

Parallels Between Auxiliaries and Numeral Classifiers

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The Issue

Clauses  Nominals



Parallels Between Auxiliaries and Numeral
Classifiers

Auxiliaries

A word that 'helps' the main verb in expressing certain moods, aspects, tenses or voices, in a clause, is an auxiliary.

(1)

- a. Greg **was** defeated.
- b. Miguel **has** defeated Greg.
- c. Erik **should have been** present.

Numeral Classifiers

- (2) a. Yaoyao kanjian-le san zhi bi.
Yaoyao see-prf three cl pen
'Yaoyao saw three pens.
- b. Yaoyao kanjian-le san di you.
Yaoyao see-prf three cl oil
'Yaoyao saw three drops of oil'.

Previous Claims on CLs

Numeral Classifiers (CLs) are analyzed

- as nominal auxiliaries in Chao (1948, 1968: 584) and Lu (1951: 42), and auxiliar-substantive in Blühdorn (2006);
- as numeral auxiliaries in Ōta (2003 [1958]: 146);
- as light nouns in Wiltschko (2005) and Huang (2009).

Outline

1. Five parallel properties of CLs and auxiliaries
2. Comparing the two types of elements with other functional elements
3. Three differences between CLs and other functional elements

1. Five Parallel Properties

- A. Semantic functions
- B. Selecting property
- C. Null forms
- D. EPP
- E. Ellipsis licensing

A. Semantic Functions

Neither an auxiliary of a clause
nor a CL in a numeral expression
functions independently as
an **argument** or
predicate,

B. Selecting property

They both c-select substantive categories.

Auxiliaries select verbal phrases;

CLs in numeral expressions select nominal phrases.

C. Null Forms

They both can be absent or have null forms in certain constructions and in certain languages.

Not all clauses have overt auxiliaries (Kayne 2012: Sec. 4).

Similarly, idiomatic expressions in Chinese have no CL between a numeral and a noun.

Non-CL languages have no CLs.

(3)

Wu ma fen shi [idiomatic expression in Chinese]

five horse divide body

‘5 horses pull a body apart (as an ancient death penalty).’

D. EPP

They both may have an EPP-like property, i.e., they are next to an overt element in addition to the selected substantive category.

In English, an auxiliary is next to the subject or the expletive (the subject is null in imperatives).

The CL in a numeral expression always occurs with a numeral or quantifier.

E. Ellipsis Licensing

They both license ellipsis, like many other head elements.

(4) Aux

a.

Baoyu huì mai baoxian, Daiyu ye hui *mai baoxian*.

Baoyu will buy insurance Daiyu also will buy insurance

‘Baoyu will buy insurance, and Daiyu will also buy insurance.’

b.

*Baoyu qu-nian mai-le baoxian, Daiyu jin-nian *ye mai-le baoxian*.

B last-year buy-prf insurance D this-year also buy-prf insurance

(5) CL

Baoyu mai-le san ben shu, Daiyu ye mai-le san ben shu.

Baoyu buy-prf three cl book Daiyu also buy-prf three cl book

‘Baoyu bought three books, and Daiyu also bought three.’

Summary of the Parallelisms

	Aux	CL
A. As argument/predicate	x	x
B. Substantial Cat-selecting	✓	✓
C. Null forms	✓	✓
D. EPP	✓	✓
E. Ellipsis licensing	✓	✓

2. Comparing with other functional elements

"Isn't it true that most of the shared properties between auxiliaries and numeral classifiers in fact hold for all functional elements?"

Aux is a realization of Fin/Infl in English and Chinese;
CL is a realization of the head of UnitP (Zhang 2012).

Complementizers, tense-aspect affixes on verbs;
Demonstratives, noun-internal individual-markers

Complementizers

	Aux	CL	Com _E <i>that</i>	Com _G <i>dass</i>
A. As argument/predicate	x	x	x	x
B. Substantial C-selecting	✓	✓	x	x
C. Null forms	✓	✓	✓	✓
D. EPP	✓	✓	x	x
E. Ellipsis licensing	✓	✓	x	x

C: Pronouns? See Baunaz (this workshop).

Demonstratives

	Aux	CL	Dem
A. As argument/predicate	x	x	x
B. Substantial C-selecting	✓	✓	✓
C. Null forms	✓	✓	x
D. EPP	✓	✓	x
E. Ellipsis licensing	✓	✓	x

Articles \approx Demonstratives

	Aux	CL	Dem/Art
A. As argument/predicate	x	x	x
B. Substantial C-selecting	✓	✓	✓
C. Null forms	✓	✓	x
D. EPP	✓	✓	x
E. Ellipsis licensing	✓	✓	x

Cf. Roehrs (2009) claims that articles are nominal auxiliaries.

Tense-aspect affixes on verbs

TAM: *-ed* (pst), *-le* (perfect), *-zhe* (progressive), *-guo* (experiential), *-de-* 'possible'

	Aux	CL	TAM
A. As argument/predicate	x	x	x
B. Substantial C-selecting	✓	✓	✓
C. Null forms	✓	✓	x
D. EPP	✓	✓	x
E. Ellipsis licensing	✓	✓	x

Noun-internal individual-markers

(5) NIIM

a. san ge da you-**di**
three cl big oil-cl
'three big oil drops'

b. viele Bröt-**chen** (German, Wiltschko 2005)
many.pl bread-dim
'many little bread-rolls'

noun-internal individual-markers

	Aux	CL	NIIM
A. As argument/predicate	x	x	x
B. Substantial C-selecting	✓	✓	✓
C. Null forms	✓	✓	x
D. EPP	✓	✓	x
E. Ellipsis licensing	✓	✓	x

Summary

Clauses  Nominals

Parallels in the properties of functional elements



Parallels Between Auxiliaries and Numeral CLs

Not all of them are shared by other functional elements

3. Three differences between numeral CLs and other functional elements

CLs have **three** properties that are shared with **substantive** elements, rather than **functional** elements.

First, CLs seem to be an open system to certain extend (T'sou 1976: 1217; Loke 1997; Aikhenvald 2003: 99; H. Zhang 2007: 57; Wu & Bodomo 2009: 490).

Chao (1968: 603): Temporary measures

Nouns >> CL

(6) a.

liang zhuozi sheng-cai

two table leftovers

'2 tableful of leftovers'

b.

san hei-ban gongshi

three blackboard formula

'3 blackboardful of formulas'

Considering this fact, it is reasonable to cast doubt on the functional head status of CLs.

Second, some substantial elements must occur with numeral expressions, which are headed by unit words (including numeral CLs).

A special semantic type;

UnitP and QuantP (Li's 1998 NumP)

e.g. *zonggong*, *yigong* 'in total'
 dengyu 'equal to'
 yue 'roughly (for a numeral)',
 zuzu 'as many as'

(7)

*Baoyu zonggong mai-le hua.

Baoyu total buy-prf flower

Third, some individual, individuating, and kind CLs have s-selectional restrictions (Zhang 2012).

Individual CLs

(8)

- | | | | |
|----|--------------------|----|------------------------|
| a. | san pi {ma/*zhu} | b. | san zhan {deng/*lazhu} |
| | three cl horse/pig | | three cl lamp/candle |
| | ‘three horses’ | | ‘three lamps’ |

Individuating CLs

(9)

- | | | |
|----|--|-----------|
| a. | liang ji {yao-shui/ | *ji-tang} |
| | two cl medicine-liquid/chicken-soup | |
| | ‘two doses of liquid medicine’ | |
| | | |
| b. | liang pao {niao/*ji-tang} | |
| | two cl urine/chicken-soup | |
| | ‘the amount of pee of two peeing events’ | |

It has been claimed that elements with s-selectional properties should be treated as substantive, rather than functional elements (Cardinaletti & Giusti 2006: 52).

However,

The status of s-selection?

Ramchand (2008: 117):

"Selection can be achieved via category labels on lexical items plus a constrained theory of lexical insertion (which we need anyway)."

=> Unit is a functional category, but its realizations, i.e., various CLs, have their own combination properties.

Ramchand (2008: 117) on s-selection:

"Consider an analogy to the description of the chemical elements in physical chemistry (here, our 'lexical items').

In such a situation, listing a description of the element's properties together with an independent listing of the different kinds of element it can combine with would seem like missing a generalization.

Instead, our chemical descriptions of elements in terms of protons, neutrons and electrons are successful precisely because they can predict what kinds of chemical compounds they can participate in."

The three properties of CLs,
together with their five parallels with auxiliaries,
challenge our current understanding of the
contrasts between functional and substantive
elements.

"classifiers occupy a middle ground between
purely grammatical units and meaning-bearing
units." Tsang & Chambers (2011: 1078)

S-selection is also found in
some light verbs (e.g., Ramchand 2008: 126)
some light nouns (e.g., Wiltschko 2005)

Such elements may belong to:

- what Borer (2005: 100) calls “**twilight zone** between the substantive and the functional”, or
- semi-lexical category in the sense of Corver & van Riemsdijk (2001).

If formal features of various types can be bundled into formatives (lexical items) in various ways,

it should not be surprising that there are gradient differences between substantive and functional elements.

Heavy vs. impoverished lexical content

Conclusions

1. There are five main parallel properties between auxiliaries and numeral CLs;
2. Other functional elements do not share so many properties
=> parallels in the two domains
3. CLs also show properties of both substantial and functional elements.

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