

Non-canonical Objects and Case

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2011, 8.

THE SOCIETY OF CHINESE STUDIES

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What may appear in the postverbal position in Chinese has been a subject of great interest for decades. Typical objects are possible in the position right after a verb, a property shared by many “head-initial” languages, such as English. However, compared to English, Chinese is more restricted on the one hand and seems much freer on the other hand in the types of elements that can occur in the postverbal position. For instance, English is “more head-initial” in the sense that many different types of expressions, such as objects and non-object adverbs or prepositional phrases

* The works on these issues are too many to cite properly. The publications mentioned in this paper and the references in them are good starting points to study the immense literature.

(PPs) can all appear postverbally; whereas Chinese is more restricted in the number and type of constituents in the postverbal position (see, among many others, Chao 1968, Li and Thompson 1981, Huang 1982, Li 1985, 1990, Tang 1990 for the postverbal constraint in Chinese). Nonetheless, Chinese seems quite free in regard to the kinds of nominal phrases (Determiner Phrases, abbreviated as DPs) in the typical object position. It has been widely observed and extensively discussed in the literature that Chinese allows DPs of many different thematic-roles to appear right after the verb, generally the position for regular objects (for a more recent comprehensive work, see Lin 2001). The many varieties of DPs can also follow intransitive verbs immediately. I will conveniently refer to the postverbal DPs that are not the typical objects of transitive verbs as “non-canonical objects.”

Numerous proposals have been made to account for the constructions with non-canonical objects, including a semantic approach (Zhang 2005), an empty predicate or a null P analysis (e.g., Guo[郭继懋]1999, Yang [杨永忠], 2007a, b, Cheng[程杰]2009), an empty light verb account (e.g., Lin 2001, Feng [冯胜利] 2005), an applicative head analysis (Cheng[程杰], Wen [温宾利] 2008, Sun[孙天琦] 2009), a lexical approach (Huang, Li and Li 2009, chapter 2, Sun and Li [孙天琦, 李亚非] 2010), and a Case-less account (Hu [胡建华] 2007). Despite the rich literature, there has yet been consensus on what exactly non-canonical objects are syntactically and various empirical, theoretical challenges remain (for the problems facing some of these proposals, see Sun and Li[孙天琦, 李亚非] 2010). In this work, I will show that non-canonical objects behave like canonical objects syntactically and the similarities between the two types of objects follow straightforwardly from the theory of abstract Case.¹⁾ This account will be contrasted with the proposal

1) The upper “Case” is used to refer to the notion of abstract Case in the generative grammar (Chomsky 1981, based on an insight of J.-R. Vergnaud), often but not always reflected in morphologically marked cases.

that Chinese should be analyzed as a Case-less language; i.e., the notion of Case is not relevant in this language (see, for instance, Hu [胡建华] 2007, Markman 2005, 2009). The main conceptual motivation for the Case-less claim is that Chinese is not marked for Case morphologically and that the lack of morphological markings should reflect the absence of abstract Case. I will argue that, even in morphologically Case-less Chinese, the notion of Case does capture important generalizations regarding the distribution of various categories (N vs. P categories for instance), properties of phrase structures, and the relation between a head and the nominal phrase closely related to this head (the Case-assigner or the one with an uninterpretable Case feature in relation to the Case-recipient or the one to check off the uninterpretable Case feature). The study is further corroborated by the Noun-Incorporation constructions in languages such as Mohawk and other Northern Iroquoian languages (Mithun, 1984)

1. Non-canonical object vs. adjunct

“Non-canonical objects” can be illustrated by the (a) examples of (1)-(3) below, which often have a counterpart containing an overt preposition (or “coverb”, or “light verb”)²⁾ in the preverbal position as shown in the (b) instances: *zai* ‘at’ for temporal/locative phrases and *yong* ‘use’ for instruments.

- 2) The distinction between Ps and Vs tends to murky in Chinese. There have been many works trying to identify the properties of the relevant morphemes and make classifications. A “neutral” non-committal term is “co-verb” (see, for instance, Li and Thompson 1981; for a recent work on the status of Ps in Chinese, see Djamouri and Paul 2009). The term “light verb” has been increasingly used to refer to such words (cf. Huang 1997, Lin 2001, Tang 1998, Huang, Li and Li 2009, among many others). For ease of presentation, I will not try to make distinctions and refer to all the phrases relevant to our discussions that have been analyzed as headed by “co-verbs” or “light verbs” or prepositions as “preverbal adjunct (PPs).”

- (1) a. ta xihuan zuo **baitian** -temporal
 he like do daytime
 'He likes to work in the daytime'
- b. ta xihuan **zai baitian** zuo (shi)
 he like at daytime do work
 'He likes to work in the daytime'
- (2) a. ta xihuan chi **haohua canting.** -locative
 he like eat fancy restaurant
 'He likes to eat at fancy restaurants.'
- b. ta xihuan **zai haohua canting** chi fan.
 he like at fancy restaurant eat meal
 'He likes to eat at fancy restaurants.'
- (3) a. ta xihuan xie **zhe-zhi maobi.** -instrumental
 he like write this-cl brush. pen
 'He likes to write with this brush pen.'
- b. ta xihuan **yong zhe-zhi maobi** xie (zi)
 he like use this-cl brush. pen write word
 'He likes to write with this brush pen.'

In addition to temporal/locative/instrumental expressions as non-canonical objects, there are other kinds of expressions, some of which are difficult to classify and do not have corresponding preverbal adjunct phrases, demonstrated by the varieties of examples in Chao (1968), Xing[邢福义] (1991), Yuan[袁毓林] (1998), Guo [郭继懋] (1999), Meng et. al[孟琮等](1999), Lin (2001), Hu[胡建华] (2007), Yang[杨永忠] (2007a, b), Cheng [程杰] (2009), Sun and Li[孙天琦, 李亚非] (2010), among many others. Some of such examples are *zou qinqi* [走亲戚] 'walk relatives (visit relatives)', *pao zhibiao* [跑指标] 'run quota (busy working towards meeting quota)', *pao boshidian* [跑博士点] run (visit) doctoral site', *chi wenhua* [吃文化] 'eat culture (eat something special to show one has culture)', *kao yanjiusheng* [考研究生] 'exam (to become) a graduate student', *chi gongzi* [吃工资] 'eat (relying on) wages', etc. The complexities and the wide range of possibilities

for non-canonical objects have made it difficult to identify clearly what such non-canonical objects are and how they are derived.

In order to define what a non-canonical object is, let us begin with what it is not. A seemingly appealing proposal is to equate the postverbal non-canonical object with a corresponding preverbal adjunct because of their similarities in meaning. However, it will be demonstrated below that there are many important generalizations requiring that a non-canonical object and a preverbal adjunct be distinguished, even though, as illustrated in the examples in (1)-(3), a non-canonical object may have an overt counterpart as a preverbal adjunct.

1.1 Differences in meaning

A non-canonical object and a corresponding preverbal adjunct differ in how they are interpreted, illustrated by the contrast in the pairs of examples below.

- (4) a. wo (cong) qi dian dao jiu dian kan haizi. -the time of the event
 I from 7 o'clock to 9 o'clock care children
 'I care(d) for children from 7 to 9 o'clock.'
- b. wo kan qi dian dao jiu dian. -the 7-9 shift/work
 I care 7 o'clock to 9 o'clock
 'I care(d) from 7 to 9 o'clock.'

The sentence in (5a) below with a non-canonical object denotes a guard's duties. The (b) case with a preverbal adjunct simply expresses the relevant activities.

- (5) a. ta zhan zaoshang/waimian.
 he stand morning/outside
 'He stands (guard) in mornings/outside.'

- b. ? ta zai zaoshang/waimian zhan(gang).³⁾
 he at morning/outside stand (guard)
 'He is standing (guard) in the morning/outside.'

The expression in (6a) below denotes restaurant food and (6b) expresses the place of eating.

- (6) a. ta chi canting/shitang.
 he eat restaurant meals are restaurant food (see Zhang 2005)
- b. ta zai canting/shitang chi.
 he at restaurant eat the place of eating is at restaurants
 'He ate at restaurants.'

Sun and Li [孙天琦, 李亚非] (2010, 22) note that the non-canonical object construction generally expresses “类别” (types, categories). The type reading is also clear in the following case (7a), expressing the type of flights, ‘evening flights’, in contrast to (7b) simply expressing the time of a flying event:

- (7) a. wo fei wanshang.
 I fly evening
 'I fly evenings = fly evening flights.'
- b. wo zai wanshang fei.
 I at evening fly
 'I am flying in the evening.'

1.2 Differences in ordering

Non-canonical objects and the corresponding adjuncts differ in their ordering in relation to canonical objects. A canonical object precedes a non-canonical object when both occur via an extra copy of the V, although a

3) Taking away the object *gang* makes the sentence sound unacceptable.

corresponding “preverbal” adjunct must be preverbal (before V and object), if such an adjunct exists:

- (8) a. you qian ren chi fan chi haohua canting.
 have money people eat meal eat fancy restaurant
 ‘The rich eat meals at fancy restaurants.’
- b. * you qian ren chi haohua canting chi fan.
 have money people eat fancy restaurant eat meal
- c. you qian ren zai haohua canting chi fan.
 have money people at fancy restaurant eat meal

1.3 Absence of one-to-one correspondence between non-canonical objects and preverbal adjuncts

A non-canonical object does not always have a corresponding preverbal adjunct and vice versa. That is, some non-canonical objects are not possible even though preverbal adjuncts exist and some acceptable non-canonical objects do not have acceptable preverbal counterparts. For instance, it is common for the time/location of an activity and the instrument/material/manner used in an activity to be expressed by a non-canonical object.⁴⁾ However, there are a few other types that are much harder or impossible as non-canonical objects, such as benefactives, comitatives, sources, even though all of them have preverbal adjunct counterparts. These are illustrated below.

Benefactives

- (9) a. wo **gei ta** zuo yifu.
 I for him make clothes
 ‘I make clothes for him.’

4) Other expressions are possible but limited and idiosyncratic (such as the hard-to-define categories mentioned at the beginning paragraph). Guo [郭继懋] (1999) observed that non-canonical objects often appear within a certain domain of usage (field-specific) or for common daily activities.

- b. * wo zuo ta.
 I make him
 intended to mean 'I make (things) for him.'

Comitatives

- (10) a. wo gen ta zuo yifu.
 I with him make clothes
 'I make clothes with him.'
- b. * wo zuo ta.
 I make him
 intended to mean 'I make (things) with him.'

1.4 No postverbal overt adjunct PPs

The last section demonstrates the lack of one-to-one correspondence between a non-canonical object and a preverbal adjunct. In addition, even though the preverbal adjuncts require the use of the temporal/locative marker *zai* or the instrument marker *yong*, these markers cannot occur with the non-canonical object after the verb:

- (11) a. ta xihuan chi fanguan/jia-li
 he like eat restaurant/home-in
 'He likes to eat at restaurants/home.'
- b. ta xihuan zai fanguan/jia-li chi fan.
 he like at restaurant/home-in eat meal
 'He likes to eat at restaurants/home.'
- c. * ta xihuan chi-zai fanguan/jia-li
 he like eat-at restaurant/home-in
- d. * ta xihuan zai-chi fanguan/jia-li
 he like at-eat restaurant/home-in

1.5 Compatibility with the types of verbs

Preverbal adjuncts easily occur with all types of verbs but non-canonical objects are generally restricted to activity verbs. The following examples demonstrate the impossibility of non-canonical objects with stative, achievement and accomplishment verbs, in contrast to preverbal adjuncts.

Stative verbs possible with preverbal adjuncts but not non-canonical objects:

- (12) wo zai guo-wai (de shihou) hen xiang jia/xihuan zhongguo dianxin.
I at country-outside de time very miss home/like Chinese snack
'I miss home/like Chinese snacks (while I am) in a foreign country.'
- (13) wo xiang/xihuan guo-wai
I miss/like country-outside
'I miss/like outside the country. (i. e, outside the country is what is missed/liked (not the time or place for the missing/liking of something).'

Achievement verbs possible with preverbal adjuncts but not non-canonical objects:⁵⁾

- (14) a. zaoshang wang-le yaoshi vs. b. *wang(-le) zaoshang
morning forget-le key forget morning

The expression in (14a) expresses the time when the key was forgotten was in the morning. (14b) can only mean what is forgotten is the morning (which is strange).

5) *Zai* in (ib) below must occur, it is a verb in a serial verb construction (Li 1985, 1990).

(i) a. zai yiyuan si le vs. b. si*(zai) yiyuan
at hospital die le die at hospital

Accomplishment verbs possible with preverbal adjuncts but not non-canonical objects:

- (15) a. yong maojin ca-gan vs. b. ca-gan maojin
 use towel wipe-dry wipe-dry towel

The towel in (15b) is the object that becomes dry from wiping. In contrast, the towel in (15a) is the tool with which to dry something else.

The many differences between a non-canonical object and a PP adjunct demonstrated so far cast doubt on the plausibility of analyzing a non-canonical object as a covert counterpart of a PP adjunct. Indeed, it will be shown below that a non-canonical object behaves just like a canonical object syntactically.

2. Non-canonical objects behaving like canonical objects syntactically

This section will show that a postverbal non-canonical object behaves exactly like a postverbal canonical object in Chinese. This claim can be supported by:⁶⁾

- (16) a. A non-canonical object must be a DP, not an Adv/PP.
 b. It is in complementary distribution with a canonical object.
 c. It can occur with a postverbal duration/frequency phrase, taking the same position as a canonical object relative to these other postverbal phrases. V-reduplication is possible in these cases, just like canonical objects. This is also true when the V is directly followed by a *de* phrase of description or result.

6) The complementary distribution of canonical and non-canonical objects was discussed in Lin (2001), who proposes a locality condition on the licensing of the relevant DPs.

- d. A non-canonical object can have narrow scope with respect to a duration/frequency phrase, like a canonical object.
- e. Object deletion is possible with non-canonical objects, as with canonical objects.⁷⁾
- f. Like a canonical object, a non-canonical object can also combine with V to take an affected outer object.
- g. Like a canonical object, a non-canonical object can occur in the construction [*...de* Ø], (a pattern separating an argument from an adjunct (see, among many others, Zhu 朱德熙 1956, 1961). That is, if an argument undergoes relativization, the relativized argument can be deleted. In contrast, a relativized adjunct cannot be deleted (see Aoun and Li 2003, chapter 5 for detailed discussion on this argument/adjunct asymmetry).

The first one (16a) is illustrated by the following examples:

- (17) a. ta tiantian/changchang chi mian. --- Adv-V
 he everyday/often eat noodle
 ‘He eats noodle often/every day.’
- b. * ta chi tiantian/changchang --- *V-Adv
 he eat everyday/often

7) However, not all non-canonical objects can be deleted equally. The more established or commonly used the form [V + non-canonical object] is, the easier it is to have the object missing. It could be that object deletion is more closely related to lexical subcategorization with designated thematic roles (Li 2005).

Moreover, the use of the experiential aspect marker *guo* tends to make the deletion of non-canonical objects better. For instance (ii) is not as good as (i); but (iii) is quite acceptable:

- (i) ta kan na-bu dianying, wo ye kan.
 he see that-cl movie I also see
 ‘He saw that movie; I also saw (that movie).’
- (ii) ??ta kan zaoshang, wo ye kan.
 he see morning I also see
 ‘He saw (something) in mornings; I also saw.’
- (iii) ta kan-guo zaoshang, wo ye kan-guo.
 he see-Asp morning I also see-Asp
 ‘He has seen (something) in mornings; I have also seen.’

- (18) a. ta cong qi dian dao jiu dian chi zaofan. --- PP-V
 he from 7 o'clock to 9 o'clock eat breakfast
 'He eats breakfast from 7 to 9 o'clock.'
- b. ta chi (*cong) qi dian dao jiu dian. --- *V-PP
 he eat from 7 o'clock to 9 o'clock

A non-canonical object appears in place of a canonical object. That is, the two are in complementary distribution (16b):

- (19) * wo chi wancan fandian/fandian wancan ---complementary distribution
 I eat dinner restaurant/restaurant dinner

Just as a canonical object is able to occur with a frequency/duration phrase, so is a non-canonical object (a definite one tends to precede the duration/frequency phrase and a bare nominal object follows the duration/frequency), as stated in (16c):

- (20) a. wo shang xingqi chi-le san-ci/tian mian/fandian. *fre/dur + bare object*
 I last week eat-LE three-times/day noodle/restaurant
 'I ate noodles/at restaurants three times/days last week.'
- b. wo shang xingqi chi-le na-zhong mian/na-jia fandian san-ci/tian. - *def obj + fre/dur*
 I last week eat-LE that-CL noodle/that-CL restaurant three-times/day
 'I ate that noodle/at that restaurant three times/days last week.'

V-reduplication is possible with non-canonical objects and other postverbal phrases such as duration/frequency and *de* expressions, just like the cases involving canonical objects:

- (21) wo **chi** mian/haohua fandian **chi-le** henduo ci/tian
 I eat noodle/fancy restaurant eat-LE many time/day
 'I ate noodle/at fancy restaurants many times/days.'
- V-reduplication with *fre/dur*

- (22) wo chi mian/haohua fudian chi-de hen gaoxing/lei
 --V-reduplication with de-phrases
 I eat noodle/fancy restaurant eat-DE very happy/tired
 'I am happy/tired from eating noodle/at fancy restaurants.'

In the same way that a canonical object can have narrow scope with respect to a duration/frequency phrase, a non-canonical object can also take narrow scope as noted in (16d):

- (23) a. ta chi-guo liangci niurou huo/he zhurou
 -- canonical object narrow scope
 he eat-ASP twice beef or/and pork
 'He ate twice beef or/and pork.'
 b. ta chi-guo liangci zhong canting huo/he xi canting.
 -- non-canonical obj. narrow scope
 he eat-ASP twice Chinese restaurant or/and western restaurant
 'He ate twice in Chinese or/and western restaurants.'

Some non-canonical objects can also undergo object deletion, like canonical objects (16e) (see note 7):

- (24) ta chang chi mian/haohua canting; wo bu chang chi ____.
 -- Object Deletion
 he often eat noodle/fancy restaurant I not often eat
 'He often eats noodle/at fancy restaurants; I don't often eat (noodle/at fancy restaurants)'

In addition, as noted in (16f), a non-canonical object can behave like a canonical object and combine with a verb to take an "affected" object (inner and outer object; cf. among many others, Thompson 1973, Lu [陆俭明] 2000, 2002, Zhan[詹卫东] 1999, Guo [郭锐] 2002, Huang [黄正德] 2007). For instance, the canonical inner object in (25a-b) can be replaced with a non-canonical object (the examples in (25) are adapted from Lu 2002):

- (25) a. wo chi-le ta san-ge pingguo.
 I eat-LE him three-CL apple
 'I ate him three apples = he was affected by my eating (his) three apples.'
- b. wo jian-le ta shi-gongchi bu.
 I cut-LE him ten-meter cloth
 'I cut ten meters of cloth from him.'
- (26) a. wo (cai) chi-le ta san-tian fanguan (ta jiu yijing shou-bu-liao le)
 I only eat-LE him three-day restaurant he then already put-not-up LE
 'I (only) ate at restaurants for three days on him (and he already could not take it).'
- b. wo (cai) jian-le ta san-ba jiandao (ta jiu yijing bu gaoxing le)
 I only cut-LE him three-CL scissors he then already not happy LE
 'I (only) cut with three pairs of scissors on him (and he already was not happy).'

The following are some more examples illustrating the ability of a non-canonical object combining with a V to license an affected object:⁸⁾

- (27) a. wo yigong xie ta san-zhi maobi
 I altogether write him three-CL brush.pen
 'I wrote with three brush pens (of his) altogether.'
- b. wo jiu qie ta san-ba daozi
 I only cut-le him three-CL knife
 'I only cut with three knives (of his).'
- c. wo xie-le ta san da-zhang zhi.
 I write-LE him three big-CL paper
 'I wrote on three big pieces of paper on him.'

The patterns above show canonical objects behave like non-canonical objects syntactically.

8) It is difficult to find examples with time expressions as non-canonical objects in such constructions because generally the inner and outer object bear some relation, such as a possession or affectedness relation (see Huang 2007 for examples not bearing a possession relation, even though an "affected" relation still holds).

Finally, regarding (16g), although the entire range of facts is not quite consistent, there is a substantial number of cases showing that non-canonical objects are like arguments, according to the test using the relativization pattern without an overt nominal following *de*. Essentially, if an argument undergoes relativization movement to appear in the position following *de* [[rel. ci. ... t_i...] *de* [NP_i]], the relativized NP can be deleted. However, adjunct relativization does not allow an empty nominal following *de* (see Aoun and Li 2003, chapters 5-6 for details).

- (28) a. [ta chi de] dou shi hao dongxi. --- *argument relativization*
 he eat DE all be good thing
 ‘All he eats are good things.’
- b. * [ta chi fan de] (dou) shi hao liyou. --- *adjunct relativization*
 he eat meal DE all be good reason
 intended to mean ‘The reasons why he eats meals are good reasons.’

A non-canonical object can undergo relativization and be deleted, just like an argument:

- (29) a. ta chi de (cating) dou shi haohua cating.
 he eat DE (restaurant) all be fancy restaurant
 ‘(The restaurants where) he ate were fancy restaurants.’
- b. zhe-shuang kuaizi jiu shi ta chi de (kuaizi).
 this-CL chopsticks exactly be he eat DE chopsticks
 ‘This pair of chopsticks was (the chopsticks) he ate with.’
- c. zhe-ba dao jiu shi ta qie de (dao).
 this-CL knife exactly be he cut de knife
 ‘This knife was exactly (the knife) he cut with.’
- d. ta xie de (zhi) jiu shi zhe-zhong zhi.
 he write DE paper exactly be this-kind paper
 ‘(The paper) he wrote on was exactly this kind of paper.’
- e. ta kan de (shijian) shi wanshang, bu shi zaoshang.
 he see DE time be evening not be morning
 ‘(The time when) he saw was in the evening, not in the morning.’

In short, the examples in (17)-(28), illustrating the points in (16a-g), identify the similarities between a non-canonical object and a canonical object. Their identical behavior and their complementary distribution argue that the two types of objects should occupy the same syntactic position.

3. A Case account

The generalization in the last paragraph can be captured straightforwardly in a Case approach: a non-canonical object competes with a canonical object for the Case assigned by the V.

Many languages in the world mark their noun phrases (arguments) with the appropriate case morphology according to their grammatical functions, such as nominative case, accusative case etc. An accusative case is generally a label for the object of a verb. Fundamentally, the mechanisms in the theory of abstract Case serve to capture the distribution of categories such as DPs vs. PPs etc.: DPs occur in Case positions but PPs do not. A PP itself contains a P, which is a Case assigner (see, for instance, Stowell's 1981 Case Resistance Principle). Briefly, the notion of Case accounts for contrasts like the following one.

- (30) a. I hate him. *I hate of him.
b. my hatred of him. *my hatred him.

In this example a V assigns Case to its object DP, not a PP; but an N does not assign Case and a PP is required.

Adopting the essence of Case theory – Case helps determine the distribution of various categories, Li (1985, 1990) shows that a Case approach to Chinese is able to capture many interesting empirical generalizations in this

language. Chinese exhibits many head-final characteristics; however, verbs allow limited numbers and types of constituents postverbally – the postverbal constituent constraint (first formalized in Huang 1982). Li argues that the notion of abstract Case is important in capturing the postverbal constituent constraint in Chinese: the phrase that occurs right after a verb is in that position to satisfy the Case filter (and some others for other reasons). No true PPs are possible postverbally. The apparent postverbal Ps such as *zai* ‘at’, *gei* ‘give’, *dao* ‘arrive’ are verbs and interpreted as such. Though the relevant analyses evolved over the years, most of the significant empirical generalizations remain, including the generalization that the position immediately following a verb is for a DP, not a true PP. This generalization will be shown to be directly relevant to the facts presented in previous sections.

Recall that the generalization emerged from (16a-g) is that a non-canonical object occupies the same position as a canonical object. Their occupying the same position is a natural consequence if both are competing for the same Case. That is, a non-canonical object needs Case and it is assigned the same Case as the one for a canonical object. I show below how (16a-g) follow from such a Case requirement.

Because a DP, not an Adv or a PP, requires Case, the generalization stated in (16a) is captured. When both are competing for the same Case, it is expected that canonical and non-canonical objects are in complementary distribution (16b). If we follow Tang (1990), Huang (1994a, b, 1997) and adopt the V'-adjunction structure or IP-adjunction structure (for gerundives) for the postverbal duration/frequency phrases, a non-canonical object is just like a canonical object in its relative position with respect to duration/frequency phrases. In general, the postverbal constituents are limited to those that need to satisfy the Case requirement or some morphological constraint (such as the requirement that *de* heading resultative/descriptive

phrases be cliticized to V.) A second constituent other than an object occurring immediately after a verb is possible if the V is reduplicated. This is so when both canonical and non-canonical objects occur. Their simultaneous occurrences are licensed by the two copies of the V. The generalization in (16c) is accommodated.

Next, consider (16d). A postverbal duration/frequency phrase can appear in a higher position than an object; it can have scope over the DP in the object position, either the canonical or the non-canonical object.

The acceptability of object deletion again points to the plausibility of a non-canonical object taking the place of a canonical object (16e).

Turn to the possibility of taking an affected outer object (16f). According to Huang (2007), the sentences like (25) are possible because the inner object is assigned a structural Case and the outer object is assigned an inherent Case. In the same way, the non-canonical object in (27) is assigned a structural Case by the verb - again, because the non-canonical object "replaces" the canonical object in these examples. The two do not co-occur because a non-canonical object occupies the position for a canonical object - the object Case position. The similarity between a canonical object and a non-canonical object in (16g) suggests that both are arguments, which are sensitive to the Case filter.⁹⁾

Indeed, if a non-canonical object is treated as a canonical object structurally (both competing for the same Case position), rather than some adjunct phrase, not only are the properties in section 2 summarized in (16a-g) captured, most of the properties in section 1 are also accommodated. Only two points are not as straightforwardly captured - those in section 1. 3 and 1. 5. Section 1. 5 concerns the verb type restriction to activity verbs. This could

9) See Chomsky (1986) for the Visibility Condition on theta-assignment: Case is assigned to arguments because arguments need to be Case marked in order to be assigned thematic roles.

be attributed to the meanings of the different types of verbs. Verbs can be decomposed into a core set of predicates (cf. e. g., Huang 2006, 2007 for such verb decomposition in Chinese). For instance, stative verbs are essentially [(HOLD) STATE], achievement verbs [BECOME + STATE], and accomplishment verbs [DO/CAUSE + BECOME + STATE] (which do not allow progressives in Chinese). That is, all except activity verbs can be so decomposed that the lowest part of the decomposed verb is [STATE], which is absent in activity verbs. Their lowest argument is predicated of [STATE]. Note that the non-canonical objects in question are essentially expressions that typically play a role in activities, such as time, location, instrument, etc. This means that the semantic/pragmatic compatibility considerations favor activity verbs with non-canonical objects.

Section 1.3 discusses the general unavailability of comitatives, sources, benefactives as noncanonical objects.¹⁰⁾ It is highly probable that this is related to the semantic contribution of Case markers.¹¹⁾ Note that when time

10) Michael Barrie (personal communication) notes that those that are difficult as non-canonical objects also rarely undergo noun incorporation in the languages that have nouns incorporated to verbs.

11) In contrast to Lin (2001), I do not take reason expressions to be true non-canonical objects. The pattern in question can be exemplified by (i).

(i) ta shi da haowan de
 he be hit fun DE
 'He is playing for fun.'

Many speakers prefer the use of the aspect maker *zhe* right after the V in this pattern, making it [V *zhe* reason] (some even allow the replacement of *zhe* by *le*). Further note that the pattern must be used in the (*shi*)...*de* form and have only a stative reading, even though the V is an activity verb.

It is possible that some of the "reason" expressions discussed in Lin (2001) might be better analyzed as canonical objects. For instance, the example containing the verb *ku* 'cry' followed by a "reason" expression does not have to be in the (*shi*)...*de* pattern. As a question, only the nominal *shenme* 'what' is possible, not the adverbial *weishenme* 'why', *zenme* 'how come' (unless the word order is reversed and the adverbial is a true adjunct modifying the verb phrase): *ni ku shenme*/**weishenme*/**zenme*? 'what are you crying about?'

and locative expressions occur in the PP form, the P is always *zai* 'at'. Li (1985, 1990) notes that *zai* does not contribute any meaning when its object is a temporal or locative DP; i.e., it is a pure Case marker. This can be illustrated by the contrast in the use of PPs in Chinese and English. Chinese uses localizers or other locative nominals to turn a non-locative to a locative expression; Ps only serve to assign Case. In contrast, English can use Ps to make a locative expression. Localizers are not needed.

- (31) a. Come to me.
 b. Go to mommy.
 c. on the table
- (32) a. lai (dao) wo *(zher) b. qu (dao) mama *(nar).
 come arrive me here go arrive mom there
 b. dao wo *(zher) lai b. dao mama *(nar) qu.
 to me here come to mom there go
 'Come to me.' 'Go to mommy.'
 c. zai zhuozi*(-shang)
 at table top
 'on the table'

As illustrated by examples like the ones above, Ps in English serve the function of Case-assignment and of creating locative nouns. In contrast, Ps in Chinese do not have the latter function. This difference in the semantic contribution by Ps in English and Chinese is further supported by the following contrast between the locative expressions in the two languages (for details, see Li 1985, 1990):

- (33) a. For [under the stars] to seem the best place to sleep, you have to be crazy.
 b. He came from [behind the door].
- (34) a. (*zai) xing kong-xia shi shuijiao de hao difang.
 at star sky-under be sleep DE good place
 'Under the stars is a good place to sleep.'

- b. ta cong (*zai) men de houbian lai.
 he from at door DE back come
 'He came from behind the door.'

In these cases, PPs in English can behave as locative arguments in Case positions because of the semantic function of Ps but Chinese does not have this option.

In short, time and locative expressions can be properly interpreted without the Case marker *zai* in Chinese. Along the same line, a V and the tool typically associated with the activity expressed by the V bear a conventionally well-accepted activity-instrument relation: 'write'-'brush pen', 'cut'-'knife', 'eat'-'chopsticks'. The typicality is a convention recognized by the speech community. Accordingly, an instrumental non-canonical object is not quite acceptable when conventionally the instrument is not the typical tool for the activity.¹²⁾ In the Chinese society, the contrast in the following examples demonstrates such pragmatic factors: chopsticks have been the tool for eating for thousands of years but fork and knife are late borrowings from a different culture:

- (35) a. ni jiu chi zhe-shuang kuazi ba!
 you then eat this-pair chopstick SFP¹³⁾
 'You eat with this pair of chopsticks!'
 b. ?*ni jiu chi zhe-ba chazi/daozi ba!
 you then eat this-CL fork/knife SFP
 'You eat with this fork/knife!'

On the other hand, the benefactive interpretation must rely on *gei*.

12) Lin (2001) notes that the canonical object must be inherently or conventionally associated with the V)

13) SFP stands for Sentence Final Particle.

- (36) a. wo *(gei) ta zuo dangao.
 I for him make cake
 b. wo zuo dangao *(gei) ta.
 I make cake for him
 c. wo zuo *(gei) ta dangao.
 I make for him cake

Similarly, the comitative interpretation relies on *gen* (or similar ones): *gen ta* 'with him'. The source interpretation comes from *cong* 'from', unless appearing in the pair: *cong...dao* 'from...to'.

Thus, the contrast between the ease in having locative, temporal and instrumental expressions as non-canonical objects and the difficulty in having benefactives, comitatives or sources as non-canonical objects follows nicely from the Case approach. The Ps for the latter group make semantic contributions but not the Ps for the former, whose main function is to assign Case. Under the Case approach to Chinese word order in Li (1985, 1990), those that need to satisfy the Case requirement can occur with a Case assigning P or appear on the right of the verb to be assigned Case by the verb. Non-canonical objects are just like canonical objects in their way of fulfilling the Case requirement.

In brief, non-canonical objects are exactly like canonical objects syntactically. This similarity is due to the fact that they both occupy the postverbal Case position and receive Case from the verb. In Chinese, it is possible to have two occurrences of a V, assigning two Cases to both the canonical and non-canonical object, as in (8a), repeated here:

- (8) a. you qian ren chi fan chi haohua canting.
 have money people eat meal eat fancy restaurant
 'The rich eat meals at fancy restaurants.'

In other words, both types of objects are licensed by the Case feature of

V.¹⁴) The availability of an additional Case position other than the one for a canonical object makes it possible for a non-canonical object to become an “object” of V: an “object” is simply a nominal phrase expressing a participant of a V that becomes inherently and conventionally associated with the V (activities in the relevant cases). This is possible when the semantic function of the non-canonical objects can be carried by the nominal expressions without a P (in relation to the V).¹⁵)

Nevertheless, it is important to point out that, to capture cross-linguistic variations regarding word order and the (im)possibilities of noncanonical objects, there have been proposals specifically denying the relevance of Case in Chinese. The next section discusses such a Case-less alternative.

14) Because of the lack of evidence for the existence of Agreement of O to check or assign Case for an object, I simply refer to V as the Case assigner/checker for verbal objects. It is possible that a Case projection is projected, allowing the object DP to move to the Spec of the functional projection and the V moves further up to derive the V-O word order. These details do not make significant differences in the analysis.

15) This analysis must assume that even intransitive verbs assign Case to postverbal non-canonical objects. However, it is not quite clear how to distinguish transitive verbs from intransitive verbs. For instance, *fei* ‘fly’ has been used as a typical example for intransitive verbs taking non-canonical objects. Nonetheless, it is not clear that *fei* is intransitive. Just like English allows *fly* to be used transitively as in *He can only fly a small plane*, it is also possible to say that *fei* is a transitive verb as in *ta zhi neng fei xiao feiji* ‘he can only fly a small plane’. Perhaps all verbs can be used transitively (see Huang 1984 for the fluidity between phrases and lexical items) or a distinction between transitive and intransitive verbs should not be made at all (see, among others, Lin 2001, Borer 2005). Also see Huang (2007) for the claim that Chinese verbs can generally assign an inherent Case, in contrast to English being restricted to a much smaller set of verbs. See Li (2010) for the type of verbs such as *renwei/yiwei* ‘think’, *cai* ‘guess’ that only allow clausal complements.

4. Relevance of Case

Chinese seems to differ from many other languages such as Japanese, English in the possibility of noncanonical objects (see Lin 2001, among others). Hu (2007, abstract) argues that “the unselectiveness of subjects and objects in Chinese results from the fact that DPs in Chinese are not marked for Case. It [the paper] makes a distinction between Case-marking languages and non-Case-marking languages, and claims that in non-Case-marking languages, a DP may be licensed neither by Case nor by syntactic theta-marking mechanism and thus may not function as an argument when appearing in some grammatical function positions.” According to Hu, the notion of Case should be overtly manifested, i.e., morphologically marked. If a language does not mark Case morphologically, the notion of Case is simply irrelevant in this language and the distribution of DPs or arguments is not sensitive to the theory of Case. Accordingly, the “object” position can host non-arguments, i.e., non-canonical objects.

Hu agrees with Markman (2005, 2009), who argues for the link between abstract Case and morphological case markings. She claims that Case and agreement features are not universal and Chinese is a language without agreement or Case, supported by the rigidity in word order in this language. “I would like to suggest that word order is a way to preserve thematic relations at PF in the absence of Case and/or agreement marking... Case and agreement morphemes can be viewed as the PF reflexes of thematic relations that hold within the vP between the verb and at least one of its arguments. However, in the absence of Case and agreement features, thematic relations at PF can be preserved via a rigid relative word order of constituents within the vP” (Markman 2009, 417). For Indo-European languages (her type B, in p. 420, table (78)), both agreement and Case exist and DP dislocation is

available. In contrast, Chinese does not have agreement or Case (her type D); therefore DP-dislocation is highly restricted – rigid word order.

However, the support for such a Case-less approach is questionable. It is not clear at all that Chinese indeed is more rigid in word order than another language with Case, for instance, English (Markman's type B language). In contrast to the SVO word order in English, Chinese prominently exhibits SOV and OSV orders.

- (37) a. niurou, ta bu chi. --OSV
 beef he not eat
 'Beef, he does not eat.'
- b. ta niurou bu chi. --SOV
 he beef not eat
 'He does not eat beef.'

English does not have the SOV variety and uses OSV much less frequently than Chinese. In addition, it is common to find pairs of reverse word orders in Chinese expressing similar meanings. The following examples are those of Huang, Li, and Li (2009, chapter 2):

- (38) a. xiao bei he lücha. --- Instrument - Theme
 small cup drink green. tea
- b. lücha he xiao bei. --- Theme - Instrument
 green.tea drink small cup
 'Use the small cup to drink (the) green tea.'
- (39) a. ni-de keren shui na-zhang chuang ba. --- Experiencer? - Location
 your guest sleep that-CL bed SFP
- b. na-zhang chuang shui ni-de keren ba. --- Location, obj - Experiencer?
 that-CL bed sleep your guest SFP
 'Let your guest sleep on that bed.'

- (40) a. jieri liwu dou gei-LE pengyou-men le. — Theme - Goal
 holiday gift all give-LE friend-PL LE
 ‘Holiday gifts were all given to the friends.’
- b. pengyou-men dou gei-LE jieri liwu LE. -- Goal-Theme
 friend-PL all give-LE holiday gift SFP
 ‘Friends were all given gifts.’
- (41) a. xiatian chi liang-bu, dongtian chi re-bu. — Temporal - Theme
 summer eat cool-tonic winter eat hot-tonic
- b. liang-bu chi xiatian, re-bu chi dongtian. --- Theme - Temporal
 cool-tonic eat summer hot-tonic eat winter
 ‘Cool tonics are for summers; hot tonics are for winters.’

It is difficult to claim that English has freer word order than Chinese. If the comparison is to be made, Chinese actually should be freer than English in word order, contrary to the claim fundamental to Markman’s Case-less approach to Chinese.¹⁶⁾ On the other hand, if we recognize the existence of Case in Chinese, the distribution of the various categories is captured. The generalizations presented in section 1-2 are the natural consequences of the properties of Case in Case theory and in Chinese (also see Huang 2007 regarding the availability of inherent and structural Case when a verb licenses two objects in English and Chinese).

5. Cross-linguistic variations

The analysis proposed in this work has the following features that might turn out to be the main factors in capturing the cross-linguistic variations with

16) It should not matter if the variant word orders are the result of topicalization or focalization. Markman’s works allow such possibilities. Moreover, in the type of languages that have Case and allow free orders such as Japanese, the notions of topic or focus are also relevant (see, among others, Matsuda 1997, Ueyama 1998).

respect to the availability of non-canonical objects:

(i) It is possible that a canonical object still exists in the cases when it is not overt. It may appear as an empty topic or object of another copy of V (deletable) in the constructions discussed: [[V + canonical object]] + V + non-canonical object].

(ii) The accusative Case position is available for a DP that is not a canonical object because the accusative Case is not taken by the canonical object.

(iii) There should be no distinct morphological markings for different Cases. For instance, a locative DP just needs to appear in a Case position and does not have to be marked by an overt morpheme distinct from the one licensed by V (for instance, locative Case or instrument Case vs. accusative Case). This allows a non-canonical DP to appear in the accusative Case position licensed by V, just like a canonical object.

The empirical support might come from noun-incorporation languages allowing arguments as well as some adjuncts (but not some others) to incorporate to verbs, which will be the subject of a separate work in collaboration with Michael Barrie.

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[Abstract]

Chinese allows nominal phrases (DPs) in the typical postverbal object position to bear a variety of thematic roles non-canonical to objects, such as instrument, time and location. The issues are whether such postverbal instrument/time/location DPs correspond to their preverbal adjunct counterparts with prepositions and whether such DPs are truly verbal objects. This work presents the many differences between the postverbal DPs and preverbal adjunct PPs in meaning, ordering and restrictions and demonstrates that such postverbal DPs behave like the canonical objects of verbs syntactically. It shows that the availability of these DPs follows straightforwardly from the Case properties of Chinese and Universal Grammar.

Received : February 20, 2011

Accepted : February 20, 2011 (invited paper)

Revision accepted : June 18, 2011 (invited paper)

