chuj? Because it exhibits a rich nominal domain, allowing to identify sub-ingredients of (in)definites.

	Configuration	Example	Rough translation
①	CLF + NP	<i>nok' tz'i'</i>	'the dog'
②	CLF + NP + DEIX	<i>nok' tz'i' chi'</i>	'the dog'
③	INDF + NP	<i>jun tz'i'</i>	'a dog'
④	INDF + CLF + NP	<i>jun nok' tz'i'</i>	'a dog'

First main contribution

Two ways of expressing **definiteness**:

weak (unique) definites

(1) 
nok' tz'i'
CLF dog
'the dog'

strong (anaphoric) definites

(2) 
nok' tz'i' chi'
CLF dog DEIX
'the dog'

- **Proposal:** (1) and (2) support the existence of 'weak' versus 'strong' definites
(Schwarz 2009, Arkoh & Matthewson 2013, Jenks 2018...)

→ Also supports the idea that the distinction is compositional (Hanink 2018, Ahn 2019)

Second main contribution

Noun classifiers (CLF) cross-cut the distinction between DEF/INDF:

regular indefinite

(3) jun tz'i'
INDF dog
'a dog'

'specific' indefinite

(4) jun nok' tz'i'
INDF CLF dog
'a dog'

- **Proposal:** (4) delivers a **specific indefinite**
 - CLFs uniformly introduce a **uniqueness presupposition**
 - While it results in standard **uniqueness presupposition** in definite cases, it results in a **'singleton indefinite'** (à la Schwarzschild 2002) in (4).
(indefinites whose domain is restricted to a unitary set)

Roadmap

1. Background on Chuj
2. Definiteness in Chuj
3. Classifier indefinites
4. Back to definites
5. Conclusion

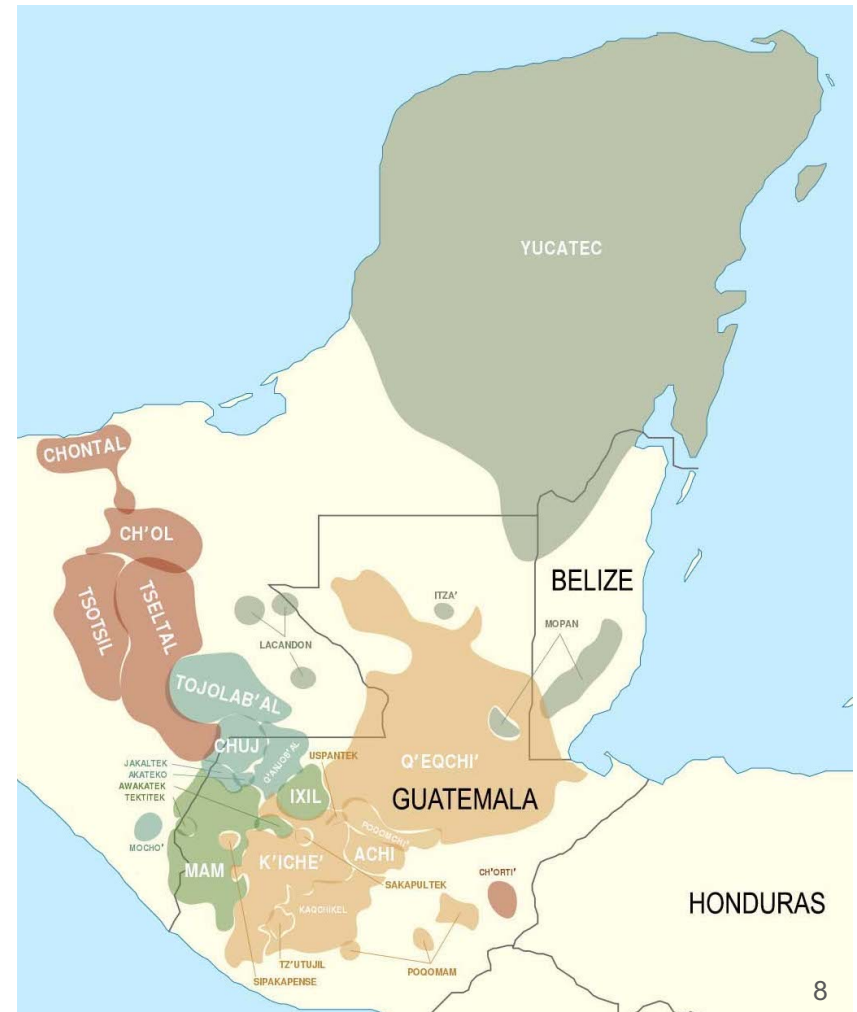
Background on Chuj

- 1. Background on Chuj**
2. Definiteness in Chuj
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Chuj

- One of 32 Mayan languages
- Spoken by roughly 80,000 speakers
- Guatemala (77,500)
- Southern Mexico (2,500)
- Diaspora communities
- San Mateo Ixtatán dialect



Chuj data

- Fieldwork from 2016-present
- In Montreal, Guatemala, and Mexico
- Hypothesis-driven fieldwork methodology
- Context-based elicitation techniques
(Matthewson 2004; Bochnak & Matthewson 2020)
- Extensive use of Chuj corpora on the
Archive of the Indigenous Languages of Latin America (Mateo Pedro & Coon 2018)





Wajxaklajunh (San Mateo Ixtatán)



Definiteness in Chuj

1. Background on Chuj
- 2. Definiteness in Chuj**
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Noun classifiers and definiteness

The Mayan languages of the Cuchumatanes mountain range feature elaborated systems of nominal classification (Hopkins 2012), including **noun classifiers**.

- Noun classifiers play a crucial role for the encoding of definiteness (Buenrostro et al. 1989, Craig 1986, Zavala 2000, Hopkins 2012, Buenrostro 2017, Mateo-Toledo 2017...)

(5) Saksak #(k'en) uj.
 white CLF moon
 'The moon is white.'



Chuj noun classifiers

Table 2: Chuj noun classifiers

CLF	Introduces	Example	
<i>ix</i>	female individual/proper name	<i>ix chichim</i>	'the elder (f.)'
<i>winh</i>	male individual	<i>winh icham</i>	'the elder (m.)'
<i>w(inh)aj</i>	masculine proper names	<i>waj Matin</i>	'Mateo'
<i>nok'</i>	animals & derived products	<i>nok' nholob'</i>	'the egg'
<i>te'</i>	wood & related entities	<i>te' k'atzitz</i>	'the log'
<i>anh</i>	plants & related entities	<i>anh paj'ich</i>	'the tomato'
<i>k'en</i>	stone/metal & related entities	<i>k'en tumin</i>	'the money'
<i>lum</i>	earth & related entities	<i>lum yaxlu'um</i>	'the mountain'
<i>ch'anh</i>	vines & related entities	<i>ch'anh hu'um</i>	'the paper'
<i>ixim</i>	corn & related entities	<i>ixim wa'il</i>	'the tortilla'
<i>atz'am</i>	salt & related entities	<i>atz'am atz'am</i>	'the salt'
<i>ha'</i>	liquids	<i>ha' melem</i>	'the river'
<i>k'ak/k'apak</i>	cloth(es)	<i>k'ak nip</i>	'the huipil'
<i>k'inal</i>	rain	<i>k'inal nhab'</i>	'the rain'
<i>naj/ni'o'</i>	young (male) individual/proper name	<i>ni nene</i>	'the (m.) baby'
<i>uch/utni</i>	young (female) individual/proper name	<i>uch nene</i>	'the (f.) baby'



Noun classifiers and definiteness

Questions

- What is the role of noun classifiers?
- How is definiteness encoded in Chuj?



Background on definiteness

Several approaches, but a major division stands out:

1. 'The' encodes contextual **uniqueness or maximality**
 - e.g., Frege 1892, Russell 1905, Strawson 1950, Hawkins 1978, Heim 1991, Elbourne 2005, Coppock & Beaver 2015...
2. 'The' encodes contextual **familiarity**
 - e.g., Christophersen 1939, Kamp 1981, Heim 1982, Chierchia 1995...



Two kinds of definites across languages

Schwarz (2009) (see also Ebert 1971, Lyons 1999, Aguilar-Guevara et al. 2019)

Some languages distinguish between two kinds of definite descriptions:

1. **Weak definites** → encode uniqueness/maximality
2. **Strong definites** → encode familiarity/anaphoricity

- Much recent crosslinguistic work now support this view.
(Arkoh & Matthewson 2013, Jenks 2015, 2018, Hanink 2018, Ahn 2019, Jenks & Konate 2022, a.m.o)



German weak definite

- (6) Der Empfang wurde **vom** / **#von dem** Bürgermeister eröffnet.
the reception was by.the_{weak} / by the_{strong} mayor open
'The reception was opened by the mayor.'

= used in contexts where there is a **unique** satisfier of NP



German strong definite

- (7) a. Hans hat einen Schriftsteller und **einen Politiker** interviewt.
Hans has a writer and a politician interviewed.
'Hans interviewed a writer and politician.'
- b. Er hat #vom / **von dem Politiker** keine interessanten Antworten bekommen.
He has from.the_{weak} / from the_{strong} politician no interesting answers gotten
'He didn't get any interesting answers from the politician.'

= used in contexts where the satisfier of NP is **anaphoric/familiar**

Two distinct definite articles

(Schwarz 2009, Jenks 2018)

(8) a. **Weak definite article**

$\lambda s_r. \lambda P. \exists! x[P(x)(s_r)]. \iota x[P(x)(s_r)]$

Situation argument (context)

Uniqueness (and existence)
presupposition in s_r

b. **Strong definite article**

$\lambda s_r. \lambda P. \lambda y. \exists! x[P(x)(s_r) \wedge x = y]. \iota x[P(x)(s_r) \wedge x = y]$

Situation argument (context)

Extra “index” argument,
whose value also comes
from the context ($g(i)$)

Familiarity: If picked up by an index,
must be in range of assignment
function, and by assumption familiar.



Distribution of weak/strong definites

Subtypes of weak definites

1. “Immediate” situation uses of definites
2. “Larger/global” situation uses of definites
3. Kind-denoting definites
4. Situation-dependent covarying uses of definites

Subtypes of strong definites

1. Anaphoric uses of definites.
2. Covarying anaphoric definites (e.g. donkey sentences).
3. Producer-product bridging uses of definites.

Empirical observation

CLF + NP

CLF + NP + DEIX



Weak definite (CLF + NP)

- (9) **Context:** There's one book. The speaker asks you to move it.

Ak' em [#(ch'anh) libro] t'achi'.

put DIR.down CLF book there

'Put the book over there.'

- Crucially, the DP in (9) triggers a **uniqueness presupposition**

- (10) **Context:** There are two books. The speaker asks you to move one of the two.

Ak' em [ch'anh libro] t'achi'.

put DIR.down CLF book there



Strong definite (CLF + NP + DEIX)

Narrative sequence in elicitation context:

- (11) a. Ay [jun **tz'i'**] yet' jun miston t'achi'.
EXT one dog with one cat there.
'There's a dog₁ and a cat there.'
- b. Saksak [**nok'** tz'i' **#(chi')**].
white CLF dog DEIX
'The dog₁ is white.'

(see also Buenrostro & Royer 2023 for **corpus data** and statistics confirming this fact)



Two kinds of definites in Chuj

Weak definites	}	CLF + NP
Strong definites	}	CLF + NP + DEIX

(see appendix for examples of all subtype)

- Strong definites contain weak definites: this begs for a compositional approach to definiteness, as proposed in recent work (e.g., Hanink 2018, Ahn 2019)
- **Next:** sketch a first analysis taking this into consideration



First analytical attempt

Make classifiers **definite articles** (Schwarz 2009; Jenks 2018; a.o.)

(12) Denotation of noun classifiers (to be revised)
 $[[\text{CLF}]] = \lambda s. \lambda P_{\langle e, \langle s, t \rangle \rangle} : |\{y: P(y)(s)\}| = 1. \lambda x[P(x)(s)]$

Situation argument (context)

Uniqueness/existence presupposition in s
("class" presuppositions ignored for the moment)

→ This entry will naturally gets us all weak definite uses of **CLF + NP**



First analytical attempt

Familiarity achieved with a separate **index** operator

- this deliver an ‘indexed definite’ (Jenks and Konate 2022)
- the source of the index is the deictic particle

(13) Denotation of deictic particle *chi*’

$$\llbracket \textit{chi}'_i \rrbracket^g = \lambda x: x = g(i). x$$

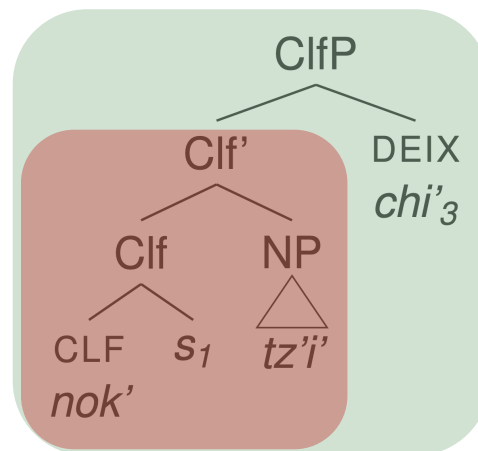
For the presupposition to be satisfied, the entity must be in the range of a contextually provided Assignment Function, and therefore familiar (Heim & Kratzer 1998).



First analytical attempt

Compositional approach

- (14) nok' tz'i' chi'
 CLF dog DEIX
 'this/the dog'



$\llbracket chi'_3 \rrbracket (\llbracket Clf' \rrbracket^g)$

P: $|\{y: DOG(y)(s_1)\}| = 1 \wedge \underline{\iota y[DOG(y)(s_1)] = g(3)}$

A: $\iota x[DOG(x)(s_1)]$



Interim summary

- Strong definites can be derived from a weak definite base (Hanink 2018)
 - CLF + NP triggers a uniqueness presupposition, like a standard weak definite
 - CLF + NP + DEIX triggers a familiarity presupposition.
 - Something must be said about whether the uniqueness presupposition survives with strong definites (you can ask me in the question period)

Next up: classifiers and indefinites

But recall: CLFs can cross-cut the distinction between DEF/INDF:

(3) jun tz'i'
INDF dog
'a dog'

(4) jun nok' tz'i'
INDF CLF dog
'a dog'

- How can CLFs, obligatory with definites, co-occur with indefinites?
- What happens with the uniqueness presupposition?
→ **Proposal:** still there, but it yields a **specific/singleton indefinite** in (4)

Classifier indefinites

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The ‘too-many-determiners’ problem

Problem: noun classifiers can co-occur with indefinite determiners:

- (15) Ay #(**jun**) **ix** **maestra** s-kuchan Sofia.
 EXT INDF CLF teacher A3-called Sofía
 ‘There was a teacher called Sofía.’

(txt)

- If CLFs are definite articles, why can they cooccur with indefinite articles?
 - Those tend to be incompatible across languages (**a the dog*)
- **Note:** Classifier indefinites are not partitive
 - Partitives are not allowed in existential sentences
 - They require plural marking
 - (see Royer 2022, section 4.1.2.)



Classifier indefinites and uniqueness

The uniqueness presupposition seems to disappear:

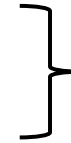
(16) **Context:** There are five priests in Yuxquen and the speaker and addressee know it. The speaker and addressee live and currently are in Yuxquen. Out of the blue, the speaker says:

a. lx-in-lolon yet' [**jun winh** pale] tikneik.
PFV-B1 S-speak with INDF CLF priest today
'I spoke with a priest today.'



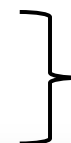
no apparent
uniqueness P,
despite CLF

b. lx-in-lolon yet' [**jun** pale] tikneik.
PFV-B1 S-speak with INDF priest today
'I spoke with a priest today.'



CLF not required

c. # lx-in-lolon yet' [**winh** pale] tikneik.
PFV-B1 S-speak with CLF priest today
Intended: 'I spoke with a priest today.'



uniqueness P fails



Classifier indefinites

What, then, is the contribution of noun classifiers with indefinites?

- Works on Q'anjob'alan languages have already noted semantic effects:
 - Craig (1986) on Popti': "the classifiers mark referential NPs which are thematically important. This thematic importance is the feature shared by the marked indefinite and the definite NPs."
 - Zavala (2000) on Akatek: "Noun classifiers are used to explicitly mark third-person nominals as individuated, referential and thematically important items in discourse [...], non-individuated and non-referential nominals as well as nominals which refer to participants of backgrounded sections of discourse are not tagged with CLFs."

Next: show that classifiers force [specific interpretations of indefinites](#)

Two types of specificity

(Fodor & Sag 1982)

Scopal specificity

1. If a relative of mine dies, I'll inherit a fortune.
 - there's a relative of mine, such that if they die, I'll inherit a fortune
 - if a relative of mine dies, no matter which relative, I'll inherit a fortune

Epistemic specificity

2. A student in the syntax class cheated on the final exam.
 - Speaker knows who exactly cheated.
 - Speaker doesn't know who exactly cheated.
- We'll see that **INDF + CLF + NP** trigger specific interpretation



‘Regular indefinites’ and **scopal specificity**

First: INDF+NP DPs can take narrow or wide scope:

- (17) **Context:** Malin is organizing a village party.
Te-junk’o’olal ix Malin [tato tz-jaw [jun icham]].
INTS-happy CLF Malin if IPFV-come INDF elder
‘Malin will be happy if an elder comes (to the party).’

- (18) a. There is just one elder called Xun, such that
if Xun comes to the party, Malin will be happy.
b. Malin will be happy if at least one elder comes
to the party, but it doesn’t matter who.

wide scope/specific = ✓

narrow scope/non-specific = ✓

(more examples in Royer 2022: section 4.2.2.)



‘Classifier indefinites’ and **scopal specificity**

INDF+CLF+NP DPs, on the other hand, must take wide-scope over operators.

- (19) **Context:** Malin is organizing a party in the village
Te-junk’o’olal ix Malin [tato tz-jaw [jun **winh** icham]].
INTS-happy CLF Malin if IPFV-come INDF CLF elder
‘Malin will be happy if an elder comes (to the party).’

- (20) a. There is just one elder called Xun, such that
if Xun comes to the party, Malin will be happy.
b. Malin will be happy if at least one elder comes
to the party, but it doesn’t matter who.

wide scope/specific = ✓

narrow scope/non-specific = ✗



‘Classifier indefinites’ and **epistemic specificity**

INDF+CLF+NP DPs are epistemically specific:

- (21) Hijan ix-ko-chi' nok' kaxlan, ix-ik' b'at nok' [jun **nok'** tz'i'].
almost PFV-A1P-eat CLF chicken PFV-bring DIR.go CLF INDF CLF dog
‘We were going to eat the chicken, but a dog stole it.’

- (22) a. A particular dog known to the speaker, say Fido, stole the chicken.
b. There are traces of a dog in the speaker's house, e.g. paw prints, that lead the speaker to think that a dog stole the chicken.

specific = ✓

non-specific = ✗

→ without the CLF, both interpretations are possible.



Summary

- CLFs force **specific interpretations** of indefinites
- Without the CLF, indefinites can be specific or non-specific



Current state of affairs

So, we want to provide a uniform treatment of CLFs, which can appear as:

(23)	nok' tz'i'	(24)	jun nok' tz'i'
	CLF dog		INDF CLF dog
	'the dog'		'a dog'
CLF + NP		INDF + CLF + NP	
weak definites (uniqueness)		specific indefinites	

Proposal: CLFs *a/ways* trigger a uniqueness presupposition, but when combined with an indefinite quantifier, it restrict the quantifier's domain to a **singleton set**

Singleton indefinites

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Singleton indefinites

(Schwarzschild 2002)

One analysis of ‘specific indefinites’:

- (Implicit) domain restriction to a **singleton set**
- “If a relative of mine *<that I have in mind>* dies, I’ll inherit a fortune”

- As Schwarzschild discusses, this approach requires a crucial assumption.
 - **Quantifier domain restriction** not always known to all discourse participants

(25) **The Privacy Principle** (Schwarzschild 2002, 307)

It is possible for a felicitous utterance to contain a restricted quantifier even though members of the audience are incapable of delimiting the extension of the (implicit) restriction without somehow making reference to the utterance itself.

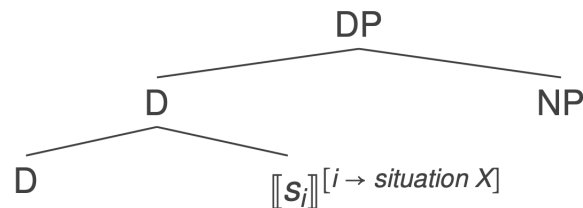


Domain restriction and situation pronouns

In situation semantics, domain restriction comes from situation pronouns.

→ Following Schwarz (2009, 2012), locus of situation variables for DPs is D^0 .

(26)



Implication of the Privacy Principle:

With indefinites, the value for s_i is not always identifiable to all discourse participants (see also Beaver & von Stechow 2013 and Arsenijevic 2018)



Key proposal (see Royer 2022 for more details)

Proposals: Two kinds of situations pronouns

1. **Familiar situation pronouns (pro_f)** delimit the domain of definites; must be accessible to all discourse participants (salient context)
2. **Private situation pronouns (pro_p)** delimit the domain of indefinites; potentially not accessible to all discourse participants

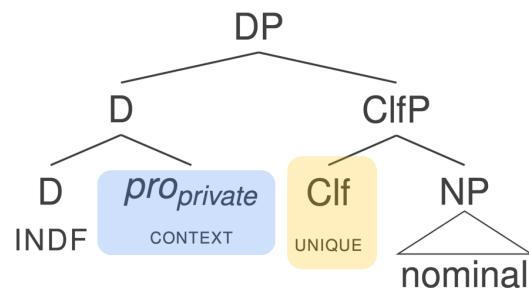
(see Beaver & von Stechow 2013, 2019; Arsenijevic 2018 for similar proposals)



Key proposal

- Indefinite determiners c-select a private situation pronoun.

(27) D_{INDF} selects for pro_{private}



- The CLF imposes a uniqueness presupposition on a *private* situation
→ since the situation is “private”, uniqueness need not hold in the salient context
→ this will deliver a singleton indefinite

Composition of classifier indefinites

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Entry for the indefinite determiner

Indefinite determiners as existential quantifiers (here following Elbourne 2005, 2013):

- (28) Indefinite determiner *jun*
 $\llbracket \textit{jun} \rrbracket = \lambda s. \lambda P_{\langle e, \langle s, t \rangle \rangle}. \lambda Q_{\langle e, \langle s, t \rangle \rangle}. \lambda s'. \exists x [P(x)(s) \wedge Q(x)(s')]$



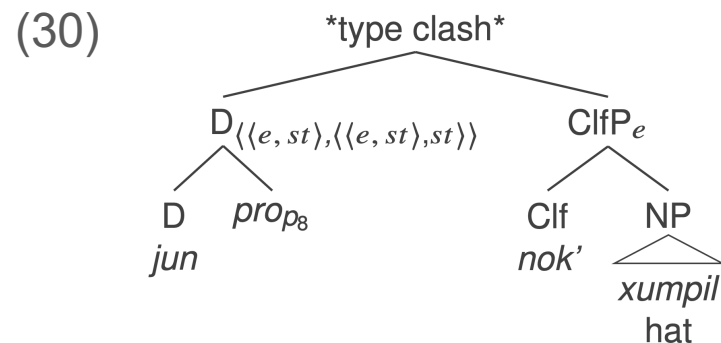
Compositional housekeeping

We need to change the CLFs **semantic type** to allow it to compose beneath *jun*.

(29) Previous entry for CLF

$$\llbracket \text{CLF} \rrbracket = \lambda s. \lambda P_{\langle e, \langle s, t \rangle \rangle} : |\{y : P(y)(s)\}| = 1. \lambda x[P(x)(s)]$$

- This entry cannot combine with an indefinite quantifier:





Compositional housekeeping

Classifiers still impose a uniqueness presupposition, but have a different type:

- (31) Classifier denotation (modified, and final)
 $\llbracket \text{CLF} \rrbracket = \lambda P_{\langle e, \langle s, t \rangle \rangle} . \lambda x . \lambda s : |\{y : P(y)(s)\}| = 1 . P(x)(s)$

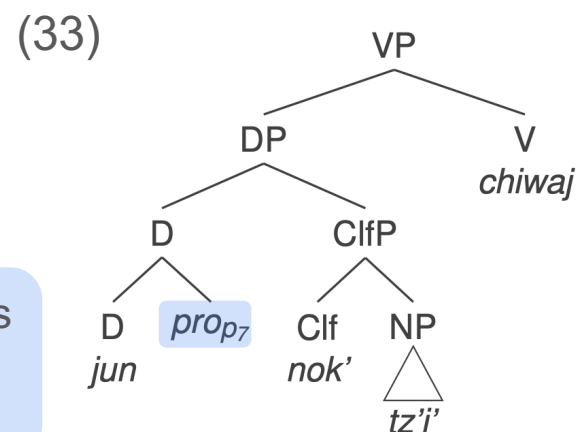
- CLF takes a property P and delivers it back with the condition that there only be one satisfier of P in the situation of evaluation.
- That situation will be whatever situation D^0 combines with
- Similar to the entry proposed for *the* by Coppock & Beaver (2015)



Composing CLF with INDF

- Composing indefinites with CLFs yields a **specific/singleton indefinite**

(32) lx-chi'waj jun **nok'** tz'i'.
 PFV-bark INDF CLF dog
 'A dog barked.'



there's a unique dog in a situation, $g(7)$, whose value is only assumed to be known to the speaker
 → **specific/singleton indefinite**

(34) $\llbracket \text{VP} \rrbracket^g = \lambda s': \{y: \text{DOG}(y)(\llbracket \text{pro}_{p7} \rrbracket^g)\} = 1. \exists x[\text{DOG}(x)(\llbracket \text{pro}_{p7} \rrbracket^g) \wedge \text{BARK}(x)(s')]$



Result: a singleton indefinite

Going back to our initial example:

(35) **Context:** There are five priests in Yuxquen...

lx-in-lolon yet' [**jun winh** pale] tikneik.

PFV-B1S-speak with INDF CLF priest today

'I spoke with a priest today.'

$$\llbracket \text{VP} \rrbracket^g = \lambda s: |\{y: \text{PRIEST}(y)(\llbracket \text{pro}_{p_7} \rrbracket^g)\}| = 1. \exists x[\text{PRIEST}(x)(\llbracket \text{pro}_{p_7} \rrbracket^g) \wedge \text{SPOKE.WITH}(x)(\text{SPEAKER})(s)]$$

- Uniqueness is relative to a private situation, not the overall salient situation
- So long as the speaker has a situation in mind with only one priest, the uniqueness presupposition is met (not a classic/pragmatic presupposition).

Non-obligatoriness of CLFs with indefinites (long story short)

Recall: CLFs are not required with specific indefinites.

- Royer (2022: 5.1.2.2): *Maximize Presupposition* operates differently when a semantic presupposition is relativized to a **familiar** or **private situation**.
 - Only propositions that are based on **familiar situations** can be in the Common Ground (CG), and not those based on **private situations**
 - *Maximize Presupposition* compares alternative propositions in the CG only.



Summary

CLFs always trigger a uniqueness presupposition

→ With indefinites, this results in a **singleton indefinite**, because the situation of evaluation is potentially not the salient situation but a private one.

Next: revisit the analysis of the definites

Back to definites:

A unified theory of noun classifiers

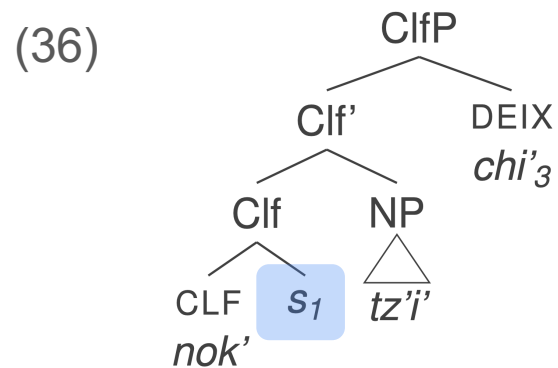
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Classifier definites

Previously: CLFs had the semantic type of definite determiners and took a situation pronoun as their first argument:



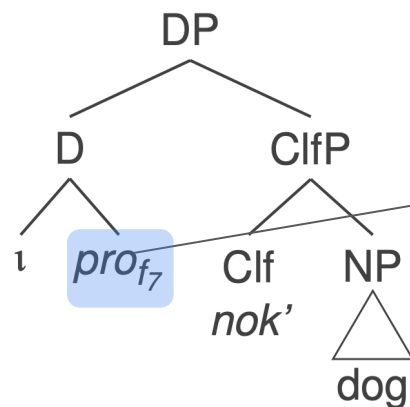
To account for CLF indefinites and the 'too-many determiners problem': CLFs are no longer determiners nor are they the locus of the situation pronoun, which is D^0



Adding *iota* to weak definite DPs

Proposal: definite DPs are headed by a syntactically-represented *iota*.

(37) a.



Crucially, *iota* must select for a familiar situation pronoun

b.
$$[[i]]^g = \lambda s. \lambda P_{\langle e, \langle s, t \rangle \rangle} : \exists ! y [P(y)(s)]. \iota x [P(x)(s)]$$



Combining *iota* with ClfP

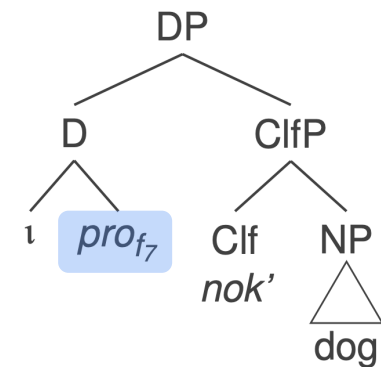
(38) $\llbracket \text{CLF} \rrbracket = \lambda P_{\langle e, \langle s, t \rangle \rangle}. \lambda x. \lambda s: |\{y: P(y)(s)\}| = 1. P(x)(s)$

(39) $\llbracket \text{ClfP} \rrbracket^g = \lambda x. \lambda s: |\{y: \text{DOG}(y)(s)\}| = 1. \text{DOG}(x)(s)$

$\llbracket \text{DP} \rrbracket^g =$

Presupposition: $|\{y: \text{DOG}(y)(\llbracket \text{pro}_{f_7} \rrbracket^g)\}| = 1$

Assertion: $\iota x[\text{DOG}(x)(\llbracket \text{pro}_{f_7} \rrbracket^g)]$



Since *iota* combines with a *pro_{familiar}*, the uniqueness presupposition is now interpreted relative to the salient context
this results in a **weak definite**



Result: a weak definite

Going back to our initial example:

(40) **Context:** there are five priests in Yuxquen...

lx-in-lolon yet' [**winh** pale] tikneik.

PFV-B1S-speak with CLF priest today

Intended: 'I spoke with a priest today.'

Uniqueness presupposition: $|\{y: \text{PRIEST}(y)(\text{pro}_f)\}| = 1$

- The situation of evaluation is now **familiar**, and therefore the uniqueness presupposition fails in the context (since it contains five priests)

Obligatoriness of CLFs with definites

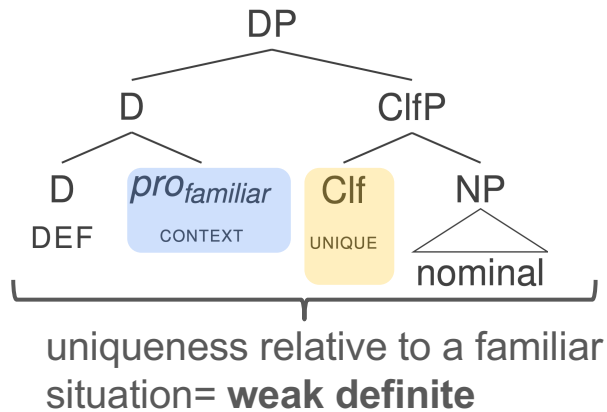
Recall: CLFs *are required* with definites

- Again, the main idea is that presuppositions based on **familiar situations** must be in the Common Ground, as opposed to those based on **private situations**.
 - *Maximize Presupposition* is thus expected to apply.
 - For the case at hand, a special kind of *Maximize Presupposition* is needed (Percus 2006; see Royer 2022: 5.1.2.2)

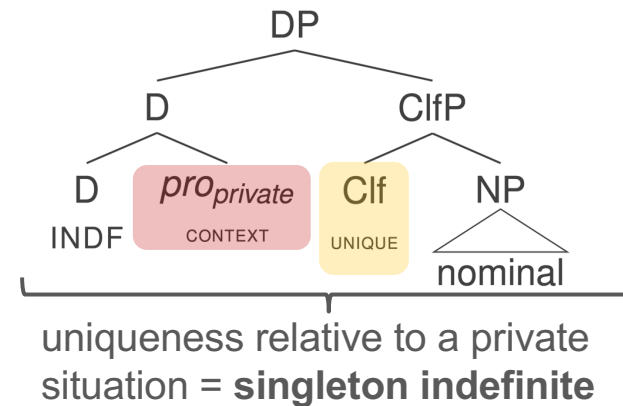


Taking stock

(41) Weak definite



(42) Specific indefinite



Lessons from Chuj

- Definites and indefinites can share common pieces (CLFs)
- The crucial semantic variation here lies in the kind of situation we consider

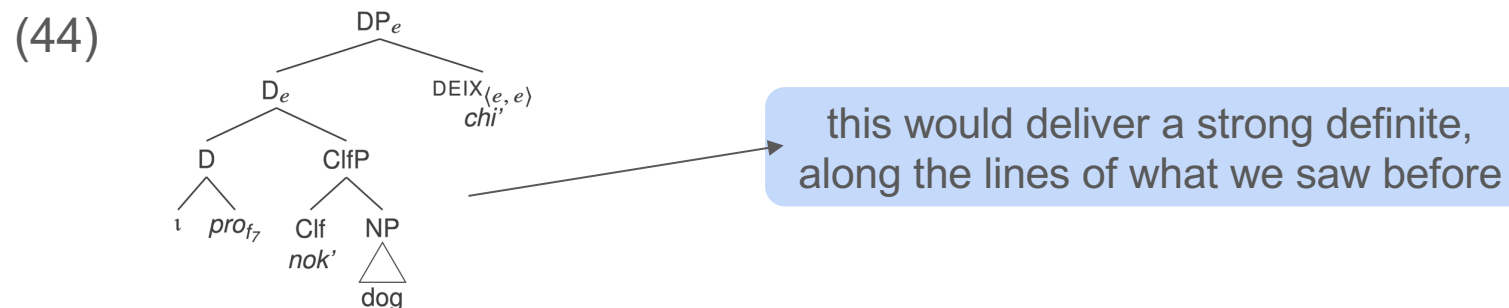


What about strong definites?

All else being equal, the entry for deictics seen earlier could be maintained:

- (43) Denotation of deictic particle *chi'*
 $\llbracket chi'_i \rrbracket^g = \lambda x: x = g(i). x$

→ It could simply combine above definite DPs, as before:





‘Indefinite’ demonstratives

But, even more DP configurations possible:

	Configuration	Example	Rough translation
①	CLF + NP	<i>nok' tz'i'</i>	‘the dog’
②	CLF + NP + DEIX	<i>nok' tz'i' chi'</i>	‘the/that dog’
③	INDF + NP	<i>jun tz'i'</i>	‘a dog’
④	INDF + CLF + NP	<i>jun nok' tz'i'</i>	‘a dog’
⑤	INDF + NP + DEIX	<i>jun tz'i' chi'</i>	‘that dog’
⑥	INDF + CLF + NP + DEIX	<i>jun nok' tz'i' chi'</i>	‘that dog’

- But semantic differences between definite and indefinite demonstratives discussed in Royer 2022, section 5.3, and Buenrostro & Royer 2023.
- Topic that requires more work!



‘Indefinite’ demonstratives

Indefinite demonstratives in Chuj get used in (Buenrostro & Royer 2023):

- Exophoric contexts
- Some first mentions in discourse (there was this guy from New York...)
- ...

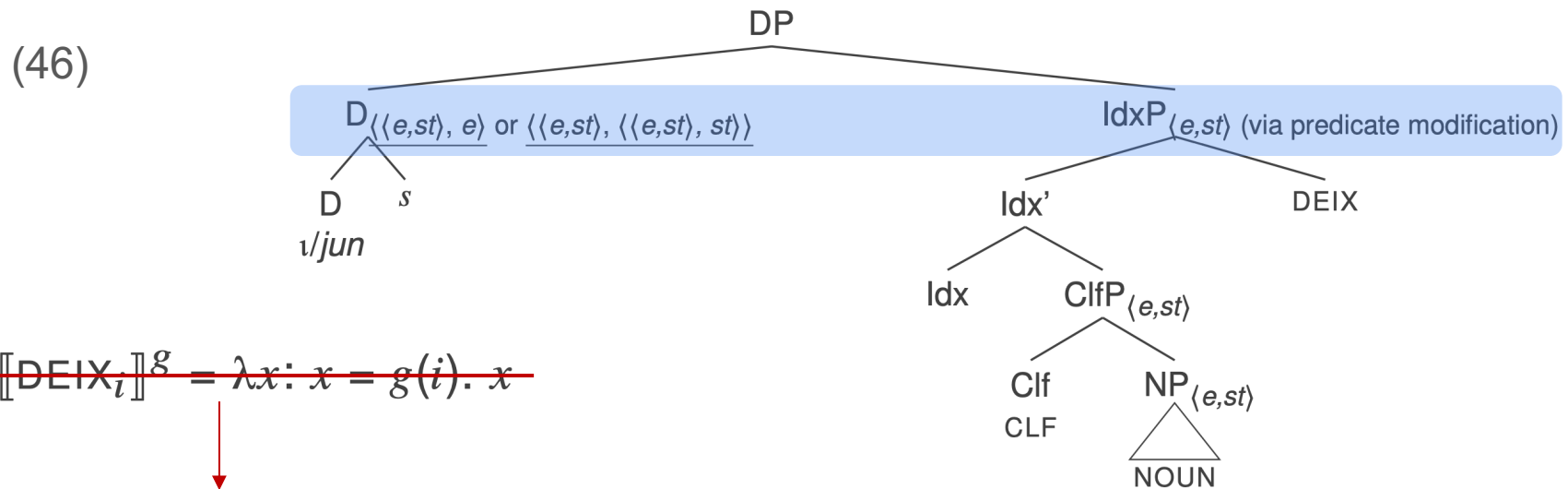
(45) Komo ha t'ay pekatax, ay [***(jun)** winh icham **chi'**].
DISC when PREP beforehand, EXT INDF CLF man DEIX
'Once upon a time, there was an old man...'

(Hopkins 2021: 45)



Indefinite demonstratives

Strategy: make the deictic compose in the restrictor of the quantifier
This new entry essentially allows for compositions with *iota* or *jun*



~~$$\llbracket \text{DEIX}_i \rrbracket^g = \lambda x: x = g(i). x$$~~

$$\llbracket \text{DEIX}_i \rrbracket^g = \lambda x. \lambda s: \exists y[y \leq s \wedge y = g(i)]. x = g(i)$$

Conclusion

1. Background on Chuj
2. Definiteness in Chuj
3. Classifier indefinites
4. Back to definites
- 5. Conclusion**





Conclusion

A unified theory of definite and indefinite DPs in Chuj:

	Configuration	Example	Rough translation
①	CLF + NP	<i>nok' tz'i'</i>	'the dog'
②	CLF + NP + DEIX	<i>nok' tz'i' chi'</i>	'the dog'
③	INDF + NP	<i>jun tz'i'</i>	'a dog'
④	INDF + CLF + NP	<i>jun nok' tz'i'</i>	'a dog'

- Two kinds of definiteness expressed: weak and strong definites
- Noun classifiers, used obligatorily with definites, can also form specific indefinites
- Unified semantics of CLFs as encoding a uniqueness presupposition:
 - can result in definite or singleton indefinite
- Underlying difference between definiteness and indefiniteness in Chuj:
 - whether or not we consider a familiar (definites) or private (indefinites) situations



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Yuj wal yos!
Thank you!
Merci!



Apendices



Data: weak and strong definites





Larger/global-situation uniqueness (CLF + NP)

- (11) **Context:** At a presidential ceremony in Guatemala.
Ix-k'och [#(ix) Presidente].
PFV-arrive CLF Presidente
'The president arrived.'

(see Hawkins 1978)



Kind-denoting definite (CLF + NP)

- (12) a. Ha-tik ko-k'apak, ha'-onh mero aj-chonhab' honh. Ichok honh winak:
FOC-DEIX A1P-clothes, FOC-B1P very AG-village B1P, like A1P man
'This is our clothes, for the true villagers. For us men:
- b. **k'apak** wex, **nok'** lopil, **k'ak** kamix, **k'apak** chak payu'...
CLF pant CLF capixay CLF shirt CLF red handkerchief
'the pants, the capixay, the shirt, the red hankerchief...'

(txt)



Situation-based covariation (CLF + NP)

- (13) Juntakel ix-ek' waj Xun t'a jun chonhab' ix-lolon winh yet' [#(winh) alkal].
every.time PFV-pass CLF Xun PREP INDF town, PFV-talk CLF with CLF mayor
'Whenever Xun visited a town, he spoke with the mayor.'

Uniqueness relativized to subsituations:

In every situation *s*, Xun met the unique mayor in *s*

- If uniqueness is not met in every sub-situation, a CLF + NP is infelicitous (see datasheet)



Donkey sentences (CLF + NP + DEIX)

Covariation with an anaphoric antecedent:

- (17) a. Masanil heb' anima' ix-il-an junjun much,
all PL person PFV-see-AF INDF.DIST bird,
'Every person that each saw a bird, ...
b. ix-s-mak'-cham [**nok**' much #(chi')] heb'.
PFV-A3-hit-die CLF bird DEIX PL
hunted that bird.'



Bridging definite (CLF + NP + DEIX)

One kind of bridging definite: **producer-product bridging definites**

- (18)
- a. lx-w-awt-ej jun libro.
PFV-A1S-read-DTV one book
'I read a book.'
 - b. Te-wach' [ix tz'ib'um #(chi')].
INTS-good CLF writer DEIX
'The author is really good.'

Data: scopal specificity





‘Classifier indefinites’ and **scopal specificity**

INDF+CLF+NP DPs must take wide-scope over operators

- (29) Junjun kinhib'al, tz-munlaj [jun **ix** ix] t'a chonh.
each morning IPFV-work INDF CLF woman PREP store
‘Each morning, a woman works in the store.’

- (30) a. Each morning, the same woman works in the store.
b. Each morning, only one woman works in the store,
but this can vary (e.g. Malin works Mondays, Xuwan Tuesdays, etc.)

specific = ✓

non-specific = ✗

→ without the CLF, both interpretations are possible.

More data





Beyond this talk

- Much more could be said about Chuj DP configurations!

	Configuration	Output in Chuj	Rough translation
①	$\mathfrak{t} + \text{CLF} + \text{NP}$	<i>nok' tz'i'</i>	'the dog' (weak)
②	$\mathfrak{t} + \text{CLF} + \text{NP} + \text{DEIX}_i$	<i>nok' tz'i' chi'</i>	'the/that dog' (strong)
③	$\mathfrak{t} + \text{CLF} + \langle \text{NP} \rangle$	<i>nok'</i>	'it' (weak)
④	$\mathfrak{t} + \text{CLF} + \text{pro}_i$	<i>nok'</i>	'it' (strong)
⑤	$\exists + \text{NP}$	<i>jun tz'i'</i>	'a dog'
⑥	$\exists + \text{CLF} + \text{NP}$	<i>jun nok' tz'i'</i>	'a dog' (specific)
⑦	$\exists + \text{NP} + \text{DEIX}_i$	<i>jun tz'i' chi'</i>	'that dog'
⑧	$\exists + \text{CLF} + \text{NP} + \text{DEIX}_i$	<i>jun nok' tz'i' chi'</i>	'that dog'



No uniqueness presupposition for classifier indefinites

Compare with a context in which **uniqueness** does hold:

- (17) **Context:** There is just one priest in Yuxquen and the speaker and addressee know it. The speaker and addressee live and currently are in Yuxquen. Out of the blue, the speaker says:

a. # lx-in-lolon yet' [**jun** winh pale] tikneik.

PFV-B1S-speak with INDF CLF priest today

Intended: 'I spoke with the priest today.'

b. # lx-in-lolon yet' [**jun** pale] tikneik.

PFV-B1S-speak with INDF priest today

Intended: 'I spoke with the priest today.'

c. lx-in-lolon yet' [**winh** pale] tikneik.

PFV-B1S-speak with CLF priest today

'I spoke with the priest today.'

not possible to use *jun* in this context, suggestive of a Maximize Presupposition effect

uniqueness P satisfied

Some evidence for non-familiar free variables





Non-familiar free variables

More needs to be said about the ability for free variables to be used, even if they aren't retrievable by all discourse participants.

→ Often assumed that indexed variables should be familiar (cf. the *Appropriateness Condition* in H&K 1998)

→ She_1 saw $them_2$ only appropriate if we all know value for $g(1)$ and $g(2)$

(34) **Context:** We're having dinner. We never talked about whales together. I tell you:

a. # Hey, by the way, [**the s_i whale**] escaped!

Defined iff the value for $g(i)$ is familiar to all discourse participants.

If defined, $ESCAPED(x)(\lambda x[WHALE(x)(s_i)])$

b. # Hey, by the way, **that whale** escaped!



Non-familiar free variables

As discussed in Partee 1973, Beaver & von Stechow 2013, 2019, and Silk 2016, however, it's unclear that indexed variables need always be familiar.

Examples from Partee 1973: 603

(35) They₇ haven't installed my telephone yet.



Value for $g(7)$ is unknown to discourse participants

(36) John went to a private school.



Value for 'past tense' does not need to be known



Situation (non)familiarity

Going back to the Privacy Principle and domain restriction, we have the following consequences

- (37) **Situation (non)familiarity**
Some DPs (e.g., definites) require that the value for their contextual/situation variable be known to all discourse participants; other DPs (e.g., indefinites) show no such requirements.

A nice quote from Schwarzschild



What is the difference between definites and indefinites?

Schwarzschild 2002: 292

There are familiarity conditions on the use of definites which do not apply to indefinites. It would be odd for me to assert out of the blue ***the aluminium toothbrush** is in a museum in New Hampshire*, despite the fact that there is a unique aluminium toothbrush. However, I could, out of the blue, speak of there being ***an aluminium toothbrush** in New Hampshire* and I would, in this case, be using a singleton indefinite, a complete one in fact. Fodor and Sag's *a friend of mine* is also singleton, albeit incomplete, and since it is likewise indefinite there is no requirement that the 'referent' be familiar to all discourse participants. This freedom appears to allow the content of the contextual supplementation to be less transparent to the hearer in a way that would be impossible with a definite. What we have in effect is an incomplete indefinite description, where the completion is asymmetrically available to the speaker but not to the hearer.