

AN ASMMETRY IN THE ACQUISITION OF ENGLISH DEFINITE AND INDEFINITE ARTICLES BY CHINESE SPEAKERS OF L2 ENGLISH*

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ABSTRACT

This study investigates the acquisition of L2 English articles in relation to two hypotheses, namely the *Full Transfer/Full Access (FT/FA) Hypothesis* of Schwartz and Sprouse (1994, 1996) and the *Interpretability Hypothesis* (Tsimpli and Dimitrakopoulou, 2007). Eighty-eight adult L1 speakers of Chinese (a language that lacks articles) of different English proficiency levels were asked to interpret articles in various contexts in two elicitation tasks. Their responses were compared with those of fifteen native English speakers. Contrary to predictions made by the *FT/FA Hypothesis*, which stipulates that speakers of article-less L1s have access to UG and will converge to the target grammatical representations, learners in the current study overwhelmingly preferred the definite article in all contexts, including in the indefinite contexts. It is argued that the asymmetrical treatment of definite and indefinite articles in learners' interlanguage can be accounted for following the *Interpretability Hypothesis*. In particular, we propose that the observed L2 behaviour results from an inaccessibility of an uninterpretable syntactic [u-Num] feature, which is subject to a critical period. The L2 interlanguage grammar involves the use of alternative resources made available by UG.

Key words: Definite, Indefinite, uninterpretable features, L1 transfer

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1. INTRODUCTION

It has been widely reported in the second language (L2) research literature that articles appear to be persistently difficult for non-native speakers of English to acquire. The difficulties L2 speakers of English have include omission errors (omission of articles in contexts where articles are obligatory), oversupply errors (articles are used in contexts where no article is required), overgeneralisation errors (consistent use of the definite article in contexts where the indefinite article should be used, and vice versa), and fluctuation errors (free use of articles to encode either definiteness or specificity). These phenomena have been the focus of numerous studies in which attempts are made to offer explanations as to why such difficulties persist (Robertson 2000; White 2003; Goad and White 2004, 2006, 2008; Ionin et al. 2004, 2008a, 2008b; Lardiere 2004; Hawkins et al. 2006; Snape, Leung and Ting 2006, Trenkic 2008; Snape 2009). The present study reports on some interesting asymmetries found in the way adult speakers of L1 Chinese (an article-less language) interpret definite and indefinite articles in L2 English. By testing against two UG-based second language acquisition (SLA) hypotheses, namely the *Full Transfer/Full Access (FT/FA) Hypothesis* of Schwartz and Sprouse (1994, 1996) and the *Interpretability Hypothesis* of Tsimpli and Dimitrakopoulou (2007), the question that will be specially addressed is whether it can be maintained that such asymmetries at the end-state grammar are an effect of adult L2 learners having difficulty in establishing full native-like syntactic representations for English or whether the divergence between non-native and native speakers of the target language is the effect of difficulties with non-syntactic aspects of L2 acquisition.

The first position to be considered is the *Full Transfer/Full Access (FT/FA) Hypothesis* of Schwartz and Sprouse (1994, 1996). The hypothesis maintains that the L1 end-state grammar constitutes the initial state in L2 acquisition. UG-guided restructuring takes place when learners encounter L2 data, which do not match the properties determined by their initial state grammar. Convergence on grammars like those of native speakers is possible, although not guaranteed. Another more recent proposal accounting for adult language

acquisition phenomena within the generative framework is the *Interpretability Hypothesis* of Tsimpli and Dimitrakopoulou (2007). The hypothesis stipulates that while interpretable syntactic features together with computational devices (e.g. feature composition and feature strength) and other aspects of UG remain available for subsequent grammar building, uninterpretable syntactic features not instantiated during primary language acquisition become unavailable in subsequent language acquisition. According to this hypothesis, the reason why uninterpretable syntactic features are problematic for adult second language learners is because these uninterpretable syntactic features are subject to maturation and are available only during a critical period in which all features are available. Beyond this period, interpretable features continue to be operative but uninterpretable features become inaccessible to adult learners.

The article is organized as follows. Sections 2 and 3 present a syntactic analysis of Nominal Phrases (NPs) and review the two SLA theories, respectively. In Section, we compare the syntactic differences between English and Chinese in relation to Nominal Phrases (NPs). Section 3 details the two competing generative theories in question. Sections 4 and 5 report the study and its results. Section 6 offers explanations for what is observed in the study. Section 7 concludes the study and suggests alternative avenues for further research.

2. THE SYNTAX OF *NOMINAL PHRASES* IN ENGLISH AND CHINESE

2.1 The Distribution and Interpretation of English Articles

Various theories have been proposed in the literature regarding the internal structure of nominal phrases in English (Abney 1987; Lyons 1999; Radford, 1997, 2006). We follow Abney (1987), Radford (1997, 2006) and Kong (2016) in assuming that nominal phrases are a projection of a functional category called *determiner* or *D*. In particular, all noun-related morphology such as

articles (*the, a/an, and ∅* (zero)), pronouns (*my, his, her*), and demonstratives (*this, that*) are the subcategories of *D* under the *Determiner Phrase* or *DP hypothesis* (Abney 1987). Given the scope of the present study, we focus on the articles system of English only.

It is generally agreed that English articles can have different distributions;¹ some of them are overlapping. Almost all types of nouns can be used with the definite article *the*: count nouns in both singular and plural forms (e.g. *chair* in 1a), mass nouns (e.g. *furniture* in 1b), and abstract nouns (e.g. *understanding* in 1c):

- (1) a. I bought *the* chair/*the* chairs (count)
b. Sam delivered *the* furniture to us (mass)
c. *The* understanding we reached was consequential (abstract)

On the other hand, only singular count nouns and abstract nouns can be used with the indefinite article *a/an*; plural count nouns and almost all mass nouns (except for when they can be interpreted as singular count nouns: *Tom bought a bread with a cheesy flavour*) cannot be used with the indefinite article *a/an*:

- (2) a. I bought a chair/*a chairs (count)
b. We reached an understanding (abstract)
c. *Sam delivered a furniture (mass)

¹ In addition to distributional variations, the English articles also have different interpretations. J. Hawkins (1978) and Lyons (1999) each describe in detail the types of articles one may find in a language like English. Bickerton (1981) proposes a semantic wheel of features that manages to capture some uses of articles. Various studies, Huebner (1985), Parrish (1987), Murphy (1997), Lyons (1999), R. Hawkins (2001), and Ionin et al. (2004, 2008a, 2008b), have set out to test such proposals with the goal of identifying different interpretations of articles in English. Ionin et al. (2004) details how specificity is operationalized. A decision has to be made about what grammatical properties to focus regarding theoretical assumption, as always in acquisition research. We only focus on the definite/indefinite contrast of articles in this study.

Finally, plural count nouns, mass nouns and abstract nouns can be used with the \emptyset article, but singular count nouns cannot:

- (3) a. I bought \emptyset chairs/* \emptyset chair (count)
- b. Sam delivered \emptyset furniture to us (mass)
- c. The paper lacks \emptyset understanding of the literature (abstract)

Radford (1997, 2006), following Abney's *DP hypothesis* (1987), proposes a unified characterization of the syntax of noun phrases in English. According to Radford, definite noun phrases and indefinite noun phrases, including bare indefinite noun phrases, are all *D*P's headed by a *D* in English. Following Abney (1987) and Radford (1997, 2006), Kong (2016) argues that a bare noun like *Apples* in *Apples are delicious* is not taken as an *N* but as a *DP* headed by a null *D* or \emptyset . To support the *DP Unified* account, Kong, quoting Radford, provides evidence both on semantic and syntactic grounds. For example, in 4 and 5,

- (4) a. *Eggs* are fattening.
- b. *Bacon* is fattening.
- (5) a. I had *eggs* for breakfast.
- b. I had *bacon* for breakfast. (as 35a.b and 36a.b in Radford 1997: 96 and 1 and 2 in Kong 2016: 173)

Following Radford, Kong interprets *eggs* and *bacon* in 4 as representing the whole class of eggs and bacon in general, while their counterparts in 5 as representing an existential or partitive interpretation meaning some eggs or some bacon. Therefore, Kong, in support of Radford, argues that semantic properties of \emptyset determining the generic or existential quantification of bare nominals can be established since bare nominals like *eggs* and *bacon* are *D*P's headed by a null generic or existential determiner \emptyset . Kong, following Radford, also provides syntactic evidence in favour of the claim that \emptyset carries person properties:

- (6) a. We syntacticians take ourselves/*yourselves/*themselves too seriously, don't *we*/**you*/**they*?
b. You syntacticians take yourselves/*ourselves /*themselves too seriously, don't *you*/**we*/**they*?
c. Syntacticians take themselves/*ourselves/* yourselves too seriously, don't *they*/**we*/**you*? (as 37a.b.c in Radford 1997: 96 and 3 in Kong 2016:174)

Following Chomsky (1981) and Radford (1997, 2006), Kong (2016) argues that anaphors must be bound within their governing domain. Therefore, the first person plural reflexive *ourselves* in 6a must be bound by *We syntacticians* which in turn can only be tagged by the first person plural pronoun *we*; likewise, the second person plural reflexive *yourselves* in 6b must be bound by *you syntacticians* which in turn is tagged by the second person plural pronoun *you*; finally, the third person plural reflexive *themselves* in 6c must be bound by the bare nominal *syntacticians* which is tagged by the third person plural pronoun *they*. In line with Abney (1987), Radford (1997, 2006), and Kong (2016), we assume in this study that bare nominals are *D*P's headed by a null determiner in English, and all nominal and pronominal arguments in English are projections of an overt or covert *D* constituent.

Following Chierchia (1998), Hawkins (2005), Hawkins et al. (2006) and Radford (2000), we further assume that count nouns in languages like English have an uninterpretable number feature [*u*-Num]. According to the *Nominal Mapping Parameter* (Chierchia 1998), languages like English and Chinese have different parameter values or different structures. English takes the [+argument, +predicate] setting or form and NPs can merge directly in argument (participants which are core elements in the meaning of an event) positions in syntactic derivations with or without further modification. Chinese takes the [+argument] setting or form and does not require licensing (formulating requirement) as all nouns are mass or kinds. Mass nouns and count plural nouns are potentially [+argument] in English and need not be modified (i.e. licensed), but count singular nouns are predicative [+predicate] in English and need to be licensed by determiner elements like articles.

Radford (2000) argues that number is an uninterpretable feature of nouns in English. Radford bases his argument on the *noun gapping* structures such as ‘*She tried on both dresses, but the blue ~~dress~~ was too big*’ (Radford 2000: 27). The noun *dress* in the second clause is gapped. According to Radford, “clearly gapping cannot require [Phonetic Form] PF-identity, since the gapped noun [*dress*] is the singular form *dress* whereas its antecedent is the plural form *dresses*; if gapping requires identity of [Logical Form] LF-interpretable features, it follows that the number feature carried by *dress/dresses* in adult English must be uninterpretable [*u-Num*]” (Radford 2000: 27). As far as the licensing of count nouns is concerned, we assume that, following Chomsky (1998), the feature [+definite] is interpretable and carries an interpretable number feature. In an NP such as *the girl*, the article is selected from the lexical array and enters the derivation carrying the interpretable feature [+definite]. The interpretable number feature of the article checks and values the uninterpretable feature of the noun *girl* after the two merge via Concord and enter into an Agreement relation. Once the noun *girl* has been valued, the uninterpretable feature is deleted as it is uninterpretable at LF. Furthermore, we follow Hawkins et al (2006) in arguing that learners of languages without articles will have trouble acquiring the syntactic [*u-Num*] feature as it has not been activated in the primary grammar. The existence of the uninterpretable number feature [*u-Num*] in English and its absence in Chinese will have an implication on the acquisition of L2 English articles by adult Chinese speakers. We return to this in Section 6.

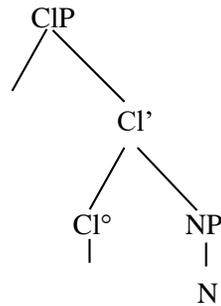
2.2 Nominal Phrase (NP) in Chinese

In contrast to English, definite and indefinite articles do not exist in Chinese (Li and Thompson 1981).² However, the absence of definite and

² Although some researchers (Huang 1999; Chen 2003, 2004) argue that certain Chinese determiners such as *zhege* (this), *nage* (that) and the numeral *yi* (one) have started to be used as definite and indefinite articles equivalent to the English *the* and *a* by some Chinese speakers, the fact that the range in which these determiners can function as articles is limited suggests that they do not have the same functions as the English articles (Partee 2006). For a semantic

indefinite articles in Chinese does not mean noun phrases cannot be interpreted as definite or indefinite. Although it is widely accepted that English noun phrases are DPs, the syntactic representation of Chinese noun phrases is still a matter of debate among researchers. The two prevailing views are the *DP analysis* camp (e.g. Li 1997; Pan 1999; Tang 1999) and the *No DP analysis* camp (e.g. Chierchia 1998; Cheng and Sybesma 1999). In this research, we follow the *No DP analysis* of Cheng and Sybesma (1999).

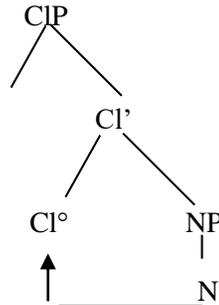
Adopting the *No DP analysis* of Cheng and Sybesma (1999), Kong (2016) assumes that Chinese nominals are *Numeral* projections rather than *DP* projections. Cheng and Sybesma (1999) observe that overt number morphology (e.g. -s) is used to denote plurality in English, whereas in Chinese, classifiers are used to function as Numeral instead. This follows Li and Thompson's (1981) that all types of nouns require classifiers, and classifiers as functional category cannot occur alone in Chinese. Following Cheng and Sybesma (1999), Kong (2016) argues that the so-called bare nouns are in fact classifiers which function just like *D* and are embedded in a projection to perform the deictic discourse function. That is to say, a bare noun in Chinese is minimally a *Classifier Phrase (CIP)* as shown in 11 (as 5 in Kong 2016: 176):



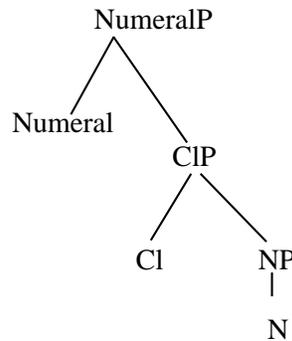
In line with Cheng and Sybesma's proposal, Kong considers that definite noun phrases are *CIPs* with either *CI'* or *CI°* for definite interpretation in

analysis of other article-less languages such as Slovenian and Serbo-Croatian, see Boskovic (2008, 2009).

Chinese, whereas indefinite noun phrases are *NumeralPs* with *Numeral* for indefinite interpretation. An *N-to-Cl* movement of Cheng and Sybesma has been adopted by Kong to account for bare noun phrases in Chinese as shown in 12 (as 6a in Kong 2016: 176):



Kong argues that in the absence of an overt classifier, the *CI°* encodes definiteness or specificity. But when indefinite noun phrases are present, they are treated as *NumeralPs*, as in 13 (as 6b in Kong 2016: 177):



Since Chinese is an article-less language, an *N-to-Cl* movement is a necessary step to change an *NP* into an individual. This is achieved through movement for the *N* to be in *Cl* position for it to receive a definiteness status. When no overt classifier is present, definite bare nouns can be interpreted as either singular or plural, as in 13a:

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- (13) a. Gou jintian tebei tinghua.
Dog today very obedient

The dog /dogs was/were very obedient today (as 2b Cheng and Sybesma 1999). Therefore, in the spirit of Cheng and Sybesma and Kong, the assumption that this research adopts is that nominals in Chinese are not *DPs*. Instead, definite noun phrases are *CIPs* whereas indefinite noun phrases are *NumeralPs*.

The focus of attention up to now has been on articles of the two languages; articles exist in English but not in Chinese. However, it should be noted that although Chinese lacks articles, it has a subset of determiners called demonstratives, which also exist in English. Both English and Chinese have a set of demonstratives, which indicates definiteness and specificity in a deictic sense. For example, the equivalents of the English demonstratives *this* (girl) and *that* (girl) are *zhe* (*nan hai* = boy) and *na* (*nan hai* = boy) in Chinese. *This* and *zhe* modify entities close to the speaker, whereas *that* and *na* refer to entities distant from the speaker. Some researchers (Hawkins 1991, 2004; Lyons 1999; Robertson 2000; Roberts 2002; Wolter 2006; Kong 2016) have argued that the English article *the* and the demonstrative *that* can be used almost interchangeably in many contexts, as in 14:

- (14) A dog was sitting next to a window as I was walking by. As I was leaving, *the/that* dog started barking at me. (as (2) in Ionin et al., 2012))

In the case of Chinese, the demonstratives *zhe* (this) and *na* (that) can be interpreted as the equivalents of the English definite article *the* and the demonstratives *this* and *that*:

- (15) a. wo xiang jiang ye-ge xiaohua. zhe-ge xiaohua fasheng zai zuo tian.
I want talk one-CL joke this-CL joke happen in last day
'I am going to tell you a joke. *This/The* joke was about something happened yesterday.'

- b. zuo tian wo kanjian yi-ge xiaohai. Na xiaohai hen ke-ai.
last day I see one-CL child that child very cute
'I saw a child yesterday. *That/The* child was very cute.'

Such definiteness effects of Chinese demonstratives have led some researchers to argue that they are beginning to take on some of the functions of the definite article in English (Li and Thompson 1981; Huang 1999; Chen 2003, 2004).³

So far, the main points made in this section concerning noun phrases in the two languages are the following. First, English is a *DP* projection language while Chinese is a *Numeral* projection language. Second, articles (definite and indefinite) exist in English but not in Chinese; the [*u-Num*] feature exists in English but not in Chinese. Third, definiteness is realized in *D* in English but [+definite] is realized in *CLP*, while [-definite] is realized in *NumeralP* in Chinese. Fourth, both English and Chinese have two different morphemes to denote deictic specificity in relation to the speaker, whether close or further away from the speaker (*this/that* and *zhe/na*). The differences between the two languages on the noun phrase projection on the one hand, and the similarities on the syntactic and morphological distributions of demonstratives in the two

³ Although Chinese demonstratives are treated as instances of *D* by researchers like Tang (1990) and Huang et al. (2009), other researchers tend to treat Chinese demonstratives as locative elements, not necessarily occurring in *D*. Citing Berstein (1997), Cheng and Sybesma (1999) argue that demonstratives in languages like Arabic and Greek can co-occur with articles. Whereas in languages like Spanish, Swedish and Norwegian, the demonstratives are the same as the words for location (here and there), denoting locational use. It seems that demonstratives in Chinese can have locative elements:

you	yi	ge	xiao	hai	zai	zhe/ na .
there	one	CL	small	child	in	here/there

A child is here/there.

Hence, the position in which demonstratives occupy is as controversial as the NP is in Chinese. The focus of the current research is on L2 English articles; we will leave Chinese demonstratives as topics for future research.

languages on the other, will have an influence on the interpretation of articles in L2 English. We return to this in Section 6.

3. TWO THEORIES IN SLA

Several influential theories of general syntactic development ((e.g. the *Minimal Tress Hypothesis* of Vainikka and Young-Scholten (1994, 1996), the *Valueless Features Hypothesis* of Eubank (1993, 1994), the *Full Transfer/Full Access (FT/FA) Hypothesis* of Schwartz and Sprouse (1994, 1996), and the *Interpretability Hypothesis* of Tsimpli and Dimitrakopoulou (2007)) have been developed to account for the developmental problems in second language acquisition. All of them assume that the principles of Universal Grammar constrain the nature of L2 grammar building. But they differ in their assumptions about the point from which L2 learners start to build grammars and what sort of characteristics the final state mental grammars of L2 learners might have. In this section, we consider two of these theories, namely, the *Full Transfer/Full Access (FT/FA) Hypothesis* (Schwartz and Sprouse 1994, 1996), and the *Interpretability Hypothesis* (Tsimpli and Dimitrakopoulou 2007), and pursue the consequences of adopting these two hypotheses.

3.1 The *Full Transfer/Full Access (FT/FA) Hypothesis* of Schwartz and Sprouse (1994, 1996)

The *Full Transfer/Full Access (FT/FA) Hypothesis* maintains that all the lexical and functional categories relevant to the construction of a mental grammar for the target language are potentially available to the L2 learner. The transfer of syntactic properties from the L1 occurs when the learner has insufficient time to experience enough samples of L2 data from the input to establish the relevant categories. In other words, divergence occurs for reasons not associated with UG, but in relation to unavailable cues in the input; the L2 learner relies on the syntax of the L1 to construct sentences in the absence of the relevant input of the L2. The hypothesis argues that the set of grammatical

representations determined by the L1 constitutes the L2 initial-state grammar. In the process of L2 acquisition, the learner will build new syntactic representations when there are aspects of the L2 input which cannot be generated by the initial-state grammar, because they do not exist in L1. All the options made available by UG are fully accessible for the restructuring of syntactic representations. Yuan (1997) provides some empirical evidence in support of the FT/FA. According to Yuan, Chinese speakers in his study initially transfer the topic-prominent properties of Chinese into their L2 English grammar, but can reset the *agreement on Infl* parameter based on positive evidence from the input in English. Yuan observes that although English Infl has features like [+/- past] and [1, 2, 3 person], these features are weak and therefore invisible at the Phonetic Form (PF); thematic verbs in English do not raise overtly to Infl, but must do so at the Logical Form (LF) level where expressions generated by the syntax are assigned interpretations. By contrast, the total absence of tense and agreement morphemes in Chinese means verbs raise to Infl neither at PF nor at LF. Yuan's line of argument is consistent with the view of the FT/FA that features of functional categories in the L2 which differ from those in the L1 are in principle resettable, arguing against the view that there is a syntactic critical period in SLA.

3.2 The *Interpretability Hypothesis* (Tsimpli and Dimitrakopoulou 2007)

The *Interpretability Hypothesis* of Tsimpli and Dimitrakopoulou (2007) is a refined version of the *Partial Access to UG Hypothesis* of Tsimpli and Roussou (1991), which stipulates that while principles of UG like the Empty Category Principle and the Binding Principle remain operative to constrain grammar building in adult L2 acquisition, critical-period-associated functional category features become inaccessible to adult L2 learners. The *Interpretability Hypothesis* further categorises syntactic features into interpretable and uninterpretable. According to the hypothesis, uninterpretable functional features (e.g. Case and Agreement features, [wh] on C (complementizer), +/-past on T (Tense) etc.) absent from the L1 are not accessible in subsequent language acquisition. Interpretable syntactic features,

however, remain permanently available for the construction of new lexical items. The *Interpretability Hypothesis*, in essence, is in a similar vein to another UG-based hypothesis called the *Representational Deficit Hypothesis* of Hawkins (2005). The *Representational Deficit Hypothesis* argues that parameterized uninterpretable features not present in the L1 are no longer accessible following a critical period for subsequent acquisition. That is to say, L2 learners' grammar is selectively impaired because uninterpretable features are inaccessible in adult L2 acquisition but interpretable features are.

3.3 Predictions

Different accounts of L2 English article acquisition difficulty are presented (Robertson 2000; White 2003; Goad and White 2004, 2006, 2008; Ionin et al. 2004, 2008a, 2008b; Lardiere 2004; Hawkins et al. 2006; Snape, Leung and Ting 2006, Trenkic 2008; Snape 2009), and yet interest in the acquisition of articles remains as strong and relevant as ever. In the present study, we join the current debate about what constitutes article difficulty by investigating the acquisition of English articles by three groups of adult Chinese speakers of L2 English. In particular, we test predictions made by the *Full Transfer/Full Access (FT/FA) Hypothesis* (Schwartz and Sprouse 1994, 1996) and the *Interpretability Hypothesis* (Tsimpli and Dimitrakopoulou 2007). With respect to the acquisition of articles, different predictions can be made following the two hypotheses. The *FT/FA Hypothesis* holds the view that both UG and the L1 grammar are the major influences on the form and functioning of the L2 grammar, and that restructuring takes place in response to L2 input. The hypothesis predicts that syntactic transfer from L1 is impossible since Chinese lacks articles. It also predicts that fluctuation is a temporary characteristic of L2 development. But with longer exposure to the target language and on the basis of the L2 input they hear or read, L2 learners will fix the appropriate values, including the uninterpretable syntactic feature [*u-Num*], rendering the ultimate attainment of the L2 English articles possible. The basic insight of the *Interpretability Hypothesis* is that uninterpretable features absent from the L1 are inaccessible in subsequent language

acquisition; different predictions from the *FT/FA Hypothesis* are to be made. One prediction made by the *Interpretability Hypothesis* is that the uninterpretable syntactic feature [*u*-Num] associated with articles in English is inaccessible to Chinese speakers for the reason that it is not selected within the critical period. Chinese speakers may not have acquired the syntactic licensing of count singular nouns in English in their interlanguage grammars; however, they will resort to other options provided by UG (e.g. interpretable and uninterpretable syntactic features already selected during L1 acquisition during the critical period) as well as computational devices (e.g. feature composition and feature strength) and their associated operating principles for L2 grammar building. Since the *Interpretability Hypothesis* argues for a permanent loss of capacity to acquire uninterpretable features following a critical period, what appears to be the acquisition of English articles is in fact the use of the UG options to approximate the target grammar.

It will be shown that, contrary to the *Full Transfer/Full Access (FT/FA) Hypothesis* which predicts ultimate attainment in L2 acquisition, the advanced learners' interlanguage grammars show a preference for the definite article *the* over the indefinite article *a*. We interpret the results as consistent with the claim that high proficiency speakers of L2 English have failed to access some uninterpretable syntactic features. In particular, an uninterpretable syntactic number feature⁴ or [*u*-Num] is inaccessible to adult Chinese speakers of L2 English. What appears to be apparent target-like L2 performance may in fact be superficial; their underlying grammatical representations are not the same as native speakers', supporting the *Interpretability Hypothesis*.

⁴ According to Pesetsky and Torrego (2001), uninterpretable syntactic features are the counterparts of interpretable features, which are relevant to syntactic computation and whose meaning of syntactic expressions such as [singular] or [3rd person] are determined by the semantic component. Although uninterpretable syntactic features are not usable by the semantic component, they may have effects on the morpho-phonological realization of syntactic expressions. For example, *be* in the past tense can take the forms (*he*) **was**, (*you*) **were**, (*we*) **were**. The person feature underlies *he*, *you*, and *we* is interpretable and *he*, *you*, and *we* mean something semantically different, whereas *was* and *were* play no role in semantic interpretation since the contrast between them is semantically irrelevant.

4. THE STUDY

4.1 Participants

Details of the participants who took part in the study are given in Table 1. A cohort of 98 Chinese speakers of L2 English participated in the Oxford Placement Test (Allan 1992) to determine their proficiency. The test has been widely used in empirical L2 English studies. Two low scoring participants and eight high scoring participants were eliminated after the placement test and the remaining 88 participants were placed in three proficiency groups on the basis of scores achieved on the placement test: the higher-elementary/G1 (scores in the range 65 to 72 out of 100), the intermediate/G2 (scores in the range 73 to 80 out of 100), and the advanced/G3 (scores in the range 81 to 88 out of 100). The 88 participants all came from a university in central Taiwan and their exposure to English was predominately classroom based, ranging from two years to twelve years. A group of fifteen native speakers of English (N1) was invited to act as controls for the reliability and validity of the test instruments.

Table 1. Participants' language background and age

Group	English proficiency range (mean)	Age range	Years of classroom English (mean)
G1 (n = 30)	65-72 (68.7)	18-22	2-6 (3.8)
G2 (n = 28)	73-80 (76.3)	17-23	5-10 (6.7)
G3 (n = 30)	81-88 (85.2)	18-24	6-12 (10.3)
N1 (n = 15)	–	20-56	–

4.2 The test

Learners were asked to complete two tasks: a forced-choice elicitation task (Task 1), a modified version of Ionin et al. (2004) and Kong (2016), and a less-controlled elicitation task (Task 2). The forced-choice elicitation task

consisted of 50 short dialogues in English involving three conversational turns in which an article is missing in a target sentence. The learners were given a choice of four articles: *a*, *an*, *the*, and \emptyset . Out of the 50 dialogue items, forty were relevant to the present study and they were contexts priming [+definite] (20 items) and [-definite] (20 items) interpretations; all the nouns used were singular countable.⁵ The other 10 dialogues consisted of distractors of various grammatical forms. Examples of the items are given in 16:

(16) a. [+definite]

Susan: I went to a bookstore yesterday.

Jim: Oh, what did you get?

Susan: I got two magazines, three pens, and an interesting book. I really liked ____ book.

a *an* *the* \emptyset

b. [+definite]

Tim: May I know who's calling please?

Lily: This is Lily. May I speak to John please?

Tim: Yes, but he's on the phone now. He's talking to ____ owner of his company. I don't know who this person is, but I know it's a very important conversation.

a *an* *the* \emptyset

⁵ Following Ionin et al. (2004), Chondrogianni and Marinis (2016), and Kong (2016), only singular countable nouns were used in the study to ensure a balanced occurrence of the definite article (*the*) and the indefinite article (*a/an*).

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c. [-definite]

Gary: Have you been to the restaurant next to our office recently?

Larry: The last time I ate there was 3 years ago.

Gary: It has improved a lot. You should go. They are changing everything. And they are creating ___ Mediterranean style.

a an the \emptyset

d. [-definite]

Secretary: I'm afraid Professor Smith is busy. She has office hours right now.

Professor Snape: What is she doing?

Secretary: She is meeting with ___ student, but I don't know who it is.

a an the \emptyset

e. Distractors

Roger: Come on! We've been in this shop for hours.

Mary: I won't be long. Which skirt shall I get?

Roger: I think you look ___ in all of them.

formality *similar* *great* *creation*

The other less-controlled elicitation task (Task 2), similar to that of Chondrogianni and Marinis (2016) and Kong (2016), consisted of 40 short answer questions formed by two conditions relevant to the study: [+definite] interpretations (16 questions) and [-definite] interpretations (16 questions). The other eight questions were distractors. Examples of the questions are given in 17:

(17) a. [+definite]

Question: David's computer and car both broke down yesterday.
Which one should he fix first?

Answer: The computer/ The car.

b. [+definite]

Question: A man called to report that his wife was murdered at home last night?

Who do you think the prime suspect is?

Answer: The man.

c. [-definite]

Question: A pet dog that is the size of a cat but usually barks a lot. What is it?

Answer: A Chihuahua dog.

d. [-definite]

Question: Erin is on the phone. She wants to write down a telephone number.

What does she need to write down the number?

Answer: A pen.

e. Distractors

Question: How many people are there in China?

Answer: 1.3 billion.

Regarding the forced-choice elicitation task (Task 1), each participant's correct choice was given a score of 1 and the other wrong choices a score of zero. For example, in 18:

(18) Susan: I went to a bookstore yesterday.

Jim: Oh, what did you get?

Susan: I got two magazines, three pens, and an interesting book. I really liked ___ book.

a an the ∅

A score of 1 would be given only if the definite article *the* was chosen. The choice of the other three articles (*a*, *an*, and \emptyset) would be deemed incorrect

and hence a score of zero assigned. As for Task 2, responses to the questions were considered correct only if correct articles were used. For example, in 19:

- (19) Question: Erin is on the phone. She wants to write down a telephone number.
What does she need to write down the number?
Answer: A pen.

The indefinite article *a* is required for the noun. A score of 1 would be given if the participant correctly inserted *a* in the determiner position (*an* would also be acceptable even though it is in the wrong form). It would be deemed incorrect if the definite article *the* or no article was given to modify the noun. Performance on distractors was disregarded in the scoring. Participants were scored individually for their performance on the two tasks and mean group scores were then calculated. Results were run through the Generalised Linear Model (GLM) procedure of the SPSS statistical programme, and repeated-measures ANOVAs were used. Post hoc tests were used to establish where significant differences between the means for the levels within each factor were detected by the ANOVAs.

4.3 Procedure

One week after the Oxford Placement Test was administered, the experimental participants were invited to complete Task 1 in a classroom setting. They were given 50 minutes to complete the task and most of them finished it within 40 minutes. Task 2 was given to the experimental participants one week after they had completed Task 1. It was also administered in a classroom setting and most of them managed to complete the task within 30 minutes. A list of unfamiliar words was given and explained to the participants prior to the test. They were told that neither discussion nor answer-checking was allowed during the test. However, they were encouraged to ask their instructor if word meanings were unclear. To avoid participants becoming aware of the syntactic knowledge being tested, we scrambled the

test items in both tasks so that two sentences of the same structure would not appear next to each other. The English controls were given the test separately.

5. Results

5.1 Forced-choice elicitation task (Task 1)

The results of the forced-choice elicitation task bear directly on whether the interlanguage grammars of the Chinese speakers are fluctuating between definiteness and indefiniteness, or are permanently diverged from the target language due to the inaccessibility of the uninterpretable [*u*-Num] feature. The mean choices of answer by each group corresponding to the two sets of interpretations ([+definite] and [-definite]) are presented in Table 2. There are several things to note about the results. Firstly, there is a proficiency-related progression among the learners; the advanced learners outperform their elementary and intermediate counterparts. Secondly, the use of the zero article \emptyset is common, especially among the elementary learners; the results also suggest that although learners in the advanced group are sensitive to the obligatoriness of articles in English, they have overgeneralized *the* to contexts where it is deemed ungrammatical by native speakers. Thirdly, the findings are inconsistent with the prediction made by Ionin et al. (2004) that learners will fluctuate between definiteness and indefiniteness; the learners do not select *the* for [-definite] contexts and *a* for [+definite] contexts. Instead, they, advanced learners included, have a preference for using the definite article *the* over its indefinite counterpart *a*.

Table 2. Choice of articles (%) in the two contexts in the forced-choice elicitation task

	G1 (n = 30)	G2 (n = 28)	G3 (n=30)	N1 (n=15)
Correct use of articles in the <i>definite (the)</i> structure	33.28	64.6	94.74	100
Substitution errors in the <i>definite (the)</i> structure	8.32	6.67	2.64	0
Omission errors in the <i>definite (the)</i> structure	58.4	28.73	2.62	0
Correct use of articles in the <i>indefinite (a)</i> structure	26.38	50.76	77.54	98.23
Substitution errors in the <i>indefinite (a)</i> structure	41.34	36.36	17.64	1.77
Omission errors in the <i>indefinite (a)</i> structure	32.28	12.88	4.82	0

Multiple comparison tests show a significant group effect between the groups with respect to the choice of articles in obligatory contexts ($F(3, 99) = 1794.48$, $p < 0.01$). Whereas the elementary L2 English group (G1) consistently omits articles in the two contexts, the intermediate group (G2) and the advanced group (G3) show increasingly high rates of filled articles. Although the intermediate group (G2) performs much better than the elementary group (G1) both in the definite context (64.6% vs. 33.28%) and in the indefinite context (50.76% vs. 26.38%), both groups are significantly less accurate than the native control group (N1) in both contexts. The advanced group (G3) performs native-like in the [+definite] contexts; no significant differences are found between G3 and the native control (N1) in the contexts in question. However, significant differences are found between the two groups in the [-definite] contexts ($F(1, 43) = 18.36$, $p > 0.03$); Post hoc Scheffe tests show that there are significant differences in the combined means for substitution errors for the [-definite] contexts between the two groups. In contexts where native controls hardly ever select the indefinite article *a*, some advanced learners select *the*. In other words, the advanced learners of L2 English display an asymmetrical choice of definite and indefinite articles; the definite article *the* is sometimes used in indefinite contexts. The overuse of *the* in indefinite contexts is also observed in the literature with respect to the

acquisition of L2 English articles (Thomas 1989; Young 1996; Robertson 2000). Table 3 displays the use of *the* by individual G3 (advanced group) learners in indefinite contexts.⁶

Table 3. Choice of *the* in indefinite contexts by the advanced learners in the forced-choice elicitation task (Task1)

Subject (G3)	-definite (20 items)
1	1
2	2
3	2
4	1
5	1
6	4
7	0
8	2
9	2
10	0
11	3
12	0
13	3
14	2
15	3
16	1
17	1
18	2
19	1
20	1
21	3
22	6
23	0
24	2
25	2
26	4
27	4
28	0
29	2
30	2

⁶ It is sometimes in the case of empirical L2 studies that mean group scores may not clearly display individual response patterns. We therefore examine individual responses and see if they are different from the group response pattern.

Results from Table 3 show that except for subjects 7, 10, 12, 23, and 28 who perform native-like in disallowing *the* for indefinite contexts, the grammar of all the other subjects in the advanced group involves the use of *the* in indefinite contexts. Some learners (subjects 6, 22, 26, and 27), contrary to native speakers, display a high use of *the* in the indefinite contexts, suggesting that they have arrived at the inappropriate value of *the* for English.

5.2 Elicitation task (Task 2)

The results (Table 4) from the elicitation task show a similar pattern to the accuracy profile that we found in the forced-choice elicitation task: the L2 learners of English acquire the properties encoded by the English article system incrementally; omission errors are common among elementary learners of English; *the* is used more frequently than *a* but sometimes in inappropriate contexts; the advanced learners are able to supply articles in obligatory D+N contexts but overgeneralize *the* to contexts where it is impossible for native speakers.

Table 4 Use of articles (%) in the elicitation task

	G1 (n = 30)	G2 (n = 28)	G3 (n=30)	N1 (n=15)
Correct use of articles in the <i>definite (the)</i> structure	24.49	75.29	95.55	100
Substitution errors in the <i>definite (the)</i> structure	3.49	2.29	0.79	0
Omission errors in the <i>definite (the)</i> structure	70.02	22.42	3.66	0
Correct use of articles in the <i>indefinite (a)</i> structure	24	60.12	81.58	98.43
Substitution errors in the <i>indefinite (a)</i> structure	44.72	28.98	14.88	1.57
Omission errors in the <i>indefinite (a)</i> structure	31.28	10.9	3.54	0

Multiple comparison tests show a significant group effect between the groups with respect to the use of articles in the two contexts ($F(3, 99) = 434.28$,

$p < 0.02$). A clear difference in ability to supply articles in obligatory contexts occurs with proficiency. The elementary learner group (G1) and the intermediate learner group (G2) are significantly different in their responses to the two contexts compared with their answers to the advanced learner group (G3) and the native control group (N1). Their responses to the Correct use of articles in the *definite* (*the*) structure are less accurate than G3 and N1 (G1: 24.49%; G2: 75.29%; G3: 95.55%; N1: 100%). A similar pattern emerges in the indefinite context where G1 and G2 are significantly less accurate than the other two groups in their responses to the Correct use of articles in the *indefinite* (*a*) structure (G1: 24%; G2: 60.81%; G3: 95.58%; N1: 98.34%). The advanced group (G3) is not significantly different from the native control group (N1) in the [+definite] contexts. However, the two groups are significantly different in the [-definite] ($F(1, 43) = 36.79, p < 0.02$); Post hoc Scheffe tests show that there are significant differences in the combined means for substitution errors for the [-definite] contexts between the two groups. A similar pattern observed in Task 1 emerges in Task 2; substitutions of the indefinite article *a* by the definite article *the* are found in the indefinite contexts in the advanced learners' interlanguage grammar. Table 5 displays the use of *the* by individual G3 (advanced group) learners in indefinite contexts.

Table 5 Use of *the* in indefinite contexts by the advanced learners in the elicitation task (Task2)

Subject (G3)	-definite (16 items)
1	2
2	3
3	4
4	2
5	1
6	5
7	0
8	4

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9	3
10	0
11	3
12	1
13	3
14	3
15	2
16	2
17	1
18	3
19	1
20	1
21	3
22	2
23	0
24	1
25	3
26	3
27	2
28	0
29	2
30	2

The results from Table 5 show only four subjects (7, 10, 23, and 28) are able to set the appropriate value of [-definite] for *a* in English while all other subjects in the advanced group show a tendency of using *the* in the indefinite contexts, suggesting an asymmetry in the use of definite *the* and indefinite *a* in their interlanguage grammar.

6. DISCUSSION

The investigation of the way adult Chinese speakers of L2 English interpret definite and indefinite articles in the current study has resulted in a number of observations. Firstly, the results of the study suggest that the Chinese participants acquire the structure of DPs in English incrementally. The intermediate learners perform significantly better than their elementary counterparts but are in the meantime significantly poorer than their advanced counterparts. Secondly, the advanced L2 English learners are more willing to accept the obligatoriness of articles in English than their elementary and intermediate counterparts. However, while there is a proficiency-related article acquisition development, there is also evidence that the advanced L2 English learners overuse the definite article *the* in indefinite contexts. We consider how these observations might receive an explanation next.

Recall that the aim of the current study is to test the *Full Transfer/Full Access (FT/FA) Hypothesis* (Schwartz and Sprouse 1994, 1996) and the *Interpretability Hypothesis* proposed by Tsimpli and Dimitrakopoulou (2007) in relation to the acquisition of articles in English by speakers of article-less Chinese. The *FT/FA Hypothesis* predicts that the L2 initial state constitutes the set of grammatical representations determined by the L1. The hypothesis also holds the view that L2 input will eventually lead learners to the appropriate setting for articles as learners have full access to UG. The *Interpretability Hypothesis* predicts that, on the one hand, interpretable syntactic features are acquirable in subsequent multilingual acquisition; on the other hand, the hypothesis claims that uninterpretable syntactic features not instantiated in L1 are no longer accessible following a critical period for acquisition, resulting in non-native-like performance.

Following the *FT/FA Hypothesis*, we expect to see Chinese speakers going through developmental stages in which the interlanguage grammars transform from resembling the L1 to representing the L2 on the basis of the L2 input-triggered grammatical restructuring. Learners in the present study are expected to have the apparent disadvantage early on in the acquisition of articles because they are absent in the initial-state L2 grammars. However,

divergence should be a temporary phase of development and sufficient English input should allow learners, advanced learners in particular, to fix the appropriate value ([*u*-Num] feature) for English. That is, very advanced speakers who have full access to principles and parameters of UG and who have available cues of articles in the L2 input should reveal no difficulty in acquiring articles in L2 English.

What we have found from the two elicitation tasks shows that the results of the study lend partial support to the hypothesis. The different behavior of the three experimental groups in the study indicates that L1 plays a role in L2 development regarding their intuitions about the obligatoriness of articles in English. While there is evidence that the learners acquire the structure of English DP incrementally, article-drop is predominant in the elementary learners' interlanguage grammars, suggesting there are L1 transfer effects. That is to say, despite the evidence in the input, the elementary learners are nevertheless not sensitive to the constraint that countable singular nouns in English all require an article. Instead, they seem to have transferred bare nouns from their L1 in encoding definiteness and indefiniteness in English. What needs explaining is the observation that while becoming aware of the obligatoriness of articles in English, the intermediate and advanced learners persistently prefer the definite article *the* to the indefinite article *a*, resulting in overusing *the* in all contexts. This is inconsistent with the *FT/FA Hypothesis* which predicts correct use of definiteness/indefiniteness given sufficient exposure and input from the L2.⁷ The asymmetry in their intuitions about +/- definiteness in L2 English is unexpected if all learners need is positive evidence to trigger the restructuring of their L2 grammar.

The results of article use in the current study are only partially consistent with the *FT/FA Hypothesis*. We argue, instead, that the observed behaviour can receive a better explanation if we follow the *Interpretability Hypothesis*.

⁷ One of the claims made by the *FT/FA Hypothesis* is that given sufficient time to experience enough L2 samples from the input (plural *-s* morpheme for example), learners should be able to establish the relevant categories. If true, then the plural morpheme *-s* in the input should trigger restructuring in the acquisition of articles, including the uninterpretable [*u*-Num] feature.

As reviewed in Section 2, we follow Hawkins et al. (2006) and Radford (2006), who argue that count nouns in English have an uninterpretable number [*u*-Num]. The *Interpretability Hypothesis* of Tsimpli and Dimitrakopoulou (2007) proposes that uninterpretable features are parametrically different between languages and are available only for a limited period in early life. L2 learners who lack the uninterpretable features in their L1 are unable to acquire these features in subsequent language acquisition due to age effects. That is to say, beyond the critical period, only those interpretable features necessary for lexical item construction remain accessible; all uninterpretable features become inaccessible to adult L2 learners. Also available are the principles of UG for grammar building. The hypothesis predicts that in multilingual acquisition, learners may appear to have performed native-like in a number of measures whereas in fact, they are using alternative options provided by UG to create a grammar, which approximates to that of the native speakers. Their underlying representations are far from native-like. The observed asymmetrical performance of the advanced learners in interpreting L2 English definite and indefinite articles can be accounted for if their grammars lack the uninterpretable article feature [*u*-Num], as discussed in Section 2.1, which is absent in their L1 Chinese, but are constrained by UG principles.

Since articles are absent in Chinese but present in English, the [*u*-Num] feature associated with articles will no longer be available to the adult Chinese speakers of L2 English. They will resort to alternative resources made available by UG (e.g. the computational devices, the associated operating principles) and possibly map morphophonological forms from L2 English to Chinese feature specifications, resulting in an interlanguage which is a mixture of L1 syntax with L2 lexical item. The question in need of an answer is, if it is established that the advanced learners have no access to the feature [*u*-Num] of articles, what can explain the asymmetry in which their grammars are sensitive to the obligatory definite article but not to the obligatory indefinite article. We speculate that L1 plays a crucial role and that the definite article *the* has been interpreted as Chinese Classifier Phrases whereas the indefinite article *a* has been treated as Numeral Phrases. As argued in Section 2.2, definite noun phrases are *CIPs* with either *CI'* or *CI^o* for definite

interpretation in Chinese whereas indefinite noun phrases are *NumeralPs* with *Num* for indefinite interpretation. It is also assumed in Section 2.2 that demonstratives *zhe* (*this*) and *na* (*that*) denote definiteness in a deictic sense and are obligatory in NPs in Chinese. Therefore, sentences with overt demonstratives denoting definiteness like *zhe/na ge nuhai hen ke ai* (*This/That girl is very cute.*) are grammatical whereas demonstrative-less sentences like **yi ge nuhai hen ke ai* (*A girl is very cute.*) are not in Chinese. Then, it is possible to argue that the learners are treating the obligatory definite article very differently from its indefinite article counterpart. The definite article *the* may have been misinterpreted as Chinese demonstratives *zhe* (*this*) and *na* (*that*) which must be overt, whereas the indefinite article *a* is seen as Numeral Phrases. With continued exposure to English, they notice that articles are obligatory and will therefore progressively approximate in performance to the target form and away from their L1. However, the interplay between the inaccessible [*u-Num*] feature together with L1 transfer and the accessible UG principles is a grammatical representation which diverges from those of native speakers as well as from their own L1.

To check more closely whether it is the case that the advanced learners have trouble accessing the [*u-Num*] feature, and properties of L1 have been transferred, we compare the performance of individuals in the group and the native controls on the interpretation of articles in indefinite contexts. In response to a question in the forced-choice elicitation task (Task 1):

- (20) Jim: Have you been to Super U lately?
Amy: I usually shop at Marks and Spencer now.
Jim: It has changed a lot. You should check it out. It sells everything now. And it has ___ buy-one-get-one-free offer on certain products every week.

Ten of the 30 advanced learners chose the definite article *the* whereas all native speakers chose the indefinite article *a* for the indefinite context. Another piece of evidence showing native non-native divergence is the use of articles in the elicitation task (Task 2):

- (21) Question: Heidi wants to send her parents an email telling them she has arrived safely in the UK. What does she need to send the email?

Answer: A computer/A tablet/A smart phone.

While all native speakers used the indefinite article *a*, nine learners in the advanced group used the definite article *the*. Interestingly, six learners in G1, four in G2, and 3 in G3 used the demonstrative *that* to modify *computer/smart phone*. One more piece of evidence that the definite article *the* has been treated as the demonstrative *this/that* is illustrated in (22) in Task 2:

- (22) Question: Jimmy bought a book and a T-shirt for his friend. Which item do you think was more expensive?

Answer: The book/The T-shirt.

While all native speakers used the definite article *the*, 16 learners in G1 dropped the article, 9 in G2 and 7 in G1 either used *this* or *that* when answering the question. These could be evidence that as proficiency increases among adult Chinese speakers, the tendency to drop articles violating the English setting declines. In the meantime, their underlying syntactic representations are quite different from the native speakers' due to the effect of the inaccessibility of the [*u*-Num] feature in English. The surface similarity to native speakers conceals the fact that the learners' grammars are constrained by the feature specifications of their L1 Chinese and that they may have misinterpreted the specific definite article *the* as overt demonstratives *zhe* (*this*) and *na* (*that*). It is noteworthy that an increasing number of studies in adult language acquisition (Hawkins and Hattori 2006; Tsimpli and Dimitrakopoulou 2007; Kong 2014, 2015, 2016, 2017, 2018) have argued that uninterpretable syntactic features not instantiated in early life become inaccessible in subsequent language acquisition. What remain fully available are the principles of UG (e.g. the computational devices, the associated operating principles), which are required for grammar building. The fact that the learners' end-state L2 English involves definite-indefinite asymmetry in

the use of articles suggests that the [*u*-Num] feature associated with articles is no longer available to them. Their performance may appear native-like but their underlying grammar is not. This raises the possibility that some parameter values which differ between the L1 and the L2 may be unacquirable due to age effects.

7. CONCLUSION AND LIMITATIONS

To conclude, from the findings of this study, it is argued that the asymmetrical treatment of definite and indefinite articles in the Chinese speakers' L2 English suggests that learners have yet to acquired the uninterpretable syntactic [*u*-Num] feature, which is language specific and is subject to a critical period. Caution is required in interpreting the apparent native-like performance in definite contexts as evidence for the acquisition of the underlying grammatical properties assumed to be present in the native speakers' grammars. These findings lead us to speculate that factors contributing to divergence between the native and non-native grammars in end-state L2 acquisition may be syntactic rather than L2 input driven. But an anonymous review has rightly pointed out that in addition to the inaccessibility to the uninterpretable syntactic [*u*-Num] feature explanation, L1 transfer, accessibility to UG options, pragmatic mapping and individual differences may all contribute to the native/non-native divergence in end-state L2 acquisition.

One possible view to explaining why older learners in the final-state L2 grammars might differ from those of native speakers is that learners may have difficulty in interpreting L2 input appropriately, because L1 properties are transferred into L2 grammars, given that there is no counterpart equivalent of English definite articles in Chinese and that the function of givenness or presupposition is encoded in different linguistic devices across the two languages. Another possible view is that the incomplete acquisition of the English article systems is the result of the complex nature of form-function mappings in English article use, since English is a language which has the

definiteness rather than the specificity setting. A third possible view, as proposed by the *Interface Hypothesis* (Sorace and Filiaci 2006 and Sorace 2011), is that when grammatical operations involve the interface of the internal (syntax-semantics) and external (syntax-pragmatics/discourse) components, the acquisition will be difficult even for advanced learners of English. Before one can conclude with confidence that [*u*-Num] feature is present in the grammar, subtle testing of grammatical knowledge of learners whose languages have articles is required.

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二語英語之漢語母語者之
英語定冠詞和不定冠詞習得的不對稱性

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本文探究二語英語冠詞習得知兩個相關之假設，即the Full Transfer/Full Access (FT/FA) Hypothesis (Schwartz and Sprouse 1994, 1996) 與 the Interpretability Hypothesis (Tsimplian and Dimitrakopoulou 2007)。88位不同英語水平之漢語成年母語者(漢語缺乏冠詞)於兩個誘發性測驗中被要求解釋不同語境的冠詞。他們的解釋結果與15位英語母語者的進行比較。根據the FT/FA Hypothesis的預測，L1少冠詞者透過UG可以達至目標語法呈現，然而結果異於該假設，本研究的學習者在任何語境過度偏愛定冠詞，包含在非限定語境。有人認為，the Interpretability Hypothesis可以解釋學習者在中介語對定冠詞和不定冠詞之不對稱處理。尤其是，我們提出已觀察到之L2行乃因無法解釋性之句法特徵[u-Num]的不可達到性所導致，即受制於關鍵期(critical period)。L2之中介語語法涉及UG所提供之替代資源之用。