Anti-uniqueness without articles

Michael Yoshitaka Erlewine
Meghan Lim

NUS National University of Singapore

We report on the expression of singular nominals in **Burmese**, an article-less language, from original elicitation work.

Singular definites and indefinites trigger *uniqueness* and *anti-uniqueness* inferences (Hawkins 1978 a.o.):

(1) **The** exchange student passed my class.
$\rightsquigarrow$ *contextual uniqueness*

(2) **An** exchange student passed my class.
$\rightsquigarrow$ *contextual anti-uniqueness*

This anti-uniqueness in (2) is commonly thought to be due to competition via **Maximize Presupposition (MP)** between the articles {**the**, **a**} (Heim 1991; Percus 2006, Sauerland 2008 etc.).

How do article-less languages convey (anti-)uniqueness?

Preview:

- Bare NPs are singular definites. **Singular indefinites take the numeral 'one' and a classifer** (cf Givón 1981).

► **'One' is a modifier that restricts the nominal domain to a singleton, based on a choice function f.** We adjoin $\exists f$ above to build **a choice function indefinite out of a "definite" DP.**

- The addition of 'one' is restricted by an **Adjunct Non-Vacuity** constraint, evaluated *locally* (see Singh 2011, Erlewine and New 2019).

- Evidence from **anaphoric definites with 'one'** serves to support this view and argue against an MP-based alternative.

Data **Analysis** **Anti-uniqueness** **Alternatives**

Burmese uses **numeral 'one'** and **demonstratives** to express (in)definiteness distinctions:

- Singular indefinites use 'one' (cf Givón 1981)
- Unique definites must be bare
- Anaphoric definites take dem. *ehdi* or are bare

	N	N 1-CL	Dem N
indef	*	OK	*
unique def	OK	*	*
anaphoric def	OK	*	OK

(3) **Indefinite (specific and nonspecific):**
You work in a doggy day care. { Specific: There are multiple dogs in the room with you and you are on the phone with Hlahla. You see one of the dogs scratching on the door. Hlahla asks you what that noise is. / Nonspecific: There are multiple dogs outside and you and Hlahla are in the back room. You hear a dog scratching on the door, but don't know which dog it is. } You tell her:

Kwi *(**tiq kaun**) ka tank'à ko c'iq-ne-teh.
dog one CL.animal NOM door ACC scratch-TAM
'A dog is scratching the door.'

(4) **Situationally unique definite:**
You and Maunmaun are at Hlahla's house. She has one dog, who is playing with MM. Neither of you can see them right now. You tell her:

(*Ehdi) **kwi** (*tiq kaun) ka MM ko cait-ne-teh.
DEM dog one CL.animal NOM MM ACC like-TAM
'The dog likes Maunmaun.'

(5) **Anaphoric definite:**
You go to an adoption drive with MM. There's an open area for the animals to hang out and people to mingle about. Up for adoption are a few dogs and cats. When MM causes trouble, you tell an organiser:

[Maunmaun ka kwi tiq kaun néh caun tiq
Maunmaun NOM dog one CL.animal CONJ cat one
kaun ko hnauqshaq-ne-teh.]
CL.animal ACC bother-PROG-NFUT

(Ehdi) kwi ka Maunmaun ko laiq-ne-teh.
DEM dog NOM Maunmaun ACC chase-PROG-NFUT

'[Maunmaun was bothering a dog_3 and a cat_4.] The dog_3 is chasing Maunmaun.'

We present examples in subject position here; the facts are different in object position, where incorporation is possible. **'One'-indefinites as in (2) are flexible in their scope.** See Lim and Erlewine 2020.

All nominals (without determiners) take null ι:

(6) $[\![\iota]\!] = \lambda s_r \,.\, \lambda P_{\langle e,\langle s,t\rangle\rangle} : \exists!x[P(x)(s_r)] \,.\, \iota x[P(x)(s_r)]$

Situation s_r allows for contextual restriction.

(4') $[\![[[\iota\ s_r]\ \text{dog}]]\!] = \iota x[x \text{ is a dog in } s_r]$
presup: there is a unique dog in s_r

Anaphoric definites take ι^x: (see Schwarz 2009, Jenks 2018)

(7) $[\![\iota^x\ (ehdi)]\!] = \boldsymbol{\lambda y} \,.\, \lambda P_{\langle e,\langle s,t\rangle\rangle} : \exists!x[P(x)(w) \wedge \boldsymbol{x = y}] \,.\, \iota x[P(x)(w) \wedge \boldsymbol{x = y}]$

ι^x takes an **index** $\boldsymbol{y}$, instead of a situation.[1]

(5') $[\![[[\iota^x\ 3]\ \text{dog}]]\!] = \iota x[x \text{ dog in } w \wedge x = g(3)] = g(3)$
presup: there is a unique [dog in w that is $g(3)$]
i.e. $g(3)$ is a dog

'One' is a modifier:

- **'One' restricts the domain to a singleton, based on a choice function $\boldsymbol{f}$.**[2]

(8) $[\![[\text{one}_{\boldsymbol{f}}\ \text{CL}]]\!] = \lambda P_{\langle e,\langle s,t\rangle\rangle} \,.\, \lambda x \,.\, \lambda s_r \,.\, x = \boldsymbol{f}_{\text{cf}}(\lambda y \,.\, P(y)(s_r) \wedge \text{ATOM}_{\text{CL}}(y))$

(2') $[\![[[\iota\ s_r]\ [\text{dog}\ [\text{one}_{\boldsymbol{f}}\ \text{CL}]]]]\!]$
$= \iota x\,[x = \boldsymbol{f}_{\text{cf}}(\lambda y \,.\, y \text{ is an atomic dog in } s_r)]$

We adjoin $\exists \boldsymbol{f}_{\text{cf}}$ above, creating a choice function indefinite from this "definite" DP.

(2") LF: $\exists \boldsymbol{f}_{\text{cf}}$ [$[[\iota\ s_r]\ [\text{dog}\ [\text{one}_{\boldsymbol{f}}\ \text{CL}]]]$ s-t-d in w]
$= \exists \boldsymbol{f}_{\text{cf}}$ [$\boldsymbol{f}(\lambda y \,.\, y$ atomic dog in $s_r)$ s-t-d in w]
$\rightsquigarrow$ 1 iff **a** dog in s_r is scratching the door in w

This predicts:	bare NP	NP 'one'-CL
exactly 1 NP in s_r:	✓	✓!
> 1 NP in s_r:	# $\rightsquigarrow$ uniqueness	✓

[1] Following a suggestion by Angelika Kratzer p.c. to Schwarz (2009: p. 264 fn. 16) and turns out to be important. ι^x is Jenks's term.

[2] $[\![\text{CL}]\!] = \lambda P_{\langle e,\langle s,t\rangle\rangle} \,.\, \lambda x \,.\, \lambda s_r \,.\, P(x)(s_r) \wedge \text{ATOM}_{\text{CL}}(x)$ $\quad [\![tiq_{\boldsymbol{f}}\ \text{'one'}]\!] = \lambda CL \,.\, \lambda P_{\langle e,\langle s,t\rangle\rangle} \,.\, \lambda x \,.\, \lambda s_r \,.\, x = f_{\text{cf}}(\lambda y \,.\, CL(P)(y)(s_r))$

Anti-uniqueness by Non-Vacuity:

(9) **Adjunct Non-Vacuity:** Adjunction of β to α is ungrammatical if $[\![[\alpha\ \beta]]\!] = [\![\alpha]\!]$.

► We propose that Adjunct Non-Vacuity is evaluated at the DP level.[3]

∴ * **'one' CL** when $[\![[[\iota\ s_r]\ [\text{NP}\ [\text{one}_f\ \text{CL}]]]]\!] = [\![[[\iota\ s_r]\ \text{NP}]]\!]$, regardless of the choice of f, which occurs when NP is a singleton in s_r.

⇝contextual anti-uniqueness

Q: What if we adjoin 'one' to a ι^x anaphoric definite?

(10) $[\![[[\iota^x\ 3]\ \text{NP}]]\!] = \iota x\,[[\![\text{NP}]\!]\,(x)(\boldsymbol{w}) \wedge x = g(3)]$
presup: there is a unique [NP in w that is $g(3)$]

(11) $[\![[[\iota^x\ 3]\ [\text{NP}\ [\text{one}_f\ \text{CL}]]]]\!] =$
$\iota x\,[x = f\,(\lambda y\,.\,[\![\text{NP}]\!]\,(y)(w)\ \ldots) \wedge x = g(3)]$

* **'one CL'** when (12) = (13) is guaranteed, regardless of the choice of f, i.e. when NP is a singleton in $\boldsymbol{w}$.

⇝ global anti-uniqueness

► Evidence for this approach comes from **anaphoric definites with 'one':**

(12) **Anaphoric definites can take 'one':**
['MM was bothering a dog_3 and a cat_4.'] *or*
['MM was bothering the dog_3.'] (unique in s_r)

Ehdi kwi (tiq kaun) ka MM ko laiq-ne-teh.
DEM dog one CL NOM MM ACC chase-TAM
'The/that (one) dog_3 is chasing MM.'

- 'One' in (12) shows it has not grammaticalized into an indefinite article (cf Givón 1981).
- The availability of 'one' in a context with a situationally unique NP shows that 'one' here does not require contextual anti-uniqueness.

(13) **But not if the NP is globally unique!**
['The sun_5 is rising.']

Aung ka **ehdi ne** (?#**tiq lòu**) ko sha-ne-teh.
Aung NOM DEM sun one CL ACC look-TAM
'Aung is looking for that (#one) sun_5.'
Comment with *tiq lou*: Ok if there are other suns.

[3] See Erlewine and New 2019 for an argument for cyclic (clause-level) evaluation of Non-Vacuity, incidentally also from Burmese.

Q: Can we derive the anti-uniqueness inferences from **Maximize Presupposition**? (Heim 1991; see also Percus 2006, Sauerland 2008, Singh 2011 etc.)

Bare "NP" vs "NP one CL":

Rouillard and Schwarz 2016 proposes that Katzir's (2007) "deletion alternatives" are relevant competitors for MP. **Bare "NP" (14) is a deletion alternative of "NP one CL" (15), and (16) is presuppositionally stronger!**

(14) LF for bare "NP":
~~$\exists f_{cf}$~~ [[[ι s_r] [dog ~~[one$_f$ CL]~~]] s-t-d in w]
$\rightsquigarrow$ 1 iff the unique dog in s_r is s-t-d in w
presup: there is a unique dog in s_r

(15) LF for "NP one CL": =(2")
$\exists \boldsymbol{f}_{cf}$ [[[ι s_r] [dog [one$_f$ CL]]] s-t-d in w]
= $\exists \boldsymbol{f}_{cf}$ [$\boldsymbol{f}(\lambda y$. y atomic dog in s_r) s-t-d in w]
$\rightsquigarrow$ 1 iff **a** dog in s_r is scratching the door in w
presup: 'dog' is non-empty in s_r
If 'dog' is a singleton in s_r, e.g. {🦙}, f_{cf} always returns the same individual, e.g. 🦙.

Anaphoric "*ehdi* NP" vs "*ehdi* NP one CL":

Consider an anaphoric definite referring to 🦙$_3$.
Among DPs with demonstrative *ehdi*, **"*ehdi* NP" (16) is again a deletion of "*ehdi* NP one CL" (17).**

(16) LF for "*ehdi* NP":
~~$\exists f_{cf}$~~ [[[ι^x 3] [dog ~~[one$_f$ CL]~~]] s-t-d in w]
$\rightsquigarrow$ 1 iff the uniq. [dog in w that's $g(3)$] is s-t-d in w
presup: there is a unique [dog in w that's $g(3)$]
$\Leftrightarrow$ **$g(3)$ is a dog in w**

(17) LF for "*ehdi* NP one CL":
$\exists \boldsymbol{f}_{cf}$ [[[ι^x 3] [dog [one$_f$ CL]]] s-t-d in w]
= $\exists \boldsymbol{f}_{cf}$ [$\iota x[x = \boldsymbol{f}(\lambda y$. y atomic dog in $w) \wedge$
$x = g(3)]$ s-t-d in w]
presup: there is a f_{cf} which takes the atomic dogs in w and returns $g(3)$
$\Leftrightarrow$ **$g(3)$ is a dog in w**

A: (16) and (17) are equivalent in their presuppositions. **The global anti-uniqueness of 'one' in anaphoric definites (12–13) is explained by Maximize Presupposition!**

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Email: mitcho@nus.edu.sg, meghan.lim@u.nus.edu

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