

CHINESE UNIVERSITY OF HONG KONG

Distribution of Null Object in Cantonese

LIN4017 Senior Thesis

by

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May, 2007

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ABSTRACT

Huang (1984) proposes that null object is a variable controlled by a null topic, unlike null subject which is a real null pronoun. This paper tries to verify this proposal by investigating the distribution of null object in Cantonese. It is found that while Huang's proposal is able to explain the majority part of the distribution of null object, it is unable to give an explanation to several cases related to resultativity and indirect object which disallow null object. A possible explanation is given to account for these cases, which is related to feature checking and a modified version of Huang's Generalized Control Rule.

1. Introduction

The theory of Generative Grammar proposes that every member of the human species is born with a language acquisition device (LAD), a faculty of the human brain which enables us to acquire a language naturally and easily, just as birds acquire their skill of flying. The process of acquisition operates according to two kinds of constraints or guidelines, namely principles and parameters. Principles are a set of constraints or features common to all languages, and are characteristic of the LAD *per se*. Parameters, on the other hand, are a set of features which have two possible polar values, and different languages make use of different combinations of values of these parameters. Hence, the different linguistic or syntactic structures in the many languages of the world arise from the use of different combinations of these parameters.

Of these parameters, one of the earlier and more studied is the Pro-Drop Parameter. Chomsky's (1981) original discussion of the parameter only considered inflectional languages such as Italian and English, but the definition was later generalized to include all languages in which a structural NP can be omitted in the surface form if it can be deduced from the discourse. The most common form of pro-drop is subject pro-drop, or null subject, which can be seen in almost all pro-drop languages. Object pro-drop, or null object, is much less common, and is not found in typical subject pro-drop languages such as Italian and Spanish. It is, however, relatively common in Asian languages such as Chinese, Japanese and Thai.

Despite surface similarities, a number of asymmetries exist between null subject and null object. An immediate interesting question to ask is whether they belong to the same phenomenon and can be treated on a par. Huang (1984) suggests

that while null subject is a true argument dropping process, null object is in fact a topic dropping process. In this paper, I am going to look closer into the distribution of null object, further verify this proposal and discuss several relevant issues.

2. Overview of Null Arguments

Traditionally, the Pro-Drop parameter involves both the phenomena of null subject and null object, although null subject has been given much more attention due to its being more widespread in known languages and its more predictable distribution.

2.1 Null Subject

Chomsky (1981; 1982) relates the possibility of subject dropping in a language to the morphological agreement of it. In Italian, for instance, a tensed verb must be morphologically conjugated to agree with its subject, thus giving the different forms in Table 1. Since it is possible to recover the subject from the morphological affix, null subject is allowed in Italian.

Table 1. Subject agreement of the verb *cantare* 'to sing' in Italian

	singular	plural
1st person	<i>(Io) canto</i> (I) sing	<i>(Noi) cantiamo</i> (We) sing
2nd person	<i>(Tu) canti</i> (You) sing	<i>(Voi) cantate</i> (You all) sing
3rd person	<i>(Lui/lei) canta</i> (He or she) sings	<i>(Loro) cantano</i> (They) sing

On the other hand, the morphological systems in languages like English and French cannot uniquely identify the subject of a verb. In other words, the morphological affixes and the subjects do not have a one-to-one correspondence relationship, as shown in Table 2, therefore, null subject is forbidden in these languages.

Table 2. Subject agreement of the verb *chanter* 'to sing' in French¹

	singular	plural
1st person	<i>Je chante</i> I sing	<i>Nous chantons</i> We sing
2nd person	<i>Tu chantes</i> You sing	<i>Vous chantez</i> You all sing
3rd person	<i>Il/elle chante</i> He or she sings	<i>Ils/ells chantent</i> They sing

In addition, since none of Italian, English or French shows object agreement in their verbs, therefore null object is not permitted in these languages.

The above paradigm works considerably well in explaining why some languages are pro-drop, while others are not. Huang (1984) illustrates a more convincing example using data from an Afghanistan language Pashto. Essentially, in this language, a transitive verb agrees with the subject if it is in present tense, and with the object if it is in past tense. The interesting point is that null subject is possible only when the verb is in present tense (thus there is subject agreement) and null object is possible only when the verb is in past tense (so there is object agreement).

However, the paradigm cannot explain why many languages without any kind of subject or object agreement, such as Chinese, also allow null arguments. It is thus proposed that a language permitting null arguments must either have a complete verb agreement system, or totally lack it.

¹ Despite the orthographical differences, *chante*, *chantes*, and *chantent* are all pronounced as [ʃãt]

2.1.1 Distribution of Null Subject

In pro-drop languages, the dropping of the subject is somewhat arbitrary. It is allowed as long as the subject is recoverable from the discourse. Sensini (1997) lists the following cases in which the subject is usually dropped in Italian:

- i. When the subject is a first or second person pronoun, in which case it can easily be deduced from the discourse and the morphology;
- ii. When the verb is imperative (in which case, the subject is understood to be a first or second person pronoun as well);
- iii. When the subject is mentioned already in previous context and it is clear that the subject in question refers to this previously mentioned nominal;
- iv. In the response of a question, whose subject is the same as that of the question.

In other words, the subject is usually dropped if the hearer can easily deduce its referent, although the subject can sometimes remain for contrastive emphasis, as demonstrated in (1), or for rhetoric effects.

(1) Io prendo questo, ma tu, tu prendi quello.

I take this but you you take that

‘It is I who take this one and you who take that one.’

In addition, there is no syntactic restriction on the ellipsis of the subject. It can be dropped in the matrix clause (2), in an embedded clause (3) or even in both (4).

(2) *e* non è andato.

(he) not is gone

‘He did not go.’

(3) Paolo_i ha detto [che *e_{i/j}* non è andato]

Paolo has said COMP not is gone

‘Paolo_i said that he did not go.’

(4) *e_i* ha detto [che *e_{i/j}* non è andato]

has said COMP not is gone

‘He or she said that he did not go.’

In addition, neither the situation type nor the transitivity of the verb affects the grammaticality of null subject in Italian. The following examples are perfectly grammatical in Italian if a suitable context is given, in spite of their different verb or predicate types.

(5) *e* conosci Paolo? (State, Transitive)

know Paolo

‘Do you know Paolo?’

(6) *e* è morto. (Achievement, Intransitive)

is died

‘He has died.’

(7) *e* va a scuola a piede ogni giorno. (Activity, Intransitive)

goes to school on foot every day

‘He or she goes to school on foot every day.’

(8) *e* ha cantata una canzone. (Accomplishment, Transitive)

has sung a song

‘He or she has sung a song.’

(9) *e* ha dato un regalo a Paolo. (Ditransitive)

has given a gift to Paolo

‘He or she has given a gift to Paolo.’

Similarly, the subject can be dropped in Chinese dialects such as Mandarin and Cantonese as long as it can be easily deduced by the hearer from the discourse. The criteria for determining when the subject can be dropped in Italian can apply to Chinese as well. Since Chinese has no morphological subject-verb agreement, compared with inflectional languages like Italian and Spanish, as a result, Chinese speakers rely even more on the discourse or pragmatic hints to recover the subject. One would therefore suspect that null subject is not used as frequently in noninflectional languages like Chinese, as the agreement system in inflectional languages gives more hints for the speakers to recover the subject. This, however, does not seem to be the case. Intuitively, null subject is used (or at least, can be used) whenever it can be deduced in noninflectional pro-drop languages like Cantonese and Japanese and at least as frequently as in inflectional languages. In fact, the use of an overt subject in situations where it can be deduced can even bring awkwardness sometimes. In (10), for example, the use of an anaphora in the subsequent clauses of a series of events related to the same subject makes the sentence sound over-redundant and awkward.

- (10) Aaming gamziu catdim heisan, zihau e/(?keoi) faan
 Aaming this.morning 7.o'clock wake.up then (he) back
 zo hokhau e/(?keoi) tong sinsan king zo zan,
 ASP school (he) with teacher talk ASP a.while
 e/(?keoi) zau faan zo ukkei
 (he) then back ASP home

‘Aaming woke up at 7 this morning, then he went to school He talked with his teachers for a while, then he came back home.’

2.2 Null Object

Null object is found in many Asian languages, such as Chinese, Japanese, Korean and Thai, as well as in Farsi, Brazilian Portuguese and colloquial German. As opposed to null subject, which is consistently allowed in subject pro-drop languages, even at first glance the acceptability of null object is subject to more restrictions. Huang points out, for example, that the object can only be dropped in colloquial German when it is placed before the verb. Therefore (11a) is good but (11b) is bad.

- (11) a. *e* hab' ich schon gesehen.
 have I already seen
 'I have already seen him or her.'
- b. * ich hab' *e* schon gesehen.
 I have already seen

In Mandarin, a null subject in an embedded clause coindexed with the subject of the matrix clause is good, but a null object in an embedded clause coindexed with the subject of the matrix clause is bad, as illustrated below.

- (12) a. Zhangsan_i xiwang [*e*_i keyi kanjian Lisi]
 Zhangsan hope can see Lisi
 'Zhangsan_i hopes that he_i can see Lisi.'
- b. * Zhangsan_i xiwang [Lisi keyi kanjian *e*_i]
 Zhangsan hope Lisi can see
 'Zhangsan_i hopes that Lisi can see him_i.'

This is echoed by similar examples in Japanese (13) and in Brazilian Portuguese (14).

- (13) a. dare-ga_i [e_i Bill-o nagutta] to itta ka?
 who-SUBJ Bill-OBJ hit that said Q
 ‘Who_i said that he or she_i hit Bill?’
- b. * dare-ga_i [Bill-ga e_i nagutta] to itta ka?
 who-SUBJ Bill-SUBJ hit that said Q
 ‘Who_i said that Bill hit him or her_i?’
- (14) a. João_i disse que e_i viu o Pedro.
 João said that saw Pedro
 ‘João_i said that he saw Pedro_i.’
- b. * João_i disse que Pedro viu e_i.
 João said that Pedro saw
 ‘João_i said that Pedro saw him_i.’

Huang proposes that the distribution of null object can be explained by assuming that what is actually dropped is not the object but the topic. He argues that in a sentence like (15), the empty category actually corresponds to the topic in a parallel sentence (16).

- (15) Zhangsan_i shuo [Lisi bu renshi e_j]
 Zhangsan say Lisi not know
 ‘Zhangsan_i said Lisi didn’t know him_j.’
- (16) neige ren_j, Zhangsan_i shuo [Lisi bu renshi e_j]
 that man Zhangsan say Lisi not know
 ‘That man_j, Zhangsan_i said Lisi didn’t know him_j.’

This is supported by the fact that in German, the preverbal position is always occupied by the topic. If only the topic can be dropped instead of the underlying

object, then one can explain why only the first constituent can be dropped in colloquial German (11).

If this is true, it follows that the ungrammaticality of (12b), (13b) and (14b) is a result of the EC in question being bound by the null topic, but not the matrix subject in these sentences.

3. Difficulties in Current Theories

3.1 Availability of Object Pro-Drop

As already discussed in the last section, Chomsky, among other linguists, proposes that the availability of subject pro-drop in a language is licensed by a complete morphological subject-verb agreement system, or, in odd cases like Chinese and Japanese, by a complete lack of such an agreement system. On the other hand, in languages which have a partial subject-verb agreement system like English and French, subject pro-drop is not allowed.

One can therefore naturally assume that object pro-drop follows much the same rule, and is licensed by a complete object-verb agreement system or the complete absence of it. Huang (1984) supports this by explaining that the absence of object pro-drop in languages like English, French and Italian is due to their lack of object-verb agreement.

I have to point out, however, that object-verb agreement does exist in many Romance languages, including French and Italian, and, following Rizzi (1986), I will illustrate several examples of null object in Italian. These instances of null object, contrary to expectation, do not seem to correspond simply to the existence of an object-verb agreement system.

A simple tensed Italian verb normally agrees with the verb in person and number, as already illustrated in Table 1. The verb, however, agrees with the direct object in number and gender if the following criteria are met:

- i. The verb is in a compound tense (such as *passato prossimo* ‘present perfect tense/aspect’);

- ii. The direct object is a pronoun.

The third person pronoun, which is in clitic form, climbs to the front of the verb and is always reduced to [l] in PF because the auxiliary *avere* ‘to have’ always starts with the vowel [a]. We can see in (17) and (18) that the object-verb agreement system is complete in the sense that it differentiates each member of the features which it agrees in with a separate affix, and so the pronoun *l’* is redundant in terms of the information provided. However, the pronoun cannot be omitted, and (18e) is ungrammatical. Similar object-verb agreement can also be found in French (19).

- (17) a. Paolo ha dato il libro a Gianni.
Paolo has given the book-MASC.SG to Gianni
“Paolo has given the gift to Gianni.”
- b. Paolo ha dato la mela a Gianni.
Paolo has given the apple-FEM.SG to Gianni
“Paolo has given the gift to Gianni.”
- c. Paolo ha dato i libri a Gianni.
Paolo has given the books-MASC.PL to Gianni
“Paolo has given the gift to Gianni.”
- d. Paolo ha dato le mele a Gianni.
Paolo has given the apples-PL.FEM to Gianni
“Paolo has given the gift to Gianni.”
- (18) a. Paolo l’ha dato a Gianni.
Paolo it-has given-MASC.SG to Gianni
“Paolo has given it to Gianni.”
- b. Paolo l’ha data a Gianni.

Paolo it-has given-FEM.SG to Gianni

“Paolo has given it to Gianni.”

c. Paolo l’ha dati a Gianni.

Paolo it-has given-MASC.PL to Gianni

“Paolo has given them to Gianni.”

d. Paolo l’ha date a Gianni.

Paolo it-has given-FEM.PL to Gianni

“Paolo has given them to Gianni.”

e. * Paolo *e* ha date a Gianni.

Paolo has given-FEM.PL to Gianni

“Paolo has given (them) to Gianni.”

(19) a. Pierre a donné les pommes à Jean.

Pierre has given the apples-FEM.PL to Jean

“Pierre has given the apples to Jean.”

b. Pierre les a donné-e-s à Jean.

Pierre them has given-FEM-PL to Jean

“Pierre has given them to Jean.”

c. * Pierre *e* a donné-e-s à Jean.

Pierre has given-FEM-PL to Jean

“Pierre has given (them) to Jean.”

If the availability of object pro-drop is licensed by an agreement system, we must then explain why in this case, the object cannot be dropped in spite of an agreement system.

In addition, Rizzi (1986) and Cattaneo (2006) describe several cases of null object in Italian.

(20) Una buona dormita riconcilia e_i con se stessi _{i}
a good sleep reconciles with oneself.MASC.PL
'A good night's sleep reconciles one_{arb}/people with themselves.'

(21) L'ambizione spesso spinge e_i a [PRO _{t} commettere errori]
the ambition often pushes to make mistakes
'Ambition often pushes one_{arb}/people to make mistakes.'

(22) Il caffè eccita e
the coffee excites
'Coffee agitates people.'

In these cases, we can clearly see that the dropping of the object is not licensed by object-verb agreement. Moreover, the distribution of null object is very much restricted in Italian, and I will not discuss further in this paper.

3.2 The Nature of Null-Object

Huang's proposal that null object is in fact the ellipsis of a topicalized object, or in other words, a null topic, is a very persuasive hypothesis at first sight. It is able to explain a number of issues as described in the previous section. However, upon more careful inspection there are reasons to suspect that his proposal may not be a complete solution and explain the entire distribution of null object.

Contrast the following sentences (23a) (Huang 1984) and (23b-e) (from N. L. Leung (personal communication)). If the EC is not coindexed with the matrix subject *John*, the sentence (23b) is grammatical. The EC is understood as referring to

someone to be inferred from the discourse. (23c) is a grammatical sentence overtly expresses the embedded object.

If Huang's proposal is correct, then every null object sentence must have a corresponding, parallel topicalized counterpart. Since (23b) is grammatical, Huang's proposal predicts that either (23d) or (23e) should be grammatical, which is not the case. In Japanese, neither of these is acceptable. In fact, there is no way of topicalizing the embedded object in Japanese.

- (23) a. * John-wa_i [Bill-ga e_i settokusuru] to omotte iru
 John-TOP Bill-SUBJ persuade COMP think
 'John_i thinks that Bill will persuade him_i.'
- b. John-wa_i [Bill-ga e_j settokusuru] to omotte iru
 John-TOP Bill-SUBJ persuade COMP think
 'John_i thinks that Bill will persuade him or her_j.'
- c. John-wa [Bill-ga Mary-o settokusuru] to omotte iru
 John-TOP Bill-SUBJ Mary-OBJ persuade COMP think
 'John thinks that Bill will persuade Mary.'
- d. * Mary-wa_i [John-wa [Bill-ga t_i settokusuru] to omotte iru]
 Mary-TOP John-TOP Bill-SUBJ persuade COMP think
 'John thinks that Bill will persuade Mary'
- e. * John-wa [Mary-wa Bill-ga settokusuru] to omotte iru
 John-TOP Mary-TOP Bill-SUBJ persuade COMP think
 'John thinks that Bill will persuade Mary.'

4. Null Object in Cantonese

In section 2, I have discussed on the general situations when null object is used. I have also noted that unlike null subject, whose usage is more or less arbitrary and only limited by the ability of discourse inference, null object is much more constrained. There are many cases when an object cannot be dropped in a sentence. Furthermore, I have pointed out that null object may not be simply reduced to null topic. (25) illustrates the fact that the distribution of null object does not coincide with that of null topic exactly. (25a) is a case of topicalization, the direct object *jidailei* ‘Italy’ is moved to the topic position, leaving a trace behind. The null object sentence (25b), without presupposing its underlying derivation, has an EC in the direct object position. The sentence is however totally meaningless if uttered out of context, and only at best marginally acceptable even if the object can be easily inferred from the discourse. Therefore a treatment must be given to null object on its own right.

- (25) a. *jidailei_i le1, ngo zau zeoi zongji t_i gaa3laa3*
 Italy TOP I EMPH most like SFP
 “I like Italy the most.”
- b. ?? *ngo zau zeoi zongji e gaa3laa3*
 I EMPH most like SFP
 “I like (it) the most.”

4.1 Aktionsarten

The aktionsart, or the situation type of a verb, concerns the intrinsic temporal structure of a verb, which involves dynamicity, telicity and punctuality.

Dynamicity classifies verbs which denote changes from those that denote states and thus involve no changes. Telicity concerns whether an action has a natural endpoint, an endpoint which is implied in the meaning of the verb. Very often this also means that the action leaves something in a certain state after its completion. Punctuality specifies the duration of the action. If an action has internal temporal structure, that is to say, it lasts for a certain duration, it is called durational. Otherwise, it is punctual.

Vendler (1957) classifies predicates into four types, namely state, achievement, accomplishment and activity based on these criteria. A fifth type, semelfactive, is added by Comrie (1976) in his classification. As a state verb involves no changes, telicity and punctuality do not apply. For the other four types, they differ in their telicity and punctuality, and is summarized in Table 3.

Table 3. Classification of dynamic aktionsarten

	durational	punctual
Telic	achievement	accomplishment
Atelic	activity	semelfactive

I have observed that in Cantonese, when an object is part of an accomplishment or an achievement predicate, which is often headed by a verb-complement compound, then it usually cannot be dropped. For example, the objects of verbs like *zamsei* 'drown', *jungfaa* 'melt' and *haakcan* 'scare' cannot be dropped even when they can possibly be recovered from the discourse (26)

- (26) bingo haak can saimui gaa3?
 who scare PRT little sister SFP

‘Who has scared little sister?’

* Aaming haak can e gaa3.

Aaming scare PRT SFP.

‘Aaming has scared (her).’

On the other hand, state verbs such as *siktak* ‘know’ and *zongji* ‘love’, semelfactive verbs like *haau* ‘knock’ and activity verbs like *hok* ‘learn’ and *sik* ‘eat’ always allow object dropping. (27) and (28) are good even when they are spoken out of context, the hearer can immediately match the silent object to a certain unknown object to be inferred in context.

(27) Aaming sik e gaa3.

Aaming eat SFP

‘Aaming has eaten (it).’

(28) Aaming siktak e aa3.

Aaming know SFP

‘Aaming knows (it).’

Since both accomplishment and achievement are telic and have a natural implied endpoint, or in other words, a change of state as a result of the action is implied, so it does seem that the unavailability of object pro-drop is related to the resultative/causative meaning of the verb. I will further verify this claim in the following sections.

4.2 Ergativity

Although only achievement and accomplishment verbs disallow null object, not all verbs in these two categories disallow it. For instance, *lamdou* ‘can think of/find out (logically)’ and *faatjin* ‘discover’ are both telic but they permit null object.

(29) Aaming lamdou2 e laa3.

Aaming find.out SFP

‘Aaming has found (it) out.’

(30) Aaming faatjin zo e laa3.

Aaming discover ASP SFP

‘Aaming has discovered (it).’

An important difference between verbs which permit null object, such as *lamdou* and *faatjin*, and those which do not permit it, such as *zamsei*, *jungfaa* and *haakcan*, is that the latter are ergative verbs and can be used in both transitive and intransitive constructions. *haakcan*, for instance, can be used both as in (31a) and (31b). In (31a) *Aaming* is the agent, and in (31b) *Aaming* is the patient.

(31) a. Aaming haak can saimui.

Aaming scare PRT little sister.

‘Aaming has scared little sister.’

b. Aaming haak can.

Aaming scared PRT

‘Aaming is scared.’

Ergative verbs have a general lexical conceptual structure:

(32) *x* ACT CAUSE [*y* BECOME *z*]

In other words, the resultative/causative meaning is central in the semantics of ergative verbs. Hence, I suggest that the crucial property involved in this distinction stems from the resultative/causative meaning in the transitive form of ergative verbs. This is supported by Ettliger's (2005) analysis that in English, topicalization cannot occur in resultative constructions that denote a change of state (33) and (34), but it is possible in resultative constructions that denote a change of position (35) and (36).

(33) * [PP Into a rage]_i Bolton flew *t_i*.

(34) * [AP Clean]_i I wiped the table *t_i*.

(35) [PP Into the room]_i I ran *t_i*.

(36) [AP Away]_i the ball rolled *t_i*.

In addition to his examples, I have also noticed that the topicalization of the direct object in a transitive resultative clause is also unavailable:

(37) * [DP The table]_i I wiped *t_i* clean.

This also holds true in Cantonese. When the verb denotes a change of state, topicalization is unavailable (38a), and when it denotes a change of location, topicalization is possible (39a). If we compare the grammaticalization of these sentences with (38b) and (39b), we can find that they are unambiguously similar. This echoes with Huang's analysis that null object is actually a variable bound by a null topic. If topicalization is unavailable in a construction, then the corresponding null object sentence is automatically ruled out. It should also be noted that since in Cantonese the majority of ergative verbs involve the change of state, so ergative verbs typically disallow null object.

(38) a. * [bong coeng]_i ngo yau hung zo *t_i*
 CL wall I paint red ASP

‘I have painted the wall red.’

b. * ngo yau hung zo e

I paint red ASP

‘I have painted (it) red.’

(39) a. [fuk waa]_i ngo fong zo t_i seong heoi

CL painting I put ASP upward

‘I have put the painting up (there).’

b. ngo fong zo e seong heoi

I put ASP upward

‘I have put (it) up (there).’

To summarize, null object is closely related to topicalization, as Huang suggests, even if the proposal that null object are equivalent to null topic cannot fully explain the picture. If this is true, then the unavailability of null object in many cases is related to the resultative/causative meaning of the verb. When a verb is resultative/causative, topicalization is not possible, and null object is also barred.

4.3 Postverbal Particles

4.3.1 The particle ‘*can*’

In addition to ergative verbs, there are nonergative verbs which also disallow null object. Notable examples are *tekcan* ‘kick’ (40) and *daacan* ‘hit’. (40b) shows that *tekcan* is not an ergative verb as the intransitive counterpart is not grammatical. (40c) shows that object dropping is not allowed for the verb.

(40) a. Aaming tek can keoi saimui laa3

Aaming kick PRT he little sister SFP

‘Aaming has (unintentionally) kicked his little sister.’

b. * Aaming tek can laa3

Aaming kick PRT SFP

Intended reading: ‘Aaming is kicked (unintentionally).’

c. * Aaming tek can e laa3

Aaming kick PRT SFP

‘Aaming has (unintentionally) kicked (him or her).’

The Cantonese verbs *tek* ‘kick’ and *daa* ‘hit’ are atelic verbs and do not impose any emphasis on the result of their actions, as (41a) is possible. We can contrast (41a) against (41b) and see that if the verbs are followed by the particle *can*, they become telic and do not allow the construction in (41b). Therefore, it is clear that the ungrammaticality of the sentence (39c) is brought forth by the postverbal particle *can*.

(41) a. Aaming tek/daa zo Aakoeng senggozung.

Aaming kick/hit ASP Aakeong for an hour

‘Aaming has kicked/hit Aakeong for an hour.’

b. * Aaming tek/daa can Aakoeng senggozung.

Aaming kick/hit PRT Aakeong for an hour

‘Aaming has kicked/hit Aakeong for an hour.’

To further verify this claim, let us consider (42). Even though the object can easily be inferred from the discourse in (42b), it is not accepted by native speakers as

a valid answer to the question (42a). Instead, when the particle *can* is not used², as in (42c), the sentence is grammatical. This confirms that the unavailability of null object is a result of the particle *can*.

- (42) a. ngamngam bingo tek can ngo aa3?
 just now who kick PRT me SFP
 ‘Who has kicked me (unintentionally) just now?’
- b. * Aaming tek can e gaa3
 Aaming kick PRT SFP
 ‘Aaming has (unintentionally) kicked (you).’
- c. Aaming tek e gaa3
 Aaming kick SFP
 ‘Aaming has kicked (you).’

Gu and Yip (2004) points out that the particle *can* is closely associated with resultativity, and “contributes an aspectual meaning to its host verb in forming a designated complex resultative predicate”. It puts an emphasis on the result of the action. The verb *daacan* has an implication that as a result of *daa* ‘hit’, the patient is left in a certain state, such as being in pain or hurt.

² There is some subtle difference in meaning when the verb is used without the particle *can*. Gu and Yip (2004) points out that *can* is associated with adversity, experientiality and resultativity. Besides, *tekcan* also gives a reading that the action is or may be unintentionally done, while the bare verb *tek* only describes the action but does not bear any emphasis on the intentionality or unintentionality.

4.3.2 The particle ‘*dou*’

A further piece of evidence is given by the *dou*-construction in Cantonese, which is also associated with resultativity (Wong 1993). The *dou*-construction has a general form:

(43) NP₁ V-*dou* NP₂ XP

Wong suggests that the postverbal particle *dou* is attached to the matrix verb V to form a resultative compound, which selects a clause [NP₂ XP] as its complement.

Testing the *dou*-construction ((44a), (45a)) against topicalization ((44b), (45b)) and null object ((44c), (45c)), we find that both are not possible. Since the *dou*-construction is a resultative construction, hence it is tempting to include it as a case of the general principle that resultative clauses are incompatible with null object as well.

- (44) a. ngodei zaa dou di jauzaagwai ceoibokbok
 we fry PRT CL doughnuts crispy
 ‘We fried the doughnuts crispy.’
- b. ? di jauzaagwai ngodei zaa dou ceoibokbok
 CL doughnuts we fry PRT crispy
 ‘We fried the doughnuts crispy.’
- c. ?? ngodei zaa dou *e* ceoibokbok
 we fry PRT crispy
 ‘We fried (the doughnuts) crispy.’
- d. ?? ngodei zaa dou *e* ceoibokbok
 we fry PRT crispy
 ‘We fried (the doughnuts), as a result we are crispy.’
- e. di jauzaagwai_i zaa dou *t_i* ceoibokbok

CL doughnuts fry PRT crispy

‘The doughnuts are fried crispy.’

f. *e* zaa dou *e* ceibokbok

fry PRT crispy

‘(The doughnuts) are fried crispy.’

(45) a. ngo waan dou Aaming siu ceotlai

I bully PRT Aaming laugh out

‘I bullied Aaming, as a result, Aaming laughed.’

b. * Aaming ngo waan dou *e* siu ceotlai

Aaming I bully PRT laugh out

‘I bullied Aaming, as a result, Aaming laughed.’

c. * ngo waan dou *e* siu ceotlai

I bully PRT laugh out

‘I bullied (him), as a result, (he) laughed.’

d. ngo waan dou *e* siu ceotlai

I bully PRT laugh out

‘I bullied (him), as a result, I laughed.’

e. *e* waan dou *t_i* siu ceotlai

bully PRT laugh out

‘(I) bullied (him), as a result, (I) laughed.’

Moreover, the interesting point to note here is that when the object is missing, the predicate XP can only predicate NP₁ ((44d), (45d)) but not the covert NP₂ ((44c), (45c)). If (44d) is spoken out of context, the only reading available is that the subject

“we” is the one who is fried crispy. This is more obvious in (45d) as the subject “I” is semantically compatible with the predicate “laugh”.

If both NPs are covert, the sentences appear to resemble the corresponding sentences with an overt subject. Therefore, they likely have the same derivation, only differing in having the subject dropped.

4.4 Relating Resultativity with Null Object

To explain the above findings, let us recall the lexical conceptual structure of a resultative clause, repeated here as (46).

(46) = (32) x ACT CAUSE [y BECOME z]

Verbs like *jungfaa* ‘melt’ and *meifaa* ‘beautify’ fit into the template by encoding z lexically:

(47) *jungfaa*: x ACT CAUSE [y BECOME MELT]

(48) *meifaa*: x ACT CAUSE [y BECOME BEAUTIFUL]

Verbs with the postverbal particle *can* attached fit into the template by encoding the manner of x ’s action lexically, and leaving the state z not clearly specified.

(49) *haakcan*: x ACT(manner: HAAK) CAUSE [y (BECOME z)]

Verbs in *dou*-construction fit into the template by encoding the manner of the action lexically and specifying all of x , y and z .

(50) *zaadou*: x ACT(manner: ZAA) CAUSE [y BECOME z]

Since all the resultative constructions discussed above share the same semantic template, I assume that they share the same underlying syntactic structure. In line with

Tang's (1997) analysis, I adopt the following syntactic structure as the generalized structure for resultative construction, where F is a functional category.

(51) $NP_1 \nu [_{VP} NP_2 V [_{FP} F [_{XP} pro/PRO X]]]$

According to Tang's analysis, the particles *dou* and *can* should be located in the place of the functional category F, the matrix verb is the main verb V, whereas the light verb corresponds to the object-marking preposition *zeong* in Cantonese, if it is present. Tang suggests that the functional category is merged with the verb V and moves to the position of the light verb ν before spell-out.

According to Huang's (1984; 1989) Generalized Control Rule (52), the empty category *pro/Pro* is coindexed to NP_2 if it is overtly expressed, as it is the closest nominal element to the EC.

(52) Generalized Control Rule (GCR)

Coindex an empty pronominal with the closest nominal element.

From the above discussion, we can generalize that if the agent NP_1 is deleted, it is possible for NP_2 to move to the matrix subject position, but not to the topic position. When this occurs, it leaves a trace in the original position. Since the trace is not a nominal element, the EC skips it and coindex with the nominal element in the subject position. This explains why (44b), (53b) and (54b) are bad but (44e), (53a) and (54a) are acceptable.

(53) a. *taaiyeong_i jungfaa zo t_i*

sun melt ASP

 ‘The Sun has melted.’

 b. * *faai bing taaiyeong jungfaa zo*

 CL ice sun melt ASP

‘The Sun has melted the piece of ice.’

(54) a. Aaming_i haakcan t_i laa3.

Aaming scare SFP.

‘Aaming is scared.’

b. *saimui Aaming_i haakcan e laa3.

little.sister Aaming scare SFP.

‘Aaming has scared little sister.’

If the matrix subject is present, then NP₂ cannot move there. However, as mentioned, for some reason NP₂ is not able to move to the topic position as well. Therefore the ungrammaticality of (44b) and (45b) is derived.

There is however a problem with the above assumption. Somehow the object seems to be able to be deleted in (44d) and (45d). The asymmetry between the grammaticality of (44d) and (45d), I suggest that, is due to semantic reasons. When the object NP₂ is deleted, the EC coindexes with the subject NP₁. Since it is not causally logical that “we” become crispy because of the action of frying something, (44d) is unacceptable, whereas in (45d), the predicate is semantically compatible with the subject, and therefore it is acceptable.

4.5 Feature Checking

Despite the above generalization, certain ergative verbs also permit null object. Examples include *daahoi* ‘open’, *saanmaai* ‘close’, *sik* ‘switch off’ and *daalaan* ‘break’.

(55) bingo daahoi go ceong gaa3?

who open CL window SFP

‘Who opened the window?’

Aaming daahoi e gaa3.

Aaming open SFP.

‘Aaming opened (it).’ (not ‘Aaming is open’)

(56) Aaming sik e gaa3.

Aaming switch.off SFP.

‘Aaming switched (it) off.’ (not ‘Aaming is switched off’)

A significant difference between these verbs and verbs like *zamsei*, *jungfaa* and *haakcan* is that the former typically takes an animate subject as the agent and an inanimate object as the patient, while the latter either requires that both the agent/subject and the patient/object are animate or does not impose strong selection on the semantics of the arguments.

Consider the topicalized sentence (57), it can be seen that the comment phrase “*Aaming daahoi*” does not raise any ambiguity because *daahoi* takes an inanimate patient as its internal argument. Aaming is animate, so it must not be the internal argument and thus the verb is not used in the intransitive way.

(57) go ceong_i Aaming daahoi t_i gaa3.

CL window Aaming open SFP.

‘Aaming has opened the window.’

On the other hand, verbs like *zamsei* ‘drown to death’ and *jungfaa* ‘melt’ can create ambiguity if the object is dropped, as the predicate is semantically compatible with both the subject and the object.

(58) Aaming zamsei zo

Aaming drown.to.death ASP

‘Aaming has drowned to death.’ (not ‘Aaming has made someone drown to death’)

(59) Taaiyeong jungfaa zo
sun melt ASP

‘The sun has melted.’ (not ‘The sun has melted something’)

If objects cannot be topicalized in a resultative construction, it is difficult to explain the forms (55) and (56), as well as (44d) and (45d). However, if we allow objects to be topicalized, assuming that certain feature checking is performed at LF and, following Hu and Pan (2000), I assume a modified version of GCR (60), then we can account for the above data more accurately.

(60) Relativized Locality Condition (RLC)

Coindex the null element with the closest compatible NP.

My proposal is that if the object is topicalized, and both the topic and the subject are overtly expressed, the resultative predicate is checked against the topic and the subject on their semantic compatibility. If the predicate is compatible with the topic (the internal object) but not the subject, then the sentence passes checking and it is grammatical. Otherwise, if it is compatible with both, then the sentence is ungrammatical. If only one argument is overtly expressed, then RLC applies and the predicate is checked against the argument coindexed with the pro/PRO. If they crash in ϕ -features, the sentence is ungrammatical; otherwise, it is grammatical.

This explains why (45b) is ungrammatical, as both arguments are overtly expressed and the predicate “laugh” is compatible with both arguments. (44b) passes the initial checking as “crispy” is normally only compatible with the inanimate object

but not the animate subject. However, since it is possible, although unlikely, that an animate subject is fried crispy, therefore there is dropped acceptability in the sentence.

For (44d) and (45d), the objects are first topicalized and then made silent. Since only one argument is overtly expressed, the EC coindexes with the subject, which is the external argument. In the case of (44d), as mentioned above, the predicate “crispy” is potentially compatible with “we”, although it sounds very awkward. Therefore one can say that they are only partly compatible, and hence the dropped acceptability. In fact, under a suitable context it is possible to obtain a reading that it is the “doughnuts” which is crispy (61). In the case of (45d), the features match with each other, so it is grammatical.

(61) di jauzaagwaaɪ zing sɛŋ dim aa3?

CL doughnuts make become how SFP

‘How are the doughnuts?’

ngodei zaa dou e ceoibokbok

we fry PRT crispy

‘We have fried (them) crispy.’

In (44e), the external argument is deleted and the internal argument moves to the subject position. Since the predicate agrees with the subject, the closest nominal element to the EC, therefore the EC coindexes with the subject, which is the internal argument, so the sentence is grammatical.

This also explains why ergative verbs like *daahoi* ‘open’ and *sik* ‘switch off’ allow null object but those like *zamsei* ‘drown to death’ and *jungfaa* ‘melt’ disallow it. For *daahoi* (55) and *sik* (56), the predicate are in incompatible with the animate subjects, therefore the EC seeks further and reaches the silent topics, which are

compatible. For *zamsei* (58) and *jungfaa* (59), the predicates are compatible with the subjects, so they can only have the reading that the subject, instead of the silent topic, is predicated. This also explains why (53b) is ungrammatical, as both compatible argument are overtly expressed.

4.6 Direct/Indirect Object

The feature checking mechanism discussed above appears to have an important function in the processing of language, namely to avoid ambiguity. Since it avoids any case in which the predicate is able to predicate both arguments, and thus is uneasy for syntactic parsing.

In addition to resultative construction, there is another phenomenon which seems to employ the same principle. In Cantonese, only the direct object but not the indirect object in a double object construction is droppable. If the indirect object is dropped from the complete double object construction (62a), the sentence is still grammatical (61b). It means that “he” has given something which is understood in the discourse to the chick. However, when the indirect object is dropped (62c), the sentence renders ungrammatical if the original meaning is to be maintained. The sentence can only be understood as “he” has given something to a worm.

- (62) a. keoi bei zo [jat tiu cung] [zek gaizai]
 he give ASP one CL worm CL chick
 ‘He gave a worm to the chick.’
- b. keoi bei zo e zek gaizai
 he give ASP CL chick
 ‘He gave (it) to the chick.’

c. * keoi bei zo jat tiu cung e
he give ASP one CL worm

‘He gave a worm (to someone).’

I think that this direct object/indirect object asymmetry is also a result of our language processing unit trying to avoid ambiguity. One cannot deny that ambiguity does exist in language, however, it does not follow that language has a preference for ambiguity. In fact, for language to be an effective system for communication, ambiguity has to be minimized, and the disallowance of null object in the discussed circumstances seems to demonstrate the strategies that language employs to achieve this goal.

5. Conclusion

Null subject, as suggested by Chomsky and Huang, among numerous others in the literature, is a real null pronoun phenomenon which is language specific. Whether a language allows null subject is a parameter in our language acquisition device, whose value is determined by the linguistic input in the earlier years of the native linguistic development of the children speakers of that language. Null subject has a rather uniform distribution, meaning that in a subject pro-drop language, a subject can arbitrarily be dropped, limited only by the possibility of recovering that subject from the discourse.

Following Huang, I agree that null object, on the other hand, is not a real null pronoun. It is a variable controlled by a discourse topic, which suppressed and made silent after the movement from its base position to the topic position. It is unclear yet whether null object is also a parameter, as it turned out that languages which allow subject pro-drop often disallow object pro-drop, and a few, such as colloquial German, disallow subject pro-drop but permit object pro-drop. In addition, as I have demonstrated, pro-drop is not strictly associated with the existence of a complete morphological object-verb agreement system, although such an agreement system seems to be relevant.

Despite the power of Huang's proposal in explaining the nature of null object, it fails to give a concrete reason for why null object is not permitted in some constructions, particularly in those related to resultative constructions. I suggest that those instances are a result of our language processing unit trying to avoid ambiguity. Syntactically, the resultative predicate performs feature checking at LF to ensure that the semantics of the predication does not crash. A modified version of Huang's

Generalized Control Rule is employed to determine which argument the resultative predicate is to predicate.

To conclude, I think that the distribution of null object in Cantonese is centered on one principle, that the sentence in question must be able to be unambiguously interpreted if it allows object dropping. This is in much the same spirit as the criteria for subject dropping in inflectional languages that the subject must be unambiguously recoverable for subject pro-drop to be allowed. Both of these are examples which demonstrate the economic use of linguistic materials in natural language.

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