**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 (cont.)**

- traditionally, the cross-reference markers are considered the syntactic arguments of the head
  - the cross-referenced NPs are syntactically optional

  (1.3) T-{wes-ah-∅} [hun-tul palal] [l=xh]=∅
    PRV-A3=gnaw-CMP(B3SG)
    one-CL.AN child DEF=cockroach=D2
    ‘The cockroach bit a child’ [elicited]

  (1.4) T-{wes-ah-∅}
    PRV-A3=gnaw-CMP(B3SG)
    ‘It bit it’ [constructed]

- 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] Si l=xu-‘ech, l=xpl-‘ech, ku=x!
  ‘You are my son alright, you are my child; let’s go!’ (Lehmann 1991)

  [1.2] T-{l=xu-‘ech
    te=ha’t=ab k’=im=x‘
    PREP=DEF=divide:PASS+Earth+sun=D1
  ‘I saw you this morning’
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: 91)
    - clausal adjunctions (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 Chichewa
    (Bantu; Malawi, Zambia, Mozambique)
  - Austin & Bresnan 1996 extend this analysis to Warlpiri

• background: Oneida

(1.6) Ohde? wa’miyo ch’ada? wə: yax̣waxa:kis ha’lo di’igaj
ka’w? yax̣waxa:kis ha’lo nukk ḥa’hala? ḥa’hala!
And she got a table/eh too
(Elvis Elia, Yaow Mi Akata’, 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’

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?

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

<table>
<thead>
<tr>
<th>Environment</th>
<th>Transitive verbs (active voice)</th>
<th>Transitive verbs (non-active voice)</th>
<th>Intransitive verbs</th>
<th>Other lexical categories</th>
<th>Possessor of nominative (Set A)</th>
<th>Nominative (Set B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set A</td>
<td>Act</td>
<td>[A]</td>
<td>[A]</td>
<td>[A]</td>
<td>[A]</td>
<td>[A]</td>
</tr>
<tr>
<td>Set B</td>
<td>Act</td>
<td>[A]</td>
<td>[A]</td>
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<td>[A]</td>
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<td>'You are my son'</td>
<td>en</td>
</tr>
<tr>
<td>2</td>
<td>pl</td>
<td>'I saw you this morning'</td>
<td>ech</td>
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</table>

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

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Summary

• head-marking and argument realization

• head-marking in Yucatec

• argument realization in Yucatec

• conclusions and discussion

The paradigms

(2.1) Iwii-eh
A1SG=scon-82SG
‘You are my son’

(2.2) T-iwii-w-ah-eh
PRV-A1SG=scon-CMP-82SG
‘I saw you this morning’
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)
    • in transitive clauses: overwhelmingly U
      – A and U in thematic projections
    – 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

• 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)

Synopsis

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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* **Pedró*e’**, *nohol* **yàan** **u=ha’il**
A3=house-REL Pedro=TOP south EXIST(B3SG) A3=hole
‘As for Pedro’s house, its door is (facing) south’

(3.2) *Le=wolis* **tiün=o’**, *ta’=kén* **inítsa’**
DEF=circle so.then=D2 where SR.IRR A1SG=put(B3SG) lent-anya’àx a’il=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.)
  – 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)

(3.3) a. *Pwes*, **le=xekhel-e’**,** tün bin**
well DET=deer=D2 PROG:A3 go
‘Well, the deer, if (S) is going...’

b. *u=kuch-mah* [new start] **le=xekhel**
A3=carry.on.back-PERF:B3SG DET=child A3=COM
‘...It (A) having shouldered (“backed”) the child (U) with...’

c. *u=ho’l* [new start] **tán** **bin**
A3=HEAD=D2 PROG A3=go
‘...its head as it (S) is going.’

d. *Pwes*, **ká=x [new start]** **le=xekhel**
well CON=PRV DET=dog also=TOP there
‘Well, (when/and then) [new start] the dog as well, there...’
an extended example (cont.)

(3.3) e. t’say-a’n-Ø tu’x yakan-Ø  
hit-RES-B3SG where EXIST-B3SG  
‘...it ($s$) was hit when it ($t$) was...’

f. t’-oplach uy=umil=ø’, t’an xan u=tohl-t-ik-Ø  
PREP-B3=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=kée=x xan=ø’; pwes, le=kée=x=ø’,  
DET=deer also=D2 well DET=deer=€D2  
‘...at the deer ($u$); well, as for the deer, ...;

h. chich un=bin tuũn=ø’.  
hard(B3SG) A3=go so.then=D3  
‘...fast was how it ($s$) went.

a micro corpus study – two texts

— *Bix kahnal le nukuch maako’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)

<table>
<thead>
<tr>
<th>Argument realization in Yucatec (cont.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• an extended example (cont.)</td>
</tr>
</tbody>
</table>
| (3.3) i. le=kái=a-t-un=p<k+<ím-t-ah-Ø  
DEF=CON=PRV-A3=fling+peitl|ATP-APP-CMP-B3SG  
 ‘(When/and then) it ($a$) threw off...’

j. le<phal=ø’. kái=h-lúub-Ø le<phal=ø’,  
DEF=child=D2 CON=PRV=fall-B3SG DEF=child=D3  
‘...the child ($u$), (when/and then) the child ($s$) fell, ...’

k. tak le<pek’. tún=ø’. h-lúub-lh.  
as.far.as DEF=dog so.then=D2 PRV=fall-B3SG  
‘...and even the dog, it ($s$) fell.’

a micro corpus study – two texts (cont.)

— *Huntúl koool kab* ‘A campesino’

— part of the collection by Domingo Dzul Poot

— we used the version with interlinear glosses produced by
  Christian Lehmann and collaborators


— 114 predication units counted in the same way as for Kahnal
  — again excluding direct speech

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

a micro corpus study (cont.)

— coding

  • refers
    — new (not previously mentioned in the discourse)
    — topical – referenced in the immediately preceding clause
    — a chain-final/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.
• a micro corpus study: results
  – new referents
  – topical referents
  – resumed referents

  occur w/ both NPs
  – the difference is
  probably not significant
  – how come?

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

• when do resumed topics occur with bare CRs?
  – two licensing factors
    • disambiguation by discourse structure
    • disambiguation by lexical semantics and world knowledge

  – example: Kohno 205-214

  (3.4) a. [...] kaa, bin, t-u=k'uch-ah-∅.
    CON,HS PRV=A3=nicely-to-cmp-B3SG
    'And he [the demon] took it [the bones] together,'

  (3.4) b. kaa t-u=k'uch-ah-∅.
    CON,HS PRV-A3=load/carry.on.back-cmp-B3SG HS
    'and he [the demon] loaded it [the bones] on his back.'

• a micro-corpus study (cont.)

  – two licensing factors (cont.)

  (3.4) c. Kaa t-u=ch-ah-∅. bin, u=t'on
    CON PRV=A3=take-cmp-B3SG HS A3=shootATP
    'And he [the demon] grabbed, they say, the gun of'
    le estés le-le-botsit, mák
    DEF-HEIS-DEF-DEF-def-poor person
    'the-uh-the-the-poor man'

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

  Argument realization in Yucatec (cont.)
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

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- we would like to thank
  - don Vicente Ek Catzin
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    - for providing much needed statistical wizardry
  - Professor Christian Lehmann
    - for getting things started
    - such as me, on linguistics and Yucatec
    - and us, here, today

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