

# **The matrix-embedded subject asymmetry in L2 English: a pilot study**

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## **Abstract**

The pilot study tests proposals made by Yuan (1997) and Kong (2005) in relation to the issue of parameter resetting in the acquisition of arguments by Chinese speaker of L2 English. Findings of the study lend partial support to the claim made by Yuan on the acquisition of overt objects which suggests that learners continue to allow null objects in their English because positive evidence in relation to the functional category features is not available. They also display some interesting findings on the matrix and embedded subject positions to which Yuan's claim that the recognition of the features of Infl in English triggers Chinese speakers to unlearn null subjects offers no explanation. Instead, they can be accounted for using a proposal made by Kong (2005), following Tsimpli and Roussou (1991), that what appears to be a parameter resetting is in fact an adjustment of L2 setting to match with the L1 setting. A potential explanation to the finding on the matrix-embedded subject asymmetry is offered.

**Keywords:** pro-drop, null subject, topicalization, UG, partial access

## 1 Introduction

The mini-pilot study focuses on an area of major syntactic difference between Chinese and English which it will be argued is the effect of different choices of features in functional categories: the possibility of free null arguments in Chinese finite clauses versus the almost total absence of null arguments in English (with the exception of ‘special’ registers like ‘diary drop’, ‘object deletion’ etc.). It has been found that Chinese speakers are successful in recognising that English does not allow null subjects, even from early stages of learning, but they are much less successful in rejecting null objects in English (Yuan 1997). Yuan argues for the initial full transfer of the Chinese functional category features into L2 English, followed by the addition of tense and agreement features of Infl as the result of contact with English, which requires Chinese speakers’ grammars then to have obligatory subjects. However, a lack of positive evidence in relation to the functional category features which allow null objects in Chinese means that learners continue to accept null objects in English.

Yuan’s line of argument is consistent with the view that features of functional categories in the L2 which differ from those in the L1 are in principle resettable, meaning that there is no syntactic critical period. But if there is no unambiguous positive evidence for change in the L2, learners will continue with the L1 features as they are crucial in the development of interlanguage (Schwartz and Sprouse 1996, Schwartz 1998a).

In a recent study, Kong (2005) tests Yuan’s hypothesis which stipulates that the recognition of S-V Agreement features triggers adult Chinese speakers of L2 English to unlearn null subjects while transfer of L1 [+topic-drop] property hinders them from unlearning null objects. A wider range of contexts such as *non-subject topics in clause initial position* has been included in testing Yuan’s hypothesis. If Yuan is correct, the acquisition of agreement and tense features of English Infl should be the triggering factor for Chinese speakers to acquire overt subjects in L2 English regardless of their positions: whether subjects are in the matrix or in the embedded position, or whether they are in clause-initial positions or preceded by adverbs or wh-clauses.

Results of Kong’s study, contrary to Yuan’s, argue against parameter resetting and are in favour of the view put forward by Tsimpli and Roussou (1991) and Smith and Tsimpli (1995) that what appears to be a parameter-resetting scenario is in fact an adjustment of the L2 setting to a configuration which looks like the L1 setting. In this case, adult Chinese speakers adjust the use of the topic-hood property when acquiring English while the parameter settings of Chinese remain unchanged.

The purpose of the pilot study reported in this paper is to test claims made by Yuan and Kong, and by implication to test the idea whether or not features of functional categories which differ between the L1 and the L2 are in principle acquirable by older L2 learners. The question that will be asked is:

Is the evidence which suggests that Chinese speakers know that English requires overt subjects sufficiently robust to support the claim that they have acquired the abstract features of English Infl? Or can it be maintained that functional categories of certain type are difficult, if not impossible, to acquire beyond the critical period?

The paper is organized as follows: In Section 2 we summarise claims made by Yuan (1997) and Kong (2005) in relation to the acquisition of English pronouns by speakers of L1 Chinese. Section 3 compares topic property variations between Chinese and English. In Sections 4 and 5 we present results of a pilot study which will then be followed by discussions for further studies in Section 6.

## **2. The Null Subject Parameter, the Morphological Uniformity Hypothesis and the acquisition of English subjects by speakers of L1 Chinese**

### ***2.1 The Null Subject Parameter and the Morphological Uniformity Hypothesis***

“Null subjects are permitted in all and only languages with morphologically uniform paradigms” (Jaeggli and Safir 1989: 29). The notion of the *Morphological Uniformity Hypothesis* is defined as: “An inflectional paradigm *P* in a language *L* is morphologically uniform iff *P* has either only underived inflectional forms or only derived inflectional forms” (Jaeggli and Safir 1989: 30).

According to Jaeggli and Safir (1989), languages like Spanish and Italian are morphologically uniform because all verbal paradigms have derived forms. Subjects of tensed clauses in these languages can be dropped since the property of the null subjects can be identified from the rich inflection. Subjects in languages like Chinese and Japanese can also be dropped because all verbal paradigms have only underived (stem) forms, which are also entitled as morphologically uniform. Languages like English and French, however, have a mixed inflectional morphology. That is to say, in English the majority of the verbs, except auxiliaries such as *be* and *have* which carry some inflectional forms,

exhibit inflection only for the third person singular tense form. Null subjects are not permitted as there are no morphologically uniform paradigms in English.

It is this parameter variation between the null-subject Spanish/Chinese-type languages and the overt-subject English-type languages that L1 transfer is believed to be a factor affecting null-subject language learners acquiring overt-subject properties in English (see Schwartz & Sprouse 1994, and White 1985, 1989).

The acquisition of overt English subjects by null-subject language speakers, Spanish-type language speakers in particular, has become one of the most extensively studied features in SLA (see Davies 1986, Hilles 1986, Lakshmanan 1986, White 1986, Phinney 1987, and Tsimpli and Roussou 1991). Nevertheless, little attempt has been made to include null-subject Chinese-type language speakers learning overt English pronouns. Yuan (1997) and Kong (2005) are two recent exceptions targeting at adult Chinese speakers acquiring English pronouns.

## ***2.2. Yuan (1997) and Kong's (2005) studies***

### ***2.2.1 Yuan's (1997) study***

Yuan's (1997) study focuses on the unlearning of null subjects and null objects by adult Chinese speakers in their acquisition of L2 English. 159 Chinese speakers of L2 English were involved in a cross-sectional study. It was administered in China where the subjects were 73 secondary school students, 65 undergraduate students majoring in English, and 21 university teachers of English. The study also involved 16 native speakers of English as a control group. Instead of categorising students' proficiency levels by using their years of English learning, which may differ from student to student as the target language input in terms of quantity and quality varies, students were given a proficiency test designed by Hill and Fenn (1989) before taking the main test. The students were then divided into 7 groups (excluding the native controls) with Group 1 as the most elementary group and Group 7 the most Advanced.

The study sets out to answer two questions: (1) The extent to which Chinese learners of L2 English would be able to unlearn null subjects and null objects, if transfer plays an important role in the L2 acquisition of English. (2) If, on the other hand, L1 transfer is insignificant, the extent to which Chinese speakers adopt *default* hypotheses in constructing their knowledge of English. Yuan assumes that null subjects are licensed in Chinese by the underspecification of T(ense) and AGR(ement) features, i.e. Chinese has no in-

flectional affixation. He also proposes that, following Huang (1984), topics in Chinese, including null topics, identify null subjects and null objects.

The data in Yuan's study were collected from an acceptability judgement test, in which learners had to decide, as according to their own intuitions, the acceptability of nine types of randomised sentences. Each sentence type consisted of an experimental (ungrammatical) sentence and a corresponding control (grammatical) sentence. Learners read and assigned any number ranging from 0 to 10 to the sentences while listening to them in a recording. We look at the results next.

### ***Null Subjects***

Informants in the learner groups, like their native controls, gave low degrees of acceptability to the experimental sentences (sentences with null subjects which are ungrammatical in English). Significant differences were found only: (1) between Group 1 (the most elementary group) and the native controls on detecting the ungrammaticality of sentences with null referential pronouns in matrix clauses; (2) between Groups 1 and 2 (the most elementary and post-elementary learners) on judging the ungrammatical experimental sentences with null subjects in embedded clauses. Experimental informants were aware, with the increase of proficiency levels, that null referential subjects are not allowed in English.

Two types of *expletive* subjects were used in the experiment: expletive in weather-predicate sentences, (e.g. *It has been very dry here recently.*) and expletive in raising-predicate sentences, (e.g. *It seems that Peter is unhappy.*). Informants in all experimental groups were as accurate as the native controls in accepting the control (grammatical) sentences with the overt expletive *it* in the subject position, and rejecting experimental (ungrammatical) sentences where the expletive was null. One interesting finding is that the mean scores of the learner groups in rejecting the ungrammaticality of the null expletive were relatively higher than the control group. The explanation Yuan provided for this phenomenon is that in colloquial English null expletive sentences such as *Seems Mary is very tired.* are acceptable to native speakers. In general, most Chinese learners of English, except for some elementary and post-elementary learners, did not have trouble in rejecting the ungrammaticality of English sentences with null subjects.

### ***Null Objects***

Results show that there was no significant difference between Groups 2-7 and the native group in accepting the control sentences with overt inanimate objects in matrix clauses, whereas in the judgement of overt inanimate objects in embedded clauses no significant differences were found between Groups 5-7 and the native group. However, all the learner groups (Groups 1-7) failed to reject the ungrammatical sentences with null objects in matrix or in embedded clauses. That is to say, there were significant differences between the native controls and all the learner groups in detecting the ungrammaticality of English sentences with null objects.

Results also illustrate that although learners' degree of acceptance of an overt inanimate object coindexed with an Argument in an Adjunct (e.g. *When you finish using the car, please lend it to me for the weekend.* ) increased with proficiency level, suggesting that there were no significant differences between the native controls and all the learners, their judgement on a null inanimate object coindexed with an Argument in an Adjunct was consistently non-native like. They were used as further evidence by Yuan to claim that Chinese learners, including advanced learners, were slow in unlearning English sentences with null objects.

### ***Subject-verb Agreement***

The core objective in Yuan's experiment is to investigate the acquisition of overt English subjects and objects by Chinese speakers, the property of subject-verb agreement is not included in the test. Bear in mind that Yuan proposes that it is the realization that English has subject-verb agreement, which triggers the acquisition of overt subjects by Chinese speakers, we would therefore assume that the informants in his study have no problem acquiring the property in question. In other words, Yuan's assumption of subject-verb agreement triggering Chinese speakers to acquire overt English subjects would not be substantial if his informants had problems in recognising subject-verb agreement property.

#### ***2.2.2 Kong's (2005) study***

75 Chinese speakers learning L2 English in China and 10 native speakers of English took part in the experiment, forming 3 experimental groups and 1 control group. The Oxford Placement Test (Allan 1992) was used to determine learners' level of English.

Kong (2005) sets out to test the claim made by Yuan that once Chinese speakers realize from the input data that S-V Agreement features exist in English they will disallow null subject but continue to allow null objects for the reason that there is a lack of positive evidence in the input data to help them abandon topic drop, which is possible in Chinese. The study also included some syntactic items with a special focus on matrix and embedded subjects. If Yuan were correct in assuming the recognition of S-V Agreement features triggering Chinese speakers to unlearn null subjects, then learners should be expected to perform equally well no matter whether subjects are in the matrix or the embedded positions, or whether they are referential or expletive.

The study consisted of two main tasks with syntactic properties such as *null matrix and embedded subjects in clauses with overt topics* and *null matrix and embedded subjects in wh-clauses*<sup>1</sup> included to test the effect that topics in clause initial positions may have on the ability of Chinese speakers to detect the ungrammaticality of null matrix and embedded subjects. We look at the results next.

### ***Null Matrix and Embedded Subjects***<sup>2</sup>

Chinese learners of English appeared to have more trouble detecting the need for overt subjects in embedded clauses than overt subjects in matrix clauses. An asymmetry has been found in response to the overt matrix and embedded subjects. Learners, advanced learners included, were found to perform in a near-native like way on matrix subjects, but were significantly worse at detecting ungrammatical null embedded subjects. If the recognition of S-V agreement features of English were the triggering factor as Yuan tended to have claimed, it would be difficult to explain why learners judged the ungrammaticality of null subjects in matrix and embedded clauses differently.

### ***Subject-Verb Agreement***

No significant differences between the three groups of learners have been found in detecting S-V agreement errors on any of the tasks. High mean scores on amending ungrammatical subject-verb agreement structures have further weakened Yuan's hypothesis. If the recognition of S-V agreement caused L1 Chinese speakers to unlearn null subjects and if Chinese speakers had no problem acquiring S-V agreement features, why should they unlearn null matrix subjects faster than null embedded subjects?

### ***Null Matrix and Embedded Expletives***

As far as null matrix and embedded expletives are concerned, learners of different levels performed significantly better on detecting the ungrammaticality of null subject expletives in matrix clauses than in embedded clauses. One-way ANOVAs have been carried out to compare the data in one of the tasks for null expletives in matrix and embedded clauses respectively. They suggest that there were no significant differences between intermediate and advanced learners for null expletives in matrix clauses but the differences were significant when the two groups were compared for null expletives in embedded clauses.

### ***Null Matrix and Embedded Subjects in Wh-clauses***

In detecting the ungrammaticality of *null matrix and embedded subjects in wh-clauses*<sup>1</sup>, all subjects combined performed significantly better on *null matrix subjects in wh-clauses* than on *null embedded subjects in wh-clauses*. Comparing learners' performance on these two properties with their performance on null matrix subjects in other tasks, it is clear that the presence of *wh-clauses* in C causes them to be less successful. Kong (2005) therefore argues that it can be the status of C, and not the status of Infl as Yuan has claimed, which determines whether or not Chinese speakers allow null subjects.

### ***Null Matrix and Embedded Subjects in Overt Topic Clauses***<sup>2</sup>

In detecting the ungrammaticality of *null matrix and embedded subjects in wh-clauses*, (sentences like: *\*Mary hasn't visited her parents for a long time. When will go again?* and *\*Mary hasn't visit her parents for a long time. I wonder why has been so busy.* (Kong 2005)) all subjects combined performed significantly better on *null matrix subjects in wh-clauses* than on *null embedded subjects in wh-clauses*.

ANOVAs relating to *null matrix and embedded subjects in overt topic clauses* showed significant differences in performance in detecting the ungrammaticality of the properties by the experimental informants. All learners in the three experimental groups performed worse in detecting the ungrammaticality of *null embedded subjects in overt topic clauses* than of *null matrix subjects in overt topic clauses*. Results of such lead Kong to argue against the claim made by Yuan that it is likely the recognition of

tense/agreement properties of Infl being the only factor involved in explaining Chinese speakers' interlanguage grammar. Presence of overt non-subject topics can also be influential.

In general, Yuan has found that although both null subjects and null objects are possible in Chinese, the Chinese speakers he studied did not have difficulty acquiring overt subjects in English. The only problem they faced is the acquisition of the obligatory status of English objects. According to Yuan, this is the result of Chinese speakers transferring the Topic Prominent property of Chinese, topic chains in particular (see Section 3 for discussion), into their L2 English. Chinese learners started using overt subjects when they were exposed to positive evidence that English has agreement-- because agreement is defective, they knew from UG that English requires obligatory subjects. But in terms of objects, Chinese speakers of L2 English fossilise because English lacks [- topic-drop]. Learners continued to carry the [+ topic-drop] features of their L1 over to English, resulting in allowing null objects in English.

If Yuan were correct, once Chinese speakers have recognised that English has weak subject-verb agreement, and hence requires overt subjects, this should be the same in any finite clauses, whether matrix or embedded. However, a consistent pattern, which shows that Chinese speakers were significantly worse at detecting ungrammatical embedded subjects than ungrammatical matrix subjects, was found across the tasks in Kong (2005). Kong hence speculates that the three structural positions – matrix subject, embedded subject, and object – were treated differently by Chinese informants. In the following section, we will consider how the three positions might be different and what can be said about the observed behaviour found in Kong, which in turn may shed some light on explaining findings displayed on the current study.

### **3. Syntactic Differences Between Discourse-Oriented Chinese and non-topic English**

#### ***3.1 Chinese as a 'Topic-hood' language***

Huang (1984: 549) asserts that *discourse-oriented* languages like Chinese, Japanese, and Korean have 'a rule of *Topic NP Deletion*, which operates across discourse to delete the topic of a sentence under identity with a topic in a preceding sentence. The result of such a deleting process is formally called a *topic chain*' (Huang 1984:549). For example:

1.[Zhongguo*ei*, difang hen da.] [*ei*, renkou hen duo.]

China place very big population very many  
 [ei, tudi hen feiwo.] [ei, qihou ye hen hao.] [ei, women duo  
 land very fertile climate too very good we all  
 hen xihuan.]  
 very like

‘(As for) China, its land area is very large. (Its) population is very big. (Its) land is very fertile. (Its) climate is also very good. We all like (it)’ (as 55 in Huang 1984:549).

According to Huang there is a *rule of coindexation in discourse-oriented languages* (Huang 1984:550), in which a deleted topic can be coindexed with an appropriate preceding topic. As in 1, *China* (Zhongguo) is the topic for the deleted *ei*, rendering zero topic possible. Following Li and Thompson (1976), Huang (1984) further argues that *discourse-oriented languages are topic-prominent*, in which contextual meaning is a dominant factor deciding the existentiality of subjects.

Huang (1984) assumes that Chinese, like all other natural languages, does not allow genuine zero object pronouns, as a result of *Generalized Control Rule (GCR)* and *Disjoint Reference (DJR)*. The former refers to the state that an empty pronominal be coindexed with its closest antecedent; the later means that a pronoun must be free in its governing category (Huang 1984: 552). Therefore in the following ill-formed English sentence:

2a. \*John said that Bill saw *e*. (As 65e in Huang 1984:553)

the empty category *e* cannot refer to either *John* or *Bill*. *e* is empty because of topic movement from object position to the initial position of the sentence. Thus it can only refer to someone previously mentioned. 2a then will have the structure like this:

[Top<sub>j</sub>] John<sub>i</sub> said that [Bill saw *e<sub>j</sub>*]

*e<sub>j</sub>* is the trace of the moved topic, which cannot be bound by *John*. But in Kong (2005) it has been argued that null objects in Chinese may also be *pro*. Consider the following construction in Chinese:

John met Lee on the street. (context)

- 2b. Johni shuo [Lee bu renshi *ei*].  
 > \*Johni said that Lee didn't know *ei*

2b is a well-formed structure in Chinese. According to Huang, neither *John* nor *Lee* in 2b can act as the antecedent for the empty pronominal *ei*, only the one mentioned in the previous discourse topic can do. One problem arises: there are only two participants, *John* and *Lee*, in the discourse, it would be contradictory if on the one hand none of them can be the antecedent for the *ei*, yet, on the other hand, they both constitute the discourse topic. In fact, *John*, not *Lee*, is the antecedent of the empty pronominal. Since *ei* is not a reflexive but an empty pronominal, it cannot be bound by the nearest antecedent *Lee* in its same clause. Therefore, its closest antecedent should be *John* instead.

Another piece of evidence in support of Kong for arguing that null objects in Chinese are *pro* comes from topic structures in English. In

- 2c. As for Billi, John thinks that Mary likes himi. (as 2b in Kong 2005)

Kong suggests that the embedded object *him* can only be bound by Bill of the topic for the reason that Bill needs an interpretation and that neither John nor Mary can be the binder. By implication, it is suggested that pronouns may be bound as long as they are free in their governing categories and that topics need to bind an argument position in the following sentence, as the English example shows. All these point to the direction that the GCR is not a necessary component in the licensing of null objects in Chinese which renders null objects in Chinese being *pro* possible (Rizzi 1986):

- 2d. [Top *ei* [John thinks [that [Mary likes Pro<sub>i</sub>]]]]. (as 2c in Kong 2005)

*Pro* has to refer to the topic as in 2d.

While in subject position, Huang (1984) suggests that null embedded subject in Chinese can refer either to the matrix subject or to someone else mentioned before. For example:

- 3a. \*John said that *e* saw Bill. (As 65d in Huang 1984: 553)

According to Huang, *e* is a pronoun in Chinese which should be free within its binding category as a rule of Binding Principle B (Haegeman 1994). It cannot be bound within its

clause, instead it has to coindex either with *John* or someone in the discourse, resulting in the following structure:

3b. *John*<sub>i</sub> said that [*pro*<sub>i/j</sub> saw Bill]

### 3.2 *English as a Non-topic language*

While Chinese is classified as a *discourse-oriented* language by Tsao (1977), languages like English, on the other hand, are *sentence-oriented*. Unlike Chinese, in which empty constituents can be coindexed with a topic and hence interpretations reconstructed from context by the reader or the hearer, pronouns are in general not omissible from a grammatical sentence in English. The only case where arguments can be null in English is when they are the subjects of an infinitival clause. For example:

4. Peter<sub>i</sub> promised John [*ei* to see Bill].

Elsewhere null arguments are ungrammatical:

- 5a. \**e* arrived.
- b. \*Peter saw *e*.
- c. \**e* liked *e*.
- d. \*Peter<sub>i</sub> promised John that [*ei* would see Bill].
- e. \*Peter promised John that [Susan would see *e*].

The reason why null arguments are generally ungrammatical in English follows from two properties which distinguish English on the one hand from languages like Spanish and Greek, and on the other hand from languages such as Chinese and Japanese. Firstly, English has meager S-V agreement properties. This means that English cannot license null subjects, unlike Spanish and Greek. Secondly, English does not allow topic chains; i.e. an empty topic cannot be coindexed with a preceding one. Since it does not allow null topics, null arguments cannot be identified, and sentences like the following are ungrammatical in English:

John met Peter's sister (context)

6. \*Øi Peter said that John really likes *ei*

As a result, English normally requires overt subjects and overt objects, and where subjects are non-referential, the position must be filled by expletive elements like *it* and *there*.

It will be assumed here that this difference between English and Chinese is the effect of different choices of parameter settings. Chinese specifies every matrix clause for a topic through an obligatory feature on the matrix C (definite NP at sentence-initial position, for example); this feature is optional in English. English has agreement features under Infl. Chinese does not have agreement features, which license null subjects. But in English, poor agreement features mean that null subjects are not licensed.

After establishing the claim that null objects are *pro* in Chinese, Kong (2005) goes further to assume that Chinese is not only a topic-prominent language, but is also an obligatory topic language; i.e. ‘topic-hood’ is a generalised property of Chinese. Following Yip (1995), Kong argues that topicalised phrases must be definite, so that sentences like the following are ungrammatical:

- 7a. \*Yi zhi mao wo zuotian wei-le.  
One CL(assifier) cat I yesterday feed PFV(perfective aspect marker)  
‘\*A cat, I fed it yesterday.’ (as 5a in Kong 2005)

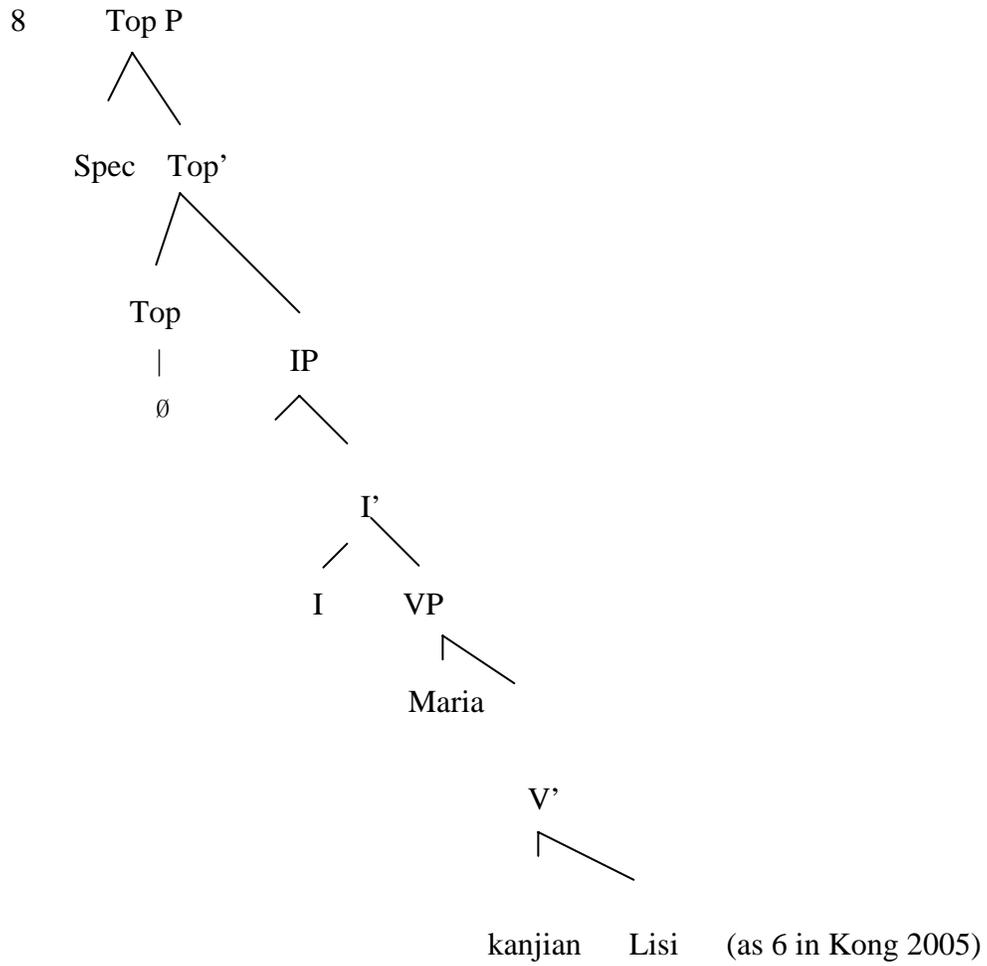
Neither is an indefinite noun phrase taking sentence-initial position grammatical in Chinese. So sentences like the following are ungrammatical:

- 7b \*Yi ge xiaohai lai le.  
one CL(assifier) child come PFV(perfective aspect marker)  
A child has come. (as 48 in Yip 1995: 87)

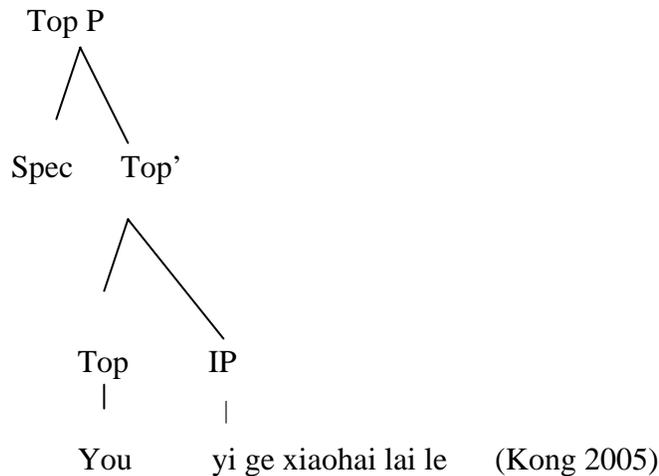
To make the sentence grammatical, an existential verb *you* ‘there be’ has to appear in clause initial position. Hence a grammatical version of Yip’s sentence would be:

- 7c You yi ge xiaohai lai le.  
There be one CL(assifier) child come PFV(perfective aspect marker)  
A child has come.

Therefore, according to Kong, some constituent in a clause has to move into the specifier position to satisfy the topic-hood property in Chinese:



In 8 either *Maria* or *Lisi* would have to move to the Specifier of TopP to satisfy the requirement for a topic. If there is only an indefinite NP available, as in 7a, which is unlikely a candidate for a topic, an existential verb has to be introduced and to fill the Top position of Top' to make the sentence grammatical:



In other words, every sentence in Chinese appears to be headed by an obligatory TopP, which is a normal consequence of the *topic-prominent* nature of Chinese syntax<sup>3</sup>.

To account for learners' performance displaying divergence between matrix subjects and arguments in other positions, Kong assumes that parameter settings of Chinese have been transferred and what appears to be the resetting of the parameters concerned is in fact a small adjustment to the use of topic chains: as long as the head of every sentence is overt, other positions can be covert. Such an explanation is consistent with the behaviour observed in Kong (2005) on the one hand. On the other hand, it offers an explanation to which Yuan's *recognition of agreement properties triggering the unlearning of overt subjects* account will have difficulty accommodating. Why should there be an asymmetry in the matrix and embedded subject positions if Yuan were correct?

#### 4. A pilot study

The mini-pilot study is intended to test the hypothesis made by Yuan in arguing for a claim that the recognition of S-V agreement initiates the acquisition of obligatory subjects in the Chinese speakers' L2 grammar. It is also designed to attest to what extent Kong's account can explain the observed matrix and embedded subject asymmetry.

#### **4.1 Subjects**

6 Chinese speakers learning L2 English, five of whom were postgraduate students at a University in the UK and the other one doing a bridging course at the same university, took part in the pilot study. All of them were L1 Mandarin (official Chinese language) speakers. According to their length of English learning, the first five were classified as advanced learners who had been learning the language for more than ten years. While the other one, with less than five years' English learning experience, was considered an intermediate learner. Regarding language proficiency, there is a problem for using the number of years of English study as the sole criterion for classification. Because the length of exposure, in which both the quantity and the quality of input may vary from learner to learner, does not necessarily relate to language proficiency. Nevertheless, when pre-test activities were unavailable, the length of English learning seemed to be an immediate consideration for learner classification in this case. Besides, as one of the entrance requirements, all the five postgraduates had scored in the range from 550 to 600 on the TOEFL before commencing their study at the university. The intermediate learner had a score of 400 on the TOEFL. Taking into account of this criterion, the classification of learners' proficiency level could still be reliable.

#### **4.2 Task**

Learners were gathered and presented with a short passage (see appendix), consisting of a set of grammatical mistakes, such as *missing pronouns in matrix and embedded clauses*, *incorrect subject-verb agreements* and *missing definite articles*, and were asked to make corrections on any mistakes as they read through it. All learners finished the task within a one-hour given time. They were encouraged to read through the passage as to make sure that they understood all the lexis in it before starting the test. The rationale for including the *Mismatched Verb-agreements* and the *Missing Definite Articles* in the test is to observe the extent to which the learners ignored other aspects of grammatical mistakes when preoccupation was put on the learning of overt pronominals in the target language. The study was designed to test the extent to which the two competing theories put forward by Yuan and Kong could best account for the observed subject-object as well as the matrix-embedded clauses asymmetry of L2 English. It is evident both in Yuan's and Kong's findings that the Chinese speakers of L2 English have less trouble unlearning null

matrix subjects and more trouble unlearning matrix objects. On the other hand, Kong's study has shown an asymmetry both on the null matrix-embedded subjects and the null matrix-embedded objects, which is not found in Yuan's. So far as the current study is concerned, the reason why there are more tokens on both the null embedded subject (8 counts) and the null embedded object (7 counts) clauses than their counterparts in matrix clauses is because null embedded arguments, the embedded subject in particular, are the domain of focus in this study. We are aware that a more balanced distribution of tokens on the matrix and the embedded clauses and a bigger scale study involving more informants will be a necessity when further studies are to carry out. Table 1 summarises the grammatical mistakes and their frequency with respect to null arguments.

**Table 1**

*Grammatical mistakes and their frequency presented in the passage*

Grammatical mistakes	Frequency
NSub/M (Null Subject in Matrix clauses)	1
NSub/E (Null Subject in Embedded clauses)	8
NExp/M (Null Expletive Subject in Matrix clauses)	1
NExp/E (Null Expletive Subjects in Embedded Clauses)	1
Ani NObj/M (Animate Null Object in Matrix clauses)	1
Ani NObj/E (Animate Null Object in Embedded clauses)	7
Inani NObj/M (Inanimate Null Object in Matrix clauses)	2
VAgr (Mismatched Verb Agreement)	16
DefArt (Missing Definite Article)	1

### **4.3 Results**

As shown in Tables 2 and 3 on the following pages, the informants appeared to have no problem accepting overt subjects in matrix clauses and the S-V agreement. In the case of overt subjects, the informants were able to identify the ungrammaticality of null subjects in the matrix clause and corrected them at an average accuracy rate of 83%, while in

the case of expletive matrix subjects, the same correct rate of 83% was recorded. In the S-V agreement structure, learners amended grammatical mistakes with a correct rate of 70%.

The average score on the acceptance of overt subjects in embedded clauses and overt objects in both matrix and embedded clauses did not seem to be symmetric. The average success rate of correcting null embedded subjects presented on the passage was 52%, compared to 83% correct rate on overt matrix subjects. In the case of object positions, the informants seemed to accept null objects in English to a great extent. Particularly in the acceptance of overt animate objects, only 33% and 34% of correct rates on matrix and embedded positions were recorded respectively. Interestingly, the acquisition rate on definite articles was extremely low, only 17% of correct rate was found, to which we turn below.

**Table 2**

*Average learners' success rate in inserting correct pronouns to the passage with missing subjects and objects*

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Learners

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	Correct in Number (CN)*	Correct in Percentage
NSub/M (Null Subject in Matrix clauses)	5/6	83%
NSub/E (Null Subject in Embedded clauses)	25/48	52%
NExp/M (Null Expletive Subject in Matrix clauses)	5/6	83%
NExp/E (Null Expletive Subjects in Embedded Clauses)	3/6	50%
Ani NObj/M (Animate Null Object in Matrix clauses)	2/6	33%
Ani NObj/E (Animate Null Object in Embedded clauses)	14/42	34%
Inani NObj/M (Inanimate Null Object in Matrix clauses)	9/12	75%
VAgr (Mismatched Verb Agreement)	67/96	70%
DefArt (Missing Definite Article)	1/6	17%

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\* CN = missing pronouns correctly inserted by learners, e.g. 4/6 means 4 out of 6 of missing pronouns is correctly inserted.

**Table 3**

*Individual learners' success rate in inserting correct pronouns to the passage with missing subjects and objects*

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Learners

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	Intermediate learner CN	Advanced Learners				
		CN 1	CN2	CN3	CN4	CN 5
NSub/M	1/1 (100%)	0/1 (0%)	1/1 (100%)	1/1 (100%)	1/1( 100%)	1/1 (100%)
NSub/E	2/8 (25%)	5/8 (63%)	6/8 (75%)	3/8 (38%)	3/8 (38%)	6/8 (75%)
NExp/M	0/1 (0%)	1/1 (100%)	1/1 (100%)	1/1 (100%)	1/1 (100%)	1/1 (100%)
NExp/E	1/1 (100%)	0/1 (0%)	0/1 (0%)	1/1 (100%)	0/1( 0%)	0/1( 0%)
Animate NObj/M	0/1 (0%)	1/1(100%)	1/1 (100%)	0/1 (0%)	0/1 (0%)	0/1 (0%)
Animate NObj/E	3/7 (29%)	4/7 (57%)	6/7( 86%)	3/7( 29%)	0/7( 0%)	0/7( 0%)
Inanimate NObj/M	1/2 (50%)	2/2(100%)	2/2(100%)	2/2(100%)	2/2(100%)	0/1( 0%)
VAgr	11/16(69%)	11/16(69%)	12/16(75%)	12/16(75%)	9/16(56%)	12/16(75%)
DefArt	1/1(100%)	0/1( 0%)	0/1(0%)	0/1(0%)	0/1 (0%)	0/1 (0%)

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## 5. Discussion

### 5.1 Overt matrix and embedded subjects

All learners were aware of the missing matrix subject in the second sentence:

9. \*Bob, who had been travel abroad for some time, was due to arrive by ship to spend the Easter with his sister Sue and her husband Tom. \_ Were going to pick \_ up from the port. (Extracted from the passage)

5 out of 6 informants inserted a pronoun, either *They* or *who*, to the null matrix subject position in the sentence. Four of them selected subject pronoun *They* correctly, while the other two use *who* with an attempt to link it as a relative pronoun clause to the noun phrase *Sue and her husband Tom* of the previous sentence. Though such an attempt results in making the sentence structure complicated, it reveals a fact that learners were able to detect the ungrammaticality of missing subject in the matrix clause.

Since there is only one case of null-subject in the matrix clause in the whole passage, the impression one may get is the result could be different if more null matrix subject sentences were presented in the task. Nevertheless, if learners were unable to reject the null matrix subjects in English as a consequence of L1 transfer, one would expect them to disallow overt matrix subjects in some English sentences. The fact that none of the overt matrix subjects in the passage has been deleted may have suggested that the learners have come to the conclusion that the matrix subject is an obligatory property in English, conforming to the findings in Yuan's and Kong's.

Overt matrix subjects do not seem to pose any problem for learners to acquire, which are in line with what Yuan and Kong have found. However, the picture becomes different when we look at subjects in embedded clauses. Consider the following sentence with null embedded subject as an example:

10. \*Tom say \_ thought she criticise \_ too much. (Extracted from the passage)

In 10 an overt embedded subject pronoun *he*, referring to the matrix subject *Tom*, must be inserted as an argument of the predicate *thought*. Nevertheless, only one learner did so correctly. Incorrect verb inflections were also amended in this learner's data, i.e. *say* to *said*, and *criticise* to *criticised*. Two learners corrected the inflections as the learner men-

tioned above did, but failed to insert pronoun *he*. Two other learners correctly amended the verb inflection from *criticise* to *criticised*, yet deleted the matrix predicate *say*. One learner, surprisingly, left the sentence unchanged.

It appears to look like an asymmetrical acquisition between the overt matrix and the overt embedded subject has emerged, which is parallel to what has been observed in Kong's study on the one hand. On the other hand, it seems to have cast doubts on what Yuan has proposed. If Yuan were correct in claiming that *the unlearning of null subjects by Chinese learners of English is triggered by the evidence in their input indicating the specification of AGR(ement) and T(ense) in English* (Yuan 1997:467), then learners in the current study should not display asymmetrical performance on the acceptance of overt matrix over overt embedded subjects. Recall that in 9, four out of six of the learners inserted matrix subject pronoun *They* correctly, but in 10 only one of them succeeded in doing so.

If we abandon the claim made by Yuan, it maybe worth exploring the “topic-hood property” proposal put forward by Kong as an alternative to the behaviour observed. Suppose that when encountering English, Chinese speakers continue with their Chinese parameter settings but at the same time they notice that typical English declarative sentences are never headed by a verb. This would mean sentence 10 has an interpretation like this:

11. \*[Tom<sub>i</sub>] [[<sub>eci</sub>] say[<sub>eci</sub>] \_ thought she criticise \_ too much.]

where there is an overt topic and a null subject. As long as the topic position is overt and that the sentence is not headed by a verb, learners would allow subjects in the embedded clause to be covert.

## **5.2 Overt matrix and embedded objects**

It appears that learners have trouble detecting the ungrammaticality of null objects as they did on null embedded subjects, more so than on null matrix subjects. In the following sentence:

12. ‘\*Then at least I could have reminded \_ to contact \_.’ (Extracted from the passage)

Two out of the six learners successfully inserted matrix object *him* and embedded object *us* into the null pronoun positions. The other four, nevertheless, did not make any changes to the sentence in question.

The results may tentatively suggest that Chinese learners of English have more difficulty acquiring overt objects than matrix subjects, which are consistent with the findings of Yuan and Kong. Yuan argues that *the lack of informative evidence to unset the [+topic-drop] setting in Chinese learners' L2 English* (Yuan 1997:467) be the triggering factor causing the failure.

The unavailability of cues in the input maybe the reason why learners have trouble unlearning null objects as Yuan has suggested. An alternative explanation and the one which appears to be more consistent in accounting for the subject and object asymmetry is to follow Kong's topic-hood assumption. Suppose Chinese speakers draw an inference that English requires one topic to be overt and as long as this constraint is met and sentences are not headed by a verb but by an entity in the topic position, arguments in other positions, objects included, can be null<sup>4 5</sup>.

One final interesting finding about the study is that all advanced learners failed to fill in the definite article in the sentence:

13. Bob arrive tired and hungry, having hitch-hiked from \_ port. (Extracted from the passage)

And only the intermediate learner succeeded in doing so. A potential explanation we can offer is that advanced learners are concerned more with complex linguistic structures, while the acquisition of definite article is more prominent for elementary and/or intermediate students. As a result, definite articles are more likely to be ignored by advanced learners. Furthermore, there is only one case of the missing definite article in the passage, the reliability of the test on this domain can be open to question.

## **6. Conclusions for Further Research**

The mini-pilot study argues in part against a claim made by Yuan (1997) which states that the recognition of S-V Agreements features triggers Chinese speakers to unlearn null subjects while the lack of positive evidence in the input data allows them to continue accepting null objects. An asymmetry on the acceptance of overt matrix and embedded subjects as well as overt objects has been observed in the study. The results

appear to conform to Yuan (1997) only on the findings concerning overt matrix subjects and overt objects. Learners in this study reveal difficulty on rejecting null embedded subjects, which is not found in Yuan's case but is consistent with what Kong (2005) has found.

It has been argued that the matrix-embedded subject asymmetry behaviour observed in the study could be accounted for using the one proposed by Kong in suggesting that Chinese speakers of L2 English transfer the parameter settings of Chinese together with a small adjustment to the use of topic chains. By implication, it can be argued that Chinese speakers treat English matrix subjects as topics in Chinese, which have to be overt. It gives an impression that they have reset the parameter but the underlying structure is still Chinese. It further supports the claims brought forward by Tsimpli and Roussou (1991) and Smith and Tsimpli (1995) that adult L2 learners have difficulty not in obtaining appropriate cues from the input but have difficulty in establishing native-like syntactic representation.

Being a mini-pilot study, there are some problems which improvements are in need if further research is to carry out. Firstly, the number of learners involved in the study is barely sufficient enough for a small pilot study of its kind, despite the fact that findings in the study seem to be in line with the ones found in the literature. But for large scale studies more learners, consisting of different levels, larger number and control group, should be enrolled for reliability consideration. As far as validity is concerned, a more sophisticated method of data analysis such as the SPSS statistical programme is to apply in cooperation with a qualitative study. The current study includes aspects, such as null matrix subjects and objects, null embedded subjects and objects, and null matrix and embedded expletives, which are properties of null pronouns. However, there appears to be an unbalanced number of properties to the test as rightfully pointed out by two anonymous Intergrams reviewers. For example, only one case of null matrix subject is presented, compared with eight cases of null embedded subjects in the same passage, performing variations on the two properties can be inevitable.

Another area of study would be looking at the extent to which the role of discourse related factors such as *clause-initial adverbs*, *cleft constructions*, the presence of *Wh-operators on null subject clauses*, and *overt non-subject topics* may have on Chinese learners' acquisition of the properties in question. Finally, definite articles seem to be a difficult aspect for advanced learners to acquire, an investigation of which in relation to discourse would be another aspect for further research.

## Notes

1. Sentence like: \*Mary hasn't visited her parents for a long time. When will go again? is an example of null matrix subject in wh-clauses; while sentence like: \*Mary hasn't visit her parents for a long time. I wonder why has been so busy. is example of null embedded subject in wh-clauses. (examples taken from Kong 2005)
2. Null matrix and embedded subjects in overt topic clauses are sentences like: \*For her birthday, Kim decided to go to the movies rather than have a party. Parties, I know that has never liked. and \*Did John lend his car to Bob or Sue? Bob, I think that wouldn't trust with his car. (examples taken from Kong 2005)
3. In response to Kong's Chinese obligatory TopP proposal, one anonymous Intergrams reviewer has cast doubts by giving a Chinese example: 張三那個人， 李四承認 [e<sub>1</sub>說過 [王五絕對不會喜歡e<sub>2</sub>]]  
張三 that person, 李四 admits has said 王五will never like  
e<sub>1</sub> in the Chinese example can only have the reference of 李四 and e<sub>2</sub> the reference of topic NP 張三, not the other way around. Nor can both e<sub>1</sub> and e<sub>2</sub> have the interpretation of topic NP 張三. This is certainly a question to which Kong needs addressing.
4. An anonymous Intergrams reviewers has correctly pointed out that there is a statistical discrepancy between the accuracy rate of rejecting the null embedded subject and the null embedded object, 52% and 34% respectively, which may undermine the "topichood" proposal of Kong, given the assumption that so long as the topic position is filled, other arguments can be null. Nevertheless, the focus of the current pilot study and Kong (2005) has been on the matrix-embedded subject position, the embedded subject and the embedded object position is certainly an interesting area for exploration. Yet, a seemingly possible explanation to answering the reviewer's question could be like this: the embedded subject position was treated differently from the embedded object position, just like the matrix subject position was treated differently from the matrix object position by the Chinese speakers.
5. In an earlier study, Kong (2001) investigated to what extent 11 L2 English speakers of Chinese' responses to the null matrix subject and the null embedded subject diverged from 3 native English speakers'. Findings in Kong (2001) were largely parallel to Kong (2005) and the current pilot study. In other words, informants in Kong (2001) had more difficulty unlearning null embedded subjects than null matrix subjects.

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## *Appendix*

**Name:**

**Native Language:**

**Other Languages:**

*Grammaticality Judgment*

Bob, who had been travel abroad for some time, was due to arrive by ship to spend the Easter holidays with his sister Sue and her husband Tom. Were going to pick up from the

port. He send them a postcard the week before, telling what time his ship arrive. Unfortunately, the postman deliver to the wrong house, and so Tom and Sue never received.

The day before was expected, Sue very angry. She say that should have contacted if wasn't coming after all. Tom say thought she criticise too much. When are travelling isn't always easy to contact people. Sue find irritating that Tom seem to excuse. 'Didn't you always say that you feel never consider anyone but himself?' He had to admit that did. Tom then say that perhaps he should have called at the last hotel where stayed. 'Then at least I could have reminded to contact.'

All three of them realise what had happened when, the following day, Bob arrive tired and hungry, having hitch-hiked from port.

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