



Vorwort

Unter Zeiten.

Das Perfekt und das Imperfekt
tranken Sekt.
Sie stießen aufs Futurum an
(was man wohl gelten lassen kann).
Plusquamper und Exaktfutur
blinzten nur.

Christian Morgenstern, *Galgenlieder*

Synopsis

- head-marking and argument realization
- head-marking in Yucatec
- argument realization in Yucatec
- conclusions and discussion

Head-marking and argument realization

- the question: what factors govern the use of NPs in head-marking constructions
 - given that NPs are by definition syntactically optional in such structures?
- hypotheses
 - Koenig & Michelson 2012, 2013: in Oneida (N. Iroquoian, ON/NY/WI), referring expressions are *rare* in discourse
 - Bohnemeyer 2009: in Yucatec, NPs are used for both new referents and locally non-topical old ones
 - i.e., for newly returned chain-initial topics in the sense of Givón (1983: 9)
 - our goal here is to test Bohnemeyer's hypothesis

Head-marking and argument realization (cont.)

- head-marking
 - understood here not in the broad sense of Nichols 1986
 - but in the narrower one of Van Valin 1985
 - = 'cross-reference' (Bloomfield 1933: 191-194); 'concentric' syntactic type (Milewski 1950)
 - a head carrying one or more bound morphemes that refer to the fillers of its argument positions
 - and that saturate them in the absence of clause-mate NPs

(1.1) Sii in=iho-ech, in=pàal-ech, ko'x!
yes A1SG=son-B2SG A1SG=child-B2SG HORT
'You ARE my son alright, you ARE my child; let's go!' (Lehmann 1991)

(1.2) T-inw=il-ah-ech te=ha'ts+kab+k'iin=a'
PRV-A1SG=see-CMP-B2SG PREP:DEF=divide:PASS+Earth+sun=D1
'I saw you this morning'

Head-marking and argument realization (cont.)

- head-marking (cont.)
 - traditionally, the **cross-reference markers** are considered the syntactic arguments of the head
 - the cross-referenced NPs are syntactically optional

(1.3) T-u=nes-ah-Ø [hun-túul pàal]j [le=xoh]j=o'
PRV-A3=gnaw-CMP-B3SG one-CL.AN child DEF=cockroach=D2
'The cockroach bit a child' [elicited]

(1.4) T-u=nes-ah-Ø
PRV-A3=gnaw-CMP(B3SG)
'It bit it' [constructed]

Head-marking and argument realization (cont.)

- head-marking (cont.)
 - the cross-referenced NPs have been treated as
 - in apposition to the cross-reference marker
 - Humboldt (1836); Boas (1911); Bloomfield (1933); Milewski (1950); Nichols (1986) – but see Lehmann (1985: 92)!
 - clausal adjuncts (Van Valin 1985)
 - detached from the clause (Jelinek 1984; Pensalfini 2004)
 - occupying a special ‘extra-core slot’ position immediately dominated by the clause (Van Valin ms.)
 - Bresnan & Mchombo 1987 propose a PRO-drop analysis (Perlmutter 1971)
 - for the subject markers of Chicheŵa (Bantu; Malawi, Zambia, Mozambique)
 - Austin & Bresnan 1996 extend this analysis to Warlpiri

Head-marking and argument realization (cont.)

- background: Oneida
 - (1.6) *Khále? wa?akoyv: táne? sÁ yutekhwahla?tslohlokta?*
 khále? wa?yako-yata?-ne? sÁ yu-ate-khw-a-hi-a-?tsl-ohlok-ht-ha?
 and FACT-3PL.P-obtain-PNC also 3PL.A-SRF-food-JN-set-JN-NMZR-cover-CAUS-HAB
 ‘And she got a tablecloth too.’ (Olive Elm, Visits to My Auntie’s, 1993)
 (Koenig & Michelson 2013: 5)
 - corpus data (Koenig & Michelson 2013)
 - only 10.6% of words in texts occur in referring expressions (REs)
 - i.e., predicate-external phrases used to reference arguments
 - **not** NPs – only 1.9-2.2% of these are headed by morphological nouns
 - however, at the *phrase* level, it turns out that apparently about 40% of clauses contain one or more REs
 - as we shall see, this figure is roughly the same for Yucatec

Head-marking in Yucatec

- Yucatec is an exclusively head-marking language
 - there is no nominal case marking of any kind
- like most Mayan languages, Yucatec has two paradigms of cross-reference markers
 - Mayanists have become accustomed to labeling these ‘Set A’ and ‘Set B’

(2.1) In=iiho-ech
A1SG=son-B2SG
‘You are my son’

(2.2) T-inw=il-ah-ech
PRV-A1SG=see-CMP-B2SG
‘I saw you this morning’

Table 1. Distribution and functions of the two paradigms of Yucatec cross-reference markers

Environment	Set A	Set B
Transitive verbs (active voice)	A(ctor)	U(ndergoer)
Intransitive verbs; transitive verbs in non-active voice	S (incomplete, ‘status’)	S (completive, subjunctive, extrafocal ‘status’)
Other lexical categories	Possessor of nominals	S of non-verbal predicates

Head-marking and argument realization (cont.)

- head-marking and argument realization
 - the pronominal analysis of “bare” cross-reference markers predicts
 - that these are used under roughly the same conditions as free pronouns in dependent-marking languages
 - i.e., prototypically, for “continuous/accessible” topics (Givón 1983: 17)
 - conversely, NPs are predicted to be prototypically associated with the least continuous/accessible topics
 - i.e., for the introduction of new referents
 - or ‘chain-initial topics’ (Givón 1983: 9)
 - but what about referents that are neither new nor continued topics, but rather resumed old topics?

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Head-marking in Yucatec (cont.)

- the paradigms

Table 2. The morphological forms of the two paradigms of cross-reference markers

	Number	Person	Set A	Set B
(2.1) In=iiho-ech A1SG=son-B2SG ‘You are my son’	SG	1	in(w)=	-en
		2	a(w)=	-ech
		3	u(y)=	-Ø (/-ih)
(2.2) T-inw=il-ah-ech PRV-A1SG=see-CMP-B2SG ‘I saw you this morning’	PL	1	(Ø)k=...(-o’n)	-o’n
		1 INCL	(Ø)k=...o’ne’x	-o’ne’x
		2	a(w)= ...e’x	-e’x
		3	u(y)= ...o’b	-o’b

Head-marking in Yucatec (cont.)

- Bohnemeyer et al ms. propose a Bresnan/Mchombo-style PRO-drop analysis
 - supporting evidence
 - the apparent presence of NPs in embedded verbal cores
 - based on constituent order patterns
 - the significantly preferred co-occurrence of optional plural marking on verbs and cross-referenced NPs
 - in data from two production experiments

Argument realization in Yucatec

- Predictions (cf. Bohnemeyer 2009)
 - bare CR: for continuing topic chains
 - in transitive clauses: overwhelmingly A
 - A and U if two topic chains are maintained in tandem
 - » never U alone?
 - CR + clause-mate NP
 - for introducing new referents (definite or indefinite)
 - for resuming discontinued topics (definite)
 - in transitive clauses: overwhelmingly U
 - A and U in thetic predications
 - » never A alone?
 - CR + left-dislocated NP
 - for launching new topic chains
 - for disambiguation in contexts with multiple topical referents
 - for As outranked in humanness, definiteness, ...
 - for contrastive topics

Argument realization in Yucatec (cont.)

- an extended example
 - the cliff scene: an excerpt from a *Frog Story* narrative
 - recorded by Christel Stolz in 1992



Figure 1. The cliff scene from the *Frog Story* (Mayer 1969)

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Argument realization in Yucatec (cont.)

- left-dislocation
 - not a pre-verbal subject position, contrary to Durbin and Ojeda 1978; Gutiérrez Bravo ms.
- (3.1) **U=nah-il Pedro=e', nohol yàan u=ho'l**
A3=house-REL Pedro=TOP south EXIST(B3SG) A3=hole
'As for Pedro's house, its door is (facing) south'
- (3.2) **Le=wolis túun=o', tu'x kéen in=ts'a'**
DEF=circle so.then=D2 where SR.IRR A1SG=put(B3SG)
le=t-a=ya'x a'l-eh?
DEF=PRV-A2=first say-SUBJ(B3SG)
'As for the circles then, where am I going to put the one you mentioned first?'

Argument realization in Yucatec (cont.)

- an extended example (cont.)
- (3.3) a. Pwes, **le=kéeh=o', túun bin** well **DET=deer=D2** PROG:A3 go
'Well, **the deer**, it (S) is going...'
- b. **u=kuch-mah-Ø le=pàal y=éetel**
A3=carry.on.back-PERF-B3SG DET=child A3=COM
'...it (A) having shouldered ("backed") **the child** (U) with ...'
- c. **u=ho'l=o' táan u=bin.**
A3=head=D2 PROG **A3=go**
'...its **head** as it (S) is going.'
- d. Pwes, **káa=h** [new start] **le=pèek' xan=e' te'l**
well CON=PRV **DET=dog** also=TOP there
'Well, (when/and then) [new start] **the dog** as well, there...'

CR + LDed NP
CR + clause-mate NP
bare CR

Argument realization in Yucatec (cont.)

• an extended example (cont.)

(3.3) e. ts'ay-a'n-Ø tu'x yàan-Ø
hit-RES-B3SG where EXIST-B3SG
'...it (S) was hit where it (S) was...'

CR + LDed NP
CR + clause-mate NP
bare CR

f. t-u=pàach u=yùumil=o', táan xan u=tohol-t-ik-Ø
PREP-A3=back A3=master=D2 PROG also A3=bark-APP-INC-B3SG
'...behind its master (lit. at his back), it (A) was also barking...'

g. le=kéeh xan=o'; pwes, le=kéeh=o',
DET=deer also=D2 well DET=deer=D2
'...(at the deer (U); well, as for the deer, ...'

h. chich u=bin túun=e'.
hard(B3SG) A3=go so.then=D3
'...fast was how it (S) went.

Argument realization in Yucatec (cont.)

• an extended example (cont.)

(3.3) i. Le=káa=t-u=pik+ch'iin-t-ah-Ø
DEF=CON=PRV-A3=fling+pelt\ATP-APP-CMP-B3SG
'(When/and then) it (A) threw off...'

CR + LDed NP
CR + clause-mate NP
bare CR

j. le=pàal=o', káa=h-lúub-Ø le=pàal=e',
DEF=child=D2 CON=PRV=fall-B3SG DEF=child=D3
'...the child (U), (when/and then) the child (S) fell, ...'

k. tak le=pèek' túun=o' h-lúub-ih.
as.far.as DEF=dog so.then=D2 PRV-fall-B3SG
'...and even the dog, it (S) fell.'

Argument realization in Yucatec (cont.)

• a micro corpus study – two texts

– *Bix kahnal le nukuch máako'b úuch wayo'* 'How the Old
Folks Used to Live Here in the Old Days' (*Kahnal*)

- a demon story narrated by VEC, a then 72-year-old near-monolingual Maya speaker in 1999

– see Bohnemeyer 2003 for details

Table 4. Aspectual/modal markers in the *Kahnal* text (Bohnemeyer 2003: 149)

Category/construction	Reported speech			Total (621 uss)
	Descriptive text (first 177 uss)	(character utterances, 126 uss)	Main narrative text (318 uss)	
Stative classes	76 (43%)	28 (22%)	50 (16%)	154 (25%)
A Imperfective	46 (26%)	6 (5%)	34 (11%)	86 (14%)
M Perfective	2 (1%)	4 (3%)	113 (35%)	119 (19%)
m Progressive	3 (2%)	3 (2%)	16 (5%)	22 (4%)
t Terminative	2 (1%)	4 (3%)	7 (2%)	13 (2%)
c Prospective	2 (1%)	1 (1%)	0 (0%)	3 (0%)
f Other AM	8 (5%)	7 (6%)	5 (2%)	20 (3%)
Derivations	5 (3%)	1 (1%)	11 (3%)	17 (3%)
Other constructions	33 (19%)	72 (57%)	82 (26%)	187 (30%)
Total	177 (100%)	126 (100%)	318 (100%)	621 (100%)

An utterance unit (uus) "comprises no more than one independent or subordinate clause plus all material adjacent to it that does not itself form a constituent of a clause (e.g., topicalized NPs, but also interjections (...), vocatives (...), etc.), but maximally one conversational turn." (Bohnemeyer 2003: 158)
– In hindsight, **predication unit** might be a better term for this.

Argument realization in Yucatec (cont.)

• a micro corpus study – two texts (cont.)

– *Huntúul kòolkab* 'A campesino'

- part of the collection by Domingo Dzul Poot
- we used the version with interlinear glosses produced by Christian Lehmann and collaborators
– <http://www.christianlehmann.eu/ling/sprachen/maya/textos/index.html>
- 114 predication units counted in the same way as for *Kahnal*
– again excluding direct speech

Argument realization in Yucatec (cont.)

• a micro corpus study – two texts (cont.)

- so the micro corpus comprises 318 + 114 = 432 predication units
- in it, we counted 127 clause-mate or LD-ed NPs
 - coindexed with arguments of the heads of the syntactic predicates of main or subordinate clauses
– we did not count possessor NPs and arguments of prepositions
- so the odds of a predication unit containing at least one NP are roughly 1 in 3
- this is actually slightly *lower* than what Koenig & Michelson report for Oneida, which is about 40%
 - however, the difference might be accounted for in terms of differences in what was included in the count
 - tentatively, we assume the figures to be roughly comparable

Argument realization in Yucatec (cont.)

• a micro corpus study (cont.)

- coding
 - referents
 - new (not previously mentioned in the discourse)
 - topical – referenced in the immediately preceding clause
» a chain-medial/final topic in Givón 1983
 - resumed – old, but not referenced in the preceding clause
 - other – referent is a state of affairs or the like
 - realization
 - NP plus CR (we did not distinguish b/w LD-ed and clause-mate NPs)
 - bare CR
 - other – verbal core or clause, etc.

Argument realization in Yucatec (cont.)

- a micro corpus study: results
 - new referents strongly favor NPs
 - topical referents strong favor bare CRs
 - resumed referents occur w/ both NPs
 - and bare CRs
 - the difference is probably not significant
 - how come?

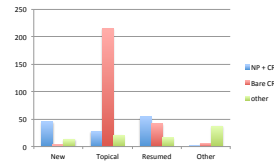


Figure 2. Argument realization and topicality in the micro corpus $\chi^2=308$; df=6; $p<0.001$

Argument realization in Yucatec (cont.)

- when do resumed topics occur with bare CRs?
 - two licensing factors
 - disambiguation by discourse structure
 - disambiguation by lexical semantics and world knowledge
 - example: *Kahnal* 205-214

(3.4) a. (...) káa, bin, t-u=kí'='k'ax-ah-Ø,
CON HS PRV-A3=nice=tie-CMP-B3SG
'(...) and, they say, he [the demon] nicely tied it [the bones] together,'
Lexical semantics: animacy

b. káa t-u=k'uch-ah-Ø, bin.
CON PRV-A3=load/carry.on.back-CMP-B3SG HS
'and he [the demon] loaded it [the bones] on his back.'

CR + LDed NP
CR + clause-mate NP
bare CR

Argument realization in Yucatec (cont.)

- two licensing factors (cont.)

(3.4) c. Káa t-u=ch'a'a'-ah-Ø, bin, u=ts'òon
CON PRV-A3=take-CMP-B3SG HS A3=shoot\ATP
'And he [the demon] grabbed, they say, the gun of'
le-estéel-le-le-le=òotsil máak
DEF-HESIT-DEF-DEF-DEF=poor person
'the-uh-the-the-the poor man'
CR + LDed NP
CR + clause-mate NP
bare CR

d. ts'-u=hàan-t-ik=o',
TERM-A3=eat-APP-INC(B3SG)=D2
'he had eaten,'

Argument realization in Yucatec (cont.)

- two licensing factors (cont.)

(3.4) e. káa=h-bin-ih.
CON=PRV-go-B3SG
'and he [the demon] took off.'

f. Pwes, le=òotsil nohoch máak=o',
well DEF=poor big person
'Well, the poor old man,'
Background!

ohel-a'n=e' biha'n-Ø h-ts'òon,
knowledge-RES(B3SG) go:RES-B3SG NOM-shoot\ATP
'it was known (that) he was gone hunting,'
tuméen u=pamiliya=o'.
CAUSE A3=family=D2
'by his family.'

Lexical semantics: animacy
Figure 3. Dead men don't walk - usually

CR + LDed NP
CR + clause-mate NP
bare CR

Argument realization in Yucatec (cont.)

- a micro-corpus study (cont.)

(3.4) g. Káa, bin, h-k'uch-Ø te=hòol+nah, bin=o',
CON HS PRV-arrive-B3SG PREP:DEF=aperture+house HS=D2
'When, they say, he [the demon] arrived at the door, they say,'
Resumption!

h. hehten!, káa, bin, t-u=pul-ah-Ø.
IDEO CON HS PRV-A3=throw-CMP-B3SG
'hehten!, and, they say, he [the demon] threw it [the bones] down.'

Lexical semantics: animacy

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Conclusions and discussion

- in narrative discourse, Yucatec speakers use bare cross-reference markers to track topic chains
 - much like speakers of dependent-marking languages use independent pronouns
 - Yucatec speakers, however, make extremely infrequent use of independent pronouns in narratives
 - outside reported speech, there are only two tokens in *Kahnal*
- noun phrases are used both for the introduction of new topics
 - and for the resumption of discontinued old ones

Conclusions and discussion (cont.)

- future directions
 - extend the corpus
 - more fine-grained coding
 - comparison of realization across Yucatec, Oneida, Lakhota, and other head-marking languages

Nachwort

An Meine Taschenuhr

Du schlimme Uhr, du gehst mir viel zu schnell;
und doch - dich schauend, sah ich selber hell.
Unschuldig Räderwerk, was schalt ich dich?
Ich geh zu langsam, ach zu langsam - ich.

Christian Morgenstern, *Galgenlieder*

Conclusions and discussion (cont.)

- bare cross-reference markers occur with discontinued topics
 - where the result does not lend itself to confusion
 - because discourse structure and lexical semantics provide cues that help avoid that
- it's not obvious that there is a difference b/w Yucatec and Oneida in the frequency of REs
 - despite the fact that Oneida CRs are gender-marked
 - and therefore might lend themselves much better to long-distance reference tracking
 - however, there is a dramatic difference b/w the two languages in the incidence of lexical nominals

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