The author argues against a grammatical basis for dividing Chinese nouns or Chinese classifiers into subcategories at the word level (e.g. count versus mass nouns, or sortal versus mensural classifiers). Instead, he proposes a division of classifiers at the phrasal level, into count classifier phrases versus measure classifier phrases. This underlying idea is reminiscent of the (in)alienable property that, similarly, is not a feature of words but of phrases. (In)alienability is the (im)possibility of separating the possessees from the possessor (Chappell & McGregor 1996).1

The author reviews empirical evidence for distinguishing between count and mass nouns, and between sortal and mensural classifiers. There is a ‘signature property’ (Chierchia 2010) that divides nouns into those that can be directly modified by numerals (count nouns) and those that cannot (mass nouns). Since all Chinese nouns carry the signature of mass nouns, the distinction of count versus mass nouns cannot be made at a grammatical level, only at an ontological level. Bare nouns, which the author investigates in a separate chapter, are underspecified between a kind-level reading and a (count/mass) object-level reading (Krifka 1995). The author deploys two tests that demonstrate this ambiguity. First, bare nouns can take kind-level predicates like juezhong ‘extinct’ or become kind-level predicates after the copula. Second, bare nouns that are objects of opaque verbs like zhao ‘seek’ are ambiguous between a kind-level reading and a definite object-level reading.

Moreover, the author discounts any evidence that would allow drawing a grammatical distinction between sortal and mensural classifiers that in turn could be used to differentiate between count and mass nouns. He argues against three pieces of evidence that Cheng and Sybesma (1998) advanced in support of a distinction between sortal and mensural classifiers. First, it is not always the case that sortal classifiers are denominal morphemes and mensural classifiers nominal morphemes. Some sortal classifiers, for example, are grammaticalized from verbs (gua ‘hang’) and adjectives (wan ‘curved’), while some mensural classifiers cannot be used as nouns that take classifiers. Second, not all sortal classifiers disallow modification by the adjectives da ‘big’/xiao ‘small’. (Mensural classifiers, by contrast, can take size adjectives.) The author quotes Lu (1987),

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1 Chappell and McGregor (1996:3) distinguish between my liver (inalienable) and my liver that I am going to eat (alienable). Languages may or may not mark the feature of inalienability in the grammar.
who identifies twenty-four sortal classifiers with possible adjectival modification. Third, there are many counterexamples to Cheng and Sybesma’s claim that sortal classifiers cannot be followed by the nominalizer de, while mensural classifiers can. A summary of these counterexamples is presented in Table 1.

PHENOMENON | TENDENCY | COUNTEREXAMPLES
--- | --- | ---
Origin of classifier | Sortal classifiers are grammaticalized nouns. | yi gua bianpao ‘a string of firecrackers’
 | Mensural classifiers are descriptive nouns. | yi ping shui ‘a bottle of water’
 | *yi ge ping ‘a bottle’
Size adjectives | Sortal classifiers cannot take size adjectives. | yi da ben zidian ‘a big dictionary’
 | Mensural classifiers can take size adjectives. | —
Nominalizer de | Sortal classifiers cannot be followed by de. | ershi-si mei de luan ‘about 24 eggs’
 | Mensural classifiers can be followed by de. | yi kuai (*de) rou ‘a piece of meat’

Table 1. Sortal classifiers and counterexamples.

In support of the author’s argumentation, we can further cite the fact that certain sortal classifiers can categorize both count and mass nouns. The classifier tiao, for example, categorizes lengthy count objects and also mass objects such as precious metals.

(1) a. san tiao he

b. san tiaojinzi

‘three rivers’

‘three gold bullions’

The main proposal of the book is a syntactic dichotomy of Chinese count and measure classifier phrases. Many scholars observed that container classifier phrases like three bottles of water are ambiguous between a count reading and a measure reading (e.g. Selkirk 1977).

(2) a. John carried [three bottles of water] home. (count)

b. I poured [three bottles of water] into the soup. (measure)

On the count reading, the classifier bottles is the head of the phrase, three its specifier, and water its complement, whereas on the measure reading the mass noun water is the head of the phrase and three bottles its specifier. This ambiguity is thus syntactic in nature.

(3) a. Count reading

b. Measure reading

The author shows that Chinese container classifiers exhibit the same ambiguity as their English counterparts in 2, and that the count and measure readings can be disambiguated in four syntactic constructions. First, in bare classifier-noun constructions (Cl + N) only the count interpretation is available (see 4 below). Second, classifiers can be reduplicated only on the count reading. Third, the use of the quantifier duo ‘more’ after the classifier (Num + Cl + duo + N) induces a measure interpretation. Fourth, the nominalizer de can link a classifier and a noun (Num + Cl + de + N) only on the measure reading.

Based on the syntactic ambiguity between count and measure interpretations, the author proposes four types of classifiers in Chinese.

These four types introduce a lexical subdivision of classifiers and run counter to Li’s original argument that classifiers cannot be distinguished at the lexical level. The [−count, −measure] type is odd since it implies that classifiers of this type (neither count nor measure) exist, despite the fact that expressions like san lei shu ‘three classes of books’ look syntactically similar to container classifiers of the type [+count, −measure].
The author builds on the formal semantic analysis of classifiers proposed by Krifka (1995) and Rothstein (2010). He proposes a formal analysis that, since it uses shortcuts and hidden assumptions, I have reinterpreted as follows.

- \( (\mathcal{D}, \subseteq, \cap, \cup) \) is a complete atomic Boolean algebra with the domain set \( \mathcal{D} \) of entities.
- \( \wp(\mathcal{D}) \) = the power set of \( \mathcal{D} \) is also a Boolean algebra
- \( W \) = set of possible worlds
- \( c \) = a context that is a subset of possible worlds \( c \subseteq W \)
- Each noun \( N \) is interpreted in \( c \) by two subsets: as property \( C^\cup_c \subseteq \mathcal{D} \) and as kind \( C^\cap_c \subseteq \mathcal{D} \). (The superscripts ‘\( \cup \)’ and ‘\( \cap \)’ symbolize Chierchia’s (1998) kind-to-property and property-to-kind shifts.)
- A numeral \( \text{Num} \) is interpreted as a context-independent function:
  \[
  \| \text{Num} \| : \wp(\mathcal{D}) \rightarrow \wp(\mathcal{D}).
  \]
  \[
  E \subseteq \mathcal{D} \rightarrow \{ E \text{ if card}(E) = \text{Num}; \emptyset \text{ otherwise} \}
  \]
- The gestalt properties of Chinese classifiers \( Cl \), such as ‘lengthy objects’, ‘granulates’, ‘bottle’, or ‘pound’, are represented by a subset \( \text{GESTALT} \subseteq \mathcal{D} \) that varies with the classifier. Depending on whether it is a sortal, container, or measure classifier, \( Cl \) is interpreted in context \( c \) as one of the following functions:
  i. \( \| Cl \|_c : \wp(\mathcal{D}) \rightarrow \wp(\mathcal{D}) \) \{sortal\} do not overlap
  \[
  E \subseteq \mathcal{D} \rightarrow \{ x \in E | \forall y \in E : x \cap y = \emptyset \} \cap \text{GESTALT}
  \]
  (GESTALT = \emptyset is ‘vacuous’ if the classifier is general without gestalt semantics)
  ii. \( \| Cl \|_c : \wp(\mathcal{D}) \rightarrow \wp(\mathcal{D}) \) \{container\} containment
  \[
  E \subseteq \mathcal{D} \rightarrow \{ x \in E | \forall y \in E : x \subseteq y \text{ or } y \subseteq x \} \cap \text{GESTALT}
  \]
  iii. \( \| Cl \|_c : \wp(\mathcal{D}) \rightarrow \wp(\mathcal{D}) \) \{measure\}
  \[
  E \subseteq \mathcal{D} \rightarrow E \cap \text{GESTALT}
  \]
- A classifier phrase ‘Num Cl N’ in context \( c \) is a subset \( \| \text{Num} Cl N \|_c \subseteq \mathcal{D} \) defined by functional concatenation: \( \| \text{Num} Cl N \|_c = \| \text{Num} \| ( \| Cl \|_c ( \| N \|_c ) ) \).

This formalization, like Rothstein’s (2010) earlier analysis but unlike Krifka’s (1995) work, uses possible worlds via the notion of context, which in my view are not required. In general, numeral classifiers do not depend on clause-external information for their interpretation. The examples the author discusses can be understood as selectional restrictions of lexical projection rules à la Katz & Fodor 1963. The use of an intensional semantics therefore appears to be unwarranted. Another problem is that the author proposes different analyses for \( \| Cl \|_c \) along the heuristic lines of sortal, container, and measure classifiers. Since the author wishes to establish the count versus measure interpretations in his book (see 3), he could have made a stronger case, if the formal semantic analyses exactly represented these interpretations.

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2 Some East Asian languages happen to encode deictic information in their nominal classifiers, for example, the Miao languages (Gerner & Bisang 2008). These classifiers, however, have functions that differ from those discussed in the book.
In the final part of the book, the author accounts for the correlation between bare classifier constructions \((\text{Cl} + \text{N})\) and (in)definite reference. His empirical observations in Mandarin Chinese, Wu, and Cantonese are summarized in Table 3.

<table>
<thead>
<tr>
<th>Cl + N</th>
<th>Topic</th>
<th>Subject</th>
<th>Preposed Object</th>
<th>Canonical Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandarin</td>
<td>—</td>
<td>—</td>
<td>indefinite</td>
<td>indefinite</td>
</tr>
<tr>
<td>Wu</td>
<td>—</td>
<td>definite</td>
<td>indefinite</td>
<td>indefinite</td>
</tr>
<tr>
<td>Cantonese</td>
<td>definite</td>
<td>definite</td>
<td>(in)definite</td>
<td>(in)definite</td>
</tr>
</tbody>
</table>

Table 3. Correlation between bare classifier constructions \((\text{Cl} + \text{N})\) and (in)definite reference.

Bare classifiers \((\text{Cl} + \text{N})\) are definite to the extent that they occur as the (primary or secondary) topic of the sentence. Wu as the most topic-prominent language correlates the definite readings always with a position that can be occupied by a topic. In the slightly less topical Mandarin and Cantonese languages, this tendency is weaker.

Following Simpson 2005, and contra Cheng & Sybesma 1998, the author does not reserve for the classifier the role of determiner or definite article. The classifier is generated in the lower classifier phrase. On the indefinite reading, no movement occurs, but on the definite reading the classifier is moved up into the specifier position of DP.

\begin{align*}
\text{(4) a. Indefinite Cl + N} & \\
\text{DP} & \\
\text{D} & \\
\emptyset & \\
\text{NumP} & \\
\emptyset & \\
\text{CIP} & \\
\text{Cl NP} & \\
\text{ben ‘volume’ shu ‘book’} & \\
\text{b. Definite Cl + N} & \\
\text{DP} & \\
\text{D} & \\
\emptyset & \\
\text{NumP} & \\
\emptyset & \\
\text{CIP} & \\
\text{Cl NP} & \\
\text{ben₁ ‘volume’} & \\
t₁ & \\
\text{shu ‘book’} &
\end{align*}

REFERENCES


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