Reanalyzing the Chinese multiple-classifier construction

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Introduction: The MCC

Mandarin Chinese has a nominal construction known as the multiple-classifier construction (MCC), which consists of a kind classifier (KCL) phrase embedded inside a second individual (ICL) or mass classifier (MCL) phrase, as in (1):

Example 1 (Liao and Wang 2011:147,149)

a. Zhangsan you san zhi zhe yi zhong gou.
Zhangsan has three KCL dog
b. Lisi gong, he-le san zhi liang zhang tang.
Lisi totally drink three KCL that two KCL soup
  ‘Lisi drank three bowls of soup of the two different kinds in total.’

c. You san zhe zhi liang zhang gou bei zhu-le qilai
  have three ICL this two KCL dog catch up
  ‘Three dogs of these two kinds got caught.’

Liao and Wang (2011) (hereafter L&W) propose that the MCC is a partitive construction with an unpronounced partitive head. They also argue that the MCC provides evidence against the theory that bare nouns in Chinese denote kinds (e.g. Chierchia 1998).

In this research we:

- discuss problems with L&W’s argument against the Nominal Mapping Hypothesis
- identify further restrictions on the MCC that make a partitive analysis less plausible
- show that the MCC is better analyzed as a special variant of a standard numerical construction, which is expected under the assumption that Chinese bare nouns denote kinds

L&W’s argument against the NMP

Chierchia’s (1998) Nominal Mapping Parameter (NMP) states that languages vary in whether their bare NPs can denote kinds (type e) and properties (type et). In particular, Chinese is claimed to be a [-arg, +pred] language: its bare NPs are always argumental (kinds).

L&W make the following argument against the NMP:

- Assuming the NMP, the Lexical Blocking Principle (an economy principle) blocks overt determiners (type et,e) from co-occurring with bare NPs (already type e by assumption) in Chinese.
- But the MCC requires either a demonstrative (zhe/na ‘this/that’) or specific article (mou ‘certain’) (L&W:149), i.e. it has an overt determiner.
- This is a contradiction, so the NMP assumption that Chinese bare nouns denote kinds must be false.

Instead L&W follow Cheng and Sybesma (1999) in assuming that Chinese bare nouns denote properties (Figure 1a).

L&W’s partitive analysis

L&W observe the following similarities between the MCC and partitive constructions:

- The lower nominal phrase (CIP or NP/DP for MCC or partitive, respectively) in both constructions can only have a collective/group reading (157).
- The lower nominal phrase in both constructions must be definite/specific; for the MCC, this is due to the obligatory demonstrative/specific article (156).
- Interpretations of both the MCC and partitive constructions are monotonic; i.e., salient part-whole relations are tracked between the measure phrase and the measured noun (159–60).
- L&W conclude that the MCC is a partitive construction with an unpronounced partitive head.

Against a partitive analysis

In the MCC it is not sufficient for the second phrase to denote a group/collective reading. The following examples in (2) with individual, group, and container classifiers are ungrammatical, in contrast to the felicitous MCC examples in (1).

Example 2 (cf. Example 1)

a. san ge zhe qu ge zhe zhi zhe yi zhong gou
   three ICL this ICL student
   intended: ‘three of the five students’

b. san ke zhe tong tong tian
   three ICL this MCL_chinese Candy
   intended: ‘three candies of this bucket’

c. san bei zhe xie cha
   three MCL this MCL_partitive tea
   intended: ‘three cups of this tea’

d. san zhe qu hao men
   two ICL this MCL_happy child pl
   intended: ‘two of this group of children’

The second classifier must be a kind classifier, as in (1).
- By contrast, partitives in English permit group/collective readings (e.g. two of the students; three cups of the tea).
- If the MCC is a partitive construction, why does it have this restriction?

Monotonicity is not a sufficient condition for being a partitive construction.
- Monotonic interpretations hold not only in partitive constructions, but also in measure phrases and numerical constructions in Chinese (Jiang 2009; Gebhardt 2011).

Problems with L&W’s argument

- L&W mischaracterize the Lexical Blocking Principle as saying that inherently type e bare NPs block the presence of lexical definite determiners in the syntax. But the Lexical Blocking Principle actually requires that lexical determiners be used over covert type-shifting operators like 1 (Chierchia 1998:360).
- In particular, it does not ban lexical determiners from co-occurring with inherently type e arguments.
- Moreover, demonstratives have additional semantic content (the act of demonstration) which removes them from direct competition with 1.
- Thus, the demonstrative in the MCC is not a valid reason to reject the NMP.

Our proposal

We propose that the MCC is simply a special variant of a standard numerical construction (NC). For example, the MCC example (3a) is a special form of an NC such as (3b), with the bare noun in (3b) replaced by the KCLP in (3a).

Example 3

a. san zhe zhe zhong gou
   MCC three ICL this KCL dog
   ‘three dogs of this kind/breed’

b. san zhe jingbaquan
   three ICL Pekingese
   ‘three Pekingese’

Figure 1b shows a possible syntactic structure for the MCC. (We remain agnostic on the status of DP in Chinese; the DP/NP choice doesn’t affect our analysis.)

We crucially assume the NMP hypothesis that Chinese bare nouns denote kinds in our structure.

Advantages over L&W’s analysis:

- Subkind restriction on the lower classifier: This follows naturally from the NMP assumption that bare nouns denote kinds and hence that classifiers directly combine with kinds.
- Role of classifiers: In an NMP framework, classifiers have a clear semantic role as a type-shifter, unpacking kinds (type e) into properties (type e,t). The role of classifiers is not clear in L&W’s theory.
- Monotonicity: Even without a partitive projection, monotonic interpretations in the MCC are expected under our analysis since Chinese NCS are monotonic (Gebhardt 2011).
- Economy: Our analysis does not postulate an unpronounced functional head.

Selected references


Zamparelli, R. 1998. ‘Zhangsan has three dogs of this breed.’


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