TRIGGERING THE UNLEARNING OF NULL ARGUMENTS IN SECOND LANGUAGE ACQUISITION

BY

YANG XIAOLU

Supervisor: Dr Gladys Tang

THESIS

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ABSTRACT

This thesis approaches the process of second language acquisition from the UG perspective. We have investigated the null argument phenomenon in the ILs of Chinese L2 learners of English, with the focus on a specific area of syntax, the null argument parameters proposed in Lillo-Martin (1991,1992). We are especially interested in the relation between the acquisition of English Infl, expletives and the tensed embedded clause and the unlearning of null arguments, the assumption being that the three structures may provide the triggering experience to Chinese learners and trigger the unlearning of null arguments as suggested for the L1 acquisition of English. The judgement of the L2 learners of English at four different levels from the Beijing University of Aeronautics and Astronautics (BUAA) and the Affiliated Middle School to the BUAA on these structures was collected and analyzed. It is found that our participants use null arguments at the initial stages of the L2 grammar development and the use of null arguments decreases as the level of proficiency improves, suggesting the transfer of the L1 Chinese parameter setting to the L2 grammar and the possibility of resetting the parameter. Our data, therefore, lend support to the Indirect-Access Hypothesis of UG in L2 acquisition: the initial setting in L2 acquisition is the L1 setting and parameter resetting is possible. The results show that Infl is a late acquired aspect of grammar and the acquisition of Infl is not correlated with the unlearning of null subjects. This implies that they are not as closely related to each other as is assumed for the L1 acquisition of English. The tensed embedded clause as the triggering domain for the null pronoun parameters, suggested in Lillo-Martin, has some effect in the L2 acquisition of English by Chinese learners, as is evidenced by the finding that our level 2 and 3 subjects tend to be more sensitive to the use of null subjects in the tensed embedded domains than in the matrix domains. However we argue that this effect does not have far reaching consequences. We have found that the subjects' judgement of expletives is closely related to their judgement of null arguments: the acquisition of English expletives accompanies the decreasing use of null arguments. This is consistent with our hypothesis. The L2 data thus show that Hyams (1986) is right in pinpointing expletives as triggers. The findings further show that not all expletives have the same status as the triggering experience. The judgement of *there* and weather-time *it* expletives is found to be highly correlated with the judgement of null arguments, but not for *it* in *seem*+clause constructions. We argue that these expletives are different in terms of the degree of nonreferentiality, which may affect acquisition.

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List of Abbreviations

UG : Universal Grammar

SLA : second language acquisition

IL(s) : interlanguage(s)

L1 : the first language

L2 : the second language

AGR : agreement

Infl : inflection

NPP : the null pronoun parameters

DOP : the discourse oriented parameter

Q : question marker (*ma* in Chinese)

Le : aspect marker (*le* in Chinese)

NP : noun phrase

CL : classifier

BUAA : the Beijing University of Aeronautics and Astronautics

CHAPTER 1 INTRODUCTION

This work investigates the null argument phenomenon in the interlanguages (henceforth ILs) of Chinese learners of English and how the unlearning of null arguments is made possible. This chapter will highlight some basic issues and assumptions that provide the theoretical framework for the present study.

1.1 Parameter Model of Acquisition

How a language is acquired by the language learner has always been an intriguing issue. Linguists and psycholinguists have attempted to explain the process of language acquisition from different aspects. Within the past ten years, the parameterized model of UG (Chomsky 1981, 1982) has become one of the dominant theories in both linguistic research and acquisition research . The basic concept of the parameter approach to UG is that in addition to a number of fixed principles, UG also consists of parameters with parameter-settings that differ from language to language, as Chomsky states:

> What we expect to find, then, is a highly structured theory of UG based on a number of fundamental principles that sharply restrict the class of attainable grammars and narrowly constraint their form, but with parameters that have to be fixed to experience. If these parameters are embedded in a theory of UG that is sufficiently rich in structure, then the languages that are determined by fixing their values one way or another will appear to be quite diverse, since the consequences of one set of choices may be very different from the consequences of another set.
>
> (Chomsky 1981:3-4)

Such a parameterized model of Universal Grammar has significant explanatory consequences in many ways. On the one hand, it captures some systematic differences between languages, and attributes some superficially unrelated syntactic phenomena to the setting of a single parameter. On the other hand, it views language acquisition as a process of fixing or setting the parameters for the particular language the learner is to acquire based on the input data he receives. Within such a model, the process of acquisition may be represented by the following diagram:

(1) input data + UG ----> knowledge of language

Therefore, in order to determine a particular grammar, UG, a priori knowledge of language that is assumed to be biologically endowed, needs to interact with the data of the learner's linguistic environment.

To fix or set a UG parameter, the learner needs to be provided with linguistic evidence. It has been assumed that there are structures in linguistic data which point directly to the correct setting of a particular parameter. These structures, being a small subset of the learner's total environmental input, constitute a special kind of linguistic evidence called triggers. Triggers must be relatively simple data, readily available to the learner. For instance, Lightfoot (1989, 1991) argues that the learner could fix the relevant parameters on the basis of data in non-embedded domains. In

other words, triggers for parameter setting come from the unembedded binding domain. Lightfoot's suggestion is then consistent with the criterion of simplicity for triggers.

The parameterized approach to UG has spawned a flurry of research in the field of language acquisition connecting the source of learners' errors and their eventual disappearance with the setting and resetting of the hypothesized linguistic parameters. The underlying assumption is that the L1 learner is guided by innate UG principles and parameters when acquiring the native language. With regard to L2 acquisition, the question arises as to whether adult L2 learners still have access to the principles and parameters of UG. This question has led to a growing interest in exploring the implications of UG principles and parameters for SLA; and as a consequence, the testing of the availability of UG has constituted a major area in SLA research.

Different positions have been presented in the literature with respect to the availability of UG in SLA. None of the positions has gained full support from empirical studies. Here we will detail three hypotheses relevant to our study.

One hypothesis is known as the 'direct-access' hypothesis which posits that L2 language learners have direct access to parameters of UG independent of their status in the L1. It suggests that as long as UG has been activated normally in the course of L1 acquisition, it can be reactivated and reaccessed in the course of L2 acquisition; and that the learner's knowledge of the L1 and greater cognitive development will have no serious effects on the L2 acquisition process itself or on the hypotheses that

the learner constructs. This hypothesis predicts that a) L2 learners should not construct grammars that are not sanctioned by any UG parameter setting and b) in principle L2 learners may instantiate any legitimate parameter setting, including those realized in the L1, L2 and in neither L1 nor L2. Support of the hypothesis comes from Ritchie (1978) and Felix (1988). In both studies, L2 learners' observation of principles of UG is not found to be restricted to those instantiated in the L1.

The second hypothesis, the 'indirect-access' hypothesis[1] or the transfer hypothesis, also suggests the availability of UG in L2 acquisition. However it postulates that L2 learners can have access to UG via the L1. Such a view attributes considerable importance to the L1 grammar. Following this claim, the L1 parameter settings have an impact on L2 acquisition in that L2 learners will assume that the L1 settings are appropriate for the L2 as well, unless positive evidence from the input indicates otherwise. Language transfer errors arise because the L2 learner assumes the L1 parameter setting still holds when the L2 setting is in fact different from the L1 setting. In this view, parameter resetting to the L2 value is possible. This view is shared by a number of researchers, such as White (1985a, 1985b, 1986b), Hilles (1986), and Flynn (1987), among others.

The third hypothesis claims that UG is not available in L2 acquisition. Proponents

[1]Another point of view concerning the role of UG in L2 acquisition that can be categorized under the indirect-access hypothesis is that UG is inaccessible but the L2 learner can reactivate that part of UG which is already instantiated in L1. This means that fixed principles and parameters exemplified in the L1 will be accessible to the L2 learners; but when L1 and L2 differ as to the values they have for some parameters, the resetting of the parameter is impossible (Schachter 1989).

of this view argue that the learning mechanisms underlying adult L2 acquisition are largely different from those in L1 acquisition. What guides adult L2 acquisition are general problem-solving principles not specific to language learning (Bley-Vroman 1989, Clahsen & Muysken 1986; Schachter 1988).

Although the picture obtained so far is not as clear as it is in L1 acquisition, more evidence seems to favour the indirect-access hypothesis for the role of UG in L2 acquisition, that is, UG is available via the L1. Whether this hypothesis stands will depend on further justification.

1.2 **Positive Evidence, Negative Evidence and the Catapult Hypothesis**

An assumption underlying the parameterized model of acquisition is the lack of reliable and specific negative evidence available to L1 learners. Negative evidence is a form of evidence indicating what is not possible in a language; it consists of information about ungrammaticality. In contrast to negative evidence, positive evidence indicates what is possible in the target language and consists of utterances that the learner is exposed to. The 'no negative evidence' hypothesis seems to make language learning an impossible task since the ultimate knowledge of a language includes the knowledge of both grammaticality and ungrammaticality.

UG is assumed to substitute for the negative evidence in the following way: it provides information as to what languages can be like, preventing the language learner from making certain incorrect assumptions from scratch. That is, the

hypotheses entertained by the learner are UG-constrained; certain kinds of incorrect structures are ruled out in advance without any need for negative evidence. However, even given the existence of UG, it is still possible in principle for the learner to make incorrect hypotheses about the target language. How the learner disconfirms and finally abandons those hypotheses seems to be mysterious given the assumption that no negative evidence is available.

One solution to this problem is to assume that the data are not a random collection of diverse and unrelated entities; rather they are a set of systematically inter-related forms by the abstract principles that constitute the grammar, one form having implications about other forms in the language. Given such implicational relationships, positive evidence for one aspect of the grammar may imply the occurrence or non-occurrence of another aspect of the grammar. In other words, positive evidence for a structure present in the grammar can serve as indirect evidence for the existence or non-existence of another related structure, leading to a change in the grammar. So positive evidence of this kind has the effect of negative evidence. It informs the learner that a certain structure is not allowed in the target language. This is known as "Indirect Positive Evidence" (Randall 1987). Based on this, Randall (1987) has proposed a way of solving lexical overgenralizations. She claims that a principle of the form [If P, then not Q] works in tandem with the primary linguistic data P: if a certain structure P exists in a grammar, structure Q will not exist in the same grammar. As a consequence, when the learner notices structure

P, he will retreat from overgeneralizing Q. This logic is captured in terms of the Catapult Hypothesis in Randall (1992), presented as follows:

For every overgeneralization,

a) the grammar contains a disjunctive principle P, [either A or B (exclusive)]

and b) the primary data exhibits A (or B).

In this way, the Catapult Hypothesis guarantees that the learner can undo or unlearn every overgeneralization, given the primary data together with a principle of grammar[2].

1.3 **The Focus of the Present Study**

As discussed earlier, a number of L2 acquisition studies have been undertaken within the principles-and-parameters model. They focus on the availability of the principles and parameters of UG in L2 acquisition. Evidence for the availability of UG parameter comes from studies where the L1 and L2 have different values and where L2 learners can successfully reset the parameter for the L2 value. If this is what really occurs in L2 acquisition, one may ask what causes L2 learners to change

[2]A realization of the Catapult Hypothesis on X-bar principles is the Order Principle which states that optional arguments may not intervene between a head and an obligatory arguments. It is argued that when the learner overgeneralizes the dative rule to verbs which do not dativize (e.g. *deliever*), the Order Principle, together with the input that the learner receives, will help the learner revise his incorrect hypothesis, leading to a retreat from dative overgeneralizations (Randall 1992).

from their L1 value to a different value. Will some syntactic structures in the L2 input "trigger" the resetting of the parameters? Few studies to date have addressed this question. We believe that an understanding of this problem will contribute to the understanding of the developmental process in L2 acquisition.

This study is mainly concerned with 1) the null argument phenomenon at early stages of interlanguage development of Chinese learners and 2) the cause of the change from the L1 parameter setting to the L2 parameter setting by Chinese learners of English with special reference to the null argument parameters in Lillo-Martin's (1991,1992) sense. The Null Argument Parameters are developed from the null subject or pro-drop parameter and aim to give an account for null elements in both subject and object positions. There are several reasons to focus on this parameter. Firstly, studies of the null argument phenomenon within Generative Linguistics have resulted in a rich body of observations concerning the nature of the null arguments. In the past few years, the parameter related to the null arguments has constituted a major topic in the field and may be one of the best-formulated parameters. It has also attracted a number of researchers in the field of SLA. Secondly, this parameter has different values for different languages. In the present case, the L1 Chinese has a different value for the null argument parameter from that of L2 English. If Chinese learners of English learn to set the right value for English, it would be interesting to examine how the L1 influences L2 learning and how the unlearning of null arguments is possible. Thirdly, Chinese learners of English do not normally receive overt

instruction regarding the null argument parameter. No evidence has been found to show the teacher consistently informing the learners that subjects in tensed clauses in English are obligatory. Even if subjectless and objectless sentences are sometimes corrected by the teacher when noticed, this kind of correction, as may be neglected by the learners, does not form strong enough evidence to make the learner aware of the discrepancy between Chinese and English with regard to the parameter. So we may assume that the resetting of this parameter depends solely on positive evidence.

1.4 The Organization of the Thesis

The thesis is organized in the following way. In the next chapter, we will provide a substantive context for the present study by reviewing previous research relevant to the null arguments. This will include an overview of the theory of null arguments and previous studies in L2 as well as L1 acquisition. In Chapter 3, we will discuss the formulation of research questions and predictions. Chapter 4 is a description of the methodology that has been adopted to conduct the experiment. Chapter 5 and 6 will be devoted to results and discussions. Conclusions and suggestions for further study will be presented in the last chapter.

CHAPTER 2 NULL ARGUMENTS: A THEORY OF PARAMETERS AND LANGUAGE ACQUISITION

The null argument phenomenon is an issue that has been studied substantially in the field of generative linguistic research. Various theories have been developed to deal with the phenomenon in natural languages. These theories, though varied in systematic ways, all attempt to capture the cross-linguistic variation regarding null arguments. Studies have also been carried out to search for direct implications of the theoretical models to account for the similar phenomenon in language acquisition. At the same time these acquisition studies have provided many insightful findings for the justification and modification of theoretical models. In the present chapter, we will review some related theoretical models and acquisition studies in order to provide a substantive context for this study. In doing so, we will begin with a brief review of the null argument theories. Special attention is paid to the Null Argument Parameters (Lillo-Martin 1991, 1992). We will then move on to L1 acquisition studies. Finally, we will turn to L2 acquisition studies.

2.1 A Theory of Parameters: the Null Argument Parameters

It has been found that languages such as Italian and Spanish differ from languages such as English and French systematically in that the former class allow phonologi-

cally null subjects in tensed sentences[1] whereas the latter do not permit such kind of subjects. An example might illustrate this phenomenon. The Italian sentence in (1a) is fully grammatical, but the English counterpart (1b) is not (cited in Hyams and Wexler 1993:423):

(1) a. Lavorano molto in questa citt1à.

b. *(They) work a lot in this city.

In addition to null subjects, languages such as Italian and Spanish have also been found to have the following characteristics: 1) a rich inflectional system; 2) no expletive pronouns; 3) subject-verb inversion; and 4) that-trace violations. This phenomenon in natural languages leads to the early formulation of the null subject parameter (or pro-drop parameter, henceforth used interchangeably) (Chomsky 1981, Jaeggli 1982, Rizzi 1982) which consists of two important empirical claims: first, that pro-drop is a parameter of UG; second, that the parameter results in more than null subjects. Ever since the null subject parameter was first proposed, research has been undertaken to develop the theory of the parameter. Consequently, various theoretical models have been suggested, among which are the AG/PRO parameter (Hyams

[1]It is argued that these empty subjects, though phonologically null, are syntactically existent. The syntactic existence of null subjects is determined by the Theta Criterion which requires the obligatory presence of a structural subject in any sentence with a verb that assigns a theta-role to the subject position and the Extended Projection Principle which demands that every S have a subject (Chomsky 1981).

1986), the Morphological Uniformity Hypothesis (Jaeggli and Hyams 1988, Jaeggli and Safir 1989a), the multi-valued null subject parameter (Saleemi 1992) and the Null Argument Parameters (Lillo-Martin 1991, 1992). These theories attempt to give a principled account of the null argument phenomenon in adult as well as child grammars.

The essence of a theory of null arguments is that it should explain how null arguments are licensed and identified, as is stated in Rizzi (1986):

> "The minimal contribution that is to be expected from a theory of a null element is that it should specify (a) the conditions that formally license the null element (the conditions that allow it to occur in a given environment) and (b) the way in which the content of the null element (minimally, its ϕ-features) is determined , or 'recovered,' from the phonetically realized environment."
>
> (Rizzi 1986:518)

Due to the scope and space of this work, the details of how null arguments are licensed and identified within each of the models[2] are not presented. Instead we skeleton the null argument parameters which are of special relevance for this present study. In later review of acquisition studies, however, we will refer to the various theoretical models.

Lillo-Martin(1991, 1992) has proposed the Null Argument Parameters based on the fact that cross-linguistically, what can be dropped includes not only arguments in

[2]Those who are interested in these theories are referred to the works cited above for detailed discussion.

subject positions, as is suggested in the null subject or pro-drop parameter, but also arguments in object positions. This proposal attempts to develop a unified theory to account for both null subjects and null objects. On the basis of the work of Rizzi (1986) and Huang (1984, 1989), Lillo-Martin suggests that the null argument phenomenon should be explained by assuming more than one single parameter. According to her, the Null Argument Parameters consist of two components: the Null Pronoun Parameters and the Discourse-Oriented Parameter, the relevant part given in (4). The Null Pronoun Parameters are composed of the licensing parameter, stated in (2) and the identification parameter, given in (3).

(2) The Null Pronoun Licensing Parameter[3]

a. AGR when it Case-marks $\left\{ \begin{matrix} \text{is} \\ \text{is not} \end{matrix} \right\}$ a licensing head for *pro*.

b. V when it Case-marks $\left\{ \begin{matrix} \text{is} \\ \text{is not} \end{matrix} \right\}$ a licensing head for *pro*.

c. P when it Case-marks $\left\{ \begin{matrix} \text{is} \\ \text{is not} \end{matrix} \right\}$ a licensing head for *pro*.

(3) The Null Pronoun Identification Parameter

I. Let X be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of

$$\left\{ \begin{matrix} \text{no features} \\ \text{the number features} \\ \text{the person and number feature} \end{matrix} \right\} \text{ on X coindexed with it.}$$

[3]Here V refers to verbs and P refers to prepositions.

II. Null referential pronominal arguments require identification by morphological marking of

{ no features / the number features / the person and number feature } on the licensing head.

(4) The Discourse Oriented Parameter (partial)

In the discourse grammar, an empty topic node { may / may not } be coindexed with an appropriate preceding topic.

The Null Pronoun Parameters (NPP), invoked in Rizzi (1986), is concerned with null pronominal arguments, i.e. *pros*. Under this analysis, AGR, transitive verbs and prepositions are licensers of *pros*. Usually, AGR will license subject or object *pros*, while verbs and prepositions only license object *pros*. The Identification Parameter can identify null nonarguments, quasi-arguments as well as null referential arguments[4]. Often, the licenser of a null argument also provides its identification, as in 'rich' verb agreement. Italian and Spanish are well-known examples of languages in which null pronominal subjects are licensed and identified by verb agreement. (See Lillo-Martin 1991:106-113 for a thorough analysis of null arguments in different languages).

With respect to the operation of the Null Pronoun Parameters, it seems that the null pronoun identification parameter will be automatically set for the negative value if

[4]. Besides, the identification parameter can distinguish languages in which null referential arguments need fewer features to be identified. For instance, in Chamorro, number features are sufficient to identify null referential subjects.

nothing identified in the null pronoun licensing parameter can be a licensing head for *pro*s in the target language[5].

The Discourse Oriented Parameter (DOP), based on Huang (1984), deals with languages in which null arguments are bound by a topic. Discourse-oriented languages, such as Chinese, allow null arguments without rich agreement; in these languages, the content of the null argument is recovered by a discourse topic. Lillo-Martin assumes that null arguments in discourse-oriented languages, such as in Chinese, are variables, not *pro*s[6]. In addition to variable null arguments, other properties, such as topic deletion, lack of expletives, topic dominance and long-distance bound anaphors, are also assumed to be associated with the Discourse Oriented Parameter[7].

The Null Argument Parameters can well accommodate data from American Sign Language (ASL) which can not be dealt with by other models. ASL is a language that allows null arguments. On the one hand, it has restricted inflections for verbs (known

---

[5]. A problem that can be raised is why English doesn't allow *pro*s since AGR is a case-marker in English. Hyams (1992b) has made an interesting suggestion. She proposes that all languages license null subjects, but they vary with respect to what counts as "appropriate identifier". Italian-type languages have rich AGR to identify *pro*s while Chinese-type languages are strongly discourse oriented so that any argument can be identified through a discourse antecedent. English lacks both kinds of identifiers. Consequently null subjects don't occur in English.

[6]Within GB framework, a variable null argument is an anaphor and should be bound by an antecedent, which may be an operator, a trace in COMP or an empty NP in COMP. A *pro* null argument, identified as a pronominal, is free in its governing category and should have independent reference; it has the same number, gender and person features as an overt pronoun does.

[7]. However, this parameter is not as fully identified and developed as the Null Pronoun Parameters.

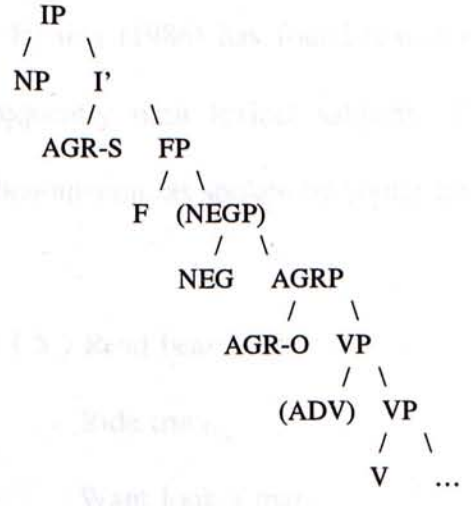
as inflecting verbs such *give, hate and inform*), showing subject-verb or object-verb agreement. On the other hand, it allows topic deletion and is identified as a discourse-oriented language. As a consequence, null arguments in ASL will have two analyses according to the contexts in which they occur. In cases when verbs are inflected for agreement with subjects or objects, null arguments seem to be *pro*s, whose reference can be determined from the agreement morphology. In cases where verbs are void of agreement markers, null arguments seem to be similar to those identified in Chinese, i.e., nonpronominal variables, coindexed with a possible empty topic which determines the reference of null arguments.

At this point, it is useful to make it clearer as to how null objects are licensed and identified. Variable null objects are usually licensed and identified by discourse topics as suggested in Huang (1984, 1989). While null subject *pro*s are invariably associated with the case-governing head Infl/AGR in the various models, null object *pro*s can also be licensed via AGR (Lillo-Martin 1991). If a language that allows null subjects licensed by verb-subject agreement also has verb-object agreement, it is expected that this language will also allow null objects[8]. It can also be predicted that if a language

[8]A recent analysis of Infl is the split Infl analysis proposed in Pollock (1989) and developed in Chomsky (1991). In this new analysis, two kinds of Verb-NP agreement are assumed: with subjects and with objects. Under the node of IP, we would expect to find two AGR elements: the subject-agreement element AGR-S and the object agreement element AGR-O. The basic structure of Infl is then articulated as follows (from Chomsky 1991:434):

has preposition-object agreement, it may allow null objects licensed by preposition-object agreement[9]. The morphological marking on AGR or preposition can determine the reference or content of the null objects. A more complicated case is that a null object may occur even if verb-object or preposition-object agreement is not present. An example of this is pro_{arb} in Rizzi's (1986) sense, as found in Italian and French[10].

2.2 **Predicting and Explaining L1 Acquisition**



This analysis of splitting AGR into AGR-S and AGR-O is also consistent with the idea of the possibility of null objects licensed and identified by object-verb agreement.

[9]There are languages with object-verb agreement which licenses and identifies object *pros*, such as Navajo, Pashto. Breton and Welsh are languages with object-preposition agreement; in these languages object *pros* licensed and identified by features on the head P are found (Lillo-Martin 1991).

[10]. According to Rizzi (1986), null objects of pro_{arb} type are licensed via a lexically governed device called Θ-role saturation. "A Θ-role is saturated when it is associated with some referential content---that is, when we can understand 'who does what' in the situation referred to"(1986:508). "A Θ-role can be saturated either in the syntax, through the Projection Principle, or in the lexicon. If a Θ-role is saturated in the lexicon, it is not projected; hence, it never reaches the syntax, and it appears to be inert in this component" (1986:509). In this case, a *pro* null object occurs. By using a procedure defined as "Assign *arb* to the direct Θ-role", the *pro* null object has the usual specifications associated with *arb*: [+human, +generic, +plural].

Hyams (1986) initiated the study on the acquisition of the null subject parameter. A number of studies have since been conducted to investigate the null argument phenomenon and how the parameter is set. We will briefly summarize some of the important findings in L1 acquisition and then discuss various issues related to the parameter setting and resetting. In doing so, we also make reference to how various theories account for the null argument phenomenon in L1 acquisition.

2.2.1 A Summary of Research Findings

Hyams (1986) has found that during a certain period in development, children frequently omit lexical subjects. The following sentences are examples of this phenomenon, as spoken by young English speaking children in Hyams' (1986) study:

(5) Read bear book.

Ride truck.

Want look a man.

Outside cold.

No morning.

Yes, is toys in there.

In addition to the feature of null subjects at an early period in child English, Hyams (1986) has also found that such a period is characteristic of sentences with overt

subjects, an absence of expletives and absence of lexical material in AUX. As these elements are also typical of the adult grammars in pro-drop languages such as Spanish and Italian, Hyams argues that the null subject phenomenon in early child grammar reflects that, like adult grammars, child grammars are also constrained by UG. Given the principles-and-parameters framework, it is expected that children might avail themselves of an option presented by the null subject parameter even though it is not exhibited in the target language. This seems to be what has been observed in early child languages. It is also found that null subjects disappear with the presence of expletives *it* and *there*. From this point, AUX is lexically realized, i.e., English modals and *be* emerge in child English. It appears that early grammars of English have undergone a process of shifting from [+pro-drop] to [-pro-drop].

Studies of children's early utterances show that subjectless sentences are found both in languages that do allow null subjects, such as Italian (Hyams 1986), Spanish (Phinney 1983), Chinese (Wang et al. 1992, Man 1993), Dutch (De Hann and Tuijnman 1988), American Sign Language (Lillo-Martin 1991) and those that do not, such as English (Hyams 1986, Radford 1990), French (Pierce 1987, Roeper and Weissenborn 1990, Weissenborn 1992), and German (Roeper and Weissenborn 1990, Weissenborn 1992). The null subject phenomenon is perhaps one of the most remarkable characteristics of early child grammars.

The acquisition of Infl has been found to be closely related to null subjects in the L1 acquisition of English. There is a period in which children omit inflectional

morphology. This also is the period in which they omit subjects. When inflection emerges, the null subject stage ends (Guifoyle 1984, Hyams 1992a).

In early child grammars omission of objects has also been found in addition to an omission of subjects, although the occurrence of missing objects is more restricted, that is, children who are exposed to languages which allow null objects are more likely to use these empty categories. Children learning Chinese omit both null subjects and null objects (Wang et al 1992, Man 1993). De Hann and Tuijnman (1988) have found that children learning Dutch omit null objects in addition to null subjects. In Lillo-Martin's (1991) study, children who learn American Sign Language also drop objects. However, English-learning children are seldom found to omit null objects[11].

German- and French- speaking children, while omitting null subjects in matrix declarative clauses, seldom use null subjects in tensed embedded clauses with complementizers or wh-questions. That is to say, their use of null subjects is restricted to the matrix domain (Roeper and Weissenborn 1990, Weissenborn 1992). It has been found that the use of null subjects stops even in the matrix domain later.

Having summarized briefly the research findings in L1 acquisition, we now are required to further see how they are explained within the parameterized framework[12]. Discussion is concerned with several issues relevant to the parameter

[11]Radford (1991) has disputed this. He has found that children acquiring English also drop objects, although the percentage of object drop is relatively lower than that of subject drop.

[12]. Other explanations have also been forwarded. One explanation is that the null subject phenomenon in early English is a result of performance factors rather than a grammatical parameter setting (cf: Bloom 1990, Gerken 1990, Valian 1991; also see Hyams and Wexler (1993) for counter-argument against this analysis). Radford (1990), within GB framework, attributes the occurrence of

setting and resetting. Special attention will be given to the acquisition of English and Chinese as these are the languages involved in the present study.

2.2.2 The Initial Setting

It has been commonly agreed that there is an initial value for each parameter which is assumed a priori and which may be later altered on the basis of positive linguistic evidence[13]. The initial setting or value of the null argument parameter is an issue of controversy. Two suggestions have been forwarded. One is that of Hyams (1986, 1992a), who argues that the [+null subject] setting constitutes the initial stage of the null subject parameter based on the observation that subjectless sentences are one of the remarkable features characterizing all child grammars regardless of whether adult grammars allow null subjects or not. The other suggestion is what Saleemi (1992) and Lillo-Martin (1991) have claimed: the [-null subject] setting (in Saleemi's sense) or the [-null argument] setting (in Lillo-Martin's sense) constitutes the initial setting, based on learnability predictions. Lillo-Martin argues that, under the learnability

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missing subjects in early child grammars of English to the late acquisition of functional categories. O'Grady (1991) holds that the child optionally uses overt and null subjects owing to an incompletely developed acquisition device "that is concerned with identifying the combinatorial properties of individual categories" at initial stages (1991:340).

[13]. One assumption that differs from the common assumption regarding initial setting is that every option that Universal Grammar offers is accessible to the child: i.e., all the values are "open" at the initial state. An option offered by UG is adopted by the language learner only if its adoption is justified by the primary data (Rizzi 1986, Valian 1990).

constraints, in particular the Subset Principle[14], the initial setting on the Null Pronoun Parameter is expected to be those which do not allow null pronouns and [-discourse-oriented] should be the initial hypothesis on the Discourse Oriented Parameter. Consequently, as the initial setting is the negative value, children who are learning a language with a positive value on the parameter will reset the parameter on the basis of the positive evidence, while children who are learning a language with a negative value will have the correct setting from the start.

However, the evidence from the acquisition of English, Italian, Spanish, Chinese, German, French and ASL all seem to suggest the initial settings of the null argument parameters are those which allow null arguments freely, contrary to the learnability predictions. To solve this problem, Lillo-Martin has proposed the association of the initial setting with the triggering domain. The idea is that the initial setting is probably only applied in the triggering domain while alternative settings of a parameter are available in domains other than the triggering domain. The triggering domain suggested for the null pronoun parameters is the tensed embedded clause. This issue will be further discussed in Section 2.2.4.

2.2.3 Identification of Early Null Arguments

[14]According to the Subset Principle, if two or more grammars yielding languages in a subset/superset relation, i.e., Grammar A is subset of Grammar B and Grammar B is a subset of Grammar C ..., the learner, being a conservative learner, will always begin with the subset grammar. If the target language is the language generated by the subset grammar, the initial hypothesis that the learner has constructed will remain. If the target language is one generated by the superset grammar, the learner can disconfirm the incorrect hypothesis and adopt the correct one that is consistent with the input data he is exposed to.

Regardless of what constitutes the initial setting and what constitutes the target setting, it is true that null arguments occur in early grammars. It then follows that explanation must be given as to how these early null arguments are identified. Within the AG/PRO parameter (Hyams 1986), identification of a null subject is completed via agreement features in AGR. A problem arises as to how null subjects in early child English and French are identified. Children acquiring Italian acquire the inflectional system at a very early age and so the null subjects in their grammar can be identified by agreement. However, children acquiring English use null subjects although the verbal morphology, such as it is in English, has not yet been acquired at this time. This is similar to children learning French and American Sign Language. So null subjects in early grammars of these languages are left unidentified.

Under the Morphological Uniformity analysis[15], Hyams (1992a), following Huang (1984), argues that children acquiring English identify the null subjects by a Topic, as has been proposed for Chinese and other adult null-subject languages which uniformly lack verbal agreement morphology. However, Hyams' analysis diverges from Huang's analysis in one important aspect: while Huang assumes that the null subject may be bound by a null topic and thus is a variable, Hyams suggests that in the early child grammar, the null subject is a pronominal *(pro)*, which is identified by a null topic. Hyams' conclusion is that English-speaking children begin with a Chinese-like language, that is, a discourse-oriented language. In the case of Italian-

[15]The Morphological Uniformity Hypothesis assumes that the Case-Governer AGR identifies an empty category.

speaking children, Hyams proposes that their early null subjects are identified by agreement, as is the case in adult Italian. This is because Italian-speaking children acquire the inflectional system early and are thus able to identify null subjects.

Hyams' topic identification of null subjects in early English has been criticized in several respects. Following this analysis, one would expect that a discourse-oriented child language should have both null subjects and null objects, because Topic can identify null objects as well as null subjects. Hyams claims that English-speaking children do not use null objects, because under her analysis null objects can not be *pro*s, i.e., they must be variables, and English-speaking children have not acquired variables at this point. This claim is challenged in Wang et al.(1992). Wang et al's study shows that Chinese-speaking children use both null subjects and null objects while English-speaking children by and large do not use null objects. If English-speaking children have a Chinese-type language as their initial parameter setting, then children learning both languages should exhibit null subjects and null objects similarly at the initial stage. However, this is not the case. Thus Hyams' analysis leaves the problem unresolved. Besides, Wang et al's study also shows that both Chinese- and English-speaking children provide evidence for the early emergence of variables, rendering Hyams' claim of the nonexistence of variables in early child grammars problematic. This problem is also pointed out in Lillo-Martin (1991).

Within the framework of the null argument parameters in Lillo-Martin (1991), null arguments in early child grammars are identified in two ways. For children learning

Chinese or Japanese, null arguments are identified via discourse topics, as the discourse oriented parameter is reset early on the basis of positive evidence. For children learning Italian or Spanish, null subjects can be identified via agreement, because the null pronoun parameters can be reset early by the children owing to the positive evidence in the input that will inform the children of the [+null argument] value of Italian or Spanish. However it is difficult to explain about null subjects in grammars of children learning English or French within Lillo-Martin's model. At this stage, Infl is not fully developed and therefore can not be used to identify early null subjects. Both English and French are [-discourse oriented] languages, so null subjects can not be identified via discourse topic. In this case, Lillo-Martin's proposal also has the problem of how null subjects in early English or French are identified.

2.2.4 Triggers in the L1 Acquisition of the Target Parameters

Although the null argument phenomenon features dominantly in early child grammars, children acquire the target value of the parameters universally. Even if English-learning children omit null subjects at early stages of grammar development, they will finally disallow null subjects and use overt subjects. What causes this change and how children acquire the target settings is still to be further expanded on.

Hyams' (1986) AG/PRO parameter assumes an exclusive relationship between lexical material in AUX and the occurrence of null subjects. When AUX is void of lexical material, null subjects may occur. When lexical material appears in AUX, null

subjects are not allowed. Hyams has found that subjectless sentences coexist with an absence of expletives and lexical material in AUX in early grammars of English. When expletives and lexical material emerge in child grammars, subjectless sentences begin to disappear. It appears that early grammar of English has undergone a process of shifting from [+null subject] to [-null subject]. Based on this observation, Hyams assumes that expletives, modals and *be* might function as specific evidence informing the child that the [+null subject] grammar is not consistent with the ambient language. Expletives play an important role in indicating that English is a [-null subject] language since expletive subjects have nothing to do with semantic considerations, but are merely present for syntactic reasons. One limitation with this analysis of L1 acquisition is that it fails to explain the observed close relationship between Infl and null subjects.

Under the Morphological Uniformity Hypothesis, null subjects are licensed by morphological uniformity and identified by rich agreement (as in Italian and Spanish) or by topic or involving control (as in Chinese). It follows that the child who uses null subjects must also be analyzing the language as morphologically uniform. There can be two predictions with regard to the acquisition of English, a language with a mixed morphology. The first prediction is that children, at the period of missing subjects, are supposed to omit inflections too, taking the English morphological system as uniform. The next prediction follows that once the child learns the properties of the inflectional system and realizes its non-uniform nature, he or she

will retreat from the null-subject grammar. In other words, Infl will trigger the shift from [+null subject] to [-null subject]. These two predictions are borne out in the acquisition data. It is well known that young children learning English do omit morphology. And the emergence of inflection coincides with the end of the null-subject stage (Guifoyle 1984, Hyams 1992a).

Weissenborn (1992) has challenged the view that Infl triggers the shift from [+null subject] to [-null subject] underlying the Morphological Uniformity Hypothesis and Hyams' analysis. He cites evidence from early French and German. Apparently, young French-speaking children produce subjectless sentences even after they have acquired the verbal agreement system. This is not predicted by Hyams' account, because in her analysis the acquisition of verb morphology in French will make children aware of the fact that it is not morphologically uniform, hence null subjects will be abandoned. Besides, Hyams' account for null subjects in early child German leaves unexplained the question of why null subjects are not found in subordinate clauses, in which verbs remain in their clause-final position. In an alternative account within the parameterized model, Weissenborn suggests that, in addition to the null subject parameter, a Comp-parameter is involved in accounting for the null subject phenomenon in early French and German. Of special relevance for us here is his identification of two syntactic contexts regarding the null subjects: a) embedded clauses with complementizers or wh-question; b) matrix declarative clauses. It is argued that the child has set the null subject parameter in type (a) contexts from the

beginning. It is in the contexts of type (b) that the difference between the child and adult in French and German emerges[16].

Lillo-Martin (1991) has proposed the idea of triggering domain for the null pronoun parameters. This idea has drawn much insight for the ambiguous input in Valian's (1990) sense and the triggering domain in Roeper and Weissenborn's (1990) sense. It is necessary to look at what are the ambiguous input and the triggering domain.

Valian (1990) points out that the input to children contains some sentences without subjects. These include grammatical imperatives such as (6), ungrammatical but acceptable null subjects such as (7), and discourse such as (8).

(6) Wash the dishes.

(7) Seems like she always has something twin-related perking.

(8) a. She's there day and night.

b. Runs the place with an iron hand.

However the acceptable but ungrammatical null subjects are never found in tensed embedded clauses, as illustrated by the ill-formed sentence in (9).

[16]A further problem is pointed out by Weissenborn. Hyams' analysis predicts that in early German null subjects occur only in verb-final structures, i.e., in SOV structures. However, this prediction is not borne out in Weissenborn's data. On the contrary there are many cases of null subjects in V-second structures.

(9) *He thinks (that) seems like she always has something twin-related perking.

Based on the observation that null subjects are never found in tensed embedded clauses in adult grammars, Roeper and Weissenborn (1990), and Weissenborn (1992) suggest that the triggering data for setting the null argument parameters must come from subordinate clauses. It is argued that even during the period when children use null subjects in matrix declaratives, they have the correct parameter-setting (non-null-subject). Evidence for this can be found by looking at their use of subjects in subordinate clauses. Children learning French and German provide evidence confirming this: null thematic subjects only appear in matrix declarative clauses.

Illuminated by these ideas, Lillo-Martin suggests that the triggering domain is the tensed embedded clauses for the Null Pronoun Parameters. As pointed out by Emonds (1970), embedded clauses are different from root clauses with respect to structure-preservation. They are more structure-preserving. Hence it is reasonable to rely on the structure-preserving nature of embedded clauses for syntactic parameter setting. Then "setting the parameter requires analysis of the relevant information in the relevant domain. Until this analysis is achieved, some variation might be observed in children's use of the parameterized structure outside the triggering domain. Once the analysis takes place, and the parameter is set, its effects reach into domains other than the triggering domain" (Lillo-Martin 1991:202). Following this account, the course of acquisition for children learning English, Italian and Chinese can be predicted. For

the child learning English, the initial setting for the DOP will remain as it is as English is a [-discourse oriented] language. He begins with the initial hypothesis of the Null Pronoun Parameter allowing no null arguments. He knows that the triggering data for the Null Pronoun Parameter are found in embedded clauses as the initial setting is associated with the triggering domain. However in matrix clauses he uses both overt and null subjects, since this is out of the triggering domain. Then the analysis of verb agreement and no evidence of null subjects in tensed embedded clauses make him aware that English is a non-null-subject language. The Null Pronoun Parameters are now set at the target value in all domains. The acquisition of verb agreement is pre-requisite to the parameter setting, since agreement must be analyzed to determine identification. The child will have to learn that Infl in English is too meagre to identify *pro*s. It is possible that some children acquire the English agreement system late, thus delaying the setting of the Null Pronoun parameter. In the case of the child learning Italian, the same process can be observed. Since agreement is acquired relatively early in Italian, null subjects appear to be correctly identified from the earliest stages. For the child learning Chinese, the process goes as follows: he begins with the initial setting, i.e. [-discourse-oriented] of the Discourse Oriented parameter. It is possible for the child to reset the parameter to [+discourse-oriented] quickly since there are many sentence types indicative of the [+discourse-oriented] setting for Chinese in the input to him.

The idea of the tensed embedded clause as the triggering domain for the null

pronoun parameters seems to contradict Lightfoot's (1989, 1991) Degree-0 learnability hypothesis which assumes that the child's triggering experience should come from the unembedded domains. However, if the tensed embedded clause is considered to be only associated with the initial setting and the triggering experience is not necessarily limited to the tensed embedded clause, we can still retain the concept of unembedded domains for triggers. Anyway, the use of overt pronouns in the subject positions of the tensed embedded domains might be one of the important indicators of the target value for the null pronoun parameters.

2.3 **A Review of L2 Acquisition Studies: Related Issues**

A number of researchers have conducted L2 acquisition studies with the focus on the null subject parameter. These studies are summarized in Table 2.1. As can be seen from the table, the different approaches and methodologies adopted in these studies make it difficult to compare the results. Nonetheless, these studies have provided insightful information about the null argument phenomenon and the relevant parameter in L2 acquisition.

2.3.1 The Null Argument Phenomenon in L2 Acquisition

Although different approaches and methodologies are used and the focus of most of these studies is on null subjects, all these studies have found missing pronouns in the early stages of the L2 acquisition process regardless of whether native languages

Table 2.1 L2 Acquisition studies on the Null Subject Parameter

Study	Theoretical framework	Assumptions & Hypotheses	Subjects	Tasks	Results
Lydia White (1985b)	Earlier formulations: pronouns, subject-verb inversion in declaratives, that-trace violations cluster with the parameter.	1)where L2 value is different from L1 value, learners may carry over L1 structures into L2 2)All aspects associated with the parameter would be learned together.	Adult Spanish and French learners of English	Grammaticality judgement	Spanish subjects do carry the pro-drop parameter over into English, particularly at lower level of proficiency, and certain aspects of the parameter are more likely to transfer than others.
White(1986a)	Similar to the above framework	1)UG is accessible via L1. The learners treat the L1 data as supporting evidence about L2 and hence the L1 setting predominates initially and transfer errors are expected 2)Mastery of one aspect of the parameter should accompany mastery of other aspects of the parameter.	Adult Spanish and French learners of English	Grammaticality judgement and written question formation	1)There are clear differences between the Spanish and French learners with respect to the sentences lacking subject pronouns, and extractions of subject from embedded clauses, supporting the first hypothesis 2)The second hypothesis is not supported since Spanish subjetcs reject the VS sentences, while at the same time accept sentences with missing subjects.
Hilles(1986)	Hyams' AG/PRO parameter: [+PD] constitutes the initial setting; expletives 'it' and 'there' trigger the shift from [+PD] to [-PD] * PD: pro-drop	Interlanguage development should ungergo a process of shifting from [+PD] grammer to [-PD] grammar, similar to first language development as observed in Hyams' study	A 12-year-old Spanish learner of English	1)Spontaneous production 2)Elicitation task 3)Preplanned sociolinguistic interaction	The subject's IL development mirrors Hyams' account of L1 development: pro-drop is present in early IL, but decreases over time, and the emergence of expletetives seems to accompany the absence of pro-drop.
Phinney (1987)	1)Earlier formulations of the pro-drop parameter. 2)Markedness model within UG framwork	Learning a [-PD] language is easier than learning a [+PD] language.	Adult Spanish learners of English vs. adult English learners of Spanish	Free composition	Spanish learners of English resetting the parameter from [+PD] to [-PD] seems to be more difficult than English learners of Spanish from [-PD] to [+PD].

Study	Theoretical framework	Assumptions & Hypotheses	Subjects	Tasks	Results
Chen(1988)	1)Earlier formulations of the parameter 2)Markedness model within UG framwork, in particular, White's (1986b) definition of markedness.	Similar to Phinney's	Chinese learners of English vs English learners of Chinese: both adult and adalecents	1)traslation grammaticality task 2)comparision judgement task	English having the [-PD] value of the pro-drop parameter is more problematic for the native Chinese learning English compared with Chinese having the [+PD] value learned by native English speakers.
Liceras(1989)	Earlier formulations of the parameter	1)Resetting the pro-drop parameter from English or French to Spanish is not difficult with respect to null subjects. 2)Verb-subject inversion and that-t effects do not have the same status as pro-drop in the interlanguage grammars.	English- and French-speakers learning Spanish	Grammaticality judgement	1)Assumptions are confirmed, suggesting minor L1 interference. 2)Differences are found between English and French group with respect to that-t effect.
Hilles(1991)	Morphological Uniformity Principle (MUP)	There should be a kind of correlation in interlanguages between the energence of pronominal subjects and inflections that Hyams and Jaeggli(1988) observe in eraly grammars of English if L2 acqusition involves access to UG	Spanish learners of English: 2 children, 2 adolecents, 2 adults	free production	1)UG is accessible in child L2 acquisition: both child subjects' interlanguages show a correlation 2)For adolecents the picture is mixed: while the data for one subject show a correlation, the data for the other don't. 3)Neither adult subjects shows a correlation in their interlanguages.
Lakshmanan (1991)	Morphological Uniformity Principle (MUP)	1)UG is accessible in child L2 learning 2)L2 learners will begin with the assuption that L2 permits null subjects and drop the assumption as they learn the mixed inflectional paradiam.	A Spanish-speaking child, a French-speaking child, a Japanese-speaking child, learning English	free production	1)Children do not have dirct access to UG when acquiring an L2. 2)The data for the three subjects do not provide any evidence that the presence of null subjects follows from the MUP. The young L2 leraners access some, but not all of the properties associated with MUP.

allow pro-drop or not, or whether the L2 learners are adult learners or child learners. This is true with adult Spanish learners of English (White 1985b, 1986a; Phinney 1987, Hilles 1991), Chinese learners of English (Chen 1988, Yuan 1992), French learners of English (White 1985b,1986a): from a pro-drop L1 to a non-pro-drop L2. It is also the case with adult English and French learners of Spanish (Phinney 1987; Liceras 1989), English learners of Chinese (Chen 1988): from a non-pro-drop L1 to a pro-drop L2. Child L2 learners also drop subjects in acquiring the non-pro-drop English (Hilles 1986, 1991; Lakshmanan 1991) no matter whether their mother tongue is a non-pro-drop like French, or a pro-drop language like Japanese or Spanish. This suggests that null arguments have characterized the initial stages of L2 grammar development.

White (1985b,1986a) and Liceras (1989) have investigated the clustering properties assumed to be associated with the null subject parameter, namely, null subjects, lack of expletives, subject-verb inversion and that-trace effect. They have found that subject-verb inversion and that-trace effect do not seem to have the same status as null subjects in the interlanguages. For instance, White's Spanish subjects carry over null subjects to the L2 grammar, but not subject-verb inversion and that-trace effect. This seems to support the argument that subject-verb inversion and that-trace effect are not properties associated with the null subject parameter (Chao 1981, Safir 1985).

In addition to null subjects, Chinese learners of English are also found to use null objects (Chen 1988, Yuan 1993). It is found that English-speaking learners of Chinese

learn to use null subjects and null objects quickly (Chen 1988). English-speaking learners of Spanish also learn to omit null subjects without much difficulty (Phinney 1987, Liceras 1989).

2.3.2 The Initial Setting and the Role of L1

What constitutes the initial setting of the parameter and what is the role of L1 in L2 acquisition are quite controversial. On the one hand, it is held that the [+null subject] setting is the initial state. In this view, the occurrence of null arguments in early interlanguage in L2 acquisition is interpreted as evidence for the initial status of the null-subject option, consistent with Hyams' view, with direct access to UG and no role for the L1 (Liceras 1989, Phinney 1987, Hilles 1991). One source of support for this view comes from the fact that both Phinney's and Liceras's English subjects learning Spanish do not have much difficulty in learning to use null subjects, even when the L1 English utilizes the non-null-subject setting. On the other hand, it is assumed that the [-null subject] setting should be the initial setting, following the learnability predictions (White 1985b, 1986a). For a non-null-subject language speaker learning a null-subject language, it is easy to reset the parameter, i.e., to learn to use null subjects, since he could be exposed to positive evidence indicating the null-subject nature of the target language. For L2 learners shifting from an L1 null-subject setting to an L2 non-null-subject setting (e.g. from Spanish or Chinese to English), the existence of null subjects in early stages of acquisition may well be

interpreted as the influence of the L1 setting. That is to say, the L2 learners assume that the pro-drop setting still holds for the L2 setting even though the L2 setting is non-pro-drop; consequently, transfer errors arise in their interlanguage. A careful investigation of learning a pro-drop L2 like Spanish or Chinese by speakers of non-pro-drop languages like French or English or vice versa would thus be more indicative in deciding the status of the L1 in parameter setting. The fact that White's Spanish-speaking subjects learning English and Chen's Chinese-speaking subjects learning English carry over null subjects to the English setting seems to support the transfer hypothesis which is compatible with the indirect-access hypothesis of UG in L2 acquisition.

2.3.3 Identification of the Null Arguments in Interlanguages

In a theory of null arguments, licensing and identification are essential for the existence of the null arguments in natural languages. A serious potential flaw with most of the L2 acquisition studies is that they have failed to explain how the null arguments in interlanguages are identified. Chen (1988) investigates the null arguments in the interlanguages of Chinese speakers learning English and has found missing objects as well as missing subjects in the early interlanguages. It is not clear, however, whether null arguments in the ILs of Chinese learners are different from those in the ILs of Spanish learners and why null objects appear in the ILs of Chinese learners.

2.3.4 Parameter Resetting and Triggers: Verifying Hyams (1986) and Morphological Uniformity Principle in L2 Acquisition

Although it has been shown that resetting the null-subject parameter from null-subject languages like Spanish or Chinese to non-null-subject languages like English or French is more difficult than resetting from English or French to Spanish or Chinese (White 1985b, 1986a; Phinney 1987; Chen 1988; Liceras 1989), resetting the parameter is possible (White 1985b, 1986a). What triggers the resetting is still not clear. Following Hyams (1986), Hilles (1986) suggests that expletives might trigger the resetting of the null-subject parameter in the L2 acquisition of English by a 12-year-old Spanish-speaking child. In this study, she examines the relationship between expletives and null subjects in the learner's interlanguage. She has found that the emergence of expletives marked a decrease in the use of null subjects. However Hilles is cautious enough as not to generalize such a claim to other cases, since only one subject was involved in the study and it was a marginal case (her subject was a 12-year-old Spanish-speaking boy). It can in no way be generalized to adult L2 acquisition.

Hilles (1991) also investigates the relationship between null subjects and Infl in the interlanguages of Spanish learners of English. Based on the Morphological Uniformity Principle suggested in Jaeggli and Hyams (1988), she assumes that if L2 acquisition does have access to UG, then one might expect that the kind of correlation between

the emergence of pronominal subjects and inflection that Jaeggli and Hyams (1988) observe for L1 learners of English also occurs in the ILs of L2 learners. In other words, if UG is available in L2 acquisition, the MUP, a principle of UG must be followed in the IL development just as it is in the grammar development of children learning English as an L1. Involved in the study were two children, two adolescents and two adults, all native speakers of Spanish. The results obtained were quite interesting: for the two children, a correlation was found---pronominal subjects and inflection emerged in roughly the same pattern as predicted. Hilles concludes that this is evidence for MUP in child L2 acquisition. The picture for the two adolescents is mixed: a correlation was found for one subject, but not for the other. The two adults' ILs failed to show a correlation between pronominal subjects and inflection, showing no evidence for MUP in L2 acquisition. Her study suggests that Infl may not trigger the resetting of the null subject parameter in adult L2 acquisition of English.

Lakshmanan (1991) also attempts to verify whether Morphological Uniformity Principle works in L2 acquisition. The subjects were three young children learning English, with the L1 being Japanese, French and Spanish respectively. The evidence obtained seems to suggest that the three children did not follow MUP in acquiring English as L2. But in a comment on her study, Hyams and Safir (1991) argue that the data in Lakshmanan's study do not necessarily lead to the conclusion that there is no evidence to show that the presence of null subjects follows from the MUP. They argue that the production data may fail to reflect the children's best understanding of

the relevant generalizations. In other words, it is likely that these children know more than is evident by their production.

As a whole, little is known about the triggering experience in the parameter resetting in L2 acquisition. If the triggering data are crucial in parameter setting or resetting, more efforts should be taken to research on this issue.

CHAPTER 3 THE FORMULATION OF THE PRESENT STUDY

The discussions in the previous chapter have provided a substantive context and may contribute to our understanding of the nature of null arguments in child as well as adult grammars and the formulation of the relevant parameter in UG. As this study explores null objects as well as null subjects and the languages involved being Chinese (L1) and English (L2), we postulate that the Null Argument Parameters suggested in Lillo-Martin (1991, 1992) can best accommodate the present case and thus serve as a working model for this study. Superficially, Lillo-Martin's model is different from other models. However, the null pronoun parameters are similar to other models in nature, regarding null subjects.

From this chapter on, we will present our study which is an attempt to investigate the null argument phenomenon and the resetting of the null argument parameters in L2 acquisition. We are especially interested in how the unlearning of null arguments is made possible. The focus of this chapter is on the discussion of the rationale and formulation of research questions and predictions.

3.1 The Status of Null Arguments in Chinese

If the L1 is assumed to play a role in L2 learning, it is important to understand the related facts and aspects of the L1. In the present case, we look at null arguments in the interlanguages of Chinese learners of English. Therefore a discussion of the status

of null arguments in Chinese is in order.

Chinese has no overt verbal inflection, thus no subject-verb agreement. Yet it does allow null subjects. The identification by agreement that is suggested in the Morphological Uniformity Hypothesis obviously fails here. In addition to null subjects, null objects are also permitted in Chinese. The following example, (1) and (2), may well illustrate this. While (b), (c), (d), (e), (f) in Chinese are perfectly grammatical in the answer, their English counterparts are all ungrammatical. (cited in Huang 1984, pp. 532-533)

(1) Speaker A: Did John see Bill yesterday?

Speaker B: a. Yes, he saw him.

b. * Yes, *e* saw him.

c. * Yes, he saw *e*.

d. * Yes, *e* saw *e*.

e. * Yes, I guess *e* saw *e*.

f. * Yes, John said *e* saw *e*.

(2) Speaker A. Zhangsan kanjian Lisi le ma?

Zhangsan see Lisi Le Q (Q: question

'Did Zhangsan see Lisi?' marker)

Speaker B: a. ta kanjian ta le.

he see he Le (Le: aspect marker)

'He saw him.'

b. e kanjian ta le.

'[He] saw him.'

c. ta kanjian e le.

'He saw [him].'

d. *e* kanjian *e* le.

'[He] saw [him].'

e. wo cai [*e* kanjian *e* le].

I guess see Le

'I guess [he] saw [him].'

f. Zhangsan shuo [*e* kanjian e le].

Zhangsan say see Le

'Zhangsan said [he] saw [him].'

Huang (1982,1984,1989) has given the most comprehensive, if not the only, account of the null pronoun phenomenon in Chinese. His major contributions to the pro-drop parameter theory are the establishment of Chinese as a pro-drop language and the distinction of the null subject parameter from a discourse-oriented parameter, which, according to him, licenses and identifies null arguments in Chinese.

According to Huang, the null subject in Chinese can be a pronominal and may be

governed. Of crucial importance is his assumption that Infl in Chinese is a proper governor. On his analysis, a distinction between finite and nonfinite clauses in Chinese can be made on the basis of the potential occurrence of any element of the AUX category(such as an aspect marker or a modal), which in turn is part of INFL. Examples in (3) and (4) (cited in Huang 1989, pp.188) show that the embedded

(3) Zhangshan shuo [(ta) lai le]

Zhangshan say (he) come Le

(4) Zhangshan xiangxin [(ta) hui lai]

Zhangshan believe (he) will come.

subject position must be a governed position since it is possible to have an overt subject at this position, which is governed by an element in INFL (or AUX), the aspect marker le or modal hui in these two cases. This may lead to the claim that "the null subject can be a *pro*, i.e., that Chinese is a pro-drop language"(Huang 1989:188).

The discourse-oriented parameter was originally proposed in Tsao (1977). The proposal is that languages like Chinese can be distinguished from languages like English by a parameter called the "discourse-oriented vs. sentence-oriented' parameter. Associated with the discourse-oriented parameter is a clustering of distinctive properties. The discourse-oriented languages exhibit these properties, but

sentence-oriented languages do not. One such property is the Topic NP deletion rule "which operates across discourse to delete the topic of a sentence under identity with a topic in a preceding sentence"(Huang 1984:549). This may result in a topic chain, another property, as illustrated in (5), in which each of the empty category marks the site of a deleted topic (cited in Huang 1984:549).

(5) [Zhongguo, difang hen da.] [*e*, renkou hen duo.] [*e*,
China place very big population very many

tudi hen feiwo.] [*e*, qihou ye hen hao.] [e, women
land very fertile climate too very good we

dou hen xihuan.]
all 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).'

Another distinction is known as "topic-prominence vs. subject-prominence"(Li and Thompson 1976). In topic-prominent languages such as Chinese, Japanese or Korean, topic has a more important status than structural subjects in explaining the

grammatical relations. Chinese is evident of topic-comment structures (base-generated topics or topicalizations without gaps). Examples in (6) and (7) illustrate what topic-comment structures are (cited in Li and Thompson 1981). In these two sentences, topics and subjects coexist, which are seldom found in sentence-oriented languages like English.

(6) wu ge pingguo liang ge huai le.

five CL apples two CL spoil Le (CL:classifier)

'Of the five apples, two are spoiled.'

(7) mian wo zui xihuan chi la de.

noodles I best like eat spicy NOM (NOM: nomilizer)

'Noodles, I like to eat spicy ones the best.'

Therefore in topic-prominent languages, topic-comment structures are more basic forms; subjects of the sentences may remain null and expletives like 'it' and 'there', which only have a syntactic function are not found in these languages. In subject-prominent languages like English, on the contrary, all sentences are required to have overt subjects. Consequently, expletives are present in these languages.

Huang argues that null objects, in matrix or in embedded clauses, are variables in Chinese, bound by a sentence topic (not necessarily lexical) which is in turn bound

by a discourse topic, empty or lexical[17], as shown by the examples from (8) to (10).

(8) neige ren , Zhangsan shuo Lisi bu renshi *e* .

that man Zhangsan say Lisi not know

'That man, Zhangsan said that Lisi didn't know [him]'

(9) Lisi hen xihuan *e* .

Lisi very like

'Lisi likes [him] very much.'

(10) Zhangsan shuo [Lisi bu renshi *e*].

Zhangsan say Lisi not know

'Zhangsan said that Lisi didn't know [him].'

Following the discourse-oriented parameter, null subjects are also bound by a discourse topic, as exemplified in (11) and (12).

(11) Zhangsan kanjian Lisi le ma?

Zhangsan see Lisi Le Q

'Did Zhangsan see Lisi?'

(12) a. *e* kanjian ta le

[17]In a recent paper, Huang (1991) attempts to analyze the null object in Chinese as the null epithet or as VP-ellipsis constructions in certain cases. The essence of the new analysis, however, is not different from the null-object-as-variable analysis: the null object should not be treated as a pure pronominal. For our purpose, we still take Huang's previous analysis of the null object in Chinese.

see him Le

'[He] saw him.'

b. wo xiang [*e* kanjian ta le]

I think see him Le

'I think [he] saw him.'

But the null subject in (13) may refer to the matrix subject *Zhangsan* or to some other person whose reference is understood in discourse (i.e. bound by the discourse topic).

(13) Zhangsan shuo [*e* hen xihuan Lisi].

Zhangsan say very like Lisi

'Zhangsan said [he] liked Lisi very much.'

Therefore null subjects in embedded clauses may be identified either by the matrix subject or by the discourse topic. The identification by the matrix subject is supposed to be a consequence of the Generalized Control Rule which is defined in (14) and (15) (Huang 1989:193).

(14) Generalized Control Rule

An empty pronominal is controlled in its control domain (if it has one).

(15) *a* is the control domain for *β* iff it is the minimal category that satisfies both (a) and (b):

a. *a* is the lowest S or NP that contains (i) *β*, or (ii) the minimal maximal category containing *β*.

b. *a* contains a SUBJECT accessible to *β*.

Getting back to (13), the higher clause is the control domain for the empty subject and consequently it is controlled by the matrix subject. So null subjects in embedded clauses may be *pro*s.

To summarize, in Huang's analysis, the null subject in matrix clauses is a variable bound by a discourse topic while the null subject in embedded clauses is a variable when bound by a discourse topic and a *pro* when controlled and thus coindexed with the matrix subject. The null object is a variable bound by a discourse topic in both matrix and embedded clauses. Hence we have two types of null arguments in Chinese as summarized in Table 3.1.

Although Huang's analysis of empty categories in Chinese has been criticized in various respects and other analyses also contribute to our understanding of null arguments in Chinese (Xu 1986, Henry 1988, Li 1988, Yuan 1993)[18], we assume

[18]There are arguments that embedded null objects may be *pro*s just like embedded null subjects, coreferential with the matrix subjects or objects (Henry, 1988, Li 1988). Considering examples from (1) to (4)

for our purpose that his analysis is on the right track and will base our study on it.

Table 3.1 Status of null arguments in Chinese

ECs Environments	Null Subject	Null Object
Matrix Clause	Variable (bound by a null topic)	Variable (bound by a null topic)
Embedded Clauses	1)Variable 2)*pro*	Variable

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(1) Lisi$_i$ danxin [Bei Da bu luqu $e_{i/j}$]
Lisi worry Beijing Univ. not accept

(2) Lisi$_i$ xiwang [Zhangshan lijie $e_{i/j}$]
hope understand

(3) Lisi tixing Zhangshan$_i$ [you ge ren genzong $e_{i/j}$]
remind have a person follow

(4) Xiaotou$_i$ yiwei [meiren kanjian $e_{i/j}$]
thief think nobody see

As can be seen, the embedded null object in each sentence can be coindexed either with a null topic in discourse or with the matrix subject or object, i.e. the argument in the matrix sentence. In the first case, the null object is a variable, bound by a null topic, but in the second one, the null object is a *pro*, coindexed with a matrix argument. It is then claimed that there are two types of null objects in Chinese: variables and *pros*. A null object is *pro* if it is base-generated and bound by an argument outside its governing category, i.e., bound by an argument in the higher clause and is a variable if it is created by movement and bound by a null topic (Yuan, 1993).

3.2 The Null Argument Parameters in Chinese and English

In Lillo-Martin's model, the null pronoun parameters take care of null arguments like *pro*s and the discourse oriented parameter is in charge of null arguments like variables. Null arguments in Chinese are assumed to be variables, bound by empty topics which in turn might be bound by preceding discourse topics, since Chinese is a discourse-oriented language. As we have discussed Huang's analysis earlier, both *pro*s and variables are existent in Chinese. If this analysis is viable, then one important consequence would follow which is not predicted within Lillo-Martin's framework: if the Null Pronoun Parameters are responsible for *pro*s and the Discourse Oriented Parameter responsible for variable null arguments and other properties, then in acquiring Chinese as the L1 both Null Pronoun Parameters and Discourse Oriented Parameter should be activated for the positive value. In other words, when the Null Argument Parameters are set for the Chinese value, it should be that Chinese speakers have [+discourse oriented] for the discourse oriented parameter and [+pro-drop] for the null pronoun parameters. In this case, Chinese is similar to ASL with the only difference being that *pro*s in ASL are identified via verb agreement while *pro*s in Chinese are identified via a control relation with the higher NPs[19].

[19]Within Lillo-Martin's framework, the null argument phenomenon is accounted for by assuming two different parameters: the null pronoun parameters and the discourse oriented parameter. It is not clear whether these two parameters work independently or there exists some form of interaction. This issue seems to be very important when acquisition is considered. If the two parameters are independent of each other, setting or resetting of one parameter has nothing to do with the setting or resetting of the other. Then the learner will have to set or reset two distinct parameters. Our opinion is that the two

Following the null argument parameters, Chinese has [+pro-drop] and [+discourse-oriented] values while English has [-pro-drop] and [-discourse-oriented] values. With respect to the null pronoun parameters, Chinese allows *pro*s but English does not. The *pro*s in embedded clauses in Chinese are identified via control relations with the higher subjects in the matrix clauses. In English, none of the assumed licensers in the NNP---AGR, V, and P---are legitimate in licensing *pro*s and thus none of them can identify *pro*s[20]. The discourse oriented parameter is assumed to have some clustering properties. Obviously, more research needs to be done to

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parameters are related to each other and there is probably some interaction between them. There are several possibilities of interaction. One possibility is that setting or resetting one parameter is dependent on the setting or resetting of the other. In other words, one parameter resetting should always come before the resetting of the other. For instance, Weissenborn (1992) claims that the setting of the null subject parameter in L1 acquisition interacts with the setting of other parameters, namely, the wh-parameter, the C-parameter and the verb-movement parameter. The setting of the null subject parameter will come after these other parameters are set because the learner needs to recognize relevant structures in order to set the null subject parameter.The second possibility is that the Null Argument Parameters are assumed to be a superordinate set with two subordinate sets. Once the superordinate set is fixed, the two subordinate sets are automatically fixed following the superordinate set. That is, if null arguments are allowed in a language, the Null Argument Parameters are set to be [+null argument]. The DOP and NPP, consequently, have the positive value. That is to say, if the superordinate is set for the positive value, so are the two subordinate sets. This demands that a language have the same value for both the NPP and the DOP. Chinese, English and ASL pose no problems for this requirement. However, languages like Spanish and Italian appear to exclude such a possibility because they have different values for the two parameters ([-discourse-oriented] on the DOP and [+pro drop] on the NPP). The third possibility is that there are no superordinate or subordinate sets, but one of the parameters may be more powerful and hence have overriding consequences. Which parameter is more powerful may be language-specific. Intuitively, in discourse-oriented languages, the DOP is presumably more powerful than NNP. If this line of thinking is reasonable, then in Chinese the DOP is more powerful. It is so powerful that its consequences may override those of the NPP. That is to say, in principle, Chinese is a pro-drop language and *pro*s can occur in Chinese, but due to a strong discourse orientation of this language, the null pronoun parameters are not well-activated and are subordinate to the discourse oriented parameter; then a variable interpretation is always preferred for null arguments to the *pro* interpretation even when the *pro* interpretation is possible. However, at the present stage, we do not have much evidence to support our argument.

[20]See footnote 5 in Chapter 2.

identify these properties. However, given the two languages involved in the present study, it is clear that the L1 Chinese manifests certain characteristics that the L2 English does not (see Table 3.2). For example, Chinese is characteristic of topic-comment structures, null arguments bound by empty topics which in turn are bound by the preceding discourse topics, topic chain and topic deletion, lack of expletives and AGR/TENSE.

Table 3.2 Properties identified in the Null Argument Parameters and their realizations in the L1 Chinese and the L2 English

	L1 Chinese	L2 English
null arguments	+/-	-
lexical expletives	-	+
topic-comment structures	+/-	-
topic-deletion(empty topics)	+/-	-
AGR/TENSE	-	+

From the above table we can see that there exist some differences between Chinese and English concerning the null argument parameters. In terms of null arguments, Chinese allows both overt arguments and covert arguments whereas English is restricted to overt arguments. Therefore Chinese is a [+null argument] language while English is a [-null argument] language. For expletives, Chinese lack lexical expletives but English has. For the AGR and TENSE elements under the Infl, Chinese is void of both whereas English possesses a meagre system of verbal inflectional system.

As we are more interested in null arguments and their relationship with expletives and AGR/TENSE, we will concentrate on these three properties of the null argument parameters and leave other properties for further investigation.

3.3 **Resetting the Null Argument Parameters and Unlearning Null Arguments**

Previous studies show that Chinese speakers learning English do carry over null arguments to the English setting (Chen 1988, Yuan 1993). If we assume that UG is indirectly accessible in L2 acquisition via the L1, we might hypothesize that Chinese learners of English begin with [+pro-drop] for the null pronoun parameters and [+discourse-oriented] for the discourse-oriented parameter. In the course of acquiring English, they have to reset the Null Argument Parameters from the [+pro-drop], [+discourse-oriented] values to the [-pro-drop], [-discourse-oriented] values. Thus the initial setting in the L2 acquisition of English seems to be similar to the initial setting in the L1 acquisition of English suggested in Hyams (1986, 1992a). If so, we may look at what Chinese learners of English should do in order to reset the null argument parameters for the target value.

It follows that, in the course of acquiring English, Chinese learners have to 'unlearn' some of the properties associated with the Chinese setting in order to reset the null argument parameters for the English value. The question arises as to how Chinese learners 'unlearn' these properties, that is, what triggers the 'unlearning ' of these properties. This leads to the formulation of the research question:

What triggers the resetting of the null argument parameters from L1 Chinese values to the L2 English values? Or what triggers the 'unlearning' of the properties associated with the Chinese setting, in particular the property of null arguments?

3.4 Suggesting Triggers in the L2 Acquisition of English

Several triggers have been suggested in the process of setting or resetting the null argument parameters in the L1 acquisition of English. Hyams (1986) has proposed that expletives may trigger the resetting of the null subject parameter from [+null subject] to [-null subject] by English learning children. Under Morphological Uniformity Hypothesis, the acquisition of Infl is assumed to be important in unlearning null subjects. In Lillo-Martin' analysis, the initial setting is associated with the triggering domain, i.e., the tensed embedded clauses. Besides, Lillo-Martin also suggests that Infl is crucial in the resetting the null argument parameters by English learning children. Despite different theoretical frameworks within which these triggers are proposed, we may still ask whether these triggers work in the L2 acquisition of English. As not much work has been undertaken with respect to this issue, our work might make some interesting contributions to the understanding of the process of resetting the null argument parameters from the L1 Chinese to the L2 English.

In the acquisition of English, Chinese learners have to 'unlearn' some properties associated with Chinese so as to establish English as a [-null argument] language. We can determine whether triggers suggested in L1 acquisition help Chinese learners

'unlearn' null arguments.

EXPLETIVES: The lack of lexical expletives in Chinese results from the topic-prominent nature of Chinese. Topics (overt or covert) may license and identify null arguments in Chinese. In this case, expletives, often referred to as "dummy subjects", seem unnecessary since lexical subjects and objects may remain empty. The existence of expletives in English, on the other hand, has to do with the subject-prominent nature of English. The grammar of English requires that sentential subjects be obligatorily overt. Expletives in English have a strictly grammatical function since they are void of semantic content. Therefore the use of expletives in English indicates the obligatory overtness of sentential subjects. Given the special status of expletives in English, it is possible for Chinese learners of English to rely on them as an important indicator of the subject-prominent nature of English, leading to the conclusion that English is [-discourse oriented] as well as [-pro-drop].

Infl: Infl is suggested to be closely related to null subjects[21]. Does Infl play an important role in the resetting of the null argument parameters in the L2 acquisition of English as it is suggested in L1 acquisition?

Chinese is well-known for its lack of overt agreement and tense inflectional

[21]There are several components under the node of Infl, including AGR, TENSE, NEG and ASPECT. Usually, AGR and TENSE are assumed to be involved in the licensing and identification of null arguments. So in the present case, Infl is restricted to AGR and TENSE.

marking. For Chinese learners of English, they should learn that English is an inflectional language and that English verbs are marked for agreement and tense. In learning the English verb inflectional system, they will know about the status of the system: it is not strong enough to be a licensing and identification head for *pro*s, especially subject *pro*s. As there is a sharp distinction between English, a language with overt inflectional morphology and Chinese, a language without overt inflectional morphology, the appearance of Infl in English may trigger the unlearning of null arguments, in particular, null subjects. It is possible that before Chinese learners of English acquire the English verb inflectional system, or before they analyze the system, they use null arguments, but once they succeed in analyzing the system, their use of null arguments decreases.

Tensed Embedded Clauses: The tensed embedded clause is suggested to be the triggering domain associated with the initial setting for the null pronoun parameters under Lillo-Martin's analysis, following Roeper and Weissenborn (1991), Weissenborn (1992). It is assumed to be the domain where the initial setting is applied. What role does the tensed embedded clause play in the resetting of the null pronoun parameters? The initial hypothesis that Chinese learners have for the null pronoun parameters would be that the Chinese setting still holds for the English setting. Chinese learners would assume that English allows null arguments. This would result in transfer errors as has been found in previous studies. In this case, the

subordinate clause as the triggering domain associated with the initial setting of the null pronoun parameters would not have deep effects at the initial stages in L2 acquisition. A plausible assumption would be that, if the tensed embedded clause is indeed the triggering domain for the null pronoun parameters, its effect in L2 acquisition would be reflected in that learners of English may be more sensitive to the use of null subjects in tensed embedded clauses than in matrix clauses.

3.5 **Predictions: Null Arguments, Triggers and ILs**

Following the above argumentation, there should exist an exclusive relationship between the triggers suggested in the discussion and null arguments. That is, the emergence of the correct use of these structures suggests a cease or a decrease in the use of null arguments. This is what is suggested in L1 acquisition with expletives and Infl (Hyams 1986, 1992). If we assume, following Selinker (1974) and many others, that interlanguages are natural languages and that interlanguages are constrained by UG, indirectly via the L1, we should be able to find evidence for the relationship between triggering data and null arguments in interlanguages. We might predict that the Chinese learner of English would begin to construct his L2 assuming that Chinese settings still hold for the L2 English. Linguistic exposure to English will provide triggering experience which will trigger the resetting of the parameter. Based on these assumptions and previous discussion, we make the following predictions:

1) Unless fossilization occurs, null arguments are expected in both subject and object positions at the initial stages of the interlanguage due to the transfer of the L1 Chinese setting, and they would decrease over time as the learner's proficiency improves.

2) Initially the learner will have problems with English verbal inflection and expletives. If they act as a trigger, the acquisition of expletives and Infl and the decrease of null arguments should coincide. In other words, if the learner has acquired Infl and expletives, he will be found to use null arguments decreasingly.

3) The learner may be more sensitive to the use of null subjects in the tensed embedded sentences. That is, he may use fewer null subjects in the embedded domains than in the matrix domains.

In the present study, we are going to test the predictions using cross-sectional data. The idea is that the interlanguages of carefully and adequately chosen learners with different proficiency levels should manifest a developmental pattern, indicating progress and change.

CHAPTER 4 THE PRESENT STUDY (I): THE EXPERIMENT--- METHODOLOGY

We have discussed the formulation of our research questions and predictions in the previous chapter. The following two chapters will report on the experiment that has been conducted to test the predictions. This chapter will concentrate on the methodology adopted to carry out the experiment. We will describe the subjects involved in the experiment, the tasks, test administration and the scoring procedure.

4.1 Subjects

The subjects for this study were 119 adults learning English as a second language from the Beijing University of Aeronautics and Astronautics (Henceforth BUAA) and the Affiliated Middle School. All of them were native speakers of Chinese and they constituted the experimental group. These subjects had been learning English in a formal environment with little exposure to English after school[22]. Most of these subjects had begun the process of learning English at age 12 or later, with few having English exposure below the age of 11 or 12. Of these subjects, 60 were middle school students studying at the Affiliated Middle School to the BUAA and 59 were college students from the BUAA. The subjects were chosen principally based on 1) the years

[22]In the formal English learning contexts in China, i.e., at schools, learners usually have 5 to 6 hours of English training each week. During this period, they are given instruction on English and are provided with limited chances to practise English

spent learning English; 2) their scores on the proficiency test (See Appendix 1) given before the experiment. The purpose of the proficiency test was to ensure that the data afford a developmental perspective. The proficiency scores of subjects in each level for the study fell in the same range.

Originally, we intended to include middle school students from all six grades, that is, from Junior Grade 1 to Senior Grade 3[23]. However, it was found that Junior Grade 1 students were too low in proficiency to participate in the experiment. Junior Grade 3 and Senior Grade 3 students were busy preparing for the graduation exam or the college entrance exam at the time we conducted the experiment. Thus Junior Grade 1, 3 and Senior Grade 3 were excluded from the experiment. Senior Grade 1 and 2 students did not display significant difference in terms of the proficiency scores, so the two groups were merged into one.

The distribution and the background information of subjects is given in Table 4.1.

Table 4.1. Background Information for the Subjects by Proficiency Level (in the mean units)

Prof Level	Level 1	Level 2	Level 3	Level 4
Number	30	30	30	30
Grade	Junior 2	Senior 1&2	College 1	College 3
Proficiency test score	11.4	26.4	44.1	65
Years EFL*	2	4.5	7	9

* years of learning English as a foreign language in the formal context.

[23]In China, secondary education is divided into two parts: Junior secondary education and Senior secondary education. Each part consists of three stages or grades: Grade 1 to Grade 3. Most of the students will go on for senior secondary education after completing junior education.

It follows that Level 1 subjects are the lowest in proficiency and Level 4 the highest. While the Level 1 subjects are low beginners, it is inaccurate to call the Level 4 subjects advanced learners even though they have had experience with English for a long time. This is so since they have been learning English mainly at school and do not have much opportunity to use English in real communication. They may have a good grasp of English grammar, but their use of English is not as good.

In addition to the experimental groups, 18 native speakers of English also participated in the written part of the study to act as controls for the test instrument. This control group included staff members and students of the Chinese University of Hong Kong and short-time visitors to the Chinese University of Hong Kong. The majority of these native speakers were American or British. There were a few from Australia and New Zealand.

4.2 The Tasks

All subjects were asked to perform three written tasks. The first task involved timed grammaticality judgement. The second was a task involving grammaticality judgement and error correction (i.e., correcting the ungrammatical sentences) and the third task involved error correction of short passages. Besides, ten subjects from each experimental group also participated in the oral task.

For the timed grammaticality judgement task, subjects were given 131 randomized

written sentences in English (See Appendix 2, Part One), which included both grammatical and ungrammatical sentences. 120 of the sentences in the task were directly related to the four categories under investigation (See Table 4.2).

As Table 4.2 shows, the four categories under are investigation are: null subjects, null objects, missing expletives and Infl. Except for the sentences related to inflection, a distinction was deliberately made between matrix and tensed embedded clauses as one of our predictions is to ascertain whether tensed embeddedness has a special effect as the triggering domain in the L2 acquisition of English. That is to say, there were null elements in embedded clauses as well as null elements in matrix clauses. All the experimental sentences are ungrammatical in English, but acceptable in Chinese. For each of the experimental sentences, there is a corresponding grammatical sentence (the control sentence), with a slight difference in vocabulary at times.

In previous studies, expletives have been treated as one category. In the present study, although they still work as one category , we split them into three subcategories, namely "*there*" constructions, "*it*" in weather-time expressions (weather it) and "*it*" in raising structures (raising it), so as to see whether the three types of expletives have the same status as the triggering experience in the ILS. Sample sentence (10) in the table has an adverb "perhaps" inserted. In designing "there" constructions, adverbs or modals were sometimes used to ensure that sentences would not be reanalysed as being incorrect because of structures irrelevant

to the issues under discussion. For instance, a sentence like "Is no life on the moon"

Table 4.2 List of sample test sentences by category

Categories	Experimental sentence	Control sentence
I. Null subjects		
1. in matrix sentence	1) Jimmy has bought a new computer. Is made in America.	John is going to buy a new recorder. It must be made in Japan.
	2) After he had finished his job, went home.	After they had done their homework, they went to the cinema.
2. in embedded sentence	3) They thought this girl was my sister. However, I told them was my friend.	I thought this boy was Mary's brother. However, Mary said he was her friend.
	4) He gave me a call as soon as got home.	The little girl cried as soon as she saw her father.
	5) Mike said hated Alice.	He said he didn't like Mary.
II. Null objects		
1. in matrix sentence	6) He's bought a new car. He really loves.	I've bought a new skirt. I like it very much.
2. in embedded sentence	7) This is really a good film. I think you should go to see.	I have met that man before, but I have forgotten where I met him.
	8) I don't have the book now because someone has borrowed.	I'm not going to read the novel because I've read it before.
	9) The thieves thought nobody would recognize.	John reminded Tom somebody was following him.
III. Missing expletives		
missing "there"		
1. in matrix sentence	10) Is perhaps no life on the moon.	There is perhaps a computer in the office.
	11) If you get there late, will be nothing to eat.	If he doesn't come, there will be a lot of trouble.
2. in embedded sentence	12) People in this city are afraid may be more rain in a few days.	They are worried there may be a war in the future.
	13) Trees will stop growing if is no sunshine.	We will die if there is no air.
missing weather "it"		
1. in matrix sentence	14) Is going to rain. Don't go out.	Yesterday it was very cold. We didn't go out.
2. in embedded sentence	15) I think you should leave now because is too late.	I have to go because it is getting dark now.
missing raising "it"		
1. in matrix sentence	16) Seems that he is good at singing.	It seems that she is good at English.
2. in embedded sentence	17) He says seems that Mary is unhappy.	He thinks it seems that Mary is unhappy.
IV. Infl		
1. [-tns, -agr]	18) He work in a hospital in Beijing in 1980.	She was a nurse when she got married.
2. [+tns, -agr]	19) Peter and his sister was very young when their mother died.	They walked home yesterday because they had missed the last bus.
3. [-tns, +agr]	20) The cat is looking for meat when I got home from school yesterday.	We went to bed very early last night.

may be reanalysed as a question. Once adverbs like "perhaps" or "probably" are inserted, there can be no misanalysis as a question. For structures with raising verbs, we only included *seem*+clause constructions in the test in order to make the test simpler for low level subjects.

In the case of all sentences, complementizer "that" was deleted if possible in case the learners might analyze it as a potential pronoun in experimental sentences where true pronouns were omitted. Samples given in (3), (5), (7), (9) and (12) in Table 4.2 are such cases.

Attention was also paid to the subjects' knowledge of the words in the testing. On the one hand, words used in the test were mostly words that had appeared in the secondary school textbooks of English. On the other hand, for certain words that low level subjects were unfamiliar with, Chinese equivalents were given in parentheses right after these words in the test paper. This was to insure that the results obtained were due to the differences in the syntactic factors manipulated and not due to the vocabulary factor.

The sentences were randomized and presented to all subjects in the written form. Before the test, subjects were informed to base their responses on their feel for the sentence rather than on the knowledge of a grammatical rule. They were asked to give their first impression of the sentences and not to change their answers. They were told that in the parenthesis before each sentence on the test questionnaire, they would either enter a tick to indicate "correct", a cross to indicate "incorrect", or a

zero to indicate "not sure". To ensure that subjects understood what was being requested of them, instructions were presented in their mother tongue orally and in the written form on the test paper. This part of test was paced in the hope that by pacing the subjects, one might get a better insight into their initial reactions to the sentences, which might otherwise have been missed if they had been given as much time as they wanted. Most of the subjects finished this task within half an hour.

Task 2 was an error correction. The sentences used in this task were the same as in the first task, but the order in which they were presented was different. Instructions were also identical to those for Task 1. The subjects needed to supply corrections of the sentences which they judged to be incorrect (See Appendix 2, Part Two). The reason for requesting subjects to correct ungrammatical sentences was to ensure that they were rejecting them for the expected reason. That is, they rejected an incorrect sentence on the basis that there existed a null element disallowed in English. The use of corrections can thus inform us of whether the subjects were performing the task as we intended. It seems that Task 2 is similar to Task 1 and may be unnecessary, however we believe the two tasks to be different. While they are asked to supply appropriate corrections in Task 2, subjects may rely more on metalinguistic knowledge than when performing Task 1.

Task 3 involved error correction in short passages (See Appendix 2, Part Three). In this task, subjects were required to read four short passages and then correct the part of the sentences with missing elements and incorrect inflections. Since we wish

to determine whether the discourse orientedness that holds in L1 Chinese is carried over to English, we designed short passages to look at the effect of the discourse contexts on the subjects' performance. Short passages may be better than sentences in establishing discourse topics and indicating the differences between Chinese and English with regard to the DOP. The rationale underlying this task is that Chinese is a discourse-oriented language allowing topic deletion, variable null elements and lack of expletives. If subjects think that the Chinese setting still holds for English, they may have more difficulty in recognizing the ungrammaticality of null elements in the discourse contexts.

The three written tasks were presented to the subjects in one test (See Appendix 2). The four experimental groups performed the tasks separately at different times since it was difficult to schedule a time for them to undertake the test together in the same setting. We administered the test to all groups. Level 3 and 4 subjects finished the test within one hour while Level 1 and 2 subjects spent a longer time on the test. Native speakers of English, those in the control group, did the test individually. They reported to have spent about half an hour on the test.

Not all the subjects performed the oral task. Ten subjects were chosen from each experimental group. The oral task included Questions and Answers, and picture description (See Appendix 3). We intended to see whether subjects omitted elements in oral production and how they used English inflection. This task was to elicit structures related to the present study in oral production. In the Questions and

Answers session, each subject was asked to answer 4 questions posed by the experimenter(See Appendix 3, A). In the picture description session, the subject was given approximately five minutes to look at a series of pictures (the famous story of "The old man who sold hats and the monkeys"; See Appendix 3, B) and was then asked to describe the pictures. All sessions were tape-recorded and later transcribed. While the subject was describing the pictures, the experimenter was ready to provide any necessary help. The subjects were also provided with some words and phrases (with Chinese equivalents) that might be useful in describing the pictures.

4.3 **Coding and Marking**

As has been discussed previously, three written tasks were given to the subjects: Task 1---timed grammaticality judgement task; Task 2---untimed grammaticality judgement plus error correction; Task 3---correction of errors in short passages. For each control sentence, the expected response is "correct" while the expected response to an experimental sentence is "incorrect" (Task 1) or "incorrect+proper correction" (Task 2) or "proper correction" (Task 3). An expected response is scored "1" and other responses are scored "0", indicating no credit[24]. In the present case, we look at the subject's achievement score for each category. Each category mean is

[24]Sometimes, it is difficult to score a sentence. For instance, some subjects judged grammatical sentences to be incorrect just because they thought the complementizer "that" should be preserved. They corrected the sentences by adding "that". For these cases, "1" was credited. When correcting sentences like "Jimmy has bought a computer. Is made in America." and "He has bought a new car. He really loves.", some subjects didn't insert an overt subject or object. Instead, they corrected the like sentences by connecting the two sentences with a relative pronoun. These cases were also encoded as providing the expected responses.

calculated as follows:

Category mean = (token1+token2+...+tokenN)/N*100.

For the oral data, in order to test the predictions, we noted and counted all instances of missing subjects, missing objects, missing expletives and incorrect use of inflections. In addition, all contexts in which overt subjects, objects, expletives and inflection would be obligatory were marked respectively. Expletive were separated as three distinct categories as they were in the written tasks.

To measure the acquisition of inflection, the presence or absence of tense inflection (past regular *-ed)* and of agreement (third singular present *-s* and third singular present irregular *has* and *does*) was taken into account. A verb with [+tns, +agr] was counted as [+infl]. All cases where a verb should be inflected, but had taken the base form [-tns, -agr], or [+tns, -agr] or [-tns, +agr] were counted as [-infl], indicating an incorrect use of inflection. In counting the incorrect use of inflection, the target language was not the criterion. In other words, credit was given for a particular inflectional affix regardless of whether the inflected from matched the form of the target language. Thus, if *sitted* was supplied instead of *sat*, the overregularized verb was nonetheless counted as an instance of past regular *-ed*. Such as these cases were present in the oral data.

The percentage of null subjects was calculated by using the formula: X / Y. In the

formula, X is the total number of null subjects. Y consists of obligatory contexts for overt subjects. The percentage of null objects was calculated by instances of null objects divided by total number of contexts for obligatory overt objects. A similar approach was adopted to measure the percentage of missing expletives and percentage of incorrect use of inflection. All cases of missing elements and incorrect use of inflection in matrix clauses were distinguished from those in tensed embedded clauses.

Chapter 5 THE PRESENT STUDY (II): THE EXPERIMENT---RESULTS

In this chapter, we will present the results that have been obtained from the experiment described in the previous chapter and provide accounts for the results where possible. Section 5.1 to Section 5.4 will report on the written results (Task 1 + Task 2 + Task 3) while the last section reports on the results obtained from the oral task.

5.1 An Overall View of the Written Results

5.1.1 Comparing task performance

As discussed in the previous chapter, we have given the subjects three written tasks: Task 1---grammaticality judgement; Task 2---judgement and error correction; and Task 3---error correction (in short passages). This section will briefly examine whether the subjects' performance is influenced by different types of tasks.

5.1.1.1 Comparing Task 1 and Task 2

The subjects' performance in Task 1 is expected to be better than in Task 2. We believe that Task 2 will be more difficult than Task 1 since in Task 1, the subjects need only judge the ungrammatical sentences to be incorrect, while in Task 2 they are required to correct those sentences which they judge to be incorrect. Figure 1 compares the results of the two tasks. As illustrated in the figure, the subjects at all

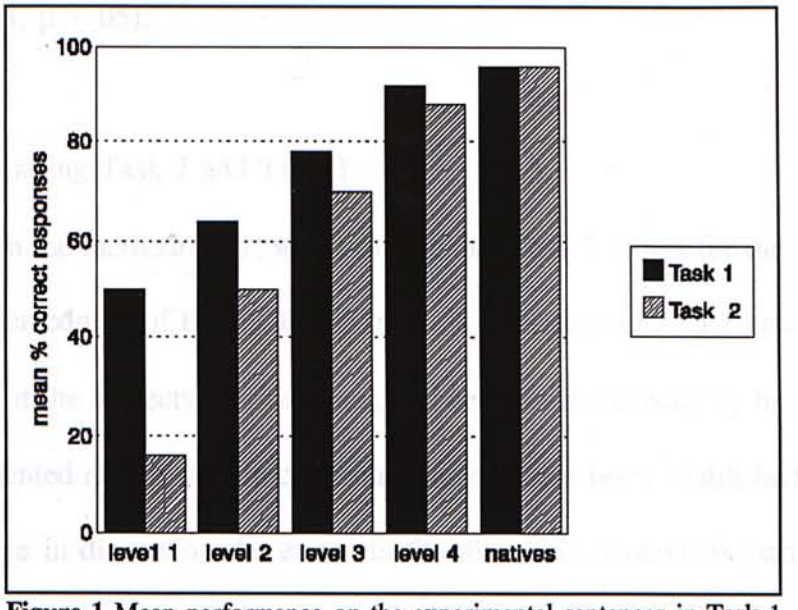

Figure 1 Mean performance on the experimental sentences in Task 1 & 2

levels are more accurate in simply rejecting the ungrammatical sentences (Task 1) than in both rejecting and correcting these sentences (Task 2), which is consistent with our expectation. The difference is statistically significant at Level 1, 2 and 3 ($t=10.97$, $p<.000$, level 1; $t=4.24$, $p<.000$, level 2; $t=2.15$, $p<.04$, level 3), but not at Level 4 ($t=1.11$, $p>.05$). The low level subjects, in particular, those at level 1 and 2, are remarkably better at simply judging the ungrammatical sentences in Task 1. Perhaps these subjects are still incapable of providing the right corrections, or they are focusing on other aspects of the target language. It is clear that the difference between Task 1 and Task 2 scores decreases as the level of proficiency improves. By the time the subjects reach level 4, they perform practically identical to native speakers of English in the control group who show no difference between these two

tasks ($t=0.34$, $p>.05$).

5.1.1.2 Comparing Task 2 and Task 3

As stated in the methodology, we have included Task 3 to test for the effect of the discourse orientedness of the L1 Chinese in the interlanguages of Chinese learners. We expect that the subjects' performance will be more influenced by the L1 Chinese discourse oriented nature when the discourse topics have been established. They may be less precise in discerning the errors in the discourse context, in particular when null arguments are concerned. Is it possible that the subjects' performance in Task 2 which involves only sentence items is different from that in Task 3 which involves

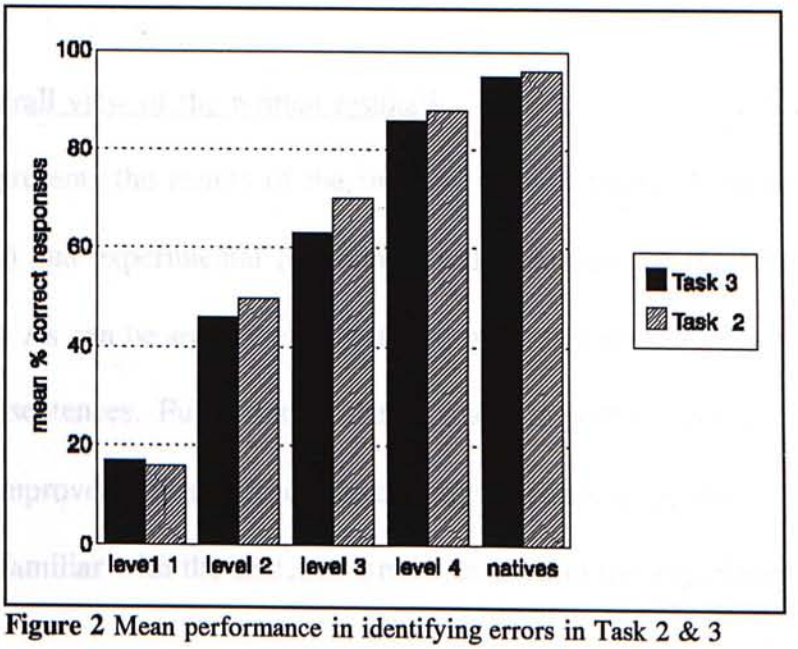

Figure 2 Mean performance in identifying errors in Task 2 & 3

a whole discourse passage? With this in mind, we have compared Task 2 scores with Task 3 scores. The subjects' overall performance in correcting relevant errors in Task 3 is not significantly different from that in Task 2, as is indicated in Figure 2. An important reason for the similarity in the subjects' performance in these two tasks may be that the stimuli sentences in Task 2 are context sensitive (cf. sample sentences in Table 4.2). Therefore, Task 2 is not different from Task 3 in testing the effect of the discourse orientedness in the interlanguages of Chinese learners. This implies that Task 2 is sufficient to test for the effect of the discourse orientedness and there is no need to include Task 3 in future similar studies.

In the following sections, we will report on the compiled data obtained from the three written tasks, but will not compare the subjects' performance in different tasks.

5.1.2 An overall view of the written results[25]

Figure 3 presents the results of the subjects' overall performance on the control (grammatical) and experimental (ungrammatical) sentences of the structures under investigation. As can be seen, the subjects are generally more accurate in accepting grammatical sentences. Furthermore, the accuracy in performance increases as the proficiency improves. The results on the control sentences in the figure show that the subjects are familiar with the sentence structures used in the experiment as a whole,

[25]There are two experimental (ungrammatical) sentences with null objects which the native speakers in the control group would accept as grammatical. We consider them as invalid test items and have exclude them in all the analyses that follow.

although the Level 1 subjects may still experience some difficulty.

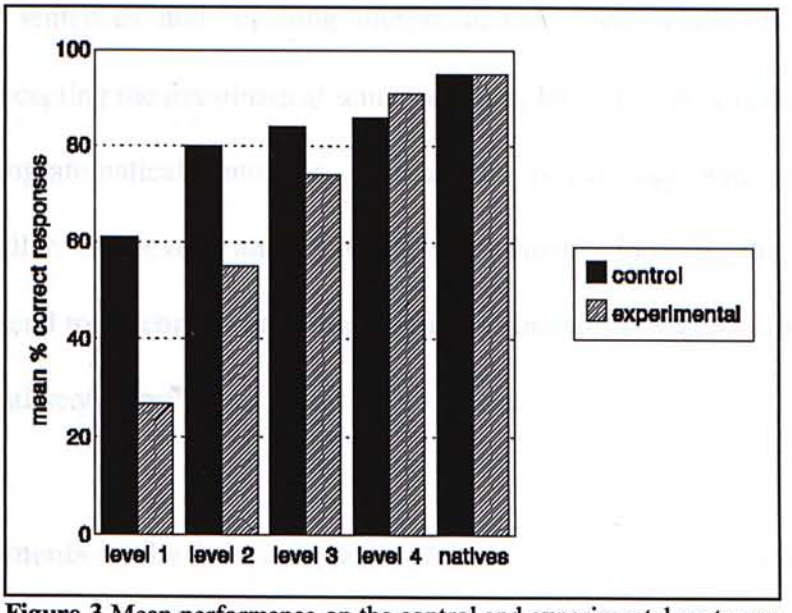

Figure 3 Mean performance on the control and experimental sentences

The subjects' performance on the experimental sentences exhibits a clear developmental pattern. The oneway ANOVA test shows that the differences among levels are highly significant ($F_{ratio}=118.70$, $F_{prob}=.0000$, $D.F_{total}=136$). This reveals that the four groups of subjects are indeed at different stages of interlanguage development in terms of the structures under investigation.

When we compare the subjects' performance on the control and experimental sentences, we find a remarkable difference at Level 1 ($t=12.82$, $p<.000$) and Level 2 ($t=8.22$, $p<.000$). The difference is also significant at Level 3 ($t=2.98$, $p<.006$)

and Level 4 ($t=2.28$, $p<.03$), but obviously less significant than at Level 1 and level 2. For the level 1 and 2 subjects, there still exists a big gap between accepting the grammatical sentences and rejecting ungrammatical ones. While they are more accurate in accepting the grammatical sentences, they have difficulty in discerning and correcting ungrammatical sentences. But as the proficiency improves, the gap becomes smaller. Our level 3 and 4 subjects' performance indicates that at this stage the learners tend to be correct both in accepting grammatical sentences and rejecting ungrammatical sentences[26].

5.2 Null Elements in the Interlanguages of Chinese Learners of English

As Chinese is a language allowing null elements in both subject and object positions, it is possible that Chinese L2 learners of English transfer this to their L2 grammar. At the initial stages of their interlanguage development, they may drop both subjects and objects, which is prohibited in English. To test this prediction, we may look at whether our subjects can recognize the ungrammaticality of null elements in English. Their failure in doing so should suggest that they accept null elements in English just as they do in their L1.

[26]It is unusual that the level 4 subjects have got a higher score for the experimental sentences than for the control sentences. When we examined the correction they provided for the grammatical sentences judged to be incorrect, we found that the corrections were mostly irrelevant to the structures under investigation, but were related to other structures, for instance, the position of adverbs, the use of tense and aspect.

5.2.1 Null subjects and null objects

Figure 4 displays the results of the subjects' performance on sentences with missing subjects and objects, together with the results of their performance on the corresponding grammatical sentences with overt subjects and objects. It is predicted that, if they are following the grammar of English, they are expected to accept overt pronouns and reject null pronouns. Our data show that the subjects at level 1, 2 and 3 accept sentences with null subjects and null objects to a certain degree. The level 4 subjects are more native-like in terms of the rejection of null subjects and objects.

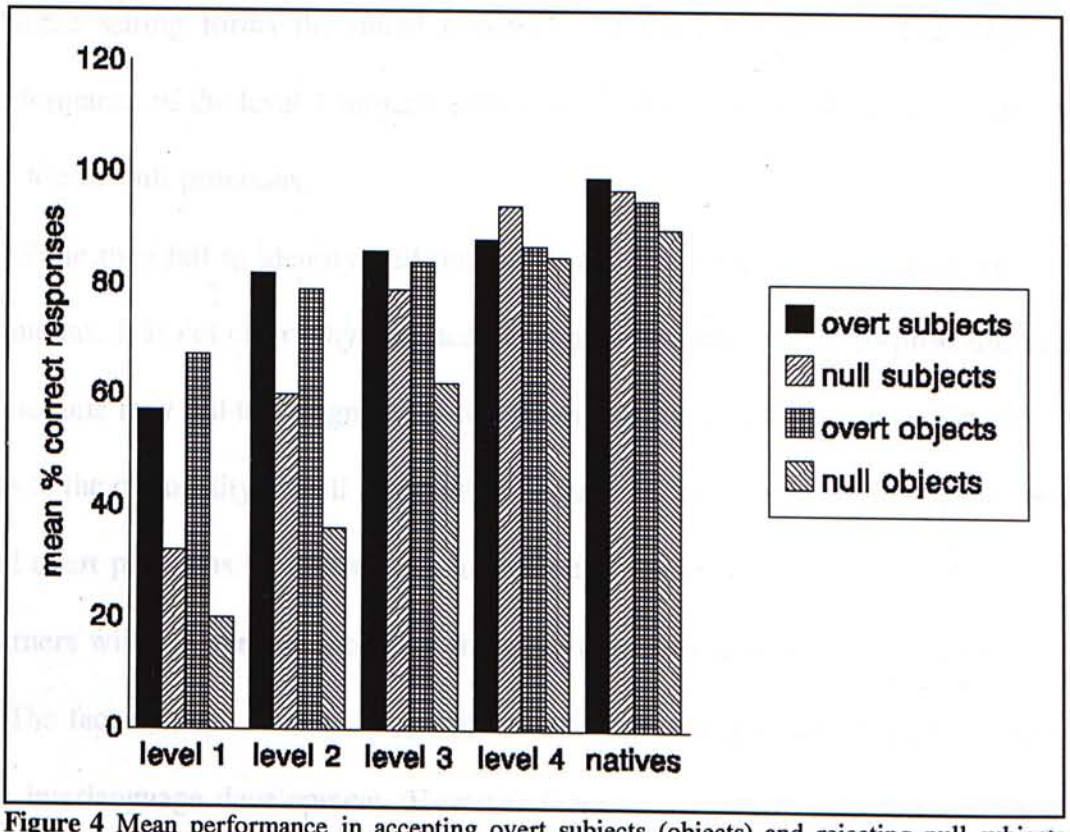

Figure 4 Mean performance in accepting overt subjects (objects) and rejecting null subjects (objects)

There are significant differences among the five groups concerning the subjects' rejection of null subjects and null objects (Oneway ANOVA: Null subjects, $F_{ratio}=70.40$, $F_{prob}=.0000$, $D.F_{total}=136$; Null objects, $F_{ratio}=115.74$, $F_{prob}=.0000$, $D.F_{total}=136$). The SCHEFFE test shows that the significant difference is not found between the level 4 data and native data. We can see that the level 1 and level 2 subjects are poor at recognizing and correcting the ungrammatical sentences where subject and object pronouns are missing. They tend to accept more null pronouns than those at higher levels of proficiency. An interpretation of this would be that the Chinese setting forms the initial hypothesis of the L2 grammar. The target-like performance of the level 4 subjects indicates that the learners will gradually abandon the use of null pronouns.

While they fail to identify null pronouns, the low level subjects still accept overt pronouns. It is not clear why they accept the grammaticality of overt pronouns at the same time they fail to recognize the ungrammaticality of null pronouns. This may be due to the optionality of null pronouns in Chinese. Chinese allows both null pronouns and overt pronouns. It follows that at the initial stages of L2 development, Chinese learners will use overt pronouns at the same time they permit null pronouns.

The fact that our learners drop objects shows a strong effect of the L1 setting in the interlanguage development. However there seems to be more null objects than expected. This, we think, is probably a result of the test stimuli. Among our 19 test items of object drop, 9 of them are those of *it*-drop. For native speakers of Chinese,

the third person singular pronoun *ta* in Chinese (=*it* in English) is seldom used. In other words, *ta* is often avoided. If so, we can explain why our subjects drop so many objects. The *it* factor has obviously induced more object drop. We have 5 cases of object drop following the verb *see*. *See* in Chinese (that is *kanjian*) can optionally take a null object; therefore the object drop following the English verb *see* in our study will be a consequence of the optionality of object drop following *kanjuan* in Chinese. Yet another factor that may affect the object drop following *see* is supposed to be related to the idiosyncratic lexical feature of the English verb *see*. This verb allows the omissibility of the direct object although it is a transitive verb[27]. The omissibility of the direct object is not a result of a general lexical or grammatical principle; rather it is a lexical idiosyncrasy. The learner has to determine whether a transitive verb allows the omissibility of the direct object and when this occurs on the basis of the input to him. Our learners may know that the English verb *see* allows the omissi-bility of the direct object as they may be exposed to this kind of evidence. However they still do not know when the direct object can be omitted and when it can

[27]There are other transitive verbs in English that also allow the omissibility of the direct object. The following examples manifest that the omission of a direct object with some verbs (*chase, hit, support*), but not with others (*follow, miss, join*), is ungrammatical (cited in Ingham 1994, p96).

(1) a. They ran away but we followed (them).
b. John aimed at the target and missed (it).
c. The team was doing well, so Mary joined (it).

(2) a. They ran away but we chased *(them).
b. John aimed at the target and hit *(it).
c. The team was doing well, so Mary supported *(it).

not. It then follows that when coming across the sentences containing *see* in the written test, they assume that the direct objects following *see* can be dropped, which is in fact not allowed according to the native judgement. If our inference is correct, it will be interesting to ascertain in future studies whether the Chinese L2 learners of English have a tendency to drop more *it* object pronouns than other pronouns as well as omit more objects following transitive verbs which allow the omissibility of the direct object than transitive verbs which do not.

5.2.2 Null expletives

In addition to null subjects and null objects, our subjects also omit expletives, as presented in Figure 5. The subjects' performance in rejecting null expletives shows a gradual improvement. The low level subjects, especially those at level 1, have greater difficulty in recognizing the ungrammaticality of null expletives, whereas the higher level subjects are better at rejecting the ungrammatility of null expletives. The differences among the four experimental groups are significant (Oneway Anova, $F_{ratio}=84.5$, $F_{prob}=.0000$, $D.F_{total}=136$). This suggests that the learners may permit null expletives at the initial stages of interlanguages and will gradually retreat from using them[28]. In addition, our data indicate that Chinese learners acquire expletives

[28]Again the level 4 data and the native data show that the score for the experimental sentences is higher than for the control sentences. We attribute it to some of the sentences which are not so common in natural speech, especially sentences containing *seem*. Some native speakers thought sentences like "He thinks that it seems that Mary is unhappy" as quite unnatural. They would convert this type of sentences into "He thinks that Mary seems unhappy" or "He thinks that Mary is unhappy". Other native speakers told me that they would prefer "I think ..." rather than "It seems ...". Although these sentences are grmmatically correct theoretically, native speakers and some level 4 subjects would

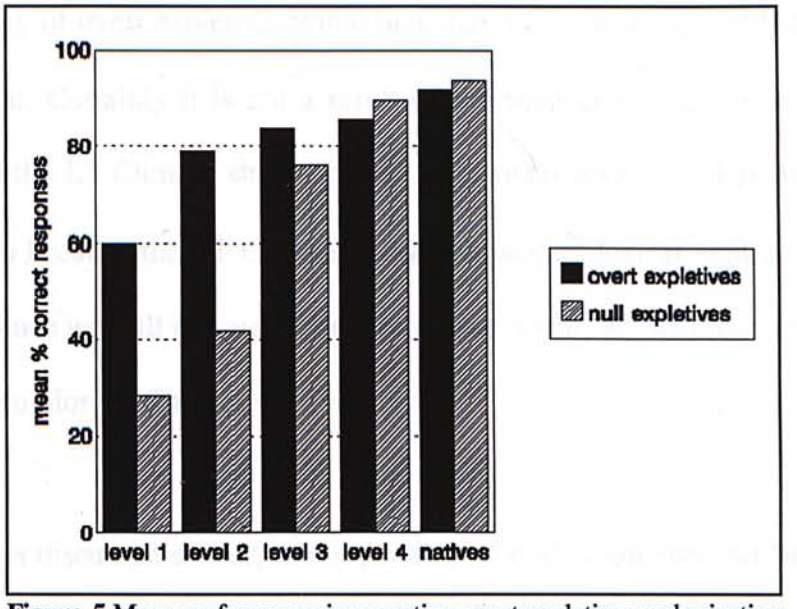

Figure 5 Mean performance in accepting overt expletives and rejecting null expletives

very early. The subjects' performance in accepting overt expletives suggests that our low level subjects do not have much difficulty in acquiring English expletives. And our level 2 subjects could recognize the ungrammatical sentences with null expletives in most cases, with a mean of 62%.

We have just explained the coexistence of overt thematic pronouns and null thematic pronouns in the early L2 grammars of Chinese learners of English. We attribute this to the optionality of null thematic pronouns in the L1 Chinese, which in turn has an effect in the interlanguage development. The results concerning expletives also show such a tendency: that is, our low level subjects accept the

judge them to be incorrect following their preference.

grammaticality of overt expletives while they may fail to recognize null expletives at the same time. Certainly it is not a result of the transfer of the optionality of null expletives in the L1 Chinese since Chinese lacks overt lexical expletives. We argue that this is so because the L1 Chinese, although lacking lexical expletives, has null expletives. Since we will discuss expletives further again, we will reserve the present issue for discussion in Chapter 6.

As has been discussed earlier, the optionality of null arguments and lack of lexical expletives are important properties associated with the Chinese setting of the Null Argument Parameters. English is characteristic of the use of overt arguments in both the subject and object positions. Our data so far imply that the L1 Chinese setting of the Null Argument Parameters, as far as the property of null arguments is concerned, is transferred to the early interlanguages of Chinese L2 learners of English and is later switched for the target setting. So the results are consistent with the Indirect-Access Hypothesis of UG in L2 acquisition: the initial state of L2 acquisition is the L1 setting and the L2 learners can eventually reset the parameters for the target value. The report that follows will provide insights to our understanding of how the unlearning of null arguments is made possible.

5.2.3 **Null Subjects in Matrix Clauses and Tensed Embedded Clauses**

Lillo-Martin, following Weissenborn, has suggested that the tensed embedded

clauses be the triggering domain associated with the initial setting for the Null Pronoun Parameters. She argues that it is the case in L1 acquisition, in particular, regarding null subjects. There is evidence showing that the French- or German-acquiring child seldom uses null subjects in the tensed embedded clauses (Roeper and Weissenborn 1990, Weissenborn 1992). Does it work in L2 acquisition? And in what way will it affect L2 acquisition? Our prediction is that, if the tensed embedded clause as the triggering domain associated with the initial setting for the Null Pronoun Parameters has an effect in L2 acquisition, L2 learners will probably be more sensitive to the use of null subjects in this domain than in the matrix domain once they have acquired the tensed embedded clauses.

To test this prediction, we have distinguished the embedded null subjects from the matrix null subjects and have compared the subjects' performance in rejecting embedded null subjects and matrix null subjects. A distinction is further made between null thematic subjects and null expletive subjects in order to see which type of null subjects is more sensitive to the embedded domain in the L2 acquisition of English.

5.2.3.1 Null thematic subjects

As Figure 6 shows, the level 1 subjects appear to be poor in discerning the ungrammaticality of null subjects in both domains, whereas the level 4 subjects are accurate in discerning the incorrectness of null subjects in both domains, in similarity

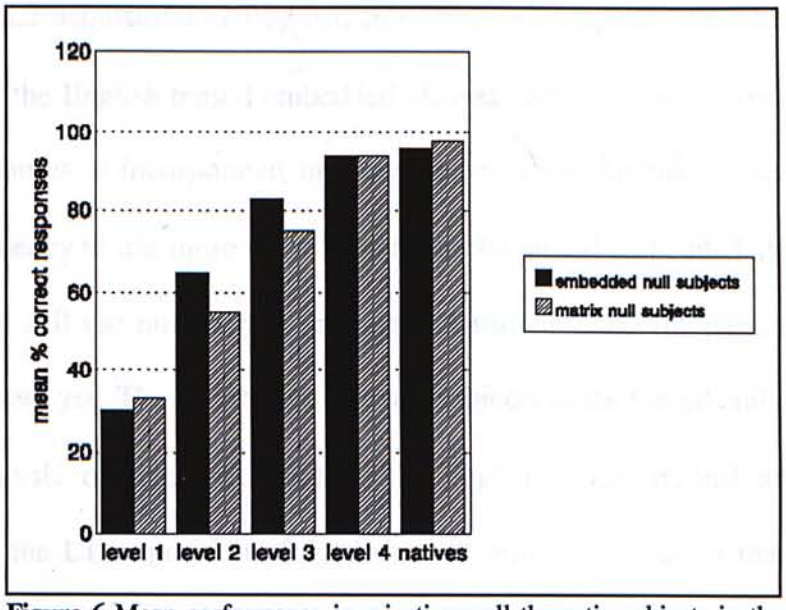

Figure 6 Mean performance in rejecting null thematic subjects in the tensed embedded clauses and matrix clauses

to native controls. No significant difference is claimed at Level 1 and Level 4 ($t=1.13$, $p>.05$, Level 1; $t=.20$, $p>.05$, Level 4) between rejecting embedded null thematic subjects and matrix null thematic subjects. The Level 2 and 3 subjects seem to be more accurate in identifying null subjects in tensed embedded sentences than in matrix sentences. There is a significant difference at these two levels ($t=3.26$, $p<.003$, Level 2; $t=3.50$, $p<.002$, Level 3).

As an effect of the L1 Chinese setting, which allows null subjects in both the matrix domains and embedded domains, the Chinese learners are expected to use null subjects in all domains initially. If the tensed embedded clause is indeed the triggering domain associated with the initial setting of the Null Pronoun Parameters and has an

effect in the L2 acquisition of English, this effect will appear only when the learner has acquired the English tensed embedded clauses. When the structure of the tensed embedded clauses is incorporated into the learner's interlanguage, the learner may exhibit a tendency to use more overt subjects in the tensed embedded clauses. At this stage he may still use null subject in matrix clauses because the parameters are not completely reset yet. The occurrence of overt subjects in the tensed embedded clauses and the analysis of relevant structures in English (such as Infl and expletives suggested in the L1 acquisition of English) will inform the learner that English is a non-pro-drop language, leading to the use of overt subjects in both domains. Viewed in this light, the Chinese L2 learner of Englsih will presumably undergo three stages of development in the resetting of the null pronoun parameters:

Stage 1: the L2 learner of English has not acquired the English tensed embedded clauses; he will be found to use null subjects, probably as a result of the transfer of the L1 setting. There is no difference between the embedded null subjects and matrix null subjects for Level 1 subjects probably because at this stage they have not acquired the English tensed embedded clauses[29]. They are poor in discerning null subjects in any domains.

Stage 2: the L2 learner has acquired the tensed embedded structures; the effect of the

[29]It is indeed the case. By the time we conducted the experiment, the level 1 subjects had not learned the tensed embedded clauses.

triggering domain is now evident: while he still uses null subjects, he may use fewer null subjects in the embedded domains. The Level 2 and Level 3 subjects are more accurate at identifying the embedded null subjects than the matrix null subjects. This can be taken as an indication of the effect of the triggering domain. These subjects have presumably acquired the English tensed embedded clauses and are better in discerning the ungrammaticality of the embedded null subjects.

Stage 3: the consistent use of overt subjects in the English tensed embedded clauses in the input and the analysis of the relevant structures in English have made the L2 learner aware of the non-pro-drop property of English; at this stage, he has reset the null pronoun parameters, and therefore he tends to use overt subjects in both the matrix and embedded domains. Our Level 4 subjects are inclined to reject null subjects in embedded as well as matrix domains, just like native speakers. No difference is detected between the embedded null subjects and matrix null subjects. It suggests that they may have reset the parameter in all domains.

If the tensed embedded clause is acquired, the learner will be expected to reject the use of null subjects in this domain, while he may still allow the use of null subjects in the matrix domain. However it is not likely that the learner will consistently use overt subjects in the embedded domain but still uses null subjects in the matrix domains. To see whether each of the subjects in the experiment shows a preference

for the embedded overt subjects, a simple analysis has been conducted. The individual subjects' scores are divided into five ranges: 0---20; 20---40; 40---60; 60---80 and 80---100. The logic goes as follows: a mean score for the embedded null subjects is always expected to fall in the same range as, or a higher range than, the one for the matrix null subjects, but not vice versa. That is, we should expect the subject to perform better in rejecting the ungrammaticality of the embedded null subjects, but not vice versa. If a score at a higher range is found for the rejection of the matrix null subjects, it is considered as an exceptional case. The results indicate that there are only a few exceptional cases, five at level 1, three at level 2 and one at level 4. So the subjects are generally inclined to use more overt subjects[30] in the embedded domains.

5.2.3.2 Null expletive subjects

We have split expletives into three types: "there" in existential constructions (represented by "there" in the figure); "it" in weather-time expressions (represented by "weather it"); and "it" in *seem*+clause constructions (represented by "raising it"). For null expletives, there is no clear pattern showing that the subjects are significantly

[30]The four individual subjects' (level 2 and level 4) mean scores are listed as follows:

	The rejection of embedded null subjects	The rejection of matrix null subjects
Subject 1	59	83
Subject 2	60	72
Subject 3	52	69
Subject 4	47	64

more accurate in discerning the embedded null expletives than the matrix null expletives (See Figure 7). However, our Level 2 and Level 3 subjects tend to reject more missing weather "it" in the embedded sentences than in the matrix sentences. Maybe weather "it" is analyzed by the learners as "referential" at the initial stages of learning English. So their performance on weather "it" patterns with their performance on the null thematic subjects: the difference regarding weather "it" between the embedded domains and the matrix domains, albeit a slight one, is

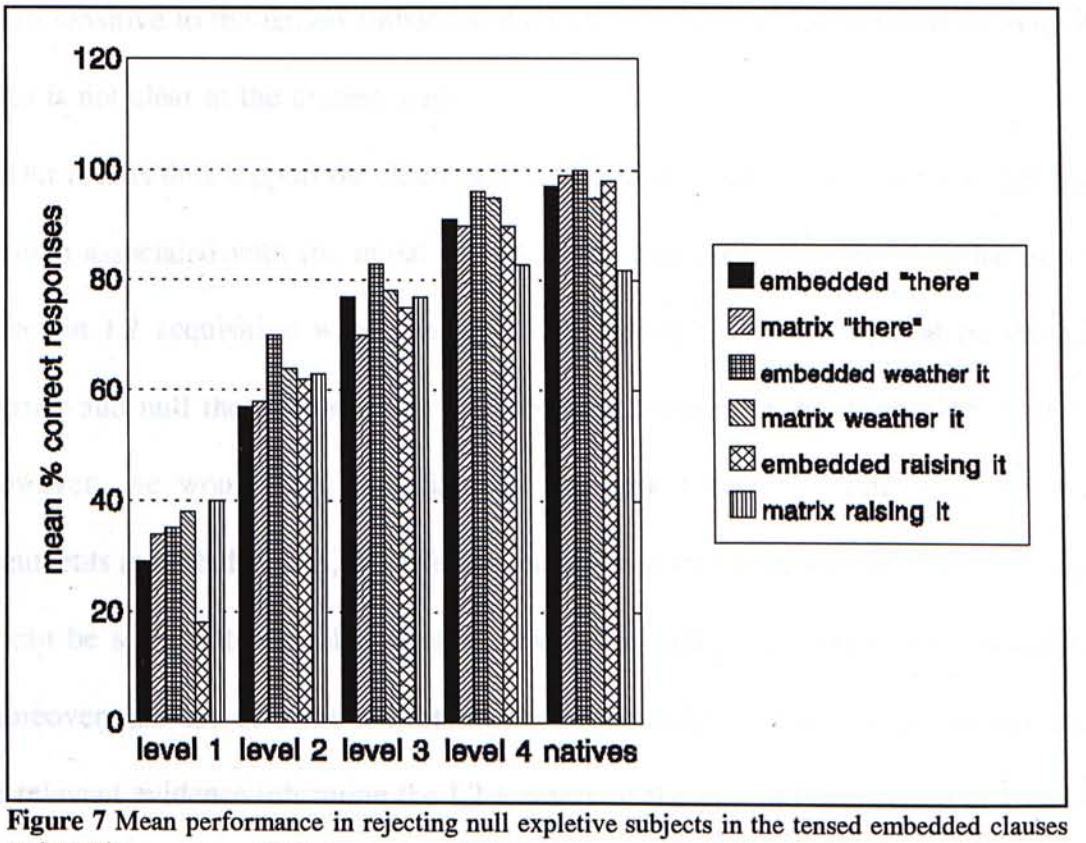

Figure 7 Mean performance in rejecting null expletive subjects in the tensed embedded clauses and matrix clauses

detected only in the Level 2 and 3 data.

For raising "it", our level 4 subjects are slightly more accurate in discerning the ungrammaticality of embedded null raising "it" than that of matrix null raising "it" ($t=2.02$, $p<.053$). The difference in the native control data for raising "it" reveals that native speakers accept more sentences with missing "it" in matrix clauses than those with missing "it" in embedded clauses. They indeed drop "it" in matrix clauses, but seldom do so in embedded clauses[31].

What we can conclude from the above results is that null thematic subjects are more sensitive to the tensed embedded domains than null expletive subjects. Why it is so is not clear at the present stage.

Our results thus support the claim that the tensed embedded clause as the triggering domain associated with the initial setting of the null pronoun parameters has some effect in L2 acquisition when the tensed embedded clause is acquired by the L2 learner and null thematic subjects will be more sensitive to the triggering domain. However, we would hold this claim in its weak form. As Chinese allows null arguments in both domains, the effect is undermined by the transfer of the L1 setting. It can be seen that our subjects at all levels use null arguments in both domains. Moreover, the use of overt subjects in the tensed embedded clauses in English may be relevant evidence informing the L2 learners of the non-pro-drop value of English since there is contradictory evidence in the matrix domains, but other potential

[31]But see note 4.

triggers do not necessarily have to be restricted to the embedded domains. If Lightfoot (1989, 1991) is correct in claiming the Degree-0 learnability, the crucial data in the unembedded domains may be sufficient to trigger the parameter setting.

5.3 Infl and Null Thematic Subjects

The results related to the subjects' performance in rejecting null arguments suggest that the resetting of the Null Arguments Parameters by Chinese learners of English is possible, at least with regard to the property of null arguments. In the previous section, we have looked at the results regarding the relationship between the tensed embedded clause and null subjects. Now we will turn to the results concerning Infl and null subjects.

It has been suggested that Infl is closely associated with null subjects in L1 acquisition, in particular with null thematic subjects. Lillo-Martin also argues that the acquisition of Infl is prerequisite for the resetting of the null pronoun parameters. The learner needs to analyze Infl so as to decide whether Infl, especially AGR, is a legitimate licenser and identifier of *pro*s in the target language. In the case of learning English, the learner has to analyze the Tense and Agr element in the Infl node. We predict, based on L1 acquisition studies, that Infl might also be connected with null thematic subjects in the L2 acquisition of English in that it may act as a trigger in the resetting of the null pronoun parameters by Chinese learners of English. One would expect to find a positive correlation between the acquisition of Infl and the unlearning

of null thematic subjects: when Infl in English is acquired, the learner will stop using null subjects. For our data, therefore, the rejection of incorrect inflection is expected to be correlated with that of null subjects.

Table 5.1 Correlations between the rejection of null subjects and the rejection of incorrect Infl by level

	Level 1	Level 2	Level 3	Level 4	Level 5
Correlations	.7079**	.4479*	.2838	.1562	
			1-tailed Signif:	* - .01	** - .001

As Table 5.1 reveals, Infl is significantly correlated with null subjects at level 1 and level 2, but it is not so at the two high levels. The correlation between Infl and null subjects appears to diminish as the subjects' level of proficiency improves, implying that the acquisition of Infl and the unlearning of null arguments are two independent issues in the interlanguage development.

English Infl has been proved to be extremely difficult for Chinese learners. Figure 8 shows that the Level 4 subjects still have problems with Infl, but their response to null subjects is similar to that of native controls. Infl seems to be a late-acquired aspect of grammar[32]. Why Infl is difficult for Chinese learners is out of the scope

[32]Although the acquisition of Infl does not reach the target criterion for Chinese L2 learners of Englsih, it does not imply that the learners do not have knowledge of Infl. Probably, they know that English verbs are inflected for agreement and tense. This should not be difficult. What seems to be difficult is to have a complete mastery of the complicated system of English verbal inflection. However it is not clear whether this partial knowledge of Infl will inform the learner of the fact that English inflectional system is too meagre to license *pro*s.

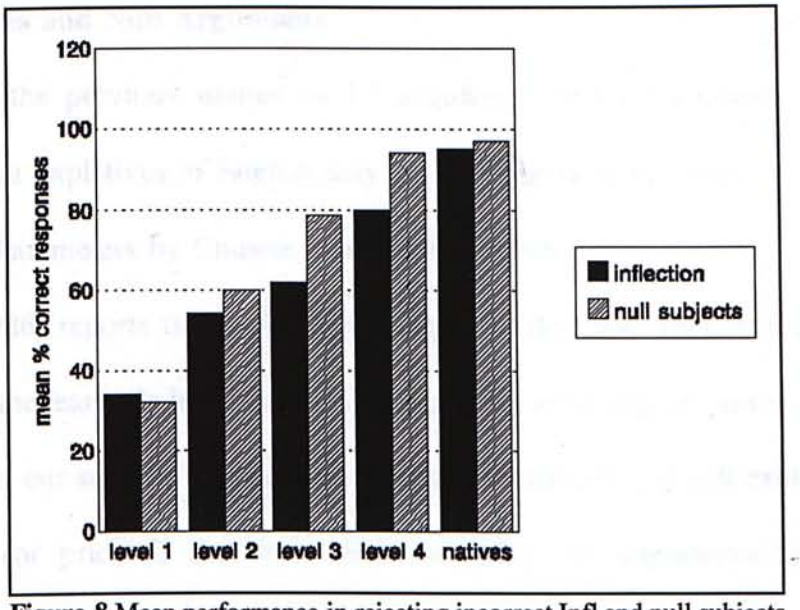

Figure 8 Mean performance in rejecting incorrect Infl and null subjects

of the present study. The null pronoun parameters should be an early set parameters. Although it has been attested that Infl is important in setting or resett ing the null pronoun parameters in L1 acquisition, our data do not show that the acquisition of Infl is closely related to the abandonment of null subjects. Thus learners will have to rely on earlier acquired structures as triggering experience, such as expletives, which will be discussed in the next section.

Superficially, the two variables are correlated for Level 1 and 2. We believe Infl to be correlated with null subjects at this stage because subjects at these two levels are at the initial stage of interlanguage development and have problems with both null subjects and Infl. Therefore it appears that Infl is not a reliable trigger in the unlearning of null subjects in the interlanguages of Chinese learners of English.

5.4 Expletives and Null Arguments

Based on the previous studies on L1 acquisition and L2 acquisition, we have suggested that expletives in English may act as triggers in the resetting of the Null Arguments Parameters by Chinese learners of English.

Hilles (1986) reports that null subjects began to decrease after lexical expletives appeared in the learner's interlanguage. If expletives are a trigger causing change, we would expect our subjects to recognize the ungrammaticality of null expletives at the same time (or prior to the time) they recognize the ungrammaticality of null arguments. As Figure 9 and Table 5.2 reveal, while subjects are generally more accurate in rejecting missing expletives, the two variables, the rejection of missing

Table 5.2 Correlations between the rejectiong of null expletives and null arguments

		Expletive	There	Weather it	Raising it
Level 1	Null Argument	.7146**	.6251**	.7378**	.2564
Level 2	Null Argument	.7222**	.6750**	.7801**	.4604*
Level 1	Null Argument	.5792**	.6136**	.5057*	.3897
Level 2	Null Argument	.6215**	.6312**	.7272**	.3683

1-tailed Signif: * - .01 ** - .001

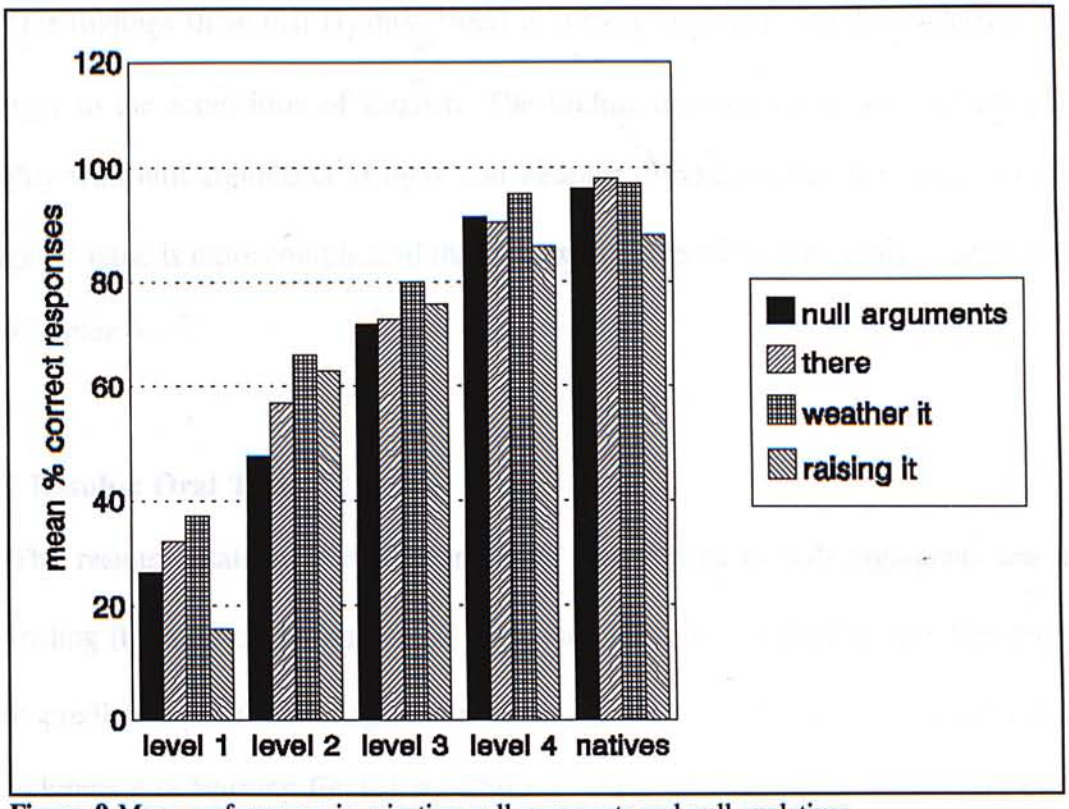

Figure 9 Mean performance in rejecting null arguments and null expletives

expletives and that of null arguments (null subjects and null objects), are highly correlated at each level (r_{xy}=.71, Level 1; r_{xy}=.72, Level 2; r_{xy}=.58, Level 3; r_{xy}=.62, Level 4). This is in consistence with our prediction. However, when expletives are split into three types as represented by *there*, *weather it* and *raising it*, it is found that the rejection of missing *there*, and *weather it* are still highly correlated with the rejection of null arguments, but not for missing *raising it* (See Table 5.2). It appears that the three types of expletives do not have the same status as the triggering experience for the Null Argument Parameters.

Our findings show that Hyams (1986) is correct in pinpointing the expletives as a trigger in the acquisition of English. The finding that *raising it* does not correlate highly with null arguments as *there* and *weather it* indicates that the "expletives-as-trigger" issue is more complicated than we expect. We will address this issue in detail in Chapter 6.

5.5 **Results: Oral Task**

The results obtained from the oral task with regard to null arguments are not revealing (because of the small data size), therefore, it is difficult to use them to test our prediction that null arguments occur at the early stages of interlanguage development in learning English by Chinese[33] (See Appendix 4 for a summary of the relevant structures produced in the oral task). However, the results are informative

[33]There appeared to be very few null arguments in the oral data. The percentages of matrix sentences with null subjects produced in the data are: 3.81% (Level 1); 5.6% (Level 2); 3% (Level 3) and 1% (Level 4). The percentages of matrix sentences with null objects produced in the data are 5.3% for Level 1, 5% for Level 2, 2% for Level 3 and 0% for Level 4. (Missing objects in Level 1 and 2 data include several cases where objects were deleted because verbs that subcategorize direct objects were unfamiliar to the low level subjects. The subjects didn't know the verbs "scratch" and "imitate" and thus they didn't understand that these two verbs were transitive verbs, which led to the occurrence of missing objects) My prediction is that at initial stages of ILs, there should be many null arguments as a factor of L1 transfer. It seems that this prediction is not borne out in the oral data, as not much difference stands out between low levels and high levels. I attribute this to the tasks designed to elicit the related structures. It is possible that the tasks are not appropriate enough for the elicitation of null elements. One reason for the inappropriateness of the tasks is that they do not elicit natural utterances that properly reveal the current stage of the subjects' ILs with regard to null arguments. I found that when they were performing the task, most of low level subjects took me as their teacher and were nervous. They tried their best to produce "good" utterances, although I attempted to relax them. Another reason may be that in the picture description part, instead of telling a coherent and continuous story according to the pictures, most subjects described the picture one by one, reestablishing the discourse topics every time they began a picture. This has apparently limited the occurrence of null arguments.

in several important respects.

First, expletives "there" and weather "it" appeared early in the ILs. Even in the oral data of the Level 1 subjects, "there" and weather "it" were used correctly in many cases (76% for "there" and 54% for "it") although sometimes they might be omitted. Sentences like "My family has four people" were counted as obligatory context for "there". So here "there" was counted as missing. Probably this counting is not accurate since this sentence is correct without using "there". If this type of sentences had been excluded as obligatory contexts for "there", there would have been even fewer cases of missing "there". That is to say, our subjects seldom omitted "there" in real "there be..." constructions. The same problem exists in the counting of obligatory contexts for weather "it". There were sentences like "Today is sunny" and "Yesterday was fine" which were counted as instances for obligatory "it". While "It is sunny today" or "Today it is sunny" sounds more standard-like, both utterances are acceptable to some native speakers of English. So we are not sure of whether the production of the utterances like "Today is sunny" is due to the transfer factor or the input factor. Most of missing "it" in the oral data are similar utterances. Anyway, the data indicate that "there" and "it" are frequent in the input so that it is possible for learners to rely on them as the triggering experience. Raising "it" occurred only once in the Level 4 data, showing that raising "it" is not as popular as "there" and weather "it" in the data. However, there was no special means to elicit raising "it" in the oral data.

Second, the data show that tensed embedded clauses do not occur at the early stages of ILs. The level 1 subjects had no concept of tensed embeddedness and not a single tensed embedded clause was found in the Level 1 data. In the Level 2 data, tensed embedded clauses appeared and constituted 9.7% of all tensed clauses (27 out of 278). They increased to 19% (53 out of 294) in the Level 3 data and to 26% (90 out of 388) in the Level 4 data. If tensed embeddedness is the triggering domain for the null pronoun parameters as it is suggested in L1 acquisition, then its effect in L2 acquisition should appear when the learner acquires the tensed embedded clauses. In this study, the effect should show up in the Level 2 data. This is what is observed in the written tasks. In the oral data, no evidence has been found that null subjects occur in the tensed embeddedness clauses. Therefore what is found in the written data gains support from the oral data.

Third, the use of inflection in the oral data supports the claim that Infl is a late-acquired aspect of grammar. There were many errors with verbal inflections at all levels, no matter whether they occurred in matrix or embedded clauses. The percentage of incorrect use of verbal inflection is as high as 40 in the Level 1 data. Even at level 4, subjects made errors in verb inflection. The Level 4 data are interesting in that while 19% of matrix verbs are uninflected, 31% of embedded verbs are uninflected. This suggests that Chinese learners do not use Infl more accurately in the embedded clauses than in the matrix clauses. Anyhow, Infl is not a reliable trigger to reset the null argument parameters.

Chapter 6 DISCUSSION

In the last chapter, our research findings are presented along with explanations for some of the findings. However, several problems have been left unsolved, in particular, the issue of expletives as a trigger. In the present chapter, we will first address questions concerning expletives. Then we will try to see how null arguments in the L2 grammars of Chinese learners get unlearned.

6.1 The Expletives-as-triggers Hypothesis Reconsidered

We have tested the hypothesis that English lexical expletives may act as triggers in the unlearning of null arguments by Chinese learners of English. The findings here seem to support this hypothesis, the evidence for which has been provided by the fact that our subjects' judgement of expletives is significantly correlated with their judgement of null arguments. The results are then in accord with what Hyams (1986) has suggested for the L1 acquisition of English. At least the L2 data show that she is correct in assuming expletives as triggers.

As has been mentioned earlier, Chinese has no overt lexical expletives. However, this does not entail that Chinese is void of expletives. If Chinese observes the Extended Projection Principle that requires that every clause have a subject (Chomsky 1981), then for the following sentences, one would expect that the subject positions of these sentences are filled by null expletives in the way lexical expletives fill in the

subject positions in the corresponding English sentences.

1) a. *e* you yi ge ren zai wu li

have one CL man at room inside

"There is a man in the room."

b. *e* xia yu le

fall rain Le

"It is raining."

In addition, there are arguments independent of the EPP that null expletives do indeed exist in Chinese (Gao et al, 1994)[34]. If this is the case, Chinese learners of English have already tapped the concept of expletives in acquiring the L1 Chinese. Thus the task of acquiring lexical expletives in English would be relatively easy. This explains why even our low level subjects have not much difficulty in accepting English expletives. Because Chinese is characteristic of null expletives, the learners may assume that it is so in English, resulting in their acceptance of null expletives in their early L2 grammars, that is, they may also use null expletives at the initial stages of L2 grammar development.

The question that arises now is why English expletives can trigger the unlearning of null arguments by Chinese learners. To answer this question, we need first see

[34]Researchers on this have argued for the existence of empty expletives in Chinese from the argument structure perspective (Gao et al, 1994).

why Chinese has no overt lexical expletives whereas English does.

Following Hyams (1986)[35], we assume that the lack of lexical expletives in Chinese may be a result of the interaction of the null argument parameters and a specific pragmatic principle: the Avoid Pronoun Principle (Chomsky 1981, Hyams 1986). Chinese is a [+pro drop] and [+discourse oriented] language, so null arguments are licensed in both subject and object positions. When the appropriate discourse context has been established, pronouns are usually omitted unless they are used to emphasize, contrast, change topics, etc. In Li and Thompson's (1981) words, in Chinese overt pronouns in the discourse context are used to "highlight"[36]. By the Avoid Pronoun Principle, lexical pronouns are avoided when they are not needed for pragmatic reasons, such as emphasis, contrast, change of discourse topic. It then follows that lexical expletive pronouns, which are not used for any of the above pragmatic reasons, do not exist in Chinese. Given that lexical expletives occur in English, a non-pro-drop and a non-discourse-oriented language, they may serve as a

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[35]Hyams (1986) argues that the lack of expletives in a language follows from the interaction of a particular grammatical principle (the null subject parameter) and a specific pragmatic principle (the Avoid Pronoun Principle). In Spanish and Italian, an empty category is licensed in the subject position of tensed sentences. In these languages, subject pronouns are used only for emphasis, contrast, to clear up ambiguities, or to introduce new discourse topics, etc. By the Avoid Pronoun Principle, lexical pronouns are avoided when they are not needed for pragmatic reasons, e.g., contrast, emphasis, change of discourse topics and so on. Therefore expletive pronouns, which may not be used for the above reasons, do not occur in these languages.

[36]Li and Thompson (1981) argue that when both an overt pronoun and a missing pronoun can occur in the discourse, the principle of highlighting will be a guideline to decide whether the overt pronoun is used or not. Generally, a missing pronoun is used when there is no reason to highlight the reference to the speaker or the hearer, while the overt pronoun is used when there is some reason to highlight the reference to the speaker or the hearer. Here to "highlight" may be to emphasize, to change a topic, to contrast, or show politeness (See examples cited in the last chapter in L1 and Thompson 1981).

special kind of triggering evidence that English is distinct from Chinese with respect to the null argument parameters.

We know that Chinese learners will transfer null arguments to the L2 grammar. That is to say, Chinese learners have overgeneralized the optionality of overt arguments in the L1 Chinese to the acquisition of English, which does not allow the optionality of overt arguments. This kind of overgeneralizations, as a result of the transfer of the L1 parameter setting, is similar to lexical overgeneralizations as a consequence of the L2 grammar learning, such as overgeneralizations of dative constructions and of past tense form *-ed* for regular verbs in English. When this happens, the learners should have a mechanism by which they can retreat from the overgeneralizations; otherwise they will never get the correct parameter reset[37]. We have discussed earlier that English expletives may be the triggering data for the retreat from using null arguments. However, the data alone could not trigger the retreat. There should exist a kind of relationship between the triggering data and the correct parameter setting which is made known to the learner. Following Randall's (1992) Catapult Hypothesis, mentioned in Chapter One and reiterated here in (3),

(3) Catapult Hypothesis

For every overgeneralization,

[37]It is likely that the L2 learner is exposed to negative evidence. But whether the L2 learner relies on it is not clear. Before we reach a conclusion about the role of negative evidence in L2 acquisition, we are required to search for other possible mechanisms to guarantee L2 acquisition on the basis of positive evidence.

a) the grammar contains a disjunctive Principle, P, [either A or B (exclusive)]

and b) the primary data exhibits A (or B).

we can see that there exists a catapult-like schemata in the null argument parameters concerning *expletives* and null arguments. Given that lexical expletives only exist in languages like English, which do not allow null arguments, the null argument parameters can be stated as an exclusive disjunction of the following form:

(4) Either null arguments or expletives, but not both[38].

Therefore when the learner notices expletives in English, the implicational relationship between English expletives and null arguments, captured in the above form (4), will make him aware that English does not allow null arguments. In this way, the presence of expletives in the input to the L2 learner can trigger a shift from the null-argument value of the L1 setting to the non-null-argument value of the L2 setting.

6.2 There, Weather it, and Raising it: their status as the triggering experience

So far we have addressed the question of why English expletives can trigger the

[38]Such an exclusive disjuntive statement of the null argument parameters may be too strong as it cannot characterize languages that can either have null nonthematic arguments as well as null thematic arguments or merely have null thematic arguments, as pointed out in Pustejovsky (1992).

unlearning of null arguments. As our data further show that the judgement of *there* and *weather it* is significantly correlated with the judgement of null arguments while *raising it* is not, we have to explain what make these expletives different so that one particular type of expletives may stand out as triggers. We believe that an understanding of this is very important.

As a category that is distinct from referential pronouns, all the expletives are non-referential and inserted to occupy an obligatory position of the syntactic structure. They do not bear Θ-roles, i.e., they only occur in non-thematic positions. Exhibiting these unique features of expletives, *raising it* is expected to have the same status as *there* and *weather it* as the triggering data if they really are. But the scenario is that while the subjects' judgement of *there* and *weather it* is closely related to their rejection of null arguments, no such relationship is detected with respect to *raising it*. This indicates that *raising it* may be analyzed as a different category from the other two types of expletives.

It seems that *there* constructions and weather-time expressions are frequently used in the input to the L2 learner. Sentences like "There are 30 students in the classroom" or "It is five o'clock" are among the constructions that are presented to the learner at an early stage. Therefore the L2 learner is exposed to these expletives at the early stages of learning. In this case he will probably take notice of expletives *there* and *it* early. *Seem*+clause structures don't occur as commonly and frequently as *there* constructions and weather-time expressions in the input. Consequently the learner may

acquire *it* expletives in *seem*+clause constructions relatively later.

In addition to the frequency of use in the input, one will also find a difference between *there*, *weather it* and *raising it* in terms of their internal syntactic and semantic structures. Although *raising it* is identified as nonreferential just like *there* and *weather it*, there is a difference between the former and the latter two. We will first discuss the difference between the two *it*s.

Weather it is identified as a quasi-argument because it may control PRO, whereas *raising it* is a nonargument which can not control PRO (Chomsky 1981), as shown by examples (5), (6), (7).

(5) It sometimes rains after PRO snowing.

(6) It is too stormy PRO to last long.

(7) *It seems that John was guilty after PRO appearing that he had a strong motive.

Saleemi (1992) observes that in the following English sentences, *raising it* may be omitted in some adjunct clauses (8a,b), but *weather it* does not appear to be omissible in similar constructions (9a,b).

(8) a. John must have left early, as seems to be the case.

b. !John must have left early, as it seems to be the case.

(9) a. *John cannot leave now, as is raining.

b. John cannot leave now, as it is raining.

In weather and time expressions, both *it* and the predicate are talking about the same thing, weather or time, as in sentences (10) and (11). In other words, although *it* in the example sentences is nonreferential, it is in fact underlyingly referring to

(10) It is raining.

(11) It is late.

the weather and time known to the speaker and hearer. However *raising it* does not have this feature.

Viewed in the light of the above discussion, it is clear that *weather it* is different from *raising it* in that the former is a quasi-argument and is in some sense a stronger subject than the latter.

Regarding the difference between *there* and *raising it*. These two types are both nonarguments, distinct from quasi-arguments. But *raising it* is different from *there* regarding the relationship with postverbal NPs, or clausal elements. *There* is associated with the postverbal elements whereas *raising it* does not appear to be so.

It has been suggested that expletive *there* in English is the target of a movement operation, with the associate of the expletive (*a man* in (12) and *men* in (13)) moving to the position of the expletive (Chomsky 1991, Chomsky and Lasnik 1991).

(12) There is a man in the room.

(13) There are men in the room.

Thus a new element combining the relevant features and its associate, [there, a man] in (12) and [there, men] in (13), is produced, namely "Amalgamated Expletive". This is known as the Amalgamated Expletive Hypothesis (Chomsky 1991, Chomsky and Lasnik 1991) or what Shlonsky (1989) calls the Expletive Replacement Hypothesis. The amalgamated expletive or the replacement of expletive by the postverbal NP argument is required by the Full Interpretation (FI), which demands that every element of the LF representation of an expression be subject to interpretation at the interface. Given FI, the LF representation of (12) and (13) is (14) and (15) respectively, with *t* being the trace of the element moved to the amalgamated

(14) [there, a man] is *t* in the room.

(15) [there, men] are *t* in the room.

expletive. Under this analysis, one of the central properties of *there* constructions is that there is an argument, which is usually the postverbal NP, associated with the expletive *there*. Therefore *there* is always closely related to the postverbal NP and inherits its features that agree with the inflected verb. In fact *there* constructions always have referential analogues like (16) and (17) although they are not as natural

as *there* constructions.

(16) A man is in the room.

(17) Men are in the room.

Given that *there* must have an NP associate, it follows that some other expletives can be associated with clauses, as in (18) and (19) (Chomsky 1988, Shlonsky 1989), with (b) being the LF representation.

(18) a. It was decided to travel by plane.

b. [it, to travel by plane] was decided *t*.

(19) a. It is unlikely that anyone will agree.

b. [it, that anyone will agree] is unlikely *t*.

Similar to *there* constructions, (18) and (19) also have referential analogues, as illustrated by (20) and (21).

(20) To travel by plane was decided.

(21) That anyone will agree is unlikely.

This analysis, however, fails when it is operated on *raising it* in *seem*+clause

structures[39]. For sentence (22), although the LF representation (22b) is possible,

(22) a. It seemed that John left early.

b. [it, that John left early] seemed *t*

c. *That John left early seemed.

(22c) is not a possible S-structure representation. Why (22c) is ill-formed is not clear[40]. However what is clear is that this kind of *raising it*, i.e., *it* in *seem*+clause structures is not that closely associated with the postverbal element as other expletives do since the replacement of the expletive by the postverbal element does not produce a well-formed sentence.

Viewed in this way, we can see that although *there, weather it* and *raising it* all belong to the category of nonreferential elements, they are not the same in terms of the degree of nonreferentiality. *Weather it* and *there* seem to be less nonreferential because they are either underlyingly referential or closely associated with a postverbal argument. *Raising it* seems to be more nonreferential in that it does not have an

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[39]In our case, *raising it* only refers to *it* in *seem*+clause structures and does not include other raising *it* expletives.

[40]A possible solution to this problem is proposed in Shlonsky (1989). There Shlonsky claims that "the question of what bars sentential subjects of certain predicates is related not to their characters as raising predicates but to their semantics: *seem* and *appear* are inherently presentational, non-predicational verbs, perhaps even 'copulas', ..."(1989:34). The difference between a presentational sentence and a predicational sentence is that the subject is the nucleus of focus in the former while the VP is focused in the latter. Therefore Shlonsky suggests solving this problem in terms of semantics or pragmatics rater than syntax. He says, "... the sentential subject of *seem* is not focused, and hence the entire clause can not be interpreted as presentational but only as a predication. A predicational interpretation is made available when *seem* is followed by a predicatinal element, but is rendered unavailable with *seem* alone"(1989:34).

underlying referent nor appear to be associated with the postverbal element. If the degree of nonreferentiality indeed distinguishes these expletives, it may have an impact on acquisition of these structures. The less nonreferential expletives (*weather it* and *there)* should be easier to acquire. This seems to be the case. The expletives that occur in child data in Hyams (1986) are *there* and weather-time *it*. No *raising it* is reported to appear in early child data[41]. In Hilles' (1986) study, the first instance of expletives in the child data of learning English as an L2 is weather-time *it*. The oral data of our study also show that *weather it* and *there* appear in the Level 1 subjects' production, while the only one instance of *raising it* ("It seems that...") in the oral data occurs in Level 4 data. Therefore, since *there* and weather-time *it* are easier to acquire (and may be acquired early), they are more likely to serve as triggers in the unlearning of null arguments in the process of learning English by Chinese learners.

6.3 **Triggering the Unlearning of Null Arguments**

In the present study, we have considered three syntactic structures in English that are assumed to be related to the unlearning of null arguments in the interlanguages of Chinese learners: Infl, the tensed embedded clause and expletives. Our data don't seem to indicate that the acquisition of English verbal inflection is related to the unlearning of null arguments. The acquisition of English Infl has been proved to be

[41]Input does play a role here in accounting for the early occurrence of *there* and *weather it* in the early child production data.

quite difficult for Chinese learners. With regard to the tensed embedded clauses, we have found the effect of the tensed embedded clauses as the triggering domain in the L2 acquisition of English, albeit a weak one. Our data reveal that our subjects are more sensitive to the use of null thematic subjects in the tensed embedded clauses, i.e., they tend to use fewer null subjects in this domain once the structure of the tensed embedded clause is acquired. The consistent use of overt subjects in the tensed embedded domains may be relevant in indicating that English doesn't allow null arguments. However it is not likely that the learners only rely on the data in this domain to unlearn null arguments. Following Lightfoot's (1989,1991) Degree-0 learnability, the learners should find crucial data for setting or resetting a parameter in the unembedded domains. Besides the effect of the tensed embedded clause as the triggering domain associated with the initial setting for the null pronoun parameters may be weakened by the transfer of the L1 setting. As Chinese allows null arguments in both matrix and embedded domains, the L2 learners would be expected to use null arguments in both domains. This is indeed the case. Hence the tensed embedded clause as the triggering domain does not affect L2 acquisition as strongly as it is assumed for L1 acquisition.

It follows that expletives are a major kind of triggering experience indicating the correct setting of the null argument parameters for English. If so, it is not difficult to give a general picture of the course of acquisition for a Chinese learner acquiring English. Because Chinese allows null arguments, the learner will begin with the

hypothesis that English also allows null arguments. This will result in the optional use of null arguments at the initial stages of learning. As there is a parametric connection between expletives and null arguments: these two structures will not coexist in the same language, the occurrence of English *there* in *there* constructions and *it* in weather-time expressions will make him aware of the gap between the L1 Chinese and the L2 English: only English, but not Chinese, has lexical expletives like *there* and *it*. This will lead him to conclude that English does not allow null arguments. From this time on, he will decrease the use of null arguments and will eventually unlearn null arguments in the L2 grammar. During this course of development, the consistent use of overt arguments in the tensed embedded clauses, especially, in the subject positions, may have a function of reconfirming the learner's hypothesis that English does not allow null arguments.

This course of unlearning null arguments by Chinese learners is clearly evidenced in our data. Our lower level subjects are found to accept both overt and null arguments, indicating that they have overgeneralized the optionality of null arguments in the L1 Chinese to the L2 grammar at the initial stages of learning. The subjects at low levels are also found to accept English lexical expletives, especially *there* and weather-time *it*. This means that English lexical expletives are incorporated into their L2 grammars at the early stages. At the same time these subjects also accept null expletives, which result from the influence of the L1 fact that the L1 Chinese uses null expletives. Their progressively more accurate rejection of null expletives

accompanies their decreasing use of null arguments. This may be taken to indicate that the analysis of English expletives *there* and weather-time *it* will lead to a decreasing use of null arguments.

We have been assuming that triggering works instantaneously. But in the real course of acquisition, the unlearning of null arguments may not occur immediately when the L2 learner notices English expletives. A gradual decrease in using null arguments is found in our data. This is expected since a change in the L2 grammar does not occur overnight.

CHAPTER SIX CONCLUSION

The present study has investigated the null argument phenomenon in the L2 acquisition of English by Chinese speakers within UG framework. It has been proposed that the parameterized model of UG (Chomsky 1981) has relevance for L2 acquisition as well as for L1 acquisition. The evidence available from the present study shows that the parameter model can well explain the specific aspects of developmental process in the L2 acquisition of English by Chinese learners. That Chinese learners of English drop subject and object pronouns initially and gradually abandon the drop of these pronouns may be attributed to the resetting of the relevant parameter in UG, that is, resetting the null argument parameters from the L1 Chinese value to the L2 English value. The parameter model of UG can also account for the superficially unrelated phenomena such as the expletives and null arguments in the ILs of Chinese learners of English: lack of overt lexical expletives and null arguments are properties associated with the Chinese setting of the null argument parameters; for Chinese learners the acquisition of English expletives will lead to the unlearning of null arguments.

We have found that Chinese learners use null arguments at the initial stages of interlanguage development. The learners have obviously transferred the L1 setting to the early L2 grammar. They assume that the Chinese setting still holds for the L2

setting, thus carrying over the L1 value to the L2 setting. These results have provided evidence for the indirect-access-of-UG hypothesis or the transfer hypothesis: the initial state in L2 acquisition is that of the L1.

Our learners are found to use null arguments decreasingly, indicating that the null argument parameters can be reset, at least, the property of null arguments can be unlearned. What has caused the change in the interlanguage development? We have assumed three syntactic structures in English to be potential triggers in the unlearning of null arguments: English Infl, the tensed embedded clause and English expletives. The data show that only the acquisition of English expletives are directly and closely related to the resetting of the null argument parameters. Our subjects' judgement of expletives is highly correlated with that of null arguments. It is found that the learning of expletives accompanies the decreasing use of null arguments for Chinese L2 learners of English. The findings thus support Hyam's (1986) expletives-as-triggers hypothesis. Our findings further imply that particular types of expletives, namely, *there* and weather-time *it*, but not *it* in *seem*+clause constructions, are closely related to the unlearning of null arguments. In other words, not all expletives have the same status as the triggering experience. We argue that raising *it* (*it* in *seem*+clause constructions) is different from the other two types of expletives in terms of the degree of nonreferenti-ality. The former is more nonreferential while the latter two are less nonreferential. Besides there exists a possibility that the occurrence of the former in the input to the L2 learners is not as frequent as the latter. Consequently,

the L2 learners may find it easier to acquire *there* and *weather-time it* than *raising it*. It follows that *there* and *weather it* will stand out as triggers in the unlearning of null arguments.

Although the tensed embedded clause as the triggering domain for the null pronoun parameters has an effect in the L2 acquisition of English, since our learners tend to be more sensitive to the use of null subjects in this domains than in the matrix domains, we don't think that the effect is as strong as predicted in L2 acquisition which is strong affected by the L1 setting at the initial stages of L2 grammar development. The triggering data need not be restricted to the embedded domains.

While verbal inflection is proposed to be crucial in setting the null argument parameters in L1 acquisition, our data do not echo this proposal. The scenario is that English verbal inflection seems to be a late-acquired aspect of grammar for Chinese learners. This makes it impossible for Chinese learners to rely on infl to reset the parameters. The data presented here suggest that parameters do play a role in L2 acquisition, but not in exactly the same way as in L1 acquisition.

Several problems, however, are left unsolved and need to be addressed in future studies. Firstly, we have established a general picture of the interlanguage development of Chinese learners by computing overall score, however our findings need to be justified by more carefully designed cross-sectional studies and case studies.

Secondly, the issue of expletives need to be probed in depth in future studies.

Expletives that are investigated in the present study include "there", weather-time "it" and "it" in *seem*+clause constructions. As we know, there are other types of raising "it" expletives in English, such as "it" in the following examples:

(1) It is possible that he will lose the contest.

(2) It seems likely (clear) that he will lose the contest.

(3) It is believed that he is innocent.

Syntactically *it* in each of the above sentences is the same as *it* in *seem*+clause structures: they are all extraposition structures. But the Amalgated Expletive Hypothesis can operate on *it*s in the above sentences but not on *it* in *seem*+clause structures, as we have shown in Chapter 6. Do these *it* expletives behave paralleling *it* in *seem*+clause structures as the triggering experience for Chinese learners of English or do they pattern like *there* and weather-time *it*? Further studies should have a fine-grained analysis of English expletives so as to determine which type of expletives are potential triggers in resetting the relevant parameters.

Thirdly, a number of properties are claimed to be associated withr the DOP, such as null arguments, topic-comment structures and long-distance bound anaphors. The focus of the present study is on the property of null arguments and its relation with expletives. It remains to be known as to whether other clustering properties have the same status as null arguments in the ILs of Chinese learners and whether the

unlearning of null arguments leads to the unlearning of other properties associated with the DOP.

The fourth problem may be more theoretical. An interesting consequence of the parameter model of UG is that some superficially unrelated syntactic aspects are attributed to the setting or resetting of a single parameter. Then a cluster of properties may fall under one single parameter. However not all the properties associated with the parameter have the same status in the interlanguages of L2 learners. It is possible that the L2 learners have acquired some properties of the relevant parameter, but may acquire later or even never acquire other properties of the same parameter. Our data show that Infl is acquired late but the impossibility of null arguments is acquired relatively early by Chinese learners. In cases where some properties are acquired but other properties are not, do we say that the L2 learners have reset the relevant parameters or do we say they have only reset part of the parameters? The issue itself indicates a difference between L1 acquisition and L2 acquisition. Therefore a criterion for what parameter resetting means in L2 acquisition is needed.

The present study approaches the process of L2 acquisition from the UG perspective. The results indicate that UG does play a role in L2 acquisition. While assuming the role of UG in L2 acquisition, we are not playing down the role of other factors in L2 acquisition, such as the general problem-solving cognitive system, form-focused instruction, learner characteristics and affective factors. We believe that L2 acquisition, especially adult L2 acquisition, can best be accounted for by taking all

these factors into consideration. It is possible that some of the factors are more important in L2 acquisition or at certain stages of L2 acquisition. Only when we have precisely determined the role of each of these factors can we have a better and clearer picture of L2 acquisition.

APPENDIX 1

英語水平測試

（60分鐘）

題目要求

1. 仔細閱讀下列各段文章，弄清各段文章意思。然后在所留空格中填上一個合適的詞。請將答案寫在答題紙上。
2. 文章難度不一，越到后越難，請盡可能多做一些題目。
3. 請不要在試題卷上做任何記號。

ENGLISH PROFICIENCY TEST

Instructions

1. Read each passage through carefully. Try to understand what the passage is about. Then look at each blank and fill in the word that has been left out. Each blank must be filled in with ONE word. Write your answer on the ANSWER sheet.

Example:

Passage

"What are the two dogs doing in (a) road?" said Mary. "They (b) fighting," replied Tom. "Can (c) hear them, Mary?" "Yes, I can (d) them easily but I want to (e) them also."

Answer

(a) the

(a) the
(b) are
(c) you
(d) hear
(e) see (look at is wrong because you may only fill each blank with ONE word.)

2. You will find it more and more difficult to complete the passages as you go on. Do as many passages as you can. If you do not know a word try and guess.

3. DO NOT WRITE ANYTHING ON THE QUESTION PAPER.

ENGLISH PROFICIENCY TEST

Fill in each blank with a proper word.

1. There is a tree in Mary's garden. It (1) a big tree. Tom likes (2) climb the tree. One day (3) climbed very high. He looked (4) the garden wall and (5) all the fields around. "I (6) see some cows in the river." Tom called (7) Mary. "What else can (8) see?" asked Mary. "I can (9) two dogs on the road." "(10) are they doing?" asked Mary. "(11) are fighting."

2. Mary and her brother Tom went for a walk. As (12) passed the big house on (13) hill, a dog ran out. It (14) a small brown dog (15) short legs. It was barking (16). Mary was frightened. But Tom (17), "It is only a small (18). Don't be frightened." He picked (19) a stone and threw it (20) the dog. It ran towards Mary (21) tried to bite her. Tom saw (22) big stick and picked (23) up. The dog quickly ran away up (24) hill.

3. Old Mrs. Lucy lived in a small house at (25) end of a village. Her (26) was dead. Her children were (27)-up and lived a (28) way away. So she was (29). No one in the village liked (30). No one came to visit her. (31) day Mrs. Jones came to her (32) and said:"Mrs. Lucy, may (33) come in? I've bought you (34) fruit. I said to myself,'I must (35) Mrs. Lucy some of my (36). She hasn't got any in (37) garden'."

4. Yesterday was Tom's birthday. His mother and father took (38) to the zoo. They went (39) the morning by bus. They took (40) food with them. Tom liked all (41) animals. They went round and (42) the zoo looking at the animals. (43) about 11:30 Tom felt (44) hungry. Then he sat down (45) his

mother and father under (46) tree. It was very cool (47) the tree. They ate (48) big lunch. After lunch they (49) to sleep. Later, a noise (50) them up. Tom felt very happy (51) pleased with his visit (52) the zoo.

5. Tony followed Mary through the dark hole. "We're (53) a tunnel,' Tony said. "Someone (54) cut it in the rock. Where (55) we now?" "This is part (56) an old mine," said Mary. "Maybe it isn't very safe. So (57) must walk carefully here. Stay (58) me." "Yes, but look at (59) rock!" Tony dropped his rope (60) climbed over some big rocks. "(61) on, Mary. Bring your torch (62) here." Mary shone her (63) on the roof of the (64).

6. Mr. Mike was a very old man and he (65) very curious. His eyes (66) still good and his ears were (67) too. He could see a (68) of things and he could (69) a lot of things. He (70) sitting in the porch of (71) daughter's house, and he was talking to (72). She was sweeping the floor inside (73) house. "Look, old Mrs. Jones is (74) into that shop again. It's the fifth (75) today that the old lady (76) gone in there."

7. When Peter was young, he fell ill and lay (77) bed unconscious. Doctors, of course, (78) their best for him and (79) to make him better; but (80) remained unconscious for a long (81). Then he suddenly began to (82) clearly. He described the cause (83) his illness and explained all (84) things that must be done (85) make him better. The doctors (86) as the boy said, and (87) soon began to get better.

8. Then suddenly I had a wonderful idea. Every morning (88) half-past six the milk-man (89) my milk. He was a short man and we were the (90) size. He had a short (91) moustache and wore a white (92) and coat. My idea was (93) borrow his clothes and the (94) of milk. Then I could (95) from the building as the (96). No one watching would know it (97) me.

9. Tun Perak and his companies watched the darkness, (98) until they were sure (99) the Siamese were fast (100). Silently Tun Perak crept (101) on the man on guard, as (102) stood looking in the direction (103) the river. With a (104) thrust he drove his sharp kris (105) the guard's heart from the (106) while his left hand covered (107) man's nose and mouth. The (108) fell to the ground without a sound.

10. Alice put her hand on his arm and looked (109) his face. "What is worrying you, David?""Something (110) silly. It's difficult to explain. I (111) a fool.""But what's (112) ?" she asked with more force. " (113) feel like a man trying (114) remember something. Have I forgotten (115) about the

reactor? Could there (116) any danger there?""An explosion?" (117) asked. "No. An explosion couldn't (118). The reactor isn't even like (119) explosion. It's like a slow fire."

11. "I don't see the point of it," said Micky. (120) were both laughing. They were (121) sure why they were laughing. (122) it was just for fun (123) because they were young. Harold (124) on rowing. The sun was (125). The fields on the opposite bank (126) bright and they could (127) the farmhouse in which they were (128). Its windows reflected the evening (129).

12. The Air Hostess went away and came back with a (130) of whisky. She seemed (131). She had blue eyes. He wished he could be as calm (132) she appeared to be. The plane's (133) grew quieter. For a moment they (134) to have stopped completely. The (135) dropped like a stone, and (136) dived into the grey clouds. He (137) see nothing except a (138) white mist outside the windows. (139) in the plane was talking to each (140). The plane seemed to fall (141) and down.

APPENDIX 2 The Written Tasks

Instructions in Chinese

第一部分：語法判斷

（30分鐘）

題目要求

1.閱讀下列句子，判斷句子是否正確。如果句子正確，請在前面的括號里打“√”；如果句子不正確，請在前面的括號里打“X”。如果不知道或不清楚，則在括號里打“0”。

2.在判斷每個句子的時候，不要拘于語法規則，最好由你自己的語法習慣，以第一感覺做出選擇。

3.注意掌握好時間，請在規定的時間里完成所有的句子。

第二部分：判斷并改錯

題目要求

1.閱讀下列句子，判斷句子是否正確。如果句子正確，請在前面的括號里打“√”；如果句子不正確，請在前面的括號里打“X”。如果不知道或不清楚，在括號前面打“0”。

2.如果句子不正確，請改正錯誤部分。

第三部分：改錯

題目要求

閱讀下列短文，指出并改正錯誤部分。

Part One Grammaticality Judgement

Instructions:

a. Read the following sentences and judge whether these sentences are correct or incorrect. If the sentence is correct, please put a "✓" in the bracket before the sentence. If the sentence is incorrect, please put a "✗" in the bracket. If you don't know or are not sure, put a "0" in the bracket.

b. Your judgement of the sentence should depend on how you feel about the sentence rather on the grammatical analysis of it. Your 'feel' is very important in doing the test.

( ) 1. They live in Canada.
( ) 2. They gave us a warm welcome. They believed we would not forget.
( ) 3. People are afraid may be another rain in a few days.
( ) 4. The lesson should begin at 2 o'clock. Last time, began late. This time, I hope will begin on time.
( ) 5. My uncle works in a large factory.
( ) 6. We are told are only a few birds in the park.
( ) 7. John is going to buy a new car. It must be made in Japan.
( ) 8. John believes he will win the game.
( ) 9. The teacher tells us a story every day.
( ) 10. When he arrived, were already many students in the classroom.
( ) 11. My teacher does not answer my question when I asked him last night.
( ) 12. Mike said hated Alice.
( ) 13. I find there are many birds at the zoo.
( ) 14. Although we got up late, arrived there on time.
( ) 15. The men broke into the bank. They ran away with a lot of money.
( ) 16. He asked where would we go the next day.
( ) 17. My sister was very tired because came home late last night.
( ) 18. I have to go because it is getting dark now.
( ) 19. They walked home yesterday because they had missed the last bus.
( ) 20. That is John. Yesterday I met him at the railway station.
( ) 21. She was a very good nurse at that time.
( ) 22. It was ten past eleven. No one was in the house.
( ) 23. We are all very busy because there will be a test this Saturday.
( ) 24. I am looking for my glasses. I can not remember where I put.
( ) 25. He goes to school by bus every day.
( ) 26. He gave me a telephone call as soon as got home.
( ) 27. He's bought a new car. He really loves.
( ) 28. I don't know why seems that they hate me.
( ) 29. Yesterday it was very cold. We didn't go out.
( ) 30. When we were studying at college, learned French.

( ) 31. There is perhaps a computer in the office.
( ) 32. Although she was tired, she did not stop her work.
( ) 33. John is unable to do the job. He will ask Peter to do it for him.
( ) 34. Is going to rain. Don't go out.
( ) 35. Jimmy has bought a new computer. Is made in America.
( ) 36. Tom and Mary has English classes every week.
( ) 37. It seems that they enjoy the party.
( ) 38. This is really a good film. I think you should go to see.
( ) 39. John reminded Tom somebody was following him.
( ) 40. The dog is looking for food when I got home from school yesterday.
( ) 41. The prisoner stayed in the forest so that the police couldn't find.
( ) 42. I warned John somebody was going to kill him.
( ) 43. Seems that he is good at singing.
( ) 44. The peasants hope they will have a good harvest.
( ) 45. They will not come if is no lesson tonight.
( ) 46. Jim and Tony hope will have a good time in England.
( ) 47. The little boy stopped because he saw a beautiful bird.
( ) 48. In winter, snows a lot in Canada.
( ) 49. I have seen the man. He looks very strong.
( ) 50. He is afraid I won't help him.
( ) 51. Seems that she loves her students very much.
( ) 52. I was glad to meet him in the street because I had not seen him for a long time.
( ) 53. When the child came home, was nobody in the house.
( ) 54. They is doing their homework at nine o'clock last night.
( ) 55. After they had done their homework, they went to the cinema.
( ) 56. I've lost my key. I hope I can find it soon.
( ) 57. What do you think will happen tomorrow?
( ) 58. He work in a hospital in Beijing in 1980.
( ) 59. Mary has a computer. However, she doesn't let me use.
( ) 60. We are doing the experiment. I'm sure we will succeed.
( ) 61. You should tell me if there are not enough chairs.
( ) 62. You will miss the bus if don't hurry.
( ) 63. I believe can do well in the exam.
( ) 64. Are always many visitors in the city.
( ) 65. It seems that she is good at English.
( ) 66. After he had finished his job, went home.
( ) 67. He told me he is listening to the radio all day yesterday.
( ) 68. If you get there late, will be nothing to eat.
( ) 69. I think you should leave now because is too late.
( ) 70. I have seen the girl. Really looks very beautiful.
( ) 71. Usually it rains a lot in spring.

( ) 72. He says seems that Mary is unhappy.
( ) 73. He said he didn't like Mary.
( ) 74. Trees will stop growing if is no sunshine.
( ) 75. I thought this boy was Mary's brother. However, Mary said he was her friend.
( ) 76. They are worried there may be a war in the future.
( ) 77. They thought this girl was my sister. However, I told them was my friend.
( ) 78. She visit her aunt last Sunday.
( ) 79. I don't have the book now because someone has borrowed.
( ) 80. There may be only one class tomorrow afternoon.
( ) 81. We will not go out today because it seems that we are not ready.
( ) 82. She paid a visit on her aunt last winter.
( ) 83. We all think is too cold today.
( ) 84. I guess are many people working in the office now.
( ) 85. The thieves thought nobody would recognize.
( ) 86. When I entered the room, there were already a lot of people.
( ) 87. You study in this school, don't you?
( ) 88. They stopped running because seemed that they were tired.
( ) 89. His brother has died for three years.
( ) 90. I've bought a new coat. I like it very much.
( ) 91. I know there are some big tigers in the forest.
( ) 92. The little girl cried as soon as she saw her father.
( ) 93. There is something wrong with our TV set. My friend is going to repair it tomorrow.
( ) 94. There are usually 50 students in a class.
( ) 95. I've seen the movie. I'm sure you will like it.
( ) 96. May be only one teacher in this village school.
( ) 97. Who do you say that arrived late?
( ) 98. The film is so uninteresting that we will not go to see it.
( ) 99. He thinks it seems that Mary is unhappy.
( ) 100. Is perhaps no life on the moon.
( ) 101. Is eight o'clock in the morning. We have to get up.
( ) 102. They don't know whether John will come next week. However, I know will come.
( ) 103. Little John were reading the book all day yesterday.
( ) 104. I am looking at the pictures on the wall.
( ) 105. She is tallest in her class.
( ) 106. I'm not going to read the novel because I've read it before.
( ) 107. She is sixteen this year, doesn't she?
( ) 108. If he doesn't come, there will be a lot of trouble.
( ) 109. In our surprise, they won the game.
( ) 110. We will die if there is no air.

( ) 111. They have lost their car. They think someone has stolen.
( ) 112. They did not go although they wanted to go.
( ) 113. They will not come to see me if snows tomorrow.
( ) 114. When the children fight, they make a lot of noise.
( ) 115. He must return the book to the library today because he has kept for three months.
( ) 116. His son is fond at playing table tennis.
( ) 117. We went to bed very late last night.
( ) 118. The girl believes in God. Every Sunday goes to church.
( ) 119. Seems that they don't want it.
( ) 120. He told me it was very hot that day.
( ) 121. Peter and his sister was very young when their mother died.
( ) 122. Mrs Smith decided that her husband should cook the dinner.
( ) 123. Their computer is not working. I'll repair for them.
( ) 124. It seems that he works very hard.
( ) 125. I asked them whether Bill would come next week. They told me he would come.
( ) 126. We were glad because would be a good film that night.
( ) 127. She was worried the University would not accept.
( ) 128. When John and Mary were young, they lived in Paris.
( ) 129. I wonder why it seems that Mary is unhappy.
( ) 130. When the soldiers arrived, there was nobody in the village.
( ) 131. We will not visit him if it rains tomorrow.

Part Two Judgement and Error Correction

Instructions

a. Read the following sentences and judge whether these sentences are correct or incorrect. If the sentence is correct, please put a " ✓ " in the bracket before the sentence. If the sentence is incorrect, please put a " ✗ " in the bracket. If you don't know or are not sure, put a "0" in the bracket.

b. Please have to make proper corrections if the sentence is incorrect.

( ) 1. I thought this boy was Mary's brother. However, Mary said he was her friend.
( ) 2. He told me it was not very hot that day.
( ) 3. After he had finished his job, went home.
( ) 4. May be only one teacher in this village school.
( ) 5. I've seen the movie. I'm sure you will like it.
( ) 6. Peter and his sister was very young when their mother died.

( ) 7. You study in this school, don't you?
( ) 8. She paid a visit on her aunt last winter.
( ) 9. The film is so uninteresting that we will not go to see it.
( ) 10. The dog is looking for food when I got home from school yesterday.
( ) 11. After they had done their homework, they went to the cinema.
( ) 12. Is eight o'clock in the morning. We have to get up.
( ) 13. Although she was tired, she did not want to take a rest.
( ) 14. The prisoner stayed in the forest so that the police couldn't find.
( ) 15. Seems that she loves her students very much.
( ) 16. I have seen the man. He looks very strong.
( ) 17. There is something wrong with our TV set. My friend is going to repair it tomorrow.
( ) 18. There may be only one class tomorrow afternoon.
( ) 19. We all think is too cold today.
( ) 20. He must return the book to the library today because he has kept for three months.
( ) 21. I warned John somebody was going to kill him.
( ) 22. He told me he is listening to the radio all day yesterday.
( ) 23. He says seems that Mary is unhappy.
( ) 24. They did not go although they wanted to go.
( ) 25. She was a nurse at that time.
( ) 26. I know there are some big tigers in the forest.
( ) 27. This is really a good film. I think you should go to see.
( ) 28. They stopped running because seemed that they were tired.
( ) 29. When I entered the room, there were already a lot of people.
( ) 30. Although we got up late, arrived there on time.
( ) 31. We are all very busy because there will be a test this Saturday.
( ) 32. I was glad to meet him in the street because I had not seen him for a long time.
( ) 33. Mrs Smith decided that her husband should cook the dinner.
( ) 34. We are doing the experiment. I'm sure we will succeed.
( ) 35. He thinks it seems that Mary is unhappy.
( ) 36. When he arrived, were already many students in the classroom.
( ) 37. Usually it rains a lot in spring.
( ) 38. Trees will stop growing if is no sunshine.
( ) 39. I don't have the book now because someone has borrowed.
( ) 40. Seems that he is good at singing.
( ) 41. The little girl cried as soon as she saw her father.
( ) 42. The men broke into the bank. They ran away with a lot of money.
( ) 43. People are afraid may be another rain in a few days.
( ) 44. My teacher does not answer my question when I asked him last night.
( ) 45. It was ten past eleven. No one was in the house.

( ) 46. I am looking at the pictures on the wall.
( ) 47. I asked them whether Bill would come next week. They told me he would come.
( ) 48. I've bought a new coat. I like it very much.
( ) 49. There is perhaps a computer in the office.
( ) 50. When the children fight, they make a lot of noise.
( ) 51. When the soldiers arrived, there was nobody in the village.
( ) 52. We will die if there is no air.
( ) 53. They is doing their homework at nine o'clock last night.
( ) 54. Is perhaps no life on the moon.
( ) 55. They will not come to see me if snows tomorrow.
( ) 56. Jimmy has bought a new computer. Is made in America.
( ) 57. He's bought a new car. He really loves.
( ) 58. When John and Mary were young, they lived in Paris.
( ) 59. John believes he will live a happy life.
( ) 60. I've lost my key. I hope I can find it soon.
( ) 61. We went to bed very late last night.
( ) 62. The meeting should begin at 8 o'clock. Last time, began late. This time, I hope will begin on time.
( ) 63. We will not visit him if it rains tomorrow.
( ) 64. I wonder why it seems that Mary is unhappy.
( ) 65. I have to go because it is getting dark now.
( ) 66. Jim and Tony hope will have a good time in England.
( ) 67. I guess are many people working in the office now.
( ) 68. I'm not going to read the novel because I've read it before.
( ) 69. You will miss the bus if don't hurry.
( ) 70. He goes to school by bus every day.
( ) 71. John is unable to do the job. He will ask Peter to do it for him.
( ) 72. I don't know why seems that they hate me.
( ) 73. They have lost their car. They think someone has stolen.
( ) 74. They walked home yesterday because they had missed the last bus.
( ) 75. The peasants hope they will have a good harvest.
( ) 76. They thought this girl was my sister. However, I told them was my friend.
( ) 77. The girl believes in God. Every Sunday goes to church.
( ) 78. Yesterday it was very cold. We didn't go out.
( ) 79. When we were studying at college, learned French.
( ) 80. Their computer is not working. I'll repair for them.
( ) 81. We are told are only a few birds in the park.
( ) 82. My aunt works in a large factory.
( ) 83. I believe can do well in the exam.
( ) 84. Tom and Mary has English classes every week.
( ) 85. My sister was very tired because came home late last night.

( ) 86. His mother tells him a story every day.
( ) 87. Mary has a computer. However, she doesn't let me use.
( ) 88. I think you should leave now because is too late.
( ) 89. He asked where would we go the next day.
( ) 90. They don't know whether John will come next week. However, I know will come.
( ) 91. John is going to buy a new car. It must be made in Japan.
( ) 92. In winter, snows a lot in Canada.
( ) 93. I am looking for my glasses. I can not remember where I put.
( ) 94. He work in a hospital in Beijing in 1980.
( ) 95. He gave me a telephone call as soon as got home.
( ) 96. We will not go out today because it seems that we are not ready.
( ) 97. If he doesn't come, there will be a lot of trouble.
( ) 98. She was worried the University would not accept.
( ) 99. I find there are many birds at the zoo.
( )100. It seems that she is good at English.
( )101. That is John. Yesterday I met him at the railway station.
( )102. You should tell me if there are not enough chairs.
( )103. Seems that they don't want it.
( )104. Little John were reading the book all day yesterday.
( )105. She is sixteen this year, doesn't she?
( )106. The little boy stopped because he saw a beautiful bird.
( )107. We were glad because would be a good film that night.
( )108. There are usually 50 students in a class.
( )109. The thieves thought nobody would recognize.
( )110. When the child came home, was nobody in the house.
( )111. John reminded Tom somebody was following him.
( )112. His brother has died for three years.
( )113. They live in China.
( )114. They are worried there may be a war in the future.
( )115. Who do you say that arrived late?
( )116. He is afraid I won't help him.
( )117. Is going to rain. Don't go out.
( )118. It seems that he works very hard.
( )119. What do you think will happen tomorrow?
( )120. If you get there late, will be nothing to eat.
( )121. In our surprise, they won the game.
( )122. She is tallest in her class.
( )123. He said he didn't like Mary.
( )124. She visit her aunt last Sunday.
( )125. It seems that they enjoy the party.
( )126. Mike said hated Alice.

( )127. Are always many visitors in the city.
( )128. His son is fond at playing table tennis.
( )129. I have seen the girl. Really looks very beautiful.
( )130. They gave us a warm welcome. They believed we would not forget.
( )131. They will not come if is no lesson tonight.

Part Three Error Correction

Instructions

Please read the following passages. Point out errors if any and make proper corrections.

1. Mary is my classmate. Live near the school. Are three people in her family: her mother, her father and herself. She is living together with her mother. Her father have been studying in the United States. Often writes to her. Yesterday, I met her in the street. She was shopping with her mother. She tells me her father was coming back soon. She said would bring her a lot of beautiful clothes and interesting books.

2. Yesterday was Sunday. Was very hot. Tom got up very early because his parents promised to take him to the zoo. They went in the morning by bus. Took some food with them. When they arrive at the zoo, found were already a lot of people.

Tom saw a lot of animals at the zoo: tigers, bears, monkeys, lions, and so on. He liked all these animals, but seemed that loved the monkeys most of all. He played with the monkeys for a long time. At noon, he was tired and hungry, so sit down with his parents under a tree. Was very cool under the tree. They had a wonderful lunch.

On the way home, Tom met his good friend John. He is walking toward the school, because had left his English textbook in the classroom. Tom said to his parents would like to go with John. They agreed. So Tom went back to the school with him. After that, went home.

Tom were glad had had a good time that day.

3. Kathy and Anna is neighbours. Now are talking about the girl who has just moved into the apartment building.

"Do you know her?"

"No, don't know her. But I think have seen before."

"Oh, where did you see?"

"Let me think. Um.... Yes, last week, I sees on TV."

"Really? Is she an actress?"

"No, seems that she is a model."

4. Last Saturday, I visited the famous university. When I started off, was raining, but stopped before I arrived. Seemed that the university is not big because the campus was small. However, is about five thousand students and two hundred teachers. I visited the university library. Seemed that not many students were studying there. The librarian told me was a holiday

I had lunch at the student canteen. At the canteen met an old classmate. Said hello to him, but seemed that he don't recognize. I reminded that we studied together at the same school when we are young. He suddenly remembered. He said had not seen for ten years. We talked for a while. Then he showed me around the campus. He told me has been teaching in the university for two years. From his smile, could see he enjoyed very much.

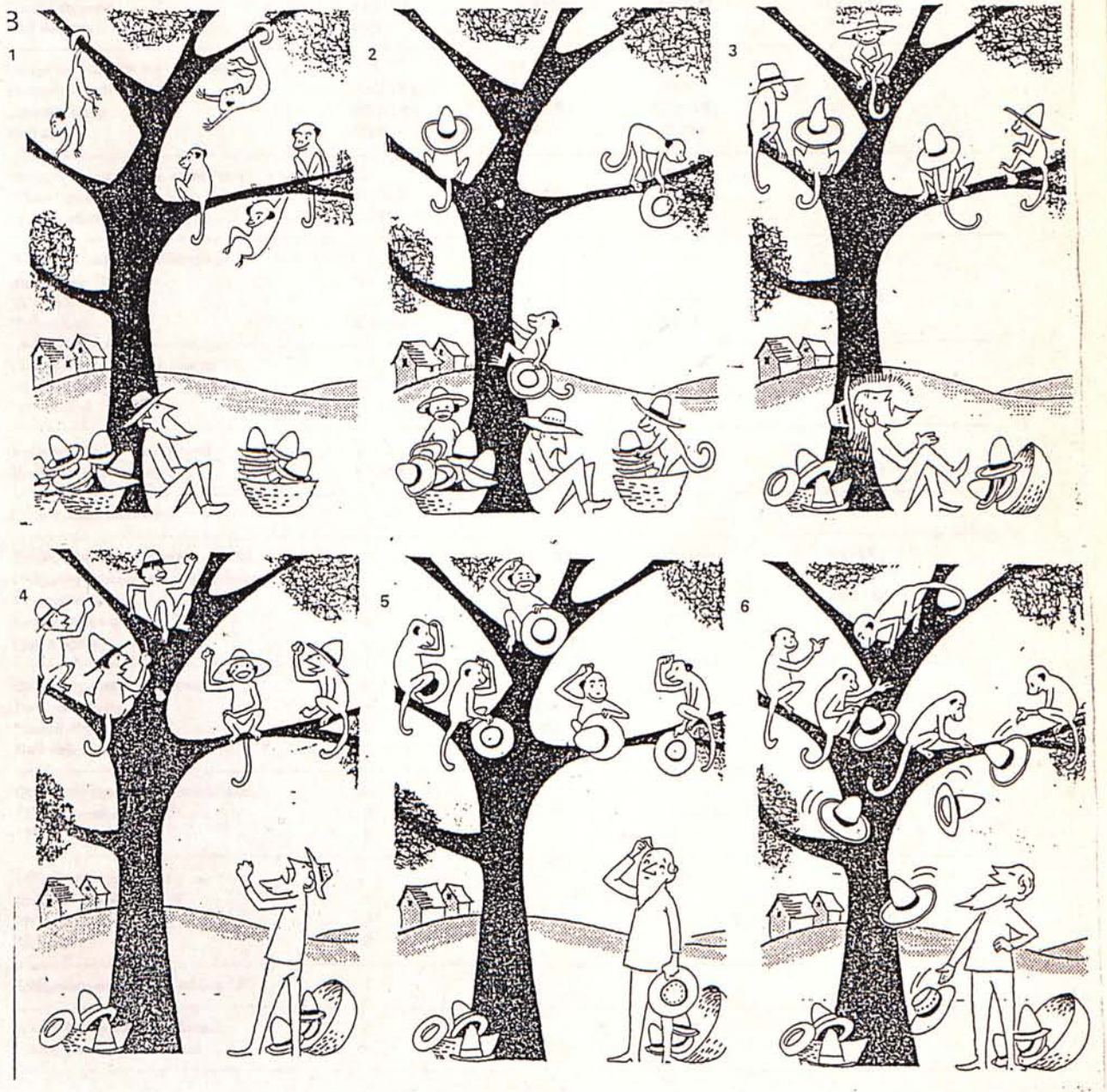
APPENDIX 3 STIMULI IN THE ORAL TASK

A. Questions and Answers

1) What did you do last night?
2) What do your classmates usually do after class?
3) Can you say something about your family?
4) What's the weather like today? (How about yesterday?)

B. Picture Description

Describe the following pictures in English by telling a coherent story



Appendix 4

A Table of the Relevant Structures Produced in the Oral Task

	Level 1	Level 2	Level 3	Level 4
N=	10	10	10	10
Total number of tensed clauses produced	210	278	294	388
I. In Matrix Clauses				
Obligatory contexts for overt subjects	210	251	241	298
Pronoun subjects	112(53%)	129(51%)	137(57%)	185(62%)
Lexical subjects	90(43%)	108(43%)	97(40%)	110(37%)
Null subjects	8(4%)	14(6%)	7(3%)	3(1%)
Obligatory contexts for overt objects	134	119	110	154
Pronoun objects	18(13%)	15(13%)	5(5%)	21(14%)
Lexical objects	109(82%)	101(85%)	103(93%)	133(86%)
Null objects	7(5%)	3(2%)	2(2%)	0
Obligatory contexts for overt "there"	21	20	18	21
"There" produced	16(76%)	17(85%)	16(89%)	21(100%)
"There" omitted	5(24%)	3(15%)	2(11%)	0
Obligatory contexts for temporal-atmospheric "it"	13	16	8	12
"It" produced	7(54%)	10(63%)	5(63%)	12(100%)
"It" omitted	6(46%)	6(37%)	3(37%)	0
Obligatory contexts for raising "it"	0	0	0	1
"It" produced	0	0	0	1
"It" omitted	0	0	0	0
Verbs that should be inflected	201	233	246	304
Verbs that are not inflected	81(40%)	94(40%)	83(34%)	59(19%)
II. In Tensed Embedded				
Tensed embedded clauses produced	0	27(9.7%)	53(19%)	90(26%)
Obligatory contexts for overt subjects	0	26	51	67
Pronoun subjects	0	9(35%)	22(43%)	30(45%)
Lexical subjects	0	17(65%)	29(57%)	37(55%)
Null subjects	0	0	0	0
Obligatory contexts for overt objects	0	11	11	23
Pronoun objects	0	2(18%)	0	0
Lexical objects	0	9(82%)	11(100%)	23(100%)
Null objects	0	0	0	0
Obligatory contexts for overt "there"	0	0	2	4
"There" produced	0	0	2(100%)	4(100%)
"There" omitted	0	0	0	0
Obligatory contexts for temporal-atmospheric "it"	0	0	0	10
"It" produced	0	0	0	10(100%)
"It" omitted	0	0	0	0
Obligatory contexts for raising "it"	0	0	0	0
Verbs that should be inflected	0	24	46	72
Verbs that are not inflected	0	14(58%)	14(30%)	22(31%)

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