On the function of numeral classifiers

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1. Introduction

Theses

At least for some languages:

1. There is no evidence for an individuating function of numeral classifiers.
2. The presence of numeral classification in such a language is, therefore, no evidence for some non-individuated basic semantic character of nouns in that language.
3. Instead, numeral classifiers are hosts to such numerals that fall short of independent nouns (in the traditional sense of ‘noun’).
4. By grammaticalization, numeral classifiers become a kind of substantivizers.

Numeral classifiers in Yucatec Maya

E1. a. hun-p'él tunich
YM one-CL.INAN stone
   “a/one stone”

b. ka'-p'él tunich
YM two-CL.INAN stone
   “two stones”

E2. a. hun-túul xib
YM one-CL.AN man
   “a/one man”

b. ka'-túul xib
YM two-CL.AN man
   “two men”
Functional hypotheses

Why should counting an object presuppose its classification?

1. The speakers of a numeral classifier language have not arrived at the pure concept of number; they have not yet abstracted cardinality as the common property of all the manifold sets of objects which happen to be of the same number. (Lévy-Bruhl 1910)

2. Languages with numeral classification typically lack the category of nominal number. And if they have it, it usually does not appear on a noun phrase containing a classifier phrase (just as in measure phrases). ⇒ The noun does not designate an individual falling under the concept, but just the concept itself. ⇒ The classifier has the function of individuation. (Greenberg 1972)

2. Structural analysis

Yucatec numeral classifier phrase

YM how.many-CL.INAN stone EXIST you two-CL.INAN
“How many stones do you have?” – “Two.”
how.many-CL.AN man EXIST you two-CL.AN
“How many men do you have?” – “Two.”

S1. Structure of the counted nominal (Yucatec)

\[
\begin{array}{c}
\text{[ [ [ X ]Num} - \text{ [ Y ]Num.Cl ]Num.Cl.P} \\
\text{ [ Z ] Count.Nom}
\end{array}
\]

G1. If a language uses numeral classifiers in counted nominals (Count.Nom) such as E1f, then it also has naked numeral classifier phrases (Num.Cl.P) (such as E3) in the place of complete noun phrases.

Diachronic version of G1

G2. If a language acquires numeral classification in constructions such as S1, it first
acquires numeral classifier phrases and uses these in anaphora.

**Numeral classifier construction in Bribri**

E4. a. kaño’ tulur bô-k ká’uk a
BRI tepezcuinte POS.seated:PL two-CL.round cave LOC
“there are two tepezcuintes in the cave.”
b. dù tulur stşôk bô-tk
bird POS.seated:PL sing:IMPF two-CL.flat
“there are two birds singing”
c. ye’ tô tkabê saâwé bô-tôm
I ERG snake see:PRFV two-CL.long
“I saw two snakes”

E5. kaño’ bô-k tulur ká’uk a
BRI tepezcuinte two-CL.round POS.seated:PL cave LOC
“the two tepezcuintes are in the cave.” (Constenla et al. 1998:70)

S2. Structure of the discontinuous counted nominal (Bribri)

\[
\begin{array}{c|c|c|c}
   X & \ldots & V & [ Y ]_{Num} [-Z ]_{Num.Cl} \end{array}
\]

S3. Evolution of numeral classifier construction

<table>
<thead>
<tr>
<th>phase</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>construction</td>
<td>classifier phrase as an anaphor</td>
<td>discontinuous counted nominal</td>
<td>continuous counted nominal</td>
</tr>
</tbody>
</table>

**Yucatec native and loan numerals**

E6. a. óox-túul xib
YM three-CL.AN man
“three men”
b. kan-túul xib = cuatro xib-o’b
four-CL.AN man four man-PL
“four men”
c. cinco xib-o’b
five man-PL
“five men”

**Conclusion 1**

It is not the Yucatec noun that needs individuation;

it is the Yucatec numeral that needs the classifier.

**Yucatec numerals and classifiers – free or bound?**

YM how.many-CL.AN-PL six [ POSS.3 CL.AN-REL ]NP

“How many were they?” – “There were six of them.” [lit.: six (are) of them]

**Conclusion 2**

The primary function of Yucatec numeral classifiers is purely structural: its members serve as props for the numerals, which are affixes.

The primary function of numeral classifiers is to serve as dummy nouns that those numerals which are affixes can attach to.

**3. Classifiers and the status of numerals**

G3. If a numeral of numerical value X is adjectival in nature, then all numerals lower than X are adjectival, too.
Conversely, if a numeral of numerical value X is substantival in nature, then all numerals higher than X are substantival, too. (cf. Corbett 1978)

S4. Grammatical status of numerals
affix < adjective < noun

G4. Given a numeral with numerical value X occupying position Y on S3, then numerals for numbers lower than X will not occupy positions to the right of Y. Conversely, numerals for numbers higher than X will not occupy positions to the left of Y on S3.
Numeral classifiers in Bribri

<table>
<thead>
<tr>
<th>numeral</th>
<th>longish object</th>
<th>flat object</th>
<th>round object</th>
<th>human</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>e'-töm</td>
<td>e'-tk</td>
<td>e'-k</td>
<td>e'-köl</td>
</tr>
<tr>
<td>2</td>
<td>bô-töm</td>
<td>bô-tk</td>
<td>bô-k</td>
<td>bô-l</td>
</tr>
<tr>
<td>3</td>
<td>maⁿñâ-töm</td>
<td>maⁿñâ-tk</td>
<td>maⁿñâ-l</td>
<td>maⁿñâ-l</td>
</tr>
<tr>
<td>4</td>
<td>tkê-töm</td>
<td>tkê-l</td>
<td>tkê-l</td>
<td>tkê-l</td>
</tr>
<tr>
<td>5</td>
<td>skê-töm</td>
<td>skê-l</td>
<td>skê-l</td>
<td>skê-l</td>
</tr>
<tr>
<td>9</td>
<td>suñli-töm</td>
<td>suñli-tu</td>
<td>suñli-tu</td>
<td>suñli-tu</td>
</tr>
</tbody>
</table>

how many  | iê-töm         | iê-tk       | iê-k         | iê-l  |
the other | bî-töm         | bî-tk       | bî-k         | bî-l  |

T1. Paradigm (after Constenla et al. 1998:65f, 73)

Numerals and numeral classifiers

G5. If, in a language, a numeral of numerical value X combines with numeral classifiers, then all numerals with numerical values lower than X also combine with numeral classifiers.
Conversely, if a numeral of numerical value X does not require a numeral classifier, then numerals with numerical values higher than X do not require one, either.

Numeral classifiers and substantivizers in Bribri

<table>
<thead>
<tr>
<th>class function</th>
<th>longish object</th>
<th>flat object</th>
<th>round object</th>
<th>human</th>
</tr>
</thead>
<tbody>
<tr>
<td>classifier</td>
<td>-töm</td>
<td>-tk</td>
<td>-k</td>
<td>-l</td>
</tr>
<tr>
<td>substantivizer</td>
<td>-ëtöm</td>
<td>-ëtk</td>
<td>-ëk</td>
<td>-ël</td>
</tr>
</tbody>
</table>

T2. Paradigm (after Constenla et al. 1998:92)

E8. a. bua'-ëk

BRI  good-CL.round

“the good one (fruit etc.)”

b. chkâii-ël

fat-CL.HUM

“the fat one (person)”

C. chkâii-ël-pa

fat-CL.HUM-PL

“the fat ones (persons)”
Substantivization of numerals in German

GERM “What (kind of) eggs do you want?” — “Give me small ones.”
GERM “How many eggs do you want?” — “Give me six.”
GERM “How many eggs do you want?” — “Give me six items.”
GERM “How many eggs do you want?” — “Give me six.”
GERM b. Um acht.
c. Um achte.
“When shall we meet?” — “At eight o'clock.”

E14. a. kleine Eier
GERM “small eggs”
b. sechs Eier / *sechse Eier
“six eggs”
E15. a. alle neune
GERM “all nine (pins)”
b. alle Kleinen
“all small ones”
E16. a. Erwin begab sich auf alle Viere.
GERM “Irvin got down on all fours.”
b. Irvin näherte sich auf allen Vieren.
“Irvin approached on all fours.”

T3. German substantivized numerals
einer, eine, eins
zweie, dreie ... zwölfe [ʦvœlœ]
³dreizehne, ³vierzehne ... ³neunzehne
*zwanzige, *dreißige ... (hunderte, tausende), *millione

S5. Grammaticalization of numeral classifier
generic noun > numeral classifier > numeral nominalizer
4. Conclusion

1. At least in some languages that use numeral classifiers, these function as hosts to numerals that are not words.
2. They are nominalizers in the broadest sense.
3. The final destination of a numeral classifier is the categorial operator.

5. References

Iturrioz Leza, José Luis 1986, "Semiotic levels. On the metalinguistic nature of grammatical meaning." Función 1:119-144.
Lehmann, Christian 2002, Possession in Yucatec Maya. Erfurt: Seminar für Sprachwissenschaft der Universität (ASSidUE, 10) (2nd revised ed.).


