

TRANSITIVITY REQUIREMENTS IN CHINESE: PUTTING THE GENERIC OBJECT IN CONTEXT*

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1. Introduction

1.1 The Generic Object Construction

Much of the research on Chinese transitivity has been devoted to the prevalent phenomenon of topic-drop, whereby the topic of discussion, known to both speaker and interlocutor, is topicalized and subsequently phonetically deleted, resulting in a referential null object, as in (1) (Huang 1984).

- (1) John, wo yijing jian guo le *e*
John, I already meet PRF *e*
'John, I already met'

Despite the abundance of literature on null objects however, there is no uniformly agreed upon consensus as to the exact nature of the null object, and the properties assigned to it. A far less debated and studied construction, seemingly the opposite of the referential null object, is that of the generic object, wherein a non-referential, generic interpretation appears to be achieved transitively, through the use of a generic object. Many verbs that are commonly used intransitively in English appear with generic objects in Chinese, yielding non-referential readings, as in (2).

- (2) Lisi zai chang ge
Lisi PROG sing song
'Lisi is singing' (lit. 'Lisi is singing-song')

As seen in (3), the generic object is in complementary distribution with other object forms.

- (3) wo zai du (*shu) zhe ben shu
I PROG read (*book) this CL book
'I am reading this book'

More specifically, the generic object is used only in non-referential contexts, and the referential null object only in referential contexts. To achieve a non-

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referential reading with the verb in (3), the generic object *shu* ‘book’ must be inserted:

- (4) wo zai du shu
 I PROG read book
 ‘I am reading’

The verbs that appear with generic objects are generally the Chinese equivalents of optionally transitive verbs in English. Some examples are found in Table 1.

Table 1 (Cheng & Sybesma 1998)

English	Mandarin
eat ¹	chi-fan ‘eat-rice=eat’
read	kan-shu ‘read-book=read’
sing	chang-ge ‘sing-song=sing’
study	nian-shu ‘study-book=study’
speak	shuo-hua ‘speak-speech=speak’
write	xie-zi ‘write-character=write’
drive	kai-che ‘drive-car=drive’
run	pao-bu ‘run-step=run’
walk	zou-lu ‘walk-road=walk’

The following section reviews Cheng & Sybesma (1998)’s analysis of the construction and introduces issues that may bring the analysis into question.

1.2 Cheng & Sybesma (1998)

Cheng & Sybesma (1998) offer a syntactic solution, based on the assumption that the null object in Chinese is referential *pro*, referring to something specific or definite. They propose that in order to achieve a non-referential reading in Chinese, a generic dummy object must be inserted so as to block referential *pro*. In the following sentence, the object gap must be interpreted as referring to a specific, referential item, ie. a previously mentioned or visible book:

- (5) wo zai du e
 I PROG read e (e=pro)
 ‘I am reading’

As clearly stipulated in their analysis, this proposal hinges on the assumption that if a verb allows a null object, any instance of this null element must be interpreted as *pro*. The problem is in fact much more complicated than this analysis would indicate, partially because it is not decisively agreed upon that a null object in Chinese must automatically be analyzed as *pro*, and also because there are data that suggest that the empty object may not necessarily be restricted

¹ My data show that the generic object for eat is *dongxi* ‘thing’ rather than *fan* ‘rice’, which is more often used to refer to dinner, or a meal.

to a referential interpretation. In the next section, I will introduce some problems with this analysis.

2. Problems with the Existing Analysis

2.1 Theoretical Assumptions

Despite the abundance of literature on the referential null object in Chinese, there is no uniformly agreed upon consensus as to the precise nature of the object. While Cheng & Sybesma (1998) assume the *pro* analysis, there are several other equally valid analyses for the Chinese null object. Huang (1984, 1987, 1991) analyzes the empty category as a variable. Qu (1994) analyzes it as a null element that alternates between variable and *pro*. Taking a fairly different stance, Xu (1986) proposes that Chinese has but one empty category, the Free Empty Category, which can assume particular properties depending on the context in which the object is found. Each analysis of the null object attributes particular syntactic and referential properties to the empty category, and the analysis that one chooses to accept for the null object may affect what properties might be attributed to the overt generic object. If it is indeed true that the two are in complementary distribution, one might expect to find certain properties that are also present in complementary distribution. A definitive, unified account of the referential null object in Chinese is needed, such that an analysis of the generic object will still hold in the event that a particular analysis of the referential null object does not.

2.2 Variation in Actual Data

A further complication is the fact that the data are not as straightforward as previously assumed, as two possible object forms have been overlooked. According to Cheng & Sybesma's analysis, there are two transitivity patterns in Chinese. The verb can appear with either a null object or a generic object.

Table 2: Transitivity patterns in Chinese

	Object Form
Referential	\emptyset_i
Non-referential	N_{generic}

According to previous analyses, the overt generic object is used exclusively in non-referential contexts, and the referential null object is used exclusively in referential contexts. In fact, the data are more complicated than these assumptions allow. It is perfectly acceptable to use an overt object in a referential context, as in (6), and conversely, to achieve a non-referential reading with a null object, as in (7).

- (6) ru guo ni chi mian, wo jiu chi fan
 if you eat noodle, I then eat rice
 'If you eat the noodles, I'll eat the rice'

- (7) buyong le, xia xia, wo yijing chi guo le *e*
 not necessary, thanks, I already eat PRF *e*
 ‘No thank you, I already ate’

Chinese therefore is not restricted to two possible object forms. Nevertheless, there is a marked preference for each context. The null object occurs more frequently in referential contexts, and the overt object is preferred in non-referential contexts. This lack of arbitrary decision-making suggests that certain factors influence the choice that native speakers make among the four options.

In actual discourse, verbal constructions vary tremendously depending on the discourse context. Pragmatics may be found to play a role in the transitivity patterns that speakers choose to use. Previous analyses have often ignored the effect of discourse and syntactic contexts.

2.3 Semantic Nature of the Generic Object

Cheng & Sybesma (1998) suggest that the generic object is void of meaning and does not contribute anything semantically to the construction. It is merely a syntactic dummy and acts as nothing more than a placeholder. I will introduce data that show that the generic object, while unable to take on referential properties, is able to make a semantic contribution.

The next section will detail the data that I have collected to shed light on the transitivity patterns in Chinese and the possible forms that the objects of transitive verbs may take.

3 Data Analysis

To confirm my intuitions that the data are more complex than Cheng & Sybesma’s analysis would predict or allow for, I elicited data to establish the possible object forms that exist in Chinese, and the contexts in which these forms are found.

3.1 Participants

The data were elicited from twenty-two native speakers of Chinese (Mandarin, Cantonese, or Chaozhou). Most speakers were bilingual, with Chinese as their first language and English as their second. The majority defined themselves as equally dominant in both languages.

Table 3: Participants

L1	Number of speakers	Other languages spoken
Mandarin	8	Bilingual (Chinese/English)
Cantonese	12	Bilingual (Chinese/English)
Chaozhou	2	Multilingual (Chinese, English, Vietnamese)

I have collapsed the data from all three dialects because I have found them to be syntactically identical in terms of the VP structure elicited.

To elicit verbal use, I asked the participants to construct simple sentences that would be uttered in varying contexts or situations (examples are given in the next section). The prompts were given in English and the responses in Chinese. All responses were transcribed.

3.2 Elicited Contexts

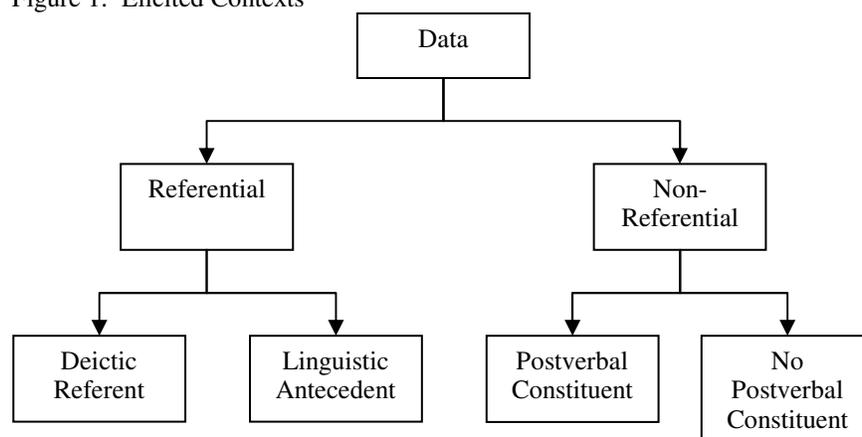
The verbal usage of eight verbs (*run, eat, drive, sing, study, read, walk, draw*) in varying discourse and syntactic contexts were elicited through what was essentially a translation task, although participants were generally not given a word-for-word prompt; rather they were given a situation and asked how they would communicate certain phrases. Some examples are found in Table 4.

Table 4: Elicited contexts and examples

	Context	Example sentence
Referential	Deictic	(<i>holding out a book</i>) Read \emptyset_i .
	Previous mention	(What happened to the cake?) I ate \emptyset_i .
Non-Referential	Postverbal constituent	He is driving very fast.
	No postverbal constituent	He is driving (car).

As outlined in Figure 1, the data were sorted in three separate divisions. The first division in the data was made with the goal of establishing whether there was an effect of referentiality on the type of object used. Within the referential condition, the data were further divided into whether the object had a deictic referent, or a linguistic antecedent. Within the non-referential condition, the effect of postverbal constituents was tested.

Figure 1: Elicited Contexts



I included the referential condition with the sole intention of confirming the existing theoretical analyses that describe Chinese as using mostly null objects to refer to referential or previously mentioned referents. This condition contained 157 tokens. I examined the non-referential condition in more detail so as to more specifically study the generic object construction. This condition contained 701 tokens in total.

The results are given in the following sections.

3.3 General Observations

Based on previous analyses and the current theory, one would expect exclusive use of the null object in referential contexts and exclusive use of the overt generic object in non-referential contexts. However, the data are not so categorically divided. While there is clearly a preference for each construction depending on the context, there are other factors at play, such as the presence of an additional postverbal constituent. Table 5 contains the rates of use of four different object types depending on syntactic and referential factors.

Table 5: % Use of various object forms by context

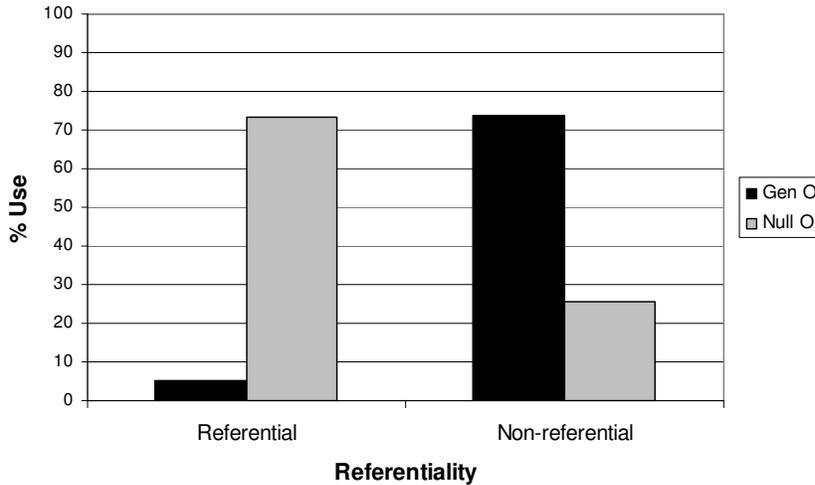
	Generic Object	Null Object	Lexical DP	Pronoun	Total
Referential	5.10	73.25	14.01	7.64	100% (157)
Non-Referential	73.75	25.68	0.57	0.00	100% (701)
Deictic	7.69	48.08	32.69	11.54	100% (52)
Previous mention	3.81	85.71	4.76	5.71	100% (105)
Postverbal constituent	44.91	54.39	0.70	0.00	100% (285)
No postverbal constituent	93.51	6.01	0.48	0.00	100% (416)

The next few sections will look at each condition in more detail.

3.4 Referentiality

The first factor that I examined was referentiality. I expected this to play a very large role in speakers' decisions to use either the generic object or the null object. Previous analyses predict a very robust division between the referential and non-referential conditions in terms of generic object use. According to the theory, subjects should drop the object in referential contexts and use the generic object in non-referential contexts. I therefore expected more generic objects in the non-referential contexts. However, I also expected variability within each condition. Figure 2 shows the rates of generic and null object use in the referential and non-referential conditions.

Figure 2: Comparing generic and null object use by referentiality



Referentiality appears to be the primary factor that influences whether or not speakers use a generic object. Use of the generic object in the referential constructions is minimal at 5.10%. In contrast, the generic object is used in 73.25% of the non-referential constructions. The null object is clearly preferred in referential contexts.

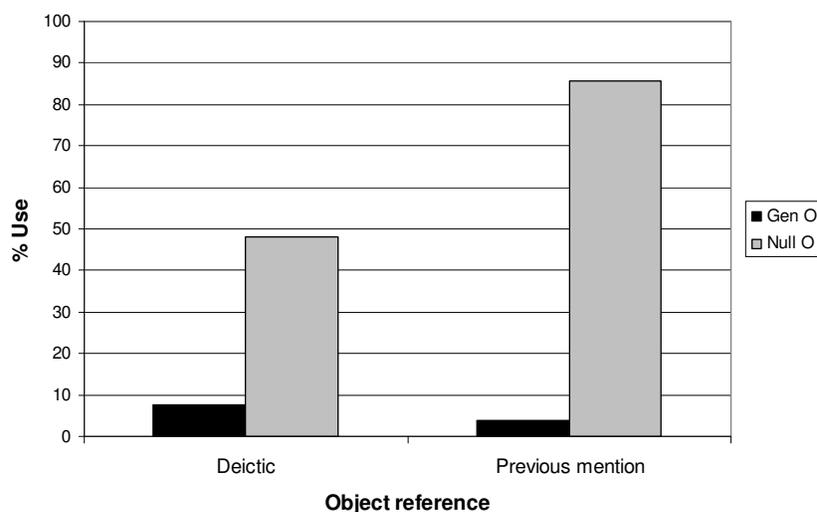
The referential verbal construction appears to be fairly straightforward in Chinese. An object that has been previously mentioned, or that has a pragmatically or deictically apparent referent, normally gets topicalized and phonetically deleted, resulting in the null object. When the null object is not used, speakers can repeat a previously mentioned object as a lexical DP, at the risk of sounding redundant. This happens when a speaker wishes to be particularly informative, descriptive, or is using a more formal register. Less frequently used is the overt pronoun.

A closer examination of the referential condition can be found in the next section.

3.5 Referential Condition

Within the referential condition, I further divided the data by whether the object had a deictic referent or a linguistic antecedent. In the deictic condition, the object was understood to be visible to both the speaker and the interlocutor. In the Previous Mention condition, the object had a linguistic antecedent. I did not expect any large differences between the two conditions, since both contained referential contexts.

Figure 3: Referential context: Deictic vs. previous mention



There is a greater use of overt objects in the deictic condition, which is not necessarily an unexpected result. An object with a linguistic antecedent is the clearest case of a referential object being topicalized and phonetically deleted. Conversely, in the case of an object that is pragmatically apparent but which has no linguistic antecedent, it is up to the speaker to pronounce the object. This optionality is reflected in the rates of null vs. overt object use, which hover around 50%.

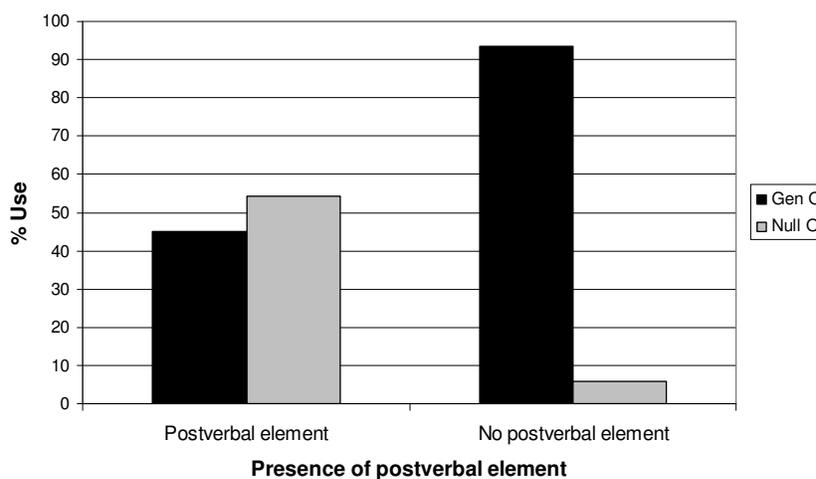
It is also worth noting that the null object is behaving like a pronominal element, or the Chinese equivalent of the English pronoun. As in English, there is less use of this pronoun (Chinese null *pro*) in the deictic condition, which favours a deictic pronoun (*this* or *that* in English) or lexical DP.

Another expected result is that there is hardly any generic object use in either condition. Speakers simply do not use the generic object in referential contexts. This result supports the characterization of the generic object as a purely non-referential element that cannot take on referential properties.

3.6 Non-Referential Condition

Within the non-referential condition, the data were divided by whether or not there was an adverbial or a prepositional phrase following the verb. I expected that where there was already some postverbal element, speakers would be less inclined to insert a generic object.

Figure 4: Effect of postverbal constituents in non-referential contexts



The presence of a postverbal constituent other than the object appears to affect the rates of use of the generic object. When there is some other element following the verb, the use of the generic object appears to be optional, hovering just under 45%. When there is no other postverbal constituent and the sentence would otherwise end with the verb, the use of the generic object rises dramatically to about 94%.

There are several possible explanations for this apparent interaction between postverbal constituents and generic object use. We will look at a couple of possibilities in a later section.

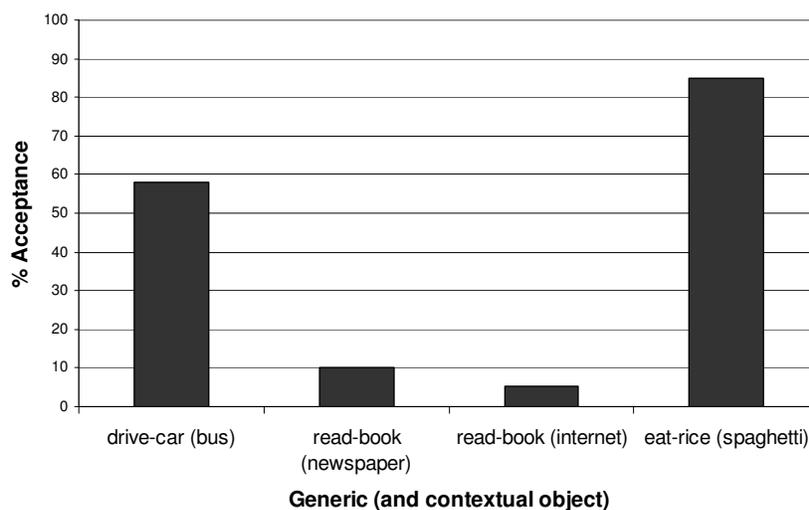
3.7 Semantic Contribution of the Generic Object

The final issue I wanted to clarify through the data was Cheng & Sybesma's claim that the generic object does not contribute anything semantically, and is in fact semantically void. Participants were asked to judge the acceptability of using verbs with generic objects in contexts where the contextual object was semantically incompatible with the generic object. The task consisted of giving yes/no answers to questions such as (8).

- (8) Is it acceptable to use the object 'car', as in 'drive-car' to describe someone who is driving a bus?

Given Cheng & Sybesma's analysis, all four constructions should have been found to be acceptable, since they refer only to the action in general, and the generic objects themselves do not contribute semantically to the construction. The results are found in Figure 5.

Figure 5: % acceptance of generic object use in semantically incompatible contexts



The data do not show any definitive acceptance of using a generic object in reference to an object that is semantically incompatible. This is not due to a mismatch between the non-referentiality of the syntactic generic object and the potentially perceived referentiality of the contextual object, since a construction such as *du shu* ‘read-book’ can very well be used when referring to the action of reading an actual book. These results suggest that the object carries some semantic information, which disallows speakers from linking the generic object to a semantically incompatible contextual object.

4. Discussion

4.1 Summary of Object Forms in Data

The contexts reviewed thus far contain not two ways of expressing an object in Chinese, but rather five different forms of the object, as listed in Table 6.

Table 6: Possible object forms in Chinese

Referentiality	referential			non-referential	
Object form	pro_i	pronoun	lexical DP	$[_N\emptyset]_{<V>}$	generic N

While the preference is for the referential null object in referential contexts and for the generic object in non-referential contexts, the use of the generic object is not quite as uniformly governed as previously thought. There appear to be factors other than referentiality that determine when speakers use the generic object, such as the presence of a postverbal constituent.

One property that is clearly characteristic of the generic object is its non-referentiality; the generic object does not appear to take on referential properties. A point for further study is the observation that the generic object seems to carry some semantic information.

Finally, it is interesting to note that in non-referential contexts, speakers can use a null object. The null object in Chinese was previously thought to be found only in referential contexts. The exact nature of this additional null object is also a point for further research.

4.2 Revised Theoretical Questions

This paper sought to establish the possible object types in Chinese, and the distribution and use of the generic object. We have observed five different object types, each being found in a particular syntactic and referential context. Also observed is variability in the use of different object forms, especially of the overt generic object. The questions that remain concern the factors that may be behind the variation in generic object use.

Another question that arises from the results is why the generic object exists in Chinese if a non-referential reading can be achieved intransitively. Previous analyses of the Chinese null object have been based on its behaviour as a referential empty category. However, the new data show that there is another null object to contend with – one which is, in contrast, characterized by its non-referentiality. We can find both the overt generic object and the non-referential null object seemingly in the same context. However when we look more closely within the non-referential context, there are certain factors (eg. postverbal constituents) that may influence which object form is used by the speaker. There must be a way to reconcile this observation with an analysis of the generic object. Possible solutions are introduced in the following section.

4.3 Variation in Generic Object Use

Clearly referentiality is the largest determinant in the use of the generic object. However, there are other factors at play. One possible solution might be found by looking at the effect of postverbal constituents.

4.3.1 Possible Prosodic Analysis

A phonological or prosodic analysis may be that the verbal phrase is analyzed as a lexical compound that like most lexical items, has a tendency to be bisyllabic. Like many other lexical items, the verb needs to be combined with another monosyllabic morpheme. The generic object is then inserted simply to lend phonological weight. Another possibility is based on the observation that sentences rarely end on the verb. It may simply be preferable not to have the sentence-final stress fall on the verb. A postverbal element prevents the final stress from falling on the verb. When there is no postverbal element, the generic object is inserted to fulfill this function.

More work must be done to elucidate any possible prosodic mechanisms behind generic object use.

4.3.2 Possible Semantic Analysis

Many verbs in Chinese are homophonous and semantically ambiguous. As such, they are rarely found in isolation. A verb is normally found within a discourse context, or is coupled with some postverbal element that removes any ambiguity as to its meaning. In the referential context, the meaning of the verb is usually apparent from context. In a non-referential reading, particularly one that lacks previous discourse context, the lack of a realized object may leave the verb semantically lacking. A generic object may be inserted to complement or complete the meaning of the verb. An adverb or a preposition that may contribute clues as to the meaning of the verb may also fulfill this function, in which case the generic object becomes optional.

The generic object does not appear to be semantically void, as predicted by Cheng & Sybesma. While it cannot take on referential properties, it clearly has a semantic contribution, as speakers cannot use it when the discourse object is semantically incompatible. The generic object seems to complement the verb semantically. In brief, the verb is ambiguous unless it is found in the context of a conversation or a particular syntactic string. The generic object helps to clarify the meaning of the verb.

To get a subjective idea of the degree of ambiguity a particular verb might carry, I did an online search for the verb *kai*, restricted to the first tone, and found eighty-two different word constructions that contained *kai*, the full range of which gave a set of very diverse meanings. Only one of the eighty-two, *kai che*, was defined as ‘drive’. *Kai* on its own may be ambiguous, having multiple meanings. Perhaps to clarify which of the meanings is intended, the speaker tags on the generic object as if to signify ‘the driving-car kind of drive’.

A construction of interest occurs when speakers want to describe a manner in which a person does a particular action, and wishes to include the generic object. This construction must consist of the verb-object compound, followed by the verb, then the particle *de*, and finally the adverb, as in (9).

- (9) ta kai che kai de hen kuai
 he drive car drive DE very fast
 ‘He drives very fast’

It is almost as if the verb-object compound is merely a tag that labels the verb as having the particular meaning that the speaker wishes to convey.

Such examples of adding elements to disambiguate otherwise semantically ambiguous contexts may be found in English. For example, the following exchange might be heard among English speakers.

- (10) A: Let’s go shopping tonight.
 B: I can’t. I’m broke.
 A: I don’t mean *shopping*-shopping. I mean *grocery*-shopping.

Repeating the verb or adding an object appears to disambiguate the lexical semantics of the verb and clarify its precise meaning. This construction suggests that it is often helpful to have some semantic complement to the verb. The Chinese generic object may act as this semantic complement.

When there is another postverbal constituent that offers some sort of semantic information, such as an adverbial or a prepositional phrase that may contribute semantic information about manner or direction, the generic object is no longer necessary, and it is entirely up to the speaker to decide whether or not to insert the generic object. Thus we see optionality in the data in this context. A more detailed study of different types of postverbal elements is necessary to clarify what type of semantic information each can contribute, and the relationship between this information and the verb and generic object.

4.3.2.1 Problems with the Semantic Analysis

The data were elicited using what was essentially a translation task. But the verbs given in the English prompts were completely unambiguous. It is therefore unreasonable to expect participants to have attempted to disambiguate unambiguous sentences by inserting the generic object. It is therefore unclear whether the effect of the postverbal constituent is of a semantic nature, ie. the postverbal constituent contributes semantic information such that the generic object is no longer necessary. It may be that there is some other structural reason for generic object use.

To discount the semantic analysis, I compared sentences with postverbal constituents to equivalent sentences with preverbal constituents (sentences in which some speakers placed the adverbial or prepositional phrase before the verb, and some speakers placed it after the verb). Only a small proportion of the sentences (62 of 701) were variable in this way, but the results are striking.

Table 7: Generic object use with pre- vs. postverbal constituents

Verb	Constituent Placement	Generic Objects	Examples
study	postverbal	7/9	<i>Keoi duk (syu) de hou kun lik.</i> 'He's studying very hard.'
	preverbal	25/25	<i>Keoi hou kun lik duk syu.</i> 'He's very hard studying.'
draw	postverbal	19/27	<i>Keoi wa (gun) wa bei keoi pung jau.</i> 'She's drawing for her friend.'
	preverbal	7/7	<i>Ta zai bei ta pung jau hua hua.</i> 'She's for her friend drawing.'
read	postverbal	26/32	<i>Keoi duk gun syu bei keoi mama tang.</i> 'She's reading to her mom.'
	preverbal	24/24	<i>Ta zai gei ta de mama du shu.</i> 'She's to her mom reading.'
sing	postverbal	23/34	<i>Keoi cheng gun (go) bei baby tang.</i> 'She's singing to the baby.'
	preverbal	6/6	<i>Ta zai gei ge baby chang go.</i> 'She's to the baby singing.'

It is interesting to note that while sentences containing postverbal constituents exhibited variable use of the generic object, all sixty-two sentences containing a preverbal constituent showed 100% use of the generic object. Preverbal elements certainly do not appear to have the same effect on generic object use as postverbal elements do. This poses a problem for the semantic analysis, and suggests that there is some other structural basis for the negative effect of postverbal constituents on generic object use. This is a point for further research.

4.4 Possible Analyses of the Non-Referential Null Object

The nature of the null object in non-referential contexts is not clear. There are at least four possible ways of analyzing it. The first is to propose that the null object is simply a phonetically null form of the overt generic object. Like the overt generic object, it has no referential properties, and cannot acquire referential properties from the context.

The second possibility is that the null object is the same empty category as the referential null object in Chinese. In cases where no referent can be found from the context, a pragmatic rule deletes the object's referential properties.

The third possibility is to propose that the null object is a universal bare noun that carries a core semantic trait (eg. the property of being *edible* when appearing with the verb *eat*, or the property of being *readable* when appearing with the verb *read*) acquired from the verb that semantically selects it. Hale & Keyser (2002)'s analysis treats this construction in English, and includes examples such as the verb *dance*, whose generic bare noun carries the semantic feature <dance>.

Another possibility is that Xu's Free Empty Category (FEC) is the only possible null object in Chinese. Depending on the context, the FEC acquires the appropriate referential properties. In non-referential contexts, it is a general bare noun that obtains its semantics from the verb. In referential contexts, it acquires its referential properties from the context. Further study may help establish the precise nature of the non-referential null object as well as its distribution, and any relation it may bear to the referential null object.

5. Conclusion

Referentiality is clearly not the only factor that governs the use of the generic object in Chinese, which alternates in non-referential contexts with the non-referential null object. The solution may not be purely syntactic, as in Cheng & Sybesma (1998)'s analysis of the generic object as a mechanism for blocking *pro*, but rather may be found by examining a combination of prosodic, semantic, and pragmatic factors. More work needs to be done to elucidate the mechanisms behind the distribution of these two objects, relative to each other, as well as to the distribution of the referential null object.

Lexical disambiguation may explain why the generic object exists as a general fact in Chinese. Chinese is incredibly homophonous and is limited in the possible number of monosyllabic words. Other factors may also contribute to semantic ambiguity (eg. tone sandhi). Chinese verbs are semantically ambiguous

when uttered out of context, and the generic object may exist to patch this semantic problem. However, given the data in Table 7, lexical disambiguation does not appear to be the underlying mechanism behind generic object use.

One enticing proposal that arises out of this study, and which poses an interesting question for further study, is that the generic interpretation in Chinese does not originate from the generic object, but rather from the null generic bare noun. The overt generic bare noun is then only pronounced for other reasons. These reasons, most likely a combination of factors rather than a single rule or condition, are what govern the use of the generic object, which explains the lack of an absolute usage of the generic object in any particular condition.

Eventually a definitive analysis of the generic object may help to complement that of the null object and lead to a comprehensive theory that can account for the distribution of different object forms in Chinese.

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