

The symmetrical embedded subjects and objects in L2 English

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Abstract

The study tests a proposal made by Kong (2005) in relation to the issue of parameter resetting in the acquisition of overt embedded subjects and objects in adjunct clauses by Chinese speakers of L2 English. Following Kong (2005), the study argues against Huang's (1984) proposal that null embedded subjects in Chinese are *pro* whereas null embedded objects in Chinese are variables. In fact, both null embedded subjects and null embedded objects could be *pro*. 'Topichood' could be argued as a generalized property of Chinese which in turn may have an effect on the interpretation of L2 English speakers' overt embedded subjects and objects, rendering symmetrical embedded subjects and objects possible in the study. Findings of the study also lend support to the claim made by Kong (2005), following Tsimpli and Roussou (1991) that functional values associated parameters are inaccessible after the critical period, that what appears to be a parameter resetting can be in fact an adjustment of L2 setting to match the L1 setting.

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

1. Introduction

One of the most extensively studied parameters within the Principles and Parameters framework has been the *pro-drop* or *null-subject* parameter. Second language (L2) researchers like White (1985; 1986), Phinney (1987), and Tsimpli & Roussou (1991) have taken a keen interest in investigating *pro-drop* Spanish-type language speakers acquiring obligatory English subjects. Apart from Yuan (1997), Kong (2005), and Kong (2007), little attempt has been made to primarily target Chinese speakers acquiring overt English arguments. Other studies focusing on the acquisition of overt English arguments are available in the literature but participants in those studies are speakers of other languages (see Toribio et al., 1992; and Roebuck et al., 1999). The purpose of this paper is to attest a proposal made by Kong (2005) concerning the nature of overt subjects and objects in adult Chinese speakers of L2 English; they look like native grammar but are in fact an adjustment of the L2 setting to match with the L1 setting. This paper's line of argument is that features of functional categories in the L2 which differ from the L1 are in principle unresettable, which means that L1 syntactic feature specification plays a major role in hindering the acquisition of L2 syntactic features and that there is a syntactic critical period (Tsimpli & Roussou, 1991; and Hawkins & Chan, 1997).

The paper is organized as follows: In section 2 we consider a position taken by some second language researchers who advocate that the divergence between native and non-native grammars is the result of L2 learners having only partial access to UG. In section 3 we summarise the 'topichood as a generalized property of Chinese' proposal made by Kong (2005) and contemplate the extent to which such a proposal accounts for the native non-native divergence found in his study. Section 4 presents an empirical study, which will be followed by Section 5 on an evaluation of the adequacy of Kong's proposal in accounting for the observations made in this paper. Finally some concluding remarks are presented in Section 6.

2. Partial Access to UG accounts

2.1 *The full access to UG principles and no parameter-resetting hypothesis*

Tsimpli and Roussou (1991), following (Borer, 1984; Lebeaux, 1988; and Chomsky 1991), take the position that UG principles are separated from parametric options and that all parameters are located within functional categories. The triggering

experience available to child L1 learners is denied to adult L2 learners. That is to say, adults L2 learners have access to UG principles but they do not set the parameters of the L2. To illustrate, Tsimpli and Roussou (1991) argue that native speakers of Greek do not reset the [+null subject] option to the [-null subject] when they learn English. What learners have done is using UG principles to re-structure their L1 on the basis of the L2 data in order to acquire a mental representation or the IL grammar. This IL grammar is different from native English, although it may look similar. Learners in Tsimpli and Roussou (1991) analyse English pronouns as argument markers of their L1, and reject verb-subject order because agreement marking on the verb is not present to license null subjects. At the same time, invariant properties of UG seem to be involved in the learners grammar because they acquire referential pronouns in English before expletive pronouns—a distinction which is not marked in the input from English. It gives the impression that they have reset the [+null subject] setting to the [-null subject], but in fact they are matching L2 data to their L1 setting.

2.2 The failed functional features hypothesis

Another representational account of the partial access to UG theory is Hawkins and Chan's (1997) *failed functional features hypothesis*. Hawkins and Chan, in modification of Tsimpli and Roussou's (1991), claim that advanced L2 speakers have a syntactic deficit which denies learners from accessing some functional-category related features present in the target language. The example that Hawkins and Chan use to fortify the claim is Chinese speakers acquiring English restrictive clauses. Native speakers of English are restrictive to Subjacency violations; Chinese speakers of L2 English in Hawkins and Chan's are not. That is to say, when acquiring wh-pronouns which introduce relative clauses (e.g. The girl *who* was shy. The car *which* was stolen.), Chinese speakers bind null resumptive pronouns in their L2 grammar, whereas native speakers bind variables or traces in argument position. The underlying hypothesis of Hawkins and Chan is that the principles of UG are available in SLA but beyond the critical period some unselected parametrised features of functional categories cease to be available.

3. The acquisition of obligatory English subjects by speakers of Chinese.

3.1 Kong (2005)

In a recent study, Kong (2005) argues against a hypothesis made by Yuan (1997) in claiming 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. Yuan's line of argument is of Schwartz and Sprouse's (1996) who stipulate that the entire L1 grammar provides the initial state for L2 learners. Input data from the L2 trigger learners to modify their L2 interlanguage, based on options drawn from UG. Learners in Yuan's study initially fully transfer the Chinese functional category features into L2 English but are able to acquire obligatory subjects as a result of contact with English which tells them that tense and agreement features of Infl are present in English. 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.

A specific empirical domain in which a divergence between non-native speakers and native speakers has been explored in Kong (2005) is the acquisition of obligatory subjects in L2 English by speakers of Chinese. An interesting observation made by Kong (2005) is that learners' performance displays a divergence between matrix subjects and arguments in other positions. That is to say, learners in the study have more trouble acquiring overt embedded subjects and overt matrix and embedded objects than overt matrix subjects. Kong questions that if Yuan is correct, then 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 Hawkins and Chan (1997). 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. We consider Kong's *topic-hood as a generalized property of Chinese* proposal next.

Following Huang (1984), Kong assumes that embedded null subjects are pronominals in Chinese which should be free within their binding category as a rule of Binding Principle B (Haegeman 1994). Therefore, the *pro* in (1) cannot be bound within its clause; instead it has to coindex either with *Zhangsan* or another referring expression elsewhere in the discourse, resulting in the following structure:

(1). Zhangsani said that [*pro*/*i* saw Lisi]

As far as null objects are concerned, Huang (1984) stipulates that genuine null object pronouns do not exist in Chinese because of the *Generalized Control Rule (GCR)* and the *Disjoint Reference (DJR)*. The former refers to the state that an empty pronominal be coindexed with its closest antecedent; the latter means that a pronoun must be free in its governing category (Huang 1984: 552). Therefore in the following ill-formed English sentence:

(2) a. *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 else previously mentioned. (2) a. will then have the following structure in Chinese:

(2) b. [Top_{*j*}] John_{*i*} said that [Bill saw *e_j*]

e_j 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:

Mary met Lee on the street. (context)

(3). Mary_{*i*} shuo[Lee bu renshi *e_i*].

> *Mary_{*i*} said that Lee didn't know *e_i*

(3) is a well-formed structure in Chinese but its English counterpart is not. According to Huang, neither *Mary* nor *Lee* in (3) can act as the antecedent for the empty pronominal *e_i*; only the one mentioned in the previous discourse topic can. One problem arises: there are only two references, *Mary* and *Lee*, in the discourse; it would be contradictory if on the one hand none of them can be the antecedent for the *e_i*, yet, on the other hand, they both constitute the discourse topic. In fact, *Mary*, not *Lee*, is the antecedent of the empty pronominal. Since *e_i* is not a reflexive but an empty pronominal, binding by its nearest

antecedent *Lee* is out of question. Therefore, its closest antecedent should instead be *Mary*.

In arguing for null objects being *pros* and against the *GCR* being involved in the licensing of null objects in Chinese, Kong resorts to topic structures in English.

(4). As for *Billi*, John thinks that Mary likes *himi*. (as 2b in Kong 2005:249)

Kong argues that the embedded object *him* in (4) 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. In other words, *Bill* needs to coindex with an existing argument in order to be interpretable. By implication, it is suggested that: (a). pronouns may be bound as long as they are free in their governing categories; (b). topics need to bind an argument position in the following sentence, as the English example shows. All these have led Kong to argue that the *GCR* is not a necessary component in the licensing of null objects in Chinese, rendering null objects in Chinese being *pro* possible (Rizzi 1986). (4) may have a structure in Chinese like (5):

(5). [Top *ei* [John thinks [that [Mary likes *Proi*]]]]. (as 2c in Kong 2005:249)

Pro cannot be bound by *Mary* of the same clause. It has to refer to the topic, which can be overt or covert.¹

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 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 (6) are ungrammatical:

(6). *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 2005:250)

Equally ungrammatical are sentences in which an indefinite noun phrase takes the sentence-initial position.

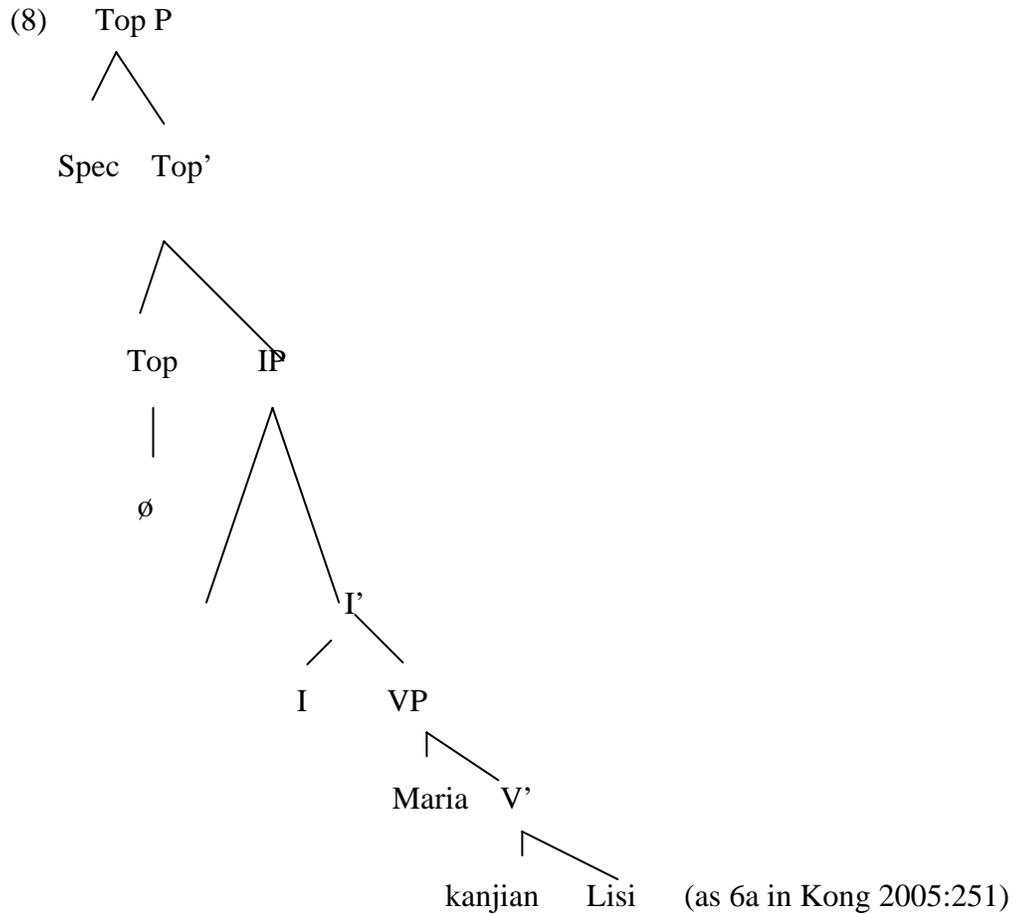
(7) a. *Yi ge xiaohai lai le.

one CL(classifier) child come PFV(perfective aspect marker)
 A child has come. (as 48 in Yip 1995: 87)

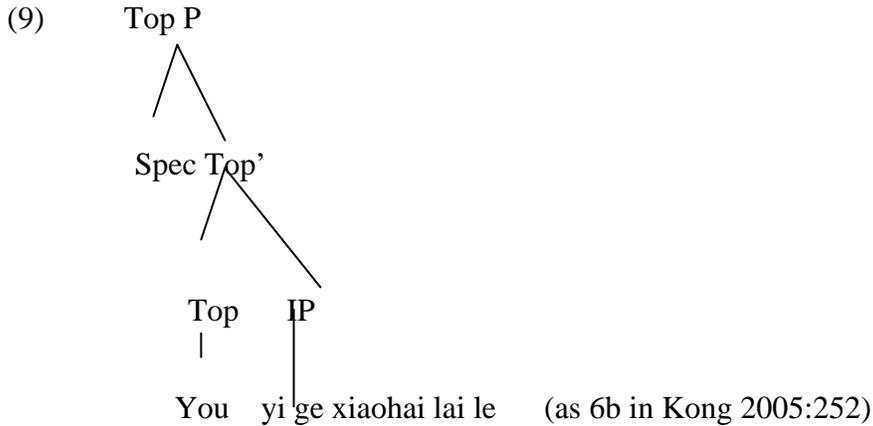
To mend the sentence, an existential verb *you* ‘there be’ has to appear in the clause initial position. Hence a grammatical version of Yip’s sentence would be:

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

The underlying assumption of Kong’s argument is that some constituents in a clause have 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 one indefinite NP available, as (7) a shows, which fails to qualify as 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, according to Kong, sentences in Chinese by and large appear to be headed by an obligatory TopP, which is a normal consequence of the *topic-prominent* nature of Chinese syntax. Under circumstances, nevertheless, topics can also be covert. Consider a discourse where an ambiguous reading occurs:

(10) a. Zhangsan zhenzai gen wo tanhua. Ta/wo wang-le gei tamama da dianhua.

Zhangsan be with me talk. He/I forget to his mother make phone-call
 Zhangsan was having a conversation with me. He/I forgot to phone his mother. (as 9a & 9b in Kong 2005)

There are two potential topics, namely *Zhangsan* and *I*. When the topic is null, both of them can be the topic, as in (10) b:

[ϕ_i] [*eci* forgot to phone his mother.]

To avoid ambiguity, the topic would have to be overt, as in (10) c:

[*Hei*] [*eci* forgot to phone his mother.]

What it means is that Chinese allows both overt and covert topics in the same context. Whether an antecedent-bound topic should be null or not is determined by pragmatic factors relating to 'being clear' in communication.

The *topic-hood* as a generalized property of Chinese account established by Kong has led Kong to assume that parameter settings of Chinese have been transferred and what appears to be the resetting of the *pro-drop* parameter 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 account explains the matrix-embedded subject asymmetry in the formation of English interlanguage grammar by speakers of Chinese observed in Kong (2005).

The purpose of this study is to test claims made by 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. According to Kong, the asymmetrical overt matrix-embedded subject behaviour found in Chinese speakers' interlanguage is a result of transfer of the parameter settings of Chinese together with a small adjustment to the use of topic chains: one topic at the head of every sentence must be overt, which explains why learners in Kong (2005) have more trouble unlearning null embedded subjects than null matrix subjects. It has been argued that Chinese speakers treat English matrix subjects as topics in Chinese, which can either be overt or covert. Noticing that English sentences are never headed by a verb, the Chinese speakers interpreted overt English matrix subjects as overt Chinese topics. So long as the topic position is overt and a sentence is not headed by a verb, Chinese speakers would allow null embedded subjects in their interlanguage. The pattern that learners have access to UG principles and have restructured their L1 on the basis of the L2 data so as to acquire a mental representation is evident in Kong (2005). The significance of Kong's account for this study is if transfer does take place and parameter resetting fails to function, adult Chinese speakers of L2 English should interpret arguments in other positions of a sentence as the same, given the assumption made by Kong that both null objects and null embedded subjects are *pros* in Chinese. The question that will be asked is:

Can it be maintained that functional categories of certain type are difficult, if not impossible, to acquire beyond the critical period? In other words, are functional features subject to parametric variations accessible to adult second language learners?

4. The study

4.1 Informants

Sixty-five Chinese speakers served as informants for the experiment and eight native speakers as controls. The 65 Chinese speakers were all adult undergraduate students at a university in Taiwan. The eight native speakers were faculty members and students at the same university. An English proficiency test was administered to all Chinese speakers prior to the beginning of the experiment. The Chinese speakers were then divided into three groups based on their scores in the test, High-elementary (HE), Intermediate (I), and Advanced (A). Table 1 shows the informants' background information. There were significant differences among the three experimental groups ($F = 32.937, p < 0.001$) shown on a one-way ANOVA.

Table 1
Informants involved in the study

Groups	Mean scores on proficiency test (SD)	No. of informants
Chinese High-elementary (HE)	54 (15.3)	24
Chinese Intermediate (I)	73 (10.8)	20
Chinese Advanced (A)	86 (3.4)	21
Native English speakers (NS)	n/a	8

Note: SD = standard deviation

4.2 Task and procedure

The learners were gathered and presented with a grammaticality judgement test (see appendix), consisting of a set of grammatical mistakes, such as *null embedded subjects* and *null embedded objects in adjunct clauses*, and *mismatched verb-agreements*. Sentences in the test were randomized. Learners were asked to correct any mistakes as they read through the test. All learners finished the test within a one-hour given time. They were encouraged to read through the sentences so as to make sure that they understood all the lexis in them before starting the test. The rationale for including the *Mismatched Verb-agreements* 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. It is evident in Kong's findings that

topics seem to have obstructed Chinese speakers from unlearning null embedded subjects. The introduction of the *null embedded subjects* and *null embedded objects in adjunct clauses* in this study is to test the extent to which topic related properties such as adjuncts may have in learners' acquisition of overt arguments other than in the matrix position. Table 2 summarises the number of test items contributing to the score for each structure in the task.

Table 2

Tokens of null embedded arguments and mismatched verb-agreements in the task

Sentence structures	Tokens
NEAdjSub (Null Embedded Subjects in Adjunct clauses)	4
NEAdjObj (Null Embedded Objects in Adjunct clauses)	4
VAgr (Mismatched Verb Agreement)	6

4.3 Results

Informants were scored individually for their performance in detecting the ungrammaticality of null arguments in the context under investigation and mean group scores were then calculated. Results were run through the Generalised Linear Model (GLM) procedure of the SPSS statistical programme, and ANOVAs were used. Two-way ANOVAs with one repeated measures factor and one independent groups factor were used for the *null embedded subjects and null embedded objects in adjunct clauses*, while one-way ANOVA was used for *subject-verb agreement*. Where significant differences between the means for the levels within each factor were detected by the ANOVAs, post hoc tests were used to establish where such differences were to be found, as appropriate. Control informants' data were excluded from analysis for the reason that they were all above 96% accurate in deleting the ungrammatical features in the task.

Null embedded subjects and objects in adjunct clauses

While Table 3 suggests that informants' performance increases with proficiency, two-way ANOVAs run on the results showed no significant difference in performance

within the groups on each pair of constructions tested. As far as the features are concerned, the experimental informants show no significant difference in their judgment. On the other hand, there is a significant difference when native controls' performance is drawn for comparison. Post hoc Tukey tests show that there are significant differences between HE (High-elementary) group and native controls as well as between I (Intermediate) group and native controls in the recognition of null embedded subjects and objects in adjunct clauses.

Table 3

Mean scores on rejecting null subjects and objects in embedded adjunct clauses in the task

		HE (n=24)	I (n=20)	A (n=21)	All
Task	Null embedded subjects in adjunct clauses	.4091	.7318	.7391	.6288
	Null embedded objects in adjunct clauses	.4318	.6429	.8261	.6357
	All	.4205	.6874	.7826	.6302

Subject-Verb Agreement

On the *subject-verb* agreement structure, learners amended grammatical mistakes presented in the task with high mean scores, which are displayed in Table 4 below. Results of one-way ANOVAs indicate that there are no significant differences between the three groups in detecting S-V agreement errors. The A group has a near native performance and the recognition of S-V agreement seems to be developmental.

Table 4

Mean scores on correct ill-formed subject-verb agreements in the task

		HE (n=24)	I (n=20)	A (n=21)	All
Task	SV Agreement	.6840	.7944	.9129	.7971

5. Discussion

According to Kong's hypothesis, learners in the main study should perform equally well or badly in rejecting null embedded subjects and null embedded objects in adjunct clauses. Once learners have recognised that a subject in the matrix clause of an

English sentence has to be overt, they should allow arguments in other positions, namely embedded subject and objects of a clause, to drop. The recognition of an overt property in the initial position of a clause does not, according to Kong, necessarily mean that they have reset the *pro-drop* parameter; it is rather an interpretation of an overt English matrix subject as a Chinese topic.

Informants' performance on detecting *null subjects and objects in embedded adjunct clauses* has tentatively pointed to the direction that both null embedded subjects and objects could be *pros* in Chinese as discussed in Section 3. No asymmetrical acquisition between the two positions has emerged means that they are treated as the same constituent by the learners. If we follow the claim made by Kong that when encountering English, Chinese speakers continue with their Chinese parameter settings but at the same time they notice that typical English sentences are never headed by a verb, this would mean sentence (11), whereas there is an *embedded subject in the adjunct clause*, can be interpreted as follows:

(11). *[John_i will make some tea], [when_j][\emptyset_j] [\emptyset_i] has finished his essay.]

and sentence (12), whereas there is an *embedded object in the adjunct clause*, can have an interpretation like this:

(12). *[Can you give this message to Jenny_i], [when \emptyset_j] [\emptyset_j] you see [\emptyset_i]?

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 can be null. This account is consistent with the observation made in this study, at least in the high-elementary and intermediate speakers. However, there is development over time. The advanced speakers become more native like in their performance both in detecting the ungrammaticality of *null embedded subjects and objects in adjunct clauses* and in correcting the *S-V agreement* errors. The fact that the development of those properties appears to be successful does not necessarily mean that advanced speakers have reset the parameter to the L2 setting. Their success seems to be gradual, making it possible to argue that speakers notice that arguments are typically overt in English. Evidence from Chinese-English interlanguage may suggest that the difficulty that adult learners have lies not in obtaining appropriate input to reset parameter setting from L1 to L2 as some researchers

have claimed (Yuan 1997). Instead, it could be argued that adult learners have trouble establishing native-like syntactic representations, suggesting that UG continues to exert its influence on grammar-building, even in adult L2 learners.

6. Conclusion

The study is a contribution to the on-going debate concerning persistent syntactic difficulties in adult second language acquisition. Having concentrated on the *null embedded subjects and objects in adjunct clauses*, the study has lent support to Kong's 'topic-hood' property of Chinese and its implication on adult Chinese speakers' acquisition of the properties concerned. It is also consistent with hypotheses put forward by Tsimpli and Roussou (1991) as well as Hawkins and Chan (1997) that adult learners' grammars are under the sanction of UG but certain functional category-related parameters are difficult, if not impossible, to reset after the critical period.

Notes

1. One anonymous Intergrams reviewer has rightly pointed out, with reference to Li (2007), that there is a subject/object asymmetry within an island in Chinese, so in (13), taken from Li (2007):

(13) a. Suoyou de ren dou hen xihuan nage laoshi, ni yiding zhao-bu-dao yige [[e bu xihuan
all people all very like that teacher you certainly find-not-able not like
e de] ren].

DE people

'Everyone likes the teacher_i; you certainly cannot find a person that does not like (him_i).'

(13) b. Nage laoshi xihuan suoyou de ren, ni yiding zhao-bu-dao yige [[*(ta) bu xihuan de] ren].
that teacher like all DE people you certainly find-not-able one he not like DE person
'The teacher_i likes everyone; you certainly cannot find a person that *(he_i) does not like.'

What is relativized in (13) a must be the subject. If, according to the reviewer, the referents of the subject and the object have been exchanged, the result is not acceptable as in (13) b. The subject of the relative clause cannot be anteceded by an element outside the complex NP. To save the sentence, an overt pronoun must be present.

Such an observation suggests convincingly that subjects and objects behave differently within an island in Chinese, which would mean that learners in the study should treat embedded English subjects and objects differently. However, it should be noted that Li's proposal that an object is a true empty category is limited to the case with islands and is contextual only. The symmetrical interpretation of the two positions in this particular study could still suggest that the Chinese speakers may have treated objects as *pro* just like their subject counterparts. Their setting is still Chinese. So long as the topic position is filled, arguments in other positions of a clause can be null in their interlanguage grammar. The *asymmetrical subject/object within an island in Chinese* observation is interesting and has a strong empirical implication for SLA researchers.

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Appendix

Null Embedded Subjects in Adjunct clauses

- *John will make some tea, when has finished his essay.
- *John had a strong drink before wrote the report.
- *I will clean the house after have cut the grass.
- *She will read newspaper after has cleaned the kitchen.

Null Embedded Objects in Adjunct clauses

- *Can you give this message to Jenny, when you see?
- *Ellen made notes for her report before she wrote.
- *You can borrow the book after you have read.

*We can discuss the play when we have seen.

Mismatched S-V agreements

*She suddenly cryed.

*John seldom gamble at the casino.

*We usually goes to the beach to spend our holidays.

*They believe that he flyed from China to London.

*They imagine that he often stay up late when working for the bank.

*I think that she leaves yesterday morning.

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