

[+Topic]-driven EPP Satisfaction in the Acquisition of English by Korean Speakers*

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In the L2 English acquisition, those who originate from topic-prominent languages easily learn the EPP requirement (Yuan 1997). The present study tested the hypothesis that the EPP acquisition is facilitated by the L1 [+topic] feature. I administered grammaticality judgment tasks to 155 Korean EFL learners and 20 native English-speaking controls. Each test sentence included an NS (null subject) either with or without a topic, where an NS was either referential or expletive. The response choice was a 4-point rank scale, and data were analyzed using non-parametric Kruskal-Wallis tests, followed by Scheffé post-hoc tests. Results showed that the learners had difficulties in detecting the ungrammaticality of an NS with a topic, while accurately rejecting an NS without a topic, regardless of whether NSs were referential or expletive. This suggests that the EPP was operative, but their EPP was overridden by the L1 [+topic]. I argue that the interlanguage phrase structure, F(unctional)P, is not V(erb)-related, suggesting that FP Spec is not necessarily Θ -assigned. FP involves a rule of predication, by which FP Spec should be filled to saturate a predicate, realized as the EPP. FP carries combined properties of TopP in the L1 and IP in the L2. FP Head is occupied by the P(eripheral)-feature [+topic] as in the L1. When the [+topic] feature is not operative, FP Spec is filled by an L2-like subject. FP Spec shows a continuum from purely L1-based topics, such as a spatiotemporal PP, to L2-oriented subjects, such as the expletive *it*.

Keywords: Extended Projection Principle (EPP), topic, null subjects, L2 acquisition

1. Introduction

The Extended Projection Principle (EPP) is informally characterized by the claim that clauses must have subjects. According to Chomsky (1995: 55), 'The *Extended Projection Principle* (EPP) states that [Spec, IP] is obligatory, perhaps as a morphological property of I or by virtue of the predicational character of VP.'

* Thanks to three anonymous reviewers for their comments on this paper. All errors are of course my own.

- (1) [_{CP} Spec [_C C [_{IP} Spec [_ΓI VP]]]] (Chomsky 1995: 55)

In (1), the *subject* position is the spec of IP. The EPP requires that the [Spec, IP] position be realized, which enters the spec of IP into a spec-head relationship, regardless of whether the subject is theta-assigned or not, since the EPP is, in principle, strictly syntactic, not semantic. In the example below (2), the subject is filled to satisfy the EPP.

- (2) There are three pigs escaping. (Haegeman 1994: 65)

The expletive *there* is not a locative adjunct, as shown in the impossible question and answer set, *Where are three pigs escaping?– *There.*¹ Without carrying any semantic content of its own, the expletive is inserted into the spec of IP to satisfy the EPP.

This UG principle is parameterized in that the subject position is realized as being either overt or null. The null subject availability has been mainly two parameters: the *pro*-drop parameter (Chomsky 1981, Rizzi 1986) and the [+discourse-oriented] parameter (Huang 1984). The first of the two is the *pro*-drop parameter. According to this parameter, *pro* subjects are allowed in languages which have rich/strong agreement morphology.² Thus, rich agreement languages, such as Spanish and Italian, allow *pro* subject, but degenerated agreement languages, such as English, require the presence of an overt subject. The other is the discourse-oriented parameter, which allows null arguments identified from discourse, in spite of the lack of agreement morphemes. This parameter accounts for the null argument phenomenon found in the so-called discourse-oriented languages, such as Chinese, Korean and Japanese. These languages do not have agreement morphemes, but allow and even favor the use of null arguments in the subject and the object positions.³

The acquisition of an L2 overt subject requirement by speakers whose L1s allow null subjects has been one of the most extensively studied phenomena (Clahsen and U Hong 1994, Hilles 1986, Lakshamanan 1994, H Park 2004, Tsimpli and Roussou 1991, White 1985, 1986, Yuan 1997). One main avenue of the acquisition research has been whether the overt subject requirement is

¹ This answer is possible, but the meaning is different from the 'there' in 'there are three pigs escaping.'

² Even though the name for this parameter is used as a catch-all for null subject phenomena, the original insights under this parameter are based on the relationship between null subjects and rich agreement.

³ The presence/absence of agreement is controversial in Korean syntax. This paper adopts the no-Agr position in Korean, based on proposals made by Y-S Kang (1986), Y J Kim (1997), Fukui (1993), Speas (1994), and others. For instance, Speas (1994) claims that Japanese, which can be extendable to Korean, does not have Agr P, even though it has other functional projections, such as Tense P and Mood P.

related to the acquisition of L2 morphological properties of I, such as agreement morphemes. In the present study, however, I adopt a different approach. I argue that [+topic] is one option of the EPP, attributable to the predicational nature of the interlanguage grammar in the acquisition of English by Korean speakers.⁴ Depending on whether [+topic] is operative, the EPP can be satisfied with either a topic or a subject. One assumption underlying this approach is that learners' language is an interlanguage, which falls between the initial state of L2 acquisition and the target state, where the initial L2 state is understood to be the steady state of L1. Thus, this study is based on the core L1 linguistic structure of the topic construction, which influences how the interlanguage is shaped in response to the L2 EPP. The resulting interlanguage EPP involves complex interactions between the L1 and L2.

This paper consists of six main sections. Section 2 reviews the parameter which allows null subjects. I discuss two parameters: the pro-drop and the discourse-oriented parameter. Section 3 reviews the L2 acquisition research on the overt subject requirement. To date, the research has mainly concerned whether the EPP is related to the acquisition of inflections, yet has not paid full attention to how the L1 knowledge influences the acquisition of the L2 EPP. Section 4 explicates the main construction in the L1 Korean: the topic construction. This construction contains a topic in a predication relation with the rest of the sentence, and the topic receives topic interpretation from the [+topic] in the head of Top(ic)P. Section 5 explores the present empirical study to test the research hypothesis that L1 topics enter the EPP configuration. Section 6 explores the interlanguage phrase structure regulating the EPP, where the interlanguage EPP is satisfied with either an L1-like topic or an L2-like subject.

⁴ In the area of L1 acquisition research, the acquisition of the overt subject requirement is considered strongly associated with the acquisition of AGR (see S Y Kim (2007), for a discussion and references). However, as will be discussed in Section 3, the empirical relationship between the acquisition of the overt subject requirement and the development of the agreement morphemes is not consistent. From the theoretical perspective, on the other hand, there are researchers who argue that the acquisition of the L2 overt subject is related to the properties of AGR or T. For instance, Wakabayashi (2002) argues for T features which interact between L1 and L2. He illustrates T features in English, Spanish, and Japanese, as follows: T in English merges with VP in overt syntax due to the strong D feature in T which results in subject raising; T in Spanish merges with VP in overt syntax, like English, but this is due to strong V feature in T, which results in verb raising, unlike English; T in Japanese merges with VP in covert syntax, due to the lack of strong categorial feature. He argues that the English overt subject requirement is more easily learned by Japanese speakers than by Spanish speakers. In order to learn the overt subject requirement in English, Japanese speakers have to 'learn' the strong D feature in T, instead of their no featured T, which is a straightforward process, yielding gradual success. On the other hand, Spanish speakers have to 'delearn' the strong V feature, and then 'learn' the strong D feature, where L1 interferes with L2. Wakabayashi (2002) argues that Japanese speakers' learning task is easier than their Spanish counterparts. For a study which concerns AGR feature in the acquisition of the overt subject requirement in L2 English, see H Park (2004).

2. Pro-drop vs. Discourse-oriented Parameter

2.1. Pro-drop Parameter

Since Taraldsen's (1978) generalization on the relationship between rich agreement and null subjects, researchers have claimed that null subjects are licensed by rich agreement morphemes. Rizzi (1986) states the *pro* subject availability in terms of 'licensing' and 'identification.' According to him, rich agreement languages, like Italian and Spanish, 'license' null subjects via the governing node INFL, and 'identify' the missing grammatical information, based on the rich agreement inflection carrying the ϕ -features of person, number and gender. Jaeggli and Safir (1989) propose the Morphological Uniformity Hypothesis to account for null subject availability in such languages as Chinese, which have no agreement at all. According to their hypothesis, null subjects are permitted in *morphologically uniform* languages, such as Italian and Chinese. In Italian, the paradigm has *all derived* inflectional forms, consisting of a stem plus affix. In Chinese, the paradigm has only *underived* inflectional forms, which are non-distinct from the stems since they do not inflect at all. On the other hand, null subjects are not permitted in morphologically non-uniform languages, where the paradigm is *mixed* with *derived* and *underived* forms. For instance, the English paradigm, *eat*, is mixed with the *derived* form, *eats*, with the *underived* stem, *eat*. Jaeggli and Safir's (1989) observation on these three types of inflections, all *derived*, *underived*, and *mixed*, is reinterpreted in Speas (1994), who classifies three types of agreement morphemes by strength into strong, weak, and no-agreement.

Speas' (1994) theory of null subjects is combined with agreement strength and a general principle of projection, which requires a contentful element to project a maximal projection. According to Speas, strong agreement morphemes, as in Spanish and Italian, have individual lexical entries which are base-generated in the Head of AgrP. Since the Agr Head is occupied by a contentful element, that is, strong agreement morpheme, AgrP can exist without filling Spec of AgrP with an overt subject, and a *pro* subject can stay inside the VP. Weak morphemes, as in English, do not have individual lexical listings. Instead they are lexically base-generated on a verb as part of a verbal paradigm, leaving the head of AgrP empty. This empty AgrP cannot exist without a contentful element, because, in order to project AgrP, this element triggers NP movement or expletive insertion into the spec of AgrP. According to Speas (1994), in languages where agreement morphemes exist, regardless of their strength, AgrP must exist for Agr feature checking via the spec-head relation. No-agreement languages like Chinese and Japanese, do not project AgrP at any level of representation. Since nothing forces an NP to move into the spec of AgrP, *pro* subjects are allowed. According to Speas (1994: 189), languages

lacking Agr have Tense and Aspect as a relevant head, and their clauses are 'a kind of predication,' following Fukui (1993). Similarly, Alexiadou and Anagnostopoulou (1998) claim that strong and weak Agr(eement) affixes are associated with parameterized EPP satisfaction, which in turn results in the availability of null subjects. According to Alexiadou and Anagnostopoulou (1998: 516), strong agreement affixes, as in Spanish, have 'the same status as the pronouns in English,' which satisfies the EPP checking operation.⁵ On the other hand, weak agreement affixes, as in English, are not assigned pronominal categorial status, and, thus, do not enter into the EPP checking operation. Instead, the EPP of weak Agr languages must be satisfied by subject movement or expletive merge without permitting a null subject.

In sum, rich agreement languages, like Spanish, permit null subjects, because the rich agreement morphemes identify the missing information (Rizzi 1986), make it structurally possible to project AgrP (Speas 1994), or carry a categorial feature like English pronouns (Alexiadou and Anagnostopoulou 1998). Weak agreement languages, like English, do not permit null subjects, because the impoverished agreement morphemes do not identify the missing information (Rizzi 1986), structurally require the spec of AgrP to be filled with a moved NP or an inserted expletive (Speas 1994), or require EPP checking via the spec-head relation (Alexiadou and Anagnostopoulou 1998). While null subjects in these accounts are associated with agreement morphology, null arguments in the [+discourse-oriented] parameter (Huang 1984) are identified from discourse, in spite of the lack of agreement morphemes. The next section is followed by a discussion of the parameter.

2.2. The Discourse-oriented Parameter

The [+discourse-oriented] parameter accounts for the occurrence of null arguments, the information of which is identified in discourse, without agreement morphemes. While the term [\pm discourse-oriented] is often used as a cover term for the null argument phenomenon in languages like Chinese, Ko-

⁵ Alexiadou and Anagnostopoulou attempt to combine the GB and minimalist frameworks. In their words, strong agreement affixes carry the [+D] feature due to their 'categorial status of a pronominal element' (1998: 494). The [+D] in strong affixes checks off the [EPP] feature of Agr via verb-raising to Agr, what they call Move/Merge X⁰. On the other hand, weak agreement affixes are not assigned the pronominal [+D] status, and thus do not enter the EPP checking operation. Instead, the [EPP] feature of AgrP, in these weak Agr languages, is checked off against the [+D] via subject movement or expletive merge, what they call 'Move/Merge XP. In other words, Alexiadou and Anagnostopoulou suggest two ways of EPP feature checking, verb raising and subject raising/expletive insertion, depending on Agr strength. Their theory does not provide an account for Speas' (1994) no-agreement languages, like Japanese and Korean (but see H Park (2004) who adopts the claim of Alexiadou and Anagnostopoulou (1998) to account for the null subject phenomenon in Korean).

rean, and Japanese (see Wang, Lillo-Martin, Best, and Levitt (1992)), it is necessary to clarify whether a 'discourse-oriented' property can serve as a dichotomous parameter. For instance, Givon (1983) claims that languages adopt discourse-anaphoric entities, which fall along a continuum from zero forms to full NPs. This can be interpreted to mean that languages have discourse-recoverable devices, regardless of whether they are discourse-oriented or sentence-oriented. In the present study, however, the term [+discourse-oriented] carries a set of syntactic and typological clusters, such as null arguments and topic-prominence. The positive setting of the [discourse-oriented] parameter indicates that a language bears a combination of these properties, allowing a topic to show connectedness to a null argument, and a topic to be placed in the sentence initial position where it picks up its reference from discourse. Thus, the term [discourse-oriented] parameter implies an availability of null arguments in connection with the clustering properties. An incorporation of the typological characteristic into the parametric framework was initially made by Huang (1984).

Huang (1984) notes that Chinese, in which agreement morphemes are absent, allows null arguments, when antecedents are retrieved from discourse. He claims that there are two distinct parameters involved in null argument availability: one regulates 'pro-drop' and the other 'zero-topic' (Huang 1984: 564). Incorporating a typological distinction of 'sentence-oriented' and 'discourse-oriented' languages, he claims that discourse-oriented languages share clustering properties, which are not observed in sentence-oriented languages. First, following Li and Thompson (1976), discourse-oriented languages have topic prominence, by which a topic occurs in the sentence initial position where the rest of the sentence serves as a comment about the topic. Second, following Tsao (1977) (cited in Huang (1984: 549)), discourse-oriented languages have a topic chain rule and a topic deletion rule. A topic forms a chain to its discourse antecedent via a topic chain rule, and then a topic is deleted via a topic deletion rule. Third, an anaphor can pick up its antecedent from discourse, without being limited to a sentence boundary. According to Huang (1984: 564), the clustering properties mentioned above are reduced into the claim that 'a general parameter distinguishes discourse-oriented from sentence-oriented languages,' which allows a null pronoun bound to a topic which can be also deleted.⁶ Following Huang (1984), this study assumes that Korean has the positive setting of [discourse-oriented] parameter. Thus, Korean shows a set of clustered syntactic and typological properties, by which the topic phe-

⁶ In this study, the status of null arguments in Korean are assumed to be *pro*, following Cole (1987), Y-S Kang (1986), S H Kim (1993), G-S Moon (1989), Zushi (2003), and others. In Huang's (1984) analysis, however, null objects are analyzed as a *variable*, whereas a null subject can be either a *variable* or a *pro*, depending on where the null subject occurs. More specifically, when the null subject is c-commanded by the matrix antecedent, it can be a *pro*.

nomenon is clustered with the null argument phenomenon, which I will return to Section 4.

3. L2 Acquisition Studies of the Overt Subject Requirement

The acquisition of the L2 overt subject requirement is one of the most extensively studied phenomena in generative L2 acquisition research. One main approach to the acquisition of the overt subject requirement has concerned whether there is a clustering effect between null subjects and inflectional morphemes in the acquisition of the overt subject requirement as there is in L1 acquisition. In one such study, Hilles (1986) studied a 12-year-old Spanish child learning English in the U.S. She reports that there was a negative relationship between null subjects and auxiliaries, and claims that the acquisition of auxiliaries triggered the overt subject requirement. Vainikka and Young-Scholten (1994), in their study of L2 German acquisition by Korean speakers and Turkish speakers, argue that the acquisition of the overt subject requirement is related to the acquisition of agreement morphemes, which in turn project functional categories.

In other L2 acquisition studies, however, the existence of a negative correlation between null subjects and agreement morphemes is controversial. Unlike Hilles (1986) and Vainikka and Young-Scholten (1994, 1997), Lakshamanan (1994) presents data that do not clearly support the relationship. Lakshamanan studied spontaneous production data in L2 English by four children from three different L1s: two Spanish children, one French child, and one Japanese child. She examined whether the acquisition of the EPP is correlated with the acquisition of inflectional elements such as agreement morphemes, auxiliaries, and modals. She reports that, except for one Spanish child's data, there was not any significant correlation between null subjects and inflectional elements. Similarly, Clahsen and U Hong (1994) claim that in L2 German acquisition by Korean speakers, EPP acquisition was not correlated with the acquisition of agreement morphemes. Instead, they argue that the two linguistic properties are acquired separately.

In summary, one main approach to the acquisition of the L2 EPP in the previous studies has concerned whether the acquisition of the EPP was negatively correlated with the development of inflectional morphemes. The empirical data were not consistent on this question, in that Hilles (1986) and Vainikka and Young-Scholten (1994, 1997) supported the correlation, whereas Lakshamanan (1994) and Clahsen and U Hong (1994) did not. This approach did not pay full attention to how the L1 knowledge influences the acquisition of the L2 EPP. My study deviates from this research trend in that I believe the L1 linguistic structure influences the shape of the interlanguage grammar in

response to the L2 EPP. In the next section, I explicate topic constructions, the core L1 linguistic structure, and the defining properties of topics in Korean.

4. Topic Constructions in the L1 Korean

4.1. Predicational Nature of the L1 Topic Construction

According to Chomsky (1977: 81), topic constructions involve ‘rule of predication.’

- (3) a) As for this book, I think you should read it. (Chomsky 1977: 91)
 b) As for the circus, elephants are funny. (Chomsky 1977: 81)

In (3a), the topic phrase provides an anaphoric interpretation for the pronominal *it*. According to Chomsky (1977: 81), the predicate *I think you should read it* is ‘taken as an open sentence satisfied by the entity [in the left-dislocated part].’ The predication in this sentence is understood as the closing of an open sentence containing a gap. In (3b), on the other hand, the topic, *circus*, does not provide any anaphoricity to the argument in the comment. Chomsky (1977) identifies the predication in (3b) as ‘aboutness,’ by which ‘the proposition must be ‘about’ the [left-dislocated] item’ (Chomsky 1977: 81). (3b) shows that predication does not necessarily involve theta-dependency between the topic and the verbal predicate. Later, Chomsky, following Rothstein (1983), suggests that predication is a kind of ‘saturation,’ meaning that ‘‘a syntactic function’ ...is unsaturated if not provided with a subject [=a topic in a topic construction] of which it is predicated (Chomsky 1986: 116).’ In other words, a topic is required to saturate a predicate, and a topic is not necessarily theta-dependent on the verb, but licensed by the ‘aboutness’ relation with the remainder of the sentence.

Like English topic constructions, Korean topic constructions involve predication (Fukui 1993, Heycock 1993, Zushi 2003). Unlike English topic sentences, as in (3a) and (3b), which are considered marked, Korean topic constructions are unmarked, and are extensively adopted. This is evidenced by S Y Choi’s (1986) text analysis, in which 79% of the Korean sentences she examined had the topic construction, schematized in (4):

- (4) The topic construction in Korean:
 [NP1/PP + *nun/un* [NP2 + *ka/i* + VP]]
 NP1/PP + TOP NP2 + NOM + VP⁷

⁷ The markers *nun* and *un*, and *ka* and *i* are allomorphs, determined by the phonological environ-

(4) shows that Korean topic constructions consist of two consecutive NPs or a PP followed by an NP.⁸ The first outer NP or PP is attached by the Topic maker *nun/un*, while the second inner NP is followed by the Nominative case marker *ka/i*. While the inner NP is theta-marked by the VP, the outer NP, that is, a topic phrase, is outside of the domain of theta-assignment of the verbal predicate. Instead of being licensed by theta-assignment, a topic is licensed by entering a predication relation to the rest of the sentence. Even though the predication relation means that a verbal predicate is interpreted as being properly ascribed to its topic, it is, in principle, independent of the verb's thematic marking. The following are some examples adopting the topic construction.

- (5) a) Madison-un | pi-ka onta.
 Madison-TOP rain-NOM is coming
 'As for Madison, it is raining.'
- b) kkoch-un | cangmi-ka yepputa
 flower-TOP rose-NOM be beautiful
 'As for flowers, roses are beautiful.'

In (5a), a spatiotemporal topic serves as a 'scene-setting' element (Lambrecht 1994: 118). (5b) is a generic topic construction, in which the topic refers to the natural class of items that the speaker and hearer both know because of a shared cultural background. The topics in (5a) and (5b) are not theta-marked by the verbal predicate, but are, instead, licensed by a predication relation based on 'aboutness' with the rest of the sentence.

4.2. Topic Interpretations and Topic Structure in the L1 Korean

In addition to being licensed by 'aboutness'-based predication, topics in Korean have particular interpretations.

- (6) a) Mother-Child interaction: They were talking about food which could cause cavities
 cereal-un | [e=ippal-i] an-sseke
 cereal-TOP [e= teeth-NOM] not-rotten
 'As for cereal, my teeth don't get rotten.'/'Cereal doesn't rot my teeth.'

ment: *nun* and *ka* are attached to NPs ending in vowels, such as *Mary-nun* and *Mary-ka*, while *un* and *i* are attached to NPs ending in consonants, such as, *John-un* and *John-i*.

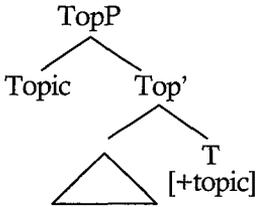
⁸ More than two NPs are available in the Korean/Japanese predication structure (Fukui 1993, Heycock 1993, Y-S Kang 1986).

- b) A lunch table women's conversation about children's potty training
- | | | | |
|----------------|---------|-------|---------|
| ai-nun | cengmal | ppali | kheyo |
| child(ren)-TOP | so | fast | grow up |
- 'As for children, they grow up so fast.'
- c) ai-ka |
- | | | | |
|----------------|---------|-------|---------|
| ai-ka | cengmal | ppali | kheyo |
| child(ren)-NOM | so | fast | grow up |
- '(The) children grow up so fast.'

(6a) contains a topic phrase, 'cereal,' and a null argument, 'teeth.' Both the topic and the null argument carry old information, overtly given or covertly inferred in the context when the interlocutors were talking about food which could cause cavities. While the two are considered old information, the two differ from each other in discourse effects. The topic, 'cereal,' carries discourse-prominence, in that it is singled out from a set of alternative food items. The null argument, on the other hand, refers to 'teeth,' lacks discourse prominence, and is fully recoverable from context. In this situation, the [+discourse-oriented] parameter (Huang 1984) allows the recoverable element to be null to avoid discourse redundancy. In (6b), the topic-marked phrase carries the same theta-role as the Nom-case marked phrase in (6c). However, a topic serves as the speaker's center of attention, by which the speaker recognizes the entity before connecting it to its predicate, and then makes a statement about the topic. This topic property can be identified as 'categorical subjecthood,' following Heycock and Doron (2003) who adopt Kuroda (1972).⁹ On the other hand, the Nom-case marked NP in (6c) lacks this property, serving as part of a simple statement. Following H S Choe (1995), I argue that these topic interpretations result from the [+topic] feature residing in the head of TopP. Adopting J-H Cho (1995, 1997), TopP is assumed to be the highest functional projection, where a topic is outside the domain of the theta-assignment of the verbal predicate, meaning that a topic is independent of the verb's theta marking.¹⁰

⁹ Postulating a null argument in (6b) is controversial. Researchers, like S Suh (1992), argue that an argument topic phrase, as in (6b), occupies the spec of IP, just like a subject in English. In this paper, I adopt the position that topic-marked phrase and Nom-case marked phrases are different, given that only topic-marked phrases carry topic-hood. This paper assumes that a topic phrase occurs in the highest functional category, Top(ic)P (see the discussion in 3.2).

¹⁰ See J-H Cho (1995, 1997) for a detailed discussion with empirical evidence for TopP.

(7) Figure 1. *Modified J-H Cho (1995, 1997) model of Korean topic constructions*

(J-H Cho 1995: 122)

Discussions on topic constructions in Korean can be summarized as follows. First, topics are extensively adopted in Korean. Second, whereas a grammatical subject is theta-assigned by the verb, a topic is independent of verbal theta-marking. This means that a topic is not necessarily theta-marked. Instead, topics are licensed by a predication relation with the remainder of the sentence, which can be thematically saturated. Third, a topic carries particular topic properties, such as discourse-prominence and categorial subjecthood. Fourth, a topic often coincides with a grammatical subject and shares the same thematic role, even though the two differ from each other in discourse, as described in terms of categorial subjecthood (topic) and thetic subjecthood (subject). These L1 topic properties are assumed to influence the shape of the interlanguage grammar in response to the L2 EPP. The next section empirically tests the hypothesis that L1 topics are utilized as subjects in learners' language.

5. Empirical Study

5.1. Hypothesis

The present study tests the hypothesis that, in the acquisition of English by Korean speakers, L1-based topics are used as subjects in the interlanguage grammar. This hypothesis has been established based on observations of the L1 topic constructions. Given the pervasive use of topics in the L1 Korean, it was predicted that 'topics' would constitute a core linguistic constituent in the initial state of the L2 English acquisition. Since topics are not necessarily theta-marked by the verb, but are, instead, licensed by an 'aboutness'-based predication relation, it was predicted that Korean learners would utilize this aboutness-based predication in their interlanguage. Additionally, given that the theta role of a topic and grammatical subject often coincide, it was predicted that the frequency of co-occurrence would lead learners to use L1 topics and L2 subjects interchangeably. Based on these observations, it has been hypothesized

that L1-based topics, with the [+topic] feature, syntactically saturate their predicates, and that this syntactic saturation would lead learners to analyze the L1-based topics as subjects in their interlanguage grammar.

5.2. Participants

This study included a total of 175 participants, consisting of 155 Korean speakers learning English as a foreign language in Korea and 20 native English speakers in the U.S. The Korean EFL learners came from three educational levels: middle school, high school, and college. There were 49 3rd year middle school students (equivalent to 9th grade in the American school system), 43 2nd year high school students (11th grade), and 63 college students. Depending on their majors, the college students displayed very different performances in the grammaticality tasks in the present study, and, thus, were divided into two groups: 40 non-English majors and 23 English majors, in the data analysis. The middle school, high school, non-English major, and English major students were assigned to four proficiency levels: low, low-intermediate, intermediate, and advanced.¹¹ For convenience, non-English majors were referred to as the 'College' group. In addition to the EFL Korean learners, twenty native speakers of English participated as a control group. They were randomly selected from the University of Wisconsin-Madison. This group reported diverse majors. They consisted of some undergraduate students, some graduate students, and some who did not report their year in school.

(8) Table 1. *Distribution of Participants*

Group	Subtotal	Subgroup	Proficiency	Number
Learners	155	Middle school students	Low	49
		High school students	low-intermediate	43
		College (Non-English majors)	intermediate	40
		English-majors	advanced	23
Native speakers	20			
Total	175			

¹¹ The participants were asked to fill out a background survey, which asked several questions about their English education background, including the age when they started learning English and their TOEFL scores. However, since only a few students reported TOEFL scores, the scores were not used. The placement method in this study is based on the participants' education level. Even though this method may have some limitations, it is considered standard procedure.

5.3. Test Materials

5.3.1. Test Sentences

As discussed in 5.1., the present study was designed to test the hypothesis that learners would use L1-based topics as subjects in the interlanguage grammar. Test items were carefully constructed to test this hypothesis. In order to explore whether the presence of a topic influenced the learners' judgments, test items were designed to contain either an NS (null subject) with a topic or an NS without a topic. NS test sentences that start with a topic are termed 'Topic-with-NS.' Additionally, to examine whether the learners were more accurate in detecting the ungrammaticality of referential NSs or expletive NSs, the test NSs were either referential or expletive. Each Topic-with-NS test item had a 'Nontopic-with-NS' counterpart, in which a nontopical element initiated the sentence. These items were designed to determine whether there would be any difference between topical and non-topical elements (nontopic, hereafter) in the sentence initial position. In the surface forms of the test sentences, a topic or a nontopic was followed by a finite verb. In addition to the sentences with targeted features, 12 distractors containing irrelevant features, such as incorrect word order, were added to draw the participants' attention from the targeted constructions. The distractors were excluded from the analyses.

(9) Test sentences

1. Null/Overt subject

i) Referential null and overt subject

- a) q14: *I saw Sandy at a school party. *Was a beautiful girl.*
- b) q50: **Knew that there was nothing to do in this situation.*
- c) q27: *Mary looked at the map, but she could not find the street.*
- d) q39: *Mary thinks that her teacher is as old as her father.*

ii) Expletive *it*

- a) q25: **Rained very hard when Peter came home.*
- b) q22: *It snowed so much that we could not go to school.*
- c) q17: **Has been getting warmer recently.*
- d) q36: *It was the coldest day of the year.*
- e) q8: **Seems that the boy is too energetic.*
- f) q21: *It seems that Peter was sick.*
- g) q3: *Sandy seemed to be happy with her test scores.*

2. Nontopic-with-NS test items

- a) q33: *Tom lives with his grandmother. *Always prepares delicious meals.*
- b) q43: **When rains a little, they walk without an umbrella.*
- c) q19: **Whenever was very hot, we went swimming.*
- d) q30: **Although seems that Tom is stupid, he is good at math.*

3. Topic-with-NS test items:

- a) q5: *Tom had lots of fun yesterday. *Today is busy with many things to do.*
- b) q4: **Yesterday rained a lot in this city.*
- c) q40: **During the entrance exam was very cold.*
- d) q15: **This year seems that Mary is getting married.*
- e) q34: *The principal sent a letter to me. *The letter has not received yet.*

(10) Table 2. *Distribution of Test sentences*¹²

		Ungram ⁱ	Gram ⁱⁱ	Subtotal
Target items: Subject	Expletive <i>it</i>	3	4	
	Referential sub.	2	2	
Subject subtotal				11
Topic	Topic-with-NS	5		
	Nontopic-with-NS	4		
Topic subtotal				9
Subtotal		14	6	20

Note. Ungramⁱ = ungrammatical sentence, Gramⁱⁱ = grammatical sentence

5.3.2. Procedures and Analytic Techniques

A questionnaire was administered to the Korean EFL learners in a classroom setting by the classroom instructor. Native speakers were chosen randomly on campus and were administered the questionnaire on the spot. The response choice was a 4-point rank scale of *yes*, *probably yes*, *probably no*, and *no*. Given that the rank scale is ordinal, a statistical treatment adopted in this study was a non-parametric Kruskal-Wallis test, following the suggestion of Siegel and Castellan (1988). Kruskal-Wallis test was followed by Scheffé post hoc tests. All statistical analyses were conducted on SPSS 12.0 (Statistical Package for the Social Sciences, 2003).

5.4. Results

5.4.1. Overall Results

The results of the Kruskal-Wallis test reveal that the learners showed significant group differences on most of the test sentences, indicating that their accuracy of grammatical evaluation increased across proficiency levels. However, the learners failed to show any group difference on q5, q15, q17, or q34 (q = question number in the questionnaire).

¹² The questionnaire is part of the author's dissertation research. See S Y Kim (2006) for the complete questionnaire.

- (11) Test sentences which did not show statistical significance
- q5: *Tom had lots of fun yesterday. *Today is busy with many things to do.*
 - q15: **This year seems that Mary is getting married.*
 - q17: **Has been getting warmer recently*
 - q34: *The principle sent a letter to me. *The letter has not received yet.*

(12) Table 3. *Kruskal-Wallis Test Statistics of Sentences with Non-Significance*

	q5	q15	q17	q34
χ^2	5.29	2.32	2.22	7.30
Asymp. sig.	NS	NS	NS	NS

Note. all $df = 3$, NS = non-significant at $p < .05$

The sentences not showing any group difference were three out of five Topic-with-NS items (q5, q15, and q34) and one expletive NS sentence (q17). No group difference means that the learners' judgments on these sentences underwent little change, meaning that the learners' accuracy did not change across proficiency level. This can be interpreted to mean that the learners had difficulties in detecting the grammaticality of these items, regardless of proficiency levels. Except for q17, this interpretation is correct, as will be discussed in 5.4.2. This will be also attributed to the learners' analysis of the L1 topics as the subjects in their interlanguage grammar.

5.4.2. Results by Sentence Types

Scheffé post hoc tests were conducted on the test sentences which yielded significant group differences in the Kruskal-Wallis test. In order to compare the learners' judgments with the native speakers', the post hoc tests were run on all five groups, including the native speakers, at $df=4$.

5.4.2.1. Null Subjects

- (13) Example test items containing null and overt subjects in the sentence initial position
- q14: *I saw Sandy at a school party. *Was a beautiful girl.*¹³
 - q21: *It seems that Peter was sick.*

¹³ One anonymous reviewer suggests that the learners' high rejection rate of q14 might come from that the learners thought that *Sandy*, the intended subject of the sentence, is a boy, rather than a girl. However, the native English speaking informants whom I consulted say that the name is much more likely a female's name. Regardless of whether the name is a boy's or a girl's, the learners showed high accuracy in other null subject sentences, such as q17, *Has been getting warmer recently*. In addition to the accuracy in detecting the ungrammaticality of null subject sentences, the learners accurately identified the grammaticality of the overt subject sentence, such as q21, *It seems that Peter was sick*. This is striking, given that '[n]onnative speakers were signifi-

The learners were in general accurate in identifying the ungrammaticality of a null subject, and the grammaticality of an overt subject in the sentence initial position. Table 4 in (14) reports the results of Scheffé post hoc test on q14 with a referential NS and q21 with an overt expletive *it*. According to Table 4, q14 and q21 did not yield significant differences between the native speakers and the learners, aside from the middle school group. It is striking that even the lowest middle school learners were quite accurate, in that 73.5% of the group judged q14 to be either a 1 (*no, not grammatical*) or a 2 (*probably not grammatical*) and that 61.2% of the group judged q21 to be either a 3 (*probably grammatical*) or a 4 (*yes, grammatical*). The learners were also quite accurate in detecting the ungrammaticality of null expletive subjects. For instance, the percentages based on the raw frequencies on q17 reveal that q17 was judged to be a 1 (*no*) or a 2 (*probably no*) by 75.5% of the lowest level, the middle school learners ($N = 37/49$).¹⁴ These performances illustrate that, like the L2 target, the interlanguage grammar has the EPP as a grammar requirement, and that this is not influenced by whether a subject is referential or expletive.

(14) Table 4. *Scheffé Post Hoc Tests on q14 and q21*

a) q14 (Referential null subject (NS))

	MS	HS	C	EN	N
MS		.33	.51	.70*	.86*
HS			.18	.37	.53
C				.19	.35
EN					.16
N					

b) q21 (Overt *it* in a raising construction)

	MS	HS	C	EN	N
MS		-.33	-.26	-.77	-1.06*
HS			.06	-.45	-.74
C				-.51	-.80
EN					-.29
N					

Note. numbers = Mean Difference, all $df = 4$, * $p < .05$

MS = Middle school group, HS = High school group,

C = College group, EN = English majors group, N = Native speakers

cantly better at rejecting ungrammatical examples ... than at accepting grammatical examples.' (Bley-Vroman et al. 1988: 21). Putting it differently, the learners' accuracy on this overt subject sentence, in addition to their accuracy on the null subject sentences, can be interpreted to mean that the learners have solid knowledge of the overt subject requirement in their L2 English.

¹⁴ In q17, the English major group, who showed native-like judgment patterns in q14, showed a marginal acceptance tendency. One explanation may be that the learners overgeneralized the subject deletion in certain register variation in English, as found in informal colloquial forms,

5.4.2.2. Nontopic-with-NS Sentences

(15) Example test sentences with Nontopic-with-NS

- a) q33: *Tom lives with his grandmother. *Always prepares delicious meals.*¹⁵
 b) q30: **Although seems that Tom is stupid, he is good at math.*

Nontopic-with-NS test items, q33 and q30, had their sentence initial positions filled with an element which was neither a topic nor a subject. Table 5 in (16) reports the results of Scheffé post hoc tests for these items. The learners from the low and the low-intermediate levels, that is, the middle and the high school groups, were significantly different from the native speakers, but the college and English major groups were not. The percentages based on raw frequencies show that q30 was inaccurately judged to be a 3 (*yes*) or a 4 (*probably yes*) by 59.2% and 53.5% of the middle and high school groups, respectively, but was only judged inaccurately by 22.5% and 4.3% of the college and English major groups, respectively. The results of the Nontopic-with-NS sentences can be interpreted to mean that the low and low-intermediate learners appeared to utilize a sequence-based cue, with which they tended to accept a sentence with its sentence-initial position filled.¹⁶ However, once the learners became intermediate or advanced, they no longer adopted sequence-based cues. The learners' judgments on the Nontopic-with-NS test items were different from those of the Topic-with-NS test items, in that the former underwent significant accuracy increase, whereas the latter tended to stay inaccurate.

(16) Table 5. *Scheffé post hoc tests on q33 and q30 (Nontopic-with-NS sentences)*

a) q33 (Nontopic-with-NS)

	MS	HS	C	EN	N
MS		.78*	1.01**	1.43**	1.69**
HS			.28	.65	.90*
C				.37	.63
EN					.25
N					

such as 'Doesn't look too well,' and 'Wonder what they're doing' (Quirk et al. 1985) (cited in Haegeman (2000: 132-133)). The learners appeared to overextend the null subject rule allowed in register variation in the target L2 into the general expletive *it* construction in their interlanguage.

¹⁵ In q33, the sentence initial position is filled with a nontopic element, 'always.' The non-topic-with NS sentences are intended to be compared to Topic-with-NS where the sentence initial position is filled with a topic.

¹⁶ This acceptance tendency to fill the subject position with any constituent echoes the findings of Vainikka and Young-Scholten (1994, 1997).

b) q30 (Nontopic-with-NS)

	MS	HS	C	EN	N
MS		.37	1.15**	1.44**	1.78**
HS			.79*	1.08*	1.41**
C				.29	.63
EN					.34
N					

Note. numbers = Mean Difference, all $df = 4$, ** $p < .001$, * $p < .05$

MS = Middle school group, HS = High school group,

C = College group, EN = English majors group, N = Native speakers

5.4.2.3. Topic-with-NS Sentences

(17) Topic-with-NS test items (exhaustive list)

- a) q5: *Tom had lots of fun yesterday. *Today is busy with many things to do.*
- b) q4: **Yesterday rained a lot in this city.*
- c) q40: **During the entrance exam was very cold.*¹⁷
- d) q15: **This year seems that Mary is getting married.*
- e) q34: *The principal sent a letter to me. *The letter has not received yet.*

These sentences all reflect the L1 topic sentences. For instance, in q5, *Tom had lots of fun yesterday. *Today [ø= he] is busy with many things to do*, the second sentence starts with *today*, which is a contrastive spatiotemporal topic. It contrasts with *yesterday* in the previous sentence, while performing a scene-setting role. At the same time, the subject, *he*, is null, since it lacks discourse-prominence. As discussed in 5.5.1., the Kruskal-Wallis test did not yield any group difference on three (q5, q15, and q34) out of the five Topic-with-NS test items in (17), indicating that the learners' judgments on these sentences underwent little change. Table 6 in (18) reports the percentages of the correct ranks assigned to these three Topic-with-NS sentences, which are in turn compared to those of q14 and q27 which started respectively with a null subject and an overt subject, and q33 and q19 which started with a nontopic element.

¹⁷ One anonymous reviewer suggests that q40 could be grammatical, as in 'Between eleven and midnight suits me alright.' Interestingly, 19 out of 20 native English speaking controls judged the sentence to be 1 (not grammatical), and 1 out of them judged the sentence to be 2 (probably not grammatical).

(18) Table 6. *Percentages of correct ranks assigned to q14, q27, q33, q19, q5, q15, and q34*

	q14	q27	q33	q19	q5	q15	q34
Middle S	73.5	67.3	40.8	32.7	32.7	49.0	51.0
High S	86.0	74.4	74.5	62.8	51.1	67.5	34.9
College	92.5	82.5	87.5	80.0	62.5	55.0	52.5
English Major	95.7	95.7	95.6	91.3	56.5	65.2	78.2

Note 1. correct ranks count a 3 (probably yes) and a 4 (yes) for q27, which is grammatical, whereas a 1 (no) and a 2 (probably no) are counted for correct ranks for other sentences which are ungrammatical.

Note 2. q27 (overt subject): *Mary looked at the map, but she could not find the street.*

q19 (Nontopic-with-NS): **Whenever was very hot, we went swimming.*

For q14 see (13a); for q33 see (15a); for q5, q15, and q34 see sentences in (17)

In Table 6, the learners' judgment patterns present the following three characteristics. First, q14 and q27 were the most accurately judged by the learners, including the low-level, middle school group. This suggests that the learners were aware that well-formed English sentences have the subject position filled, indicating that the EPP was operative almost from the beginning of the English acquisition. Second, even though the EPP was operative, the low-level, middle school group, appeared to rely on sequence-based cues. This was evident because their accuracy decreased in q33 and q19, where the sentence initial position was filled with any constituent. Learners no longer relied on these sequence-based cues once they became intermediate or advanced, as shown by their drastically increased accuracy. Third, q5, q15, and q34, with a Topic-with-NS, underwent little change regardless of proficiency levels.¹⁸ For instance, the ungrammatical q5 was rejected only by 56.5% of the English major group, who showed solid knowledge of the EPP in other sentences. I argue that the learners' difficulties in detecting the ungrammaticality of the Topic-with-NS sentences stem from their analysis of the L1-based topics as subjects in their interlanguage. I will return to this point in Section 5.

In sum, the learners appeared to be aware of the EPP almost from the beginning of their L2 English acquisition. The low-level learners tended to utilize a sequence-based cue, with which they tended to accept sentences with the sentence-initial position filled with any constituent. This sequence-based cue was not adopted, once the learners entered the intermediate level. The learners, however, tended to analyze L1-based topics as subjects in their interlanguage, suggesting their interlanguage EPP is satisfied with either a topic or a subject. The following section is a discussion of the linguistic structure regulating the EPP in the learners' grammar.

¹⁸ The English major group showed accuracy increase on q34, but the Kruskal-Wallis test did not detect any significant group difference among the four learner groups.

6. The Linguistic Structure of the Learners' Grammar

6.1. Interlanguage as Predication Structure

I argue that the learners' judgment patterns can be accounted for in terms of predication structure. In the learners' language, a predicate must be saturated by taking either a topic or a subject. A topic is identified based on the L1, in that it is not necessarily theta-marked, and that it carries L1 topic properties, such as discourse-prominence. For instance, as discussed in the previous section, the topic in q5 serves as a spatiotemporal contrastive topic. In q34, the topic is a logical object, but, due to its discourse-prominence, is singled out as the topic from alternatives. The learners' language also allows the expletive *it*, which does not exist in the L1. This suggests that either an L1-based topic or an L2-based subject can saturate a predicate to satisfy the well-formedness condition of the predication structure. The predicational nature of the interlanguage has the following characteristics. First, it has a bipartite structure partitioned into a topic/subject and a predicate. Second, the predication involves syntactic saturation, rather than thematic saturation. Third, predication can be divided intothetic and categorical predication, following Raposo and Uriagereka (1995). Thus, a grammatical subject can saturate athetic predicate, and a categorical predicate is predicated of a topic. I argue that the predication structure in the learners' language stems from their use of the L1 concept of 'topic,' while still being sensitive to the L2 target EPP. In the next section, I propose a phrase structure regulating the EPP of the interlanguage.

6.2. Interlanguage Syntactic Structure Regulating the EPP

I propose that the interlanguage grammar of the present study has an independent syntactic projection FP, where F can stand for 'force' (Chomsky 2000: 108), or 'functional' (Raposo and Uriagereka 1995: 186).¹⁹ Following Rizzi

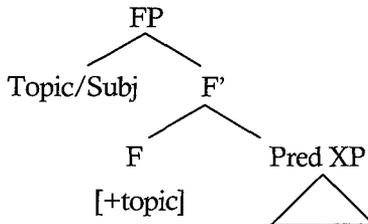
¹⁹ According to one anonymous reviewer, it is plausible to assume that the Korean learners might interchangeably use the L1 TopP and the L2 IP (TP), rather than a transitional syntactic projection FP. However, the postulation of FP is supported based on the fact that the interlanguage grammar is often neither solely dependent on the L1, nor solely on the L2. The L2 acquisition literature shows that English learners whose L1 allows double/multiple nominative constructions avoid consecutive nominal sequences in their L2 English, as attested in Yip and Matthews (1995) and Zobl (2002). For instance, Zobl (2002) studied Japanese adult learners' written corpora in English, and claims that 'the topic plus subject sequence has been "cloaked" by linking two internal phrases of the subject DP prepositionally' (2002: 43, the quotation marks original). The following example (1) is taken from his study.

(1) 'The oldest son is doing good work but **the youngest son** of *the parents* are not happy with his work....' (Zobl 2002: 43, emphases are added)

Yip and Matthews (1995) examined Chinese students' L2 English writing samples. Yip and Matthews report that the double nominal sequence of a topic and a subject was avoided by the

(1997), who claims that higher clauses above IP are to link a sentential proposition expressed by IP and superordinate structure, such as the architecture of discourse, FP is understood as one of the higher clauses than IP. Again using Rizzi's analysis (1997), the FP performs a role of formal projection which serves as interface between propositional content and discourse. It is not part of the Verb system, and thus is not constrained by verbal selectional restrictions. Instead, the head F^0 defines 'predication,' meaning that the spec must be filled to saturate the predicate in the complement position. The spec position is occupied by either a topic or a subject, which saturates a categorical or a thematic predicate, respectively. The spec requirement is realized as the EPP, given Chomsky (2000: 102) who defines the EPP as 'a property of allowing an extra Spec,' 'beyond its s-selection.' The EPP requirement in FP is coupled with 'P-features of the peripheral system (force, topic, focus, etc.)' (Chomsky 2000: 108, italics and parentheses original), by which FP spec with the P-feature is interpreted as a topic. The operation of the p-feature is selective, meaning that FP spec can be either a topic or a subject.

(19) Figure 2. FP as the interlanguage phrase structure for a topic and a subject



In Figure 2, the head F is occupied by the P(eripheral)-feature [+topic], which is one optional choice for satisfying the EPP. If the [+topic] applies, the EPP configuration yields a topic interpretation of the Spec-FP. The resulting Spec of FP bears the properties of a categorical subject, by which the categorical subject is singled out from the remainder of a sentence, and it does not necessarily show a theta-dependency. If the [+topic] does not apply, the EPP is satisfied in the same way as in the L2 IP. The EPP is satisfied by either a topic or a subject. This structure accounts for the learners' tendency to accept a topic sentence where a topic is followed by a verb, as well as their accuracy in identi-

prepositions *for* and *as for*, as follows:

- (2) a) For first language, every child develops it almost at the same time.
 b) For most people, they would learn their mother tongue only, but...
 c) For Japanese speakers, they may think more positively about....
 d) For L1 acquisition, success is not influenced... (all sentences from Yip and Matthews 1995: 23-25).

fying the (un)grammaticality of null and overt subjects in the matrix clause.

In this scenario, the FP is understood as a transitional structure between the L1 TopP and the L2 IP. The Spec-FP hosts constituents along the continuum ranging from an L1-topic to an L2-subject. As the learners' proficiency increases, a Spec-FP constituent bears more L2-like properties. Moving toward the L2 target is made possible by learning and practicing the L2 subject properties, such as theta-assigned subjects, and unlearning the L1 topic properties, such as spatiotemporal PP topics. The interlanguage EPP, satisfied with either a topic or a subject, is attested in Finnish (Holmberg and Nikanne 2002). Holmberg and Nikanne (2002) convincingly present data showing that the EPP in Finnish can be satisfied by 'filling the Spec of FP,'²⁰ where the possible Spec constituents are a nominative subject, a topic, and an expletive. The data in Finnish suggest that the EPP's allowing either a topic or a subject in the interlanguage is a natural language rule.

6.3. Conclusion

In this paper, I have argued that the EPP is satisfied by either a topic or a subject in the interlanguage grammar of Korean speakers acquiring English. I suggest that the satisfaction of the EPP is attributable to the predicational nature of the interlanguage, meaning that either a topic or a subject is required to saturate a predicate. This interlanguage EPP explains the learners' judgment patterns in the experimental study, in that the learners accurately identified the (un)grammaticality of null and overt subjects in the sentence initial position, but also tended to accept sentences in which a topic was followed by a finite verb. In order to account for the predicational nature of the interlanguage grammar, I proposed an independent syntactic category, FP, which is a transitional structure between the L1 TopP and the L2 IP. FP defines 'predication,' where the spec of FP is in a predication relation with the XP Predicate, which is the complement of the head F. The head F is occupied by a peripheral feature [+topic], as an option of the EPP. If the [+topic] is operative, the spec of FP is occupied by an L1-based topic, such as a spatiotemporal topic. If not, the EPP is satisfied by filling the spec of FP with an L2-oriented subject, such as the expletive *it*. The EPP in the interlanguage grammar is a condition of [Spec, FP], which is independent of the V-system, but licensed by predication. It thus allows either a topic or a subject to fill the Spec FP. Further evidence of the EPP being satisfied by either a topic or a subject comes from Finnish (Holm-

²⁰ One anonymous reviewer insightfully suggests that Holmberg and Nikanne (2002) also use 'FP,' which is 'roughly AgrSP (mnemonic for 'finite') below CP, while 'FP' in this paper is 'Force' or 'Functional.' This paper adopts the empirical aspect found in a natural language where a topic and a subject can occur in the same position. Also note that neither Holmberg and Nikanne's FP nor the interlanguage learners' FP is not V-system, following Rizzi (1997).

berg and Nikanne 2002). Based on empirical data, the interlanguage EPP condition is argued to be a natural language rule. One further question of the present study is to investigate when learners learn the L2 English subject properties, and what they learn exactly. I leave this for future research.

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