# Source of Transfer in the Acquisition of French as a Third Language from the Generative Perspective 

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#### Abstract

This thesis investigates the source of transfer in the acquisition of nominal and verbal domain of French as a third language by Korean and Chinese adult students who have learned English as a second language. Theories of syntactic transfer including the L1 Factor, the Cumulative-Enhancement Model, the L2 Status Factor and the Typology Primacy Model will be reviewed and examined with the written production results of four syntactic structures of French; mainly, the distinction of (in)definite articles, the placement of adjectives, the placement of verbs and the negation. Our results show positive and negative transfers from both the L1 and the L2 separately or collaboratively. The latter seems to support the argument of multi-competence, according to which the interlanguage is treated as a whole instead of a distinct L1 and L2. Moreover, in the cases where a syntactic structure is not typologically similar to the L1 or the L2, our participants seem to have direct access to Universal Grammar.

Keywords: Third Language Acquisition; Syntactic Transfer; French; English; Chinese; Korean


To my father, mother and aunt.

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## List of Acronyms

| L1 | First Language (maternal language) |
| :--- | :--- |
| L2 | Second Language |
| L3 | Third Language |
| AdvP | Adverb Phrase |
| AgrP | Agreement Phrase |
| AspP | Aspect Phrase |
| ACC | Accusative |
| AP | Adjective Phrase |
| CLP | Classifier Phrease |
| CP | Complementizer Phrase |
| DAT | Dative |
| DP | Determiner Phrase |
| DEC | Declarative |
| GEN | Genitive |
| InfIP | Inflection Phrase |
| LF | Logical Form |
| NegP | Negation Phrase |
| NumP | Number Phrase |
| NumeralP | Numeral Phrase |
| NEG | Negative marker |
| NOM | Nominal |
| NP | Noun Phrase |
| SLA | Second Language Acquisition |
| SOV | Subject-Object-Verb |
| SVO | Subject-Verb-Object |
| TLA | Third Language Acquisition |
| TP | Tense Phrase |
| UG | Universal Grammar |
| VP | Verb Phrase |

## 1. Introduction

This thesis investigates the acquisition of verbal and nominal domains of French as a third language in adult language learners from the generative linguistics perspective. The notion of Second Language Acquisition (SLA) has been defined as the acquisition of all languages other than the maternal language (L1). To this fact, Third Language Acquisition (TLA) has always been considered as a sub-field of SLA. However, in recent years research works have started looking at TLA as a separate domain and realized that the complexity and the diversity of the learning process increases when a third, or new, language is added to the learners' interlanguage ${ }^{1}$ (See Cenoz et al, 2001).

There are at least four different scenarios in which a new language can be introduced into the interlanguage. A language learner can start acquiring three different languages simultaneously (L1/L2/L3) or successively (L1>L2>L3). A language learner can also start learning two new languages simultaneously after having acquired the L1 (L1>L2/L3) ${ }^{2}$. Finally, a language learner can start learning a new language after having simultaneously acquired the L1 and L2 (L1/L2>L3) ${ }^{3}$. Understandably, the learning process and outcome will vary, to a certain extent, according to each of these scenarios of acquisition.

While examining the acquisition of a new language, it is essential to consider of how a previous acquired language can interact and affect the learning process of a new

1 In SLA, the interlanguage refers to the language system of a nonnative speaker at any stage prior to full acquisition of the target language.
${ }^{2}$ For example, the acquisition of two foreign languages at the same moment and in the same setting (i.e., school).
${ }^{3}$ In the case of L1 bilingualism for instance.
language. This occurs through cross-linguistic influences (Sherwood Smith, 1983). There are various different types of cross-linguistic influences: the transfer, the transfer in reverse, the interference, the resolution, the borrowing, etc. In this study, we will examine one cross-linguistic influence: the syntactic transfer ${ }^{4}$. While there is only one possible source of transfer in SLA, notably the L1, there are two possible sources of transfer in TLA. In other words, the L1 and/or the L2 could possibly affect the learning process and the results of a third language; the question is how and to what extent (Leung, 2007).

In this study, we will investigate the acquisition of four syntactic structures of French: the distinction between definite and indefinite articles, the placement of adjectives, the SVO word order and the negation. By examining these specific syntactic structures, we will endeavor to answer the following questions which will be developed from the literature review:

1. Does a L1 always play a prominent role in TLA as it does in SLA?
2. Does a L2 block the access of a L1 even when the L1 would be a more suitable source for positive transfer?
3. Is there a clear division between a L1 and L2 or should they be considered as a whole?
4. Is a typologically more similar language always considered as a preferred source of transfer?
5. What would happen when a syntactic structure of a L3 is not typologically similar to a L1 or L2?

We have recruited 8 Korean and 8 Chinese students who have English as their L2 and French as their L3. At the time of the experiment, these participants were all enrolled in a French course at Simon Fraser University in British Columbia, Canada. This particular French course (FREN 120) is designed for people who have never taken French before. In other words, these participants are all true beginners of French. We

4 Even though in our study, we are only interested in syntactic transfer, the transfer can manifest in several sub-categories of linguistics: phonetics, phonology, lexicology... etc. (See Ringbom, 2001 for a detailed review).
will compare the results of the Korean group with the Chinese group, both in the manner of intergroup and intragroup. The reason why we chose Korean and Chinese is because even though these are both East Asian languages, they are different in certain aspects of syntactic structures which can be examined at the initial stage of learning. This allows us to observe subtle transfer effects (See Chapter 3).

In this thesis, we will first review the theories of the syntactic transfer proposed in SLA and TLA, and summarize previous studies of transfer from the generative perspective in chapter 2. In chapter 3, we will review relevant aspects of the syntactic structures of Korean, Chinese, English and French, and discuss how they are similar or different from one another. In chapter 4, we will present the background and language learning history of our participants; we will also explain our methodology and experimental tasks. In chapter 5, we will report our statistical findings and compare the results of the Korean group with the Chinese group. Finally in chapter 6, we will analyze our findings and provide plausible explanations for them.

## 2. Previous Studies and Theories of Transfer on SLA and TLA in Generative Linguistics

### 2.1. L2 Acquisition

In this chapter, we will summarize and present previous studies and various theories of transfer on SLA and TLA. As mentioned, we will investigate the syntactic transfers from the generative approach in our study. Thus we have selected the most fundamental and influential studies from generative linguistics. Before considering theories of transfer in TLA, it is important to review theories of transfer in SLA.

### 2.1.1. Minimal Tree Hypothesis

The Minimal Tree Hypothesis (Vainikka \& Young-Scholten 1994, 1996) makes a crucial distinction between lexical categories and functional categories. Vainikka and Young-Scholten state that, "only lexical categories are present at the earliest stage of the L2 acquisition, and that during acquisition functional projections develop in succession" (1996, p. 7). In other words, only properties of lexical categories will be transferred from the L1 at the beginning of the L2 acquisition, whereas the proper L2 functional categories will develop with sufficient amount of positive L2 input.

Vainikka and Young-Scholten (1996) also claim that L2 learners construct the phrase structure in much the same way as children do in the acquisition of their L1 (p. 13). More precisely, both L1 and L2 learners go through an early stage where functional categories are non-existent. However, whereas the children acquiring their L1 have no knowledge of any previous acquired language, the L2 learners will transfer their knowledge of their L1 into the beginning of the acquisition of the L2 without any functional projections.

This hypothesis was formulated from the results of a longitudinal and crosssectional production study of adult L2 learners of German whose L1 are Korean,

Turkish, Italian and Spanish. The VP headedness was investigated in their study: German, Korean and Turkish are VP head-final languages, and Italian and Spanish are VP head-initial languages. Vainikka and Young-Scholten (1996) report that while Korean and Turkish learners are able to produce head-final German VP from the start, Italian and Spanish learners have to pass through an additional stage by mistakenly positing a head-initial VP for their L2 German before attaining a correct headedness for German VP. Thus, it is possible for L2 learners to reset the parameters with sufficient exposure to a L2.

However, Vainikka and Young-Scholten (1996) also notice that despite the headedness of VP, all learners produced basically no auxiliary or modals at the beginning of the L2 acquisition. Assuming that both auxiliary and modal are associated with InfIP-level functional projections, these authors posit that functional categories are not transferred. Moreover, they rule out the possibility that the L2 learners' L1 functional categories would be transferred at a later stage of the L2 acquisition: "the learner transfers only his or her native language VP, and that no functional projections are transferred - neither initially, nor subsequently" (p. 15).

### 2.1.2. Valueless Features Hypothesis

Similar to the Minimal Tree Hypothesis, the Valueless Features Hypothesis (Eubank, 1993/1994, 1994, 1996) also makes a crucial distinction between lexical categories and functional categories. Instead of only transferring the lexical categories, as claimed by the Minimal Tree Hypothesis, the Valueless Feature Hypothesis supports that all categories from the L1, including functional ones, will be transferred into the initial stage of the L2 mental grammar. However, note that the particular specifications or values activated by their L1 for the functional categories are neutralized. Namely, any specific features activated by the L1 will become 'valueless' in SLA. Even though the functional categories that are present in the L1 will also be present in the initial stage of the L2 grammar, they will only function as structural position markers without any particular specifications and trigger no specific effects.

Eubank $(1993 / 1994,1994)$ reexamines the data from several previous studies with regards to the verb movement and the verbal features (ie. Infl, Agr, Neg, ...etc.). He
proposes the "weak transfer model", and suggests that "lexical and functional projections transfer from the native language, and so do the headedness characteristics of those projections, but values under function heads are not transferred" (1994, p. 385). However, in his later work, Eubank (1996) seems to agree with Vainikka and YoungScholten (1996)'s proposal that only lexical categories are transferred in the initial stage of the acquisition. Eubank $(1994,1996)$ maintains that functional categories will transfer with valueless features only when there is positive evidence from the L2 for projecting the functional category in question.

### 2.1.3. Failed Functional Feature Hypothesis

Hawkins and Chan (1997) and Hawkins $(1998,2000)$ first proposed The Failed Functional Feature Hypothesis. It can be considered as an updated version of "no parameter resetting" or "full transfer partial access" (White, 2000). This hypothesis has also been grouped under the "impairment" camp (White, 2003).

Different from the Minimal Tree Hypothesis and the Valueless Feature Hypothesis mentioned above, the Failed Functional Feature Hypothesis assumes full transfer from the learner's native language. However, this hypothesis denies the availability of UG in the acquisition of a new language. UG is available to the L2 language learners in some attenuated form. Hawkins and Chan state that "certain subparts of UG are inaccessible or less accessible to second language learners, while other subparts remain fully available" (1997, p. 188). More precisely, all the parameterized UG properties that are not activated by the L1 will no longer be able to be activated by a subsequent language.

Hawkins and Chan (1997) compare the acquisition of English restrictive relative clauses by Chinese L2 learners with French L2 learners. In English and French, the [wh] features motivate the wh-operator movement in overt syntax while they do not in Chinese. The Chinese and French participants were divided into three groups according to their English proficiency. Hawkins and Chan (1997) report that the French participants have a significantly higher success rate than the Chinese participants across all proficiency levels. Even though the Chinese participants' L2 grammar becomes more English-like in appearance, a different grammatical representation was developed.

Namely, the English [wh] features of these Chinese participants involved pronominal binding instead of operator movement (Hawkins \& Chan, 1997).

More evidence in favour of this hypothesis is reported in a subsequent study by Hawkins (1998), in which the author examines the acquisition of gender in the DP (Determiner Phrase) of French by English L2 learners. Hawkins (1998) observes that these English participants reveal a persistent problem related to the usage of gender in their French interlanguage. More specifically, they overgeneralize the masculine and feminine form of articles and favour the usage of one or the other in their oral production. However, it is interesting that these English L2 learners are all native-like with regard to the acquisition of post-nominal adjectives. According to Leung (2005), this phenomenon can be considered to be a contra-example, suggesting that the feature strength of functional categories is not necessarily subject to the 'failure'.

The Failed Functional Feature Hypothesis also suggests that there is a critical period allowing the activation of the parameterized UG properties that are not instantiated in the L1 grammar. They state,"features of the functional categories, and only those features, are subject to a critical period" (Hawkins \& Chan, 1997, p. 188). Where L2 learners who start learning a new language before the critical period will not be restricted by a prediction through this hypothesis, adults or post-puberty L2 learners will never be able to activate the UG features that are instantiated in their L1. They therefore will be permanently 'stuck' with their L1 features (Hawkins \& Chan, 1997).

### 2.1.4. Full Transfer Full Access

Schwartz and Sprouse (1994) first proposed the Full Transfer Full Access Hypothesis ${ }^{5}$ under the terminology of 'Absolute L1 Influence'. These authors later modified the terminology to match the one we are familiar with today (Schwartz \& Sprouse, 1996). The Full Transfer Full Access Hypothesis can be broken down into two

[^0]parts: the "Full Transfer" applies to the initial stage of the L2, whereas the "Full Access" applies to the subsequent and final stage of the L2 development.

Similar to the Failed Functional Feature Hypothesis, the Full Transfer Full Access Hypothesis posits that the L2 learners will initially transfer everything from their L1 grammar into their L2 interlanguage. The L2 initial state will thus be composed of all the formal features, feature values and feature strengths, all of which have been activated by the L1. However, the Full Transfer Full Access Hypothesis also allows the L2 learners to have full access to UG to readjust the parameter in order to match the grammar of the L2. More precisely, the parameterized properties that are not activated by the L1 can eventually be acquired. The final stage of acquisition of the L2 is fully constrained by UG even though the final stage of the grammar may not necessarily be target-like (Schwartz \& Sprouse, 1996).

Schwartz and Sprouse (1994) examine the word order and the nominative case assignment in spontaneous oral productions of an adult native ${ }^{6}$ Turkish speaker learning German as a second language. A longitudinal study was conducted over a period of 26 months. The authors were able to identify three developmental stages throughout this period of time: the initial stage of the native Turkish speaker's L2 interlanguage grammar was attributable to L1 Turkish; the subsequent stage saw the L2 learner, with a sufficient amount of German input, being able to readjust the parameters by accessing UG; and in the final stage, the interlanguage grammar conformed to UG in response to the German input even though it is never exactly target-like. Despite being a very interesting observation, this particular study is based only on a single participant.

[^1]
### 2.2. L3 Acquisition

Having reviewed theories of transfer in L2 acquisition from a generative perspective, the question that we can now ask is whether these theories are applicable when an additional language is added to the mix (Leung 2005). To verify this question, Leung (2005) examines the acquisition of French DPs and the feature strength of Num by Chinese L1 learners who have English as a L2. The hypothesis of Leung's study is based on the Failed Function Feature Hypothesis and the Full Transfer Full Access.

On one hand, according to the Failed Function Feature Hypothesis, since all parameterized functional categories that are not activated by the L1 will no longer be able to be activated by the L2 or the L3, the initial state of the L3 grammar can only be the steady state of the L1. On the other hand, according to the Full Transfer Full Access Hypothesis, the initial state of the L3 grammar can be either the steady state of the L1 or ${ }^{7}$ the L2. This is because language learners will transfer the grammar from previously acquired languages in its entirety; hence "Full Transfer".

What Leung (2005) actually observed is a partial transfer of the L 2 at the initial stage of the acquisition of French instead of a full transfer of the L1. This result completely contradicts the Failed Function Feature Hypothesis since according to this hypothesis, all functional categories, formal features and feature strength, that are not instantiated in the L1 will not be activated in the acquisition of L2. As a result, the source of transfer can only be the L1. Moreover, this result does not totally agree with Full Transfer and Full Access Hypothesis since the weak feature strength of L2 English was not transferred into the L3.

One of the biggest obstacles in applying the hypotheses of SLA into TLA is that most of them are not able to determine if the L1 or the L2 is considered as the main source of transfer in the acquisition of a third language. One of the fundamental

7 The reason why we say 'or' instead of 'and' is because we are not certain if the Full Transfer Full access theory would consider L1 and L2 as a whole or as distinctly in a language learner's mind, since this particular theory was proposed in regards to SLA.
differences between SLA and TLA is the fact that there can only be one source of transfer in SLA: the L1. As we have mentioned in the introduction, the issue of source of transfer is much more complex in TLA than in SLA due to the addition of a third language. In fact, there has been a long debate on this particular issue in TLA (e.g., Leung, 2001, 2005, 2006a, 2006b; Flynn et al., 2004; Bardel \& Falk, 2007; Jaensch, 2008, 2011; Cabrelli Amaro et al., 2009; Rothman and Cabrelli Amara, 2010. Falk \& Bardel, 2011).

### 2.2.1. L1 Factor

We can consider the L1 Factor as an extension of the Failed Function Feature Hypothesis since this hypothesis defends the idea that properties that are not initiated in the L1 are no longer accessible for activation by the input of the L2 or the L3. As Rothman et al. explains:

L2 Global Impairment and L2 Representation Deficit approaches must default to assuming the L1 factor, at least for properties that would clearly involve the acquisition of new uninterpretable features during the course of L2 acquisition, since such new L2 features should be impossible to acquire in adulthood and thus not available for transfer (2001, p. 8-9).

In Lozano's study (2003), the author examines the interpretation of overt and null pronouns in Overt Pronoun Constraint and in Contrastive Focus Constraint (Montelbetti, 1986) in the acquisition of Spanish as an L2 and L3 by participants who have Greek and English as an L1 or an L2. Their results suggest that the L2 or the L3 learners of Spanish obey the Overt Pronoun Constraint in spite of the differences in configuration of their L1 or L2. However, the knowledge of the Contrastive Focus Constraint is conditioned by Spanish learners' L1. In other words, the L1 can cause persistent fossilization if the L1 features do not match the L2 or the L3.

Similar results are found in the study of Fufen (2009). The author examined the (null) object acquisition of L3 learners of Norwegian who had Chinese as a L1 and English as a L2. Whereas Chinese language allows the dropping of objects in sentential contexts related to the [+zero topic] setting of the topic-drop parameter allowed by UG, English and Norwegian are assumed to instantiate the [-zero topic] parameter setting. The results show a significant difference between participants' response to null object
sentences in English and Norwegian. The L3 Norwegian learners successfully rejected ungrammatical null object sentence in English, but failed to do so in Norwegian. According to Fufen (2009), this phenomenon can be explained by the dominant influence of L1 in the acquisition of an L3. The author concludes that L1 grammar cannot be eliminated as a direct source of transfer in TLA even when the L2 is typologically similar to the L3.

### 2.2.2. Cumulative-Enhancement Model

Central questions in the study of Flynn and Foley (2004) is whether the L1 always represents a privileged source of the transfer in TLA, or whether the acquisition of a new language is a cumulative process, perhaps in the sense of the multicompetence or the multilingual competence, according to which a second language learner's mind should be viewed as a whole instead of a distinct L1, L2 and Ln (Cook, 1996; Herdina \& Jessner, 2002). Flynn and Foley (2004) explain,"it might be the case that each language learned and represented in the mind/brain of the learner is equally important and perhaps equally available for playing some role in subsequent language learning" (p. 5).

If the properties of all the previous acquired languages have an impact on the results of the acquisition of a new language, the question then, is to what extent, and in which manner, would these previously acquired languages influence the acquisition process? Following this train of thought, Flynn and Foley (2004) propose the Cumulative-Enhancement Model. They purport that the acquisition of a new language is cumulative and non-redundant, and that all the previously acquired languages will only facilitate the acquisition of the new language; otherwise they will remain neutral. In other words, any previously acquired languages provide only positive transfers, which enhance the language learning process, into the acquisition of a new language.

The Cumulative-Enhancement Model is proposed based on the study of Flynn and Foley (2004) in which they examine the oral production of CP (Complementizer Phrase), more precisely the relative clauses, of English L3 learners who have Kazakh as an L1 and Russian as an L2. The results of this study are compared to the learning patterns of English L1 children and English L2 learners who have either Japanese or

Spanish as their L1. Japanese L1 learners of English undergo the same pattern of learning as English L1 children. For example, the free relative clause structure, a relative clause with no lexical head ${ }^{8}$, appears to be a developmental precursor to the lexically headed form (Flynn \& Lust, 1981). Spanish L1 learners however, are able to directly transfer the correct headedness of CP from their L1 into their L2 without using the free relative clauses as a developmental precursor (Flynn, 1983; 1987).

As for English L3 learners in the study of Flynn and Foley (2004), since Russian and English share similar properties like head-initial and right-branching, these English L3 learners were able to produce English relative clauses without using the free relative clause structure as a developmental precursor. In other words, they were able to successfully transfer the properties of Russian L2 into the acquisition of English L3. Their results suggest that prior CP development can influence development of CP structure in the acquisition of the subsequent language. Flynn and Foley (2004) conclude that the experience in any prior language can be drawn upon in subsequent language acquisition and that the L1 does not always play a dominant role as a privileged source of the transfer.

### 2.2.3. L2 Status Factor

The L2 Status Factor Hypothesis was first introduced by William and Hammarberg's study (1998) in which they examined the lexical transfer of an adult learner of Swedish (L3) who has English as an L1 and German as an L2. The authors noticed that the L1 and the L2 play a different role in the acquisition of Swedish. For example, the L2 provides material for lexical construction in the production of the L3 whereas the L1 plays an instrumental role for metalinguistic awareness ${ }^{9}$ (William \& Hammarberg, 1998). Moreover, this theory distinguishes the acquisition process of the

8 i.e., 'I hit what pushes you.'
9 Metalinguistic awareness is defined as the ability to utilize one's native language to talk 'about' language. It allows a speaker to reflect upon and attend to language forms as objects in and of themselves, rather than simply using language to convey meaning (WarrenLeubecker \& Carter, 1988).

L1 and L2: the acquisition process of the L1 is based on the interaction of the input with a system of features and parameters (i.e., Universal Grammar), whereas the acquisition of L2 is a combination of UG, knowledge of L1 and the encyclopedic knowledge ${ }^{10}$.

As for the acquisition of an L3, since the language learners have already been in contact with one non-native language, "it can therefore be assumed that this learner is more aware about the language learning process, and has acquired metalinguistic awareness and learning strategies to the non-native/foreign language learning" (Bardel \& Falk, 2010, p. 62). Therefore, when the L2 and the L3 are both foreign languages acquired in a formal setting (i.e., a classroom), it is possible for L3 learners to differentiate their languages as either native or non-native (Williams \& Hammarberg, 1998). Meisel (1983) states that, "previous learned second languages interfere with the learning of another foreign language" and that "it is not at all obvious that the conditions on the application of transfer strategies from the L1 or a foreign language are identical" (p. 18). Meisel (1983) also suggests that if and when the difference of storing and processing first and second language in the neuropsychological basis can be proven, then the distinction between 'first language' and 'other than first language' must be deemed as crucial (p. 18).

L2 Status Factor refers to the language learners' inclination to activate a previously acquired second language in production of an L3. According to this approach, it is believed that all non-native languages are stored in certain zones of the brain different from the one dedicated to the L1. It may, therefore, be easier for a language learner to activate a non-native language as a source of transfer rather than the native language during the acquisition of a L3. In other words, the L2 acts as a 'mental block' that prevents learners from accessing their L1 directly (Bardel \& Falk, 2007).

10 As defined by Oxford Dictionary of Linguistics: "Knowledge of the world as distinguished from knowledge of the language system. Thus in many accounts a word like cat might have a semantic feature [+ mammal] or [+ viviparous]: to know that it has this feature and others that distinguish it from other units in the lexicon is to know its meaning in the language. But it would then be a matter of 'encyclopaedic knowledge' that the young of cats are born blind, that the period of gestation in the domestic cat is about 65 days, and so on."

Figure 1 (inspired by Hufeisen, 1998) below is a graphic representation of the differences in the acquisition process of a L1, L2 and L3. It highlights the additional factors that are necessary for TLA. This schema was first proposed by Hufeisen (1998) in order to explain some of the lexical transfer phenomena in TLA, but it is believed to be a suitable model in other subcategories of linguistics as well (Bardel \& Falk, 2010).


Figure 1. L1, L2 and L3 acquisition inspired by Hufeisen's model.
Note. Adapted from Hufeisen (1998, p. 171).

In Folk and Bardel (2007), the authors examine the placement of negation of learners of Swedish and Dutch, both verb-second (V2) languages ${ }^{11}$, as an L3. Two groups of participants were recruited. One group had a V2 L1 and a non-V2 L2, and the other group a non-V2 L1 and a V2 L2. The results show that the group with a V2 L2 outperformed the other group. This supports the argument that the L2 is the main source of the crosslinguistic transfer. Folk and Bardel (2007) conclude that the L2 blocks and prevents direct access of the morphosyntactic system of the L1 even when the L1 is considered to be typologically more similar to the L3 than it is to a L2.

Similar results are reported Bardel and Folk (2010) in a subsequent study in which they examine the placement of object pronouns of learners of German as an L3. In this study, a group of participants who have French (L1) and English (L2) are compared to a group of participants who have English (L1) and French (L2). Where the object pronouns are preverbal in French, in English they are postverbal. German, on the other hand, has preverbal object pronouns in subordinate clauses and postverbal pronouns in main clauses. The grammatical judgment task is employed in this experiment. The results show that the French L2 participants outperform the English L2 participants in the preverbal object pronoun tickets whereas English L2 participants have a better performance in the postverbal object pronoun tickets. According to Bardel and Folk (2010), since there is strong evidence of both positive and negative transfer from learners' L2, the L2 is the main source of the transfer even when the L1 would provide more suitable positive transfer for the syntactic properties in question.

### 2.2.4. Typology Primacy Model

Similar to the Cumulative-Enhancement Model (Flynn, 2004), the Typology Primacy Model (Rothman, 2011) supports that L1 and L2 can both potentially be the main source of transfer. However, the Typology Primacy Model does not support that

[^2]previously acquired languages would only facilitate the acquisition of a new language, or else stay neutral. Rothman state:


#### Abstract

Initial state transfer for multilingualism occurs selectively, depending on the comparative perceived typology of the language pairing involved, or psychotypological proximity. Syntactic properties of the closest [psycho] typological language, either the L1 or L2, constitute the initial state hypotheses in multilingualism, whether or not such transfer constitutes the most economical option ${ }^{12}$. (2011, p.112)


Where the typology refers to the actual typological proximity between two languages, the psychotypology proposed by Kellerman (1983) refers to the perception of the typological proximity of the language learner.

Rothman (2011) examines the acquisition of the adjective placement and its semantic differences in the acquisition of Spanish and Brazilian Portuguese as an L3. Since these two languages are both categorized as Romance languages, they share many typological similarities. The results of a group of native Italian speakers who have English as a L2 are compared to the results of a group of native English speakers who have Spanish as a L2. Most nouns are obligated to move in front of the adjectives for feature checking purposes in Romance languages (prenominal), whereas nouns stay insitu in English (postnominal). Furthermore, in Romance languages, certain adjectives can be placed either before or after the noun depending on the intended meaning. In English, however, the fact that adjectives can only be placed syntactically in front of the noun creates a certain ambiguity to the meaning. The results demonstrate that, despite the L1 and the L2, these L3 learners are able to correctly place the adjectives according to the semantic interpretations. In other words, these L3 learners are able to successfully transfer previously acquired knowledge of the adjective placement from their L1 or L2, irrespective of the order of acquisition, into the L3.

[^3]In most cases, the typological and psychotypological proximity are the same. It is possible however, that one of the previously acquired languages, the one which provides the best source of transfer, is perceived by the language learner as less typologically similar to the target language. Rothman and Cabrelli (2010) examine the Null Subject Parameter in the acquisition of Italian or French as an L3 by native English speakers who are in an advanced level of L2 Spanish. Spanish and Italian are both null-subject languages, whereas English and French are not. Even though English would be the most economical source of transfer for L3 French learners in this particular parameter, both French and Italian groups treat their L3 as a null-subject language due to the psychotypological similarity of their L2 Spanish to French and Italian.

More evidence to support that the typology is the principal predictor of the source of interlanguage transfer in the acquisition of L3 can be found in Foote's study (2009). In this study, Foote examines the acquisition of an aspect of past tense (perfective and imperfective) in Romance languages of $L 3$ learners. The participants in this study are divided into two groups: Romance language L1/English L2 and English L1/Romance language L2. The results of these two groups of participants are compared to another group of L2 Romance language learners who have English as a L1. The distinction of perfectivity and imperfectivity is always expressed morphologically in Romance languages (ie. passé composé and imparfait, in French), whereas this distinction is not expressed morphologically in English ${ }^{13}$. Furthermore, the stative verbs have an ambiguous interpretation when they are used in the simple past tense ${ }^{14}$. The results show that while L3 learners are able to transfer previously acquired knowledge of the distinction between perfectivity and imperfectivity, L2 learners lag behind in the development of this crucial distinction. Also, both L3 groups have a similar performance as one and the other despite the differences in their L1 or L2. These results seem to
${ }^{13}$ In order to express imperfectness, English must use the past progressive tense or other lexical expression such as 'used to' or 'would'.
14 I was happy' can either mean that I became happy at a specific point of time (perfective interpretation) or that I was in a state of being happy without an specific starting or ending point (imperfective interpretation).
suggest that language typology plays a prominent role in the determination of the source of transfer in the acquisition of the L3. Moreover, the results of this study seem to contradict the L2 Status Factor because the group of Romance language L1/English L2 performed just as well as the other English L1/Romance language L2 group.

### 2.3. Discussion

After having reviewed some studies and theories on transfers from the generative perspective, it is clear that the central issues of SLA and TLA differ from one another. On the one hand, in SLA, researchers are attempting to find out whether or not elements from the L1 will be transferred into L2, and if so, what exactly can be transferred. On the other hand, in TLA, researchers are interested in finding out whether the L1 or L2 will act as the preferred source of transfer.

Our study is inspired by Leung's work (2005), in which she successfully demonstrated that TLA should be considered as a separate field from SLA by comparing the acquisition of L2 French by Vietnamese monolinguals and the acquisition of L3 French by Cantonese-English bilinguals. In our study, however, we would like to compare the acquisition of L3 French by Chinese-English bilinguals and Korean-English bilinguals. We hope to shed some light on the following questions:

1. Does a L1 always play a prominent role in TLA as it does in SLA?
2. Does a L2 block the direct access of a L1 even when the L1 would be more suitable source for positive transfer?
3. Is there a clear division between a L1 and L2 or should they be considered as a whole?
4. Is a typologically more similar language always considered as a preferred source of transfer?
5. What would happen when a syntactic structure of a L3 is not typologically similar to a L1 or L2?

## 3. Syntactic Representations of French, English, Chinese and Korean

### 3.1. Nominal Domain

For our study, we will be investigating the acquisition of nominal and verbal domains of French as a L3. We will begin by describing the similarities and the differences regarding the nominal category of English, French, Chinese and Korean. This section will allow us to examine and analyze the distinction of definite and indefinite articles, as well as the placement of adjectives for our experiment.

### 3.1.1. French and English Determiner Phrase (DP)

According to Abney (1987) and Valois (1991), English and French nominal phrases are considered as DPs. The following is the syntactic structure representation of French and English noun phrase under the DP Hypothesis:


Figure 2. Syntactic representation of English and French DPs
Note Adapted from Leung (2005 p. 42)

According to the DP Hypothesis, illustrated above, French and English nominals are D-projections. It has been assumed the semantic distinction between definiteness and indefiniteness is formally represented as a feature [ $\pm$ definite] on the $D$ head (Leung, 2002). Effectively, both English and French have a semantic distinction in (in)definiteness, produced by definite articles ('the' in English and 'le/la/les' in French) and indefinite articles ('a/an/some' in English and 'un/une/des' in French.)

An additional category of NumP is located between DP and NP. The formal feature of [ $\pm$ plural] is represented on Num head, which is also the landing site for noun movement in Romance languages (Valoir, 1991). According to Longobardi (1994), it is the strength of functional features that triggers the movement or non-movement of N . Effectively, the Num feature in French is assumed to be strong, which attracts the noun to move up for the purpose of feature checking at Num head. On the other hand, the Num feature is considered to be weak in English, which does not require overt nounraising for feature checking. Therefore, the placement of attributive adjectives is different in French and English; the attributive adjective precedes the noun in English, whereas they generally follow the noun in French as a result of noun-raising. Compare these following examples:
(1) Une robe rouge
a dress red
(2) A red dress

There are, however, a few adjectives that are obligatory prenominal. Consider these examples:
(3) Un bon garçon a good boy "a good boy"
(4) Une jolie fille a pretty girl "a pretty girl"

Certain adjectives can be either prenominal or postnominal and the meaning varies accordingly. Compare these two following examples:
(5) Un homme grand
a man tall/big
"a man who is tall in height"
(6) Un grand homme
a tall/big man
"a great man'

In this study, we are only interested in examining the syntactic property that differentiates some aspects of French from English. More specifically, our main concern will be focused on the placement of postnominal adjectives in French-- not the semantic distinction.

Besides the difference in the placement of adjectives, another difference between English and French is the null plural article. Where definite and indefinite articles (or determiners) are always obligatory in French, these articles are often omitted in plural cases. Consider these following examples:
(7) Les Français mangent du fromage. The French eat some cheese
(8) French eat cheese

The last difference between English and French that will be examined in this study is the obligatory use of definite articles with a country in French. Compare these following sentences:
(9) J'aime la France!

I love the France
(10) I love France!

### 3.1.2. Mandarin and Korean NumeralP

According to many linguists (Cheng \& Sybesma, 1999; Leung, 2002; Kim C., 2005 for examples), Korean, Mandarin and most East Asian languages are considered to be classifier languages, which have Numeral phrases (NumeraIP) instead of DPs. These nominals are Numeral Projections, different from Number (Num in French and English), and the Numeral head selects the classifier phrase (CLP). Consider the following syntactic representation of NumeralP:


Figure 3. Syntactic representatin of Korean and Chinese NumeralPs Note. Adapted from Leung (2005, p. 43)

Except in bare noun phrases, classifier languages require a noun to appear together with a classifier. A classifier can be considered to be measuring phrases that allow nouns to be countable. It is not possible for classifiers to appear by themselves; they are obligated to co-occur with nouns (ex. CL-N). Classifiers also have the options to co-appear with possessives, demonstratives and numerals (ex. (Poss)-(Dem)-(Num)-CL$\mathrm{N})$. Even though Chinese and Korean are both considered as classifier languages, the placement of a classifier is different in these two languages. While classifiers precede the nouns in Chinese, they can be placed prenominally and postnominally in Korean.

Due to its highly developed particle system, the word order is relative-free in Korean. Consider the following examples:
(11) Chinese
a. shu
book
"books in general"
b. *ben shu

CL book
"(the/a) book"
c. yi ben shu
one CL book
"one book"
d. na (yi) ben shu
that (one) CL book
"that book"
e. wode na ben shu
my that CL book
"that book of mine"
(12) Korean
a. chayk
book
"books in general"
b. chayk han kwen
book one CL
"a book"
c. han kwen -uy chayk one CL -GEN book "a book"
d. jeo chayk (han kwen) that book (one CL) "that book"

In classifier languages, bare nouns are generic or non-referential, [CL+N] and can be interpreted as either definite or indefinite. Nonetheless, according to Cheng and Sybesma (1999), an indefinite [CL+N] can be considered as a NumeralP whereas a definite $[C L+N]$ is considered as a CLP. While some previous studies of Chinese noun phrases claim that Numeral Phrase is equivalent to the Number projection of English
and French (Au Yeung, 1997; Del Gobbo, 1999), others support that numerals are not equal to Number (Cheng \& Sybesma, 1999). The latter argues that languages need grammatical markers of countability, and that English, French and Korean use overt number/plural morphology; Chinese lacks of this morphology and use classifiers instead. In fact, in English and French, the plurality of nouns are shown by adding the suffix '-s' to countable nouns, including humans, animate objects and inanimate countable objects ${ }^{15}$. Similarly in Korean, the plural suffix '-dul' can also be added to the same categories as in English and French, but the plural marker is not always needed if a proper context is provided (Kim J., 2005). Given that the plural marker '-dul' in Korean can be applied in a similar fashion as English and French, we can perhaps insert a category Num with the feature [ $\pm$ plural] in between CLP and NP (see Figure 3 on p. 22). In Chinese, the plural suffix '-men' can only be added to humans. The table below demonstrates the differences and similarities between plural markers in Chinese, Korean, English and French.

Table 3.1. Pluralization in Chinese, Korean, English and French nominals

|  | [+human] | [-human, +animate] | [-animate, +count] | [-animate, -count] |
| :---: | :---: | :---: | :---: | :---: |
| Chinese | $\checkmark$ |  |  |  |
| Korean | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| English | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| French | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

Nonetheless, in Chinese, certain classifiers seem to function as Number. These are the plural classifiers that allow the semantic portioning of count nouns to be lexically visible. These plural classifiers share the same positional properties as other classifiers. Consider the following examples:

15 In French, the plural marker is only visible in writing, but it is never pronounced orally. More specifically, one would have to rely on the determiners to show plurality in oral production.
a. yi xie shu
one $\mathrm{CL}(\mathrm{PL})$ book
"Some books"
b. *xie shu

CL(PL) book
"(some) book"
c. na xie shu

That CL(PL) book
"those books"
d. wode na xie shu
my that CL(PL) book
"Those books of mine"

From these examples, it is clear that (plural) classifiers could be associated with the notion of plurality, perhaps even with Number. Yet it is important to point out that Number is not marked overtly on Chinese nouns whereas in English, French and Korean, plural nouns are marked morphologically. Besides, the agreement of Number is clearly lacking in Chinese compared to French. Thus, we could consider these plural classifiers as merely a lexical device without any formal feature of Number since it is uncertain that noun movement and feature checking of Number would be applicable to classifier languages (Leung, 2002).

As for the definiteness and indefiniteness, there are no definite or indefinite articles in Chinese or Korean and the classifiers do not have any ability to assign (in)definiteness to the nouns. Cheng and Sybesma purport that " [the classifer CL] only performs the discourse deictic function of linking the extension of the noun to whatever entity in the real world it applies to [...] and does not add definiteness" (Cheng \& Sybesma, 1997, p.31). According to Lyons (1999), the interpretation of (in)definiteness is heavily based on the discourse and the pragmatics when a language does not have formal grammatical markings of definiteness.

However, the classifiers do assign specificity and non-specificity to the nouns (Matthews \& Pacioni, 1997) and specificity is not the same as definiteness (Chomsky, 1995). Also, the classifiers of each language play a different role in [ $\pm$ specific] assignment. In fact, bare nouns or null CL in Mandarin can be interpreted either specific
or non-specific, whereas a filled CL head is always non-specific. Despite the similarities to Mandarin, a null CL noun head has a non-specific interpretation in Cantonese, while a filled CL head is always specific.

According to Leung (2002), this subtle difference between Mandarin and Cantonese may cause a significant consequence in the acquisition of French or English as a L2 if the category $D$ has not been fully developed and if these learners treat $D$ as $C L^{16}$. On the one hand, Cantonese learners of English or French may not be able to differentiate definiteness from indefiniteness since the Cantonese CL only denotes specificity. On the other hand, Mandarin learners of English or French may overgeneralize indefinite articles to all definite and indefinite contexts since Mandarin CL denotes non-specificity.

Similar to Mandarin, Korean does not have articles. Bare nouns can be interpreted as definite or indefinite according to the context. However, Korean classifiers behave quite differently in comparison to Mandarin or Cantonese. The placement of CL and NP is flexible and the feature of [ $\pm$ specific] is determined by the placement of CL. Consider these following sentences, illustrated by Kim (2005, p. 219):

$$
\begin{array}{lcc}
\text { Hakseng-dul-i } & \text { chayk-se.ke -lul } & \text { ilk -ess -ta }  \tag{14}\\
\text { student -PL-NOM } & \text { book-3.CL -ACC } & \text { read-PST-DEC } \\
\text { Students read three (specific or non-specific) } & \text { books. }
\end{array}
$$

$$
\begin{array}{lccc}
\text { Hakseng-dul-i } & \text { chayk } & - \text { ul } & \text {-se.ke ilk }  \tag{15}\\
\text { student -PL - ess -ta } \\
\text { Students read three (non-specific) books } & \text { boch } &
\end{array}
$$

In (14), the CL is between the NP and the Case marker, whereas the CL is between the Case marker and the verb in (15). While the classifier in (14) has either a specific or nonspecific interpretation, the classifier in (15) can only be non-specific. Following the

16 Since our study is only interested in the acquisition of French as an L3, we assume that the category $D$ would have already been developed (or at least to a certain point) during the acquisition of English as an L2. However, in order to avoid any influences of this subtle difference between Cantonese and Mandarin, we only recruited native Mandarin speakers in our study.
assumption of Leung (2002) for Chinese learners of L2 French or English, while Mandarin learners may overgeneralize indefinite articles to all definite and indefinite contexts, Korean learners may have more difficulty in distinguishing between definite and indefinite articles. This is because the CL can be interpreted either as specific or non-specific depending on the context in Korean. Again, these predictions can only be true if the category $D$ has not been fully developed and if these learners treat $D$ as $C L$.

Last but not least, adjectives in Chinese and Korean are attached to the NP (see figure 3 above) and they are strictly placed before the nouns. Consider the following examples:
(16) Chinese
wo xihuan yi ge cunmingde niuhaizi
I like one CL smart girl
"I like a smart girl"
(17) Korean

Na-nun ddokddok-han yeoja-lul joah han-ta
I -NOM smart -ADJ girl-ACC like -DEC
"I like a smart girl"

Since Numeral is not the same as Number, as we have discussed above, we can assume that Chinese and Korean do not involve the Num projection and that the feature strength of Number is also inapplicable. According to Leung (2002), the [ $\pm$ specific] feature on CL triggers a covert $N$-raising at LF in order to distinguish specific interpretation from non-specific interpretation of the nominal expressions. Thus, the feature strength of CL is considered to be weak and nouns do not overtly move over the adjectives in these languages (p. 42).

### 3.1.3. Summary

Table 3.2 summarizes similarities and differences of nominal domain in French, English, Chinese and Korean.

Table 3.2. Cross-linguistics comparison of nominal domain in French, English, Chinese and Korean

|  | French | English | Chinese | Korean |
| :---: | :---: | :---: | :---: | :---: |
| DP | $\checkmark$ | $\checkmark$ | x | x |
| CLP | x | X | $\checkmark$ | $\checkmark$ |
| [ $\pm$ definite] | $\checkmark$ | $\checkmark$ | x | X |
| [ $\pm$ plural] | $\checkmark$ | $\checkmark$ | x | $\checkmark$ |
| Feature strength of Number | strong | weak | N/A | N/A |
| Adjective placement | postnominal | prenominal | prenominal | prenominal |

### 3.2. Verbal domain (VP, Word Order, Negation)

We now turn to the cross-linguistic similarities and differences of the verbal domain in French, English, Chinese and Korean. We will present certain aspects of the verbal domain that will allow us to investigate the production of basic word order and negation for our study.

### 3.2.1. English and French

English and French verbal function is quite similar. According to the Principles and Parameters or Government Binding approach in early generative studies, the Infl node includes all verbal inflectional properties, and a single syntactic head contains two sets of features: [ $\pm$ tense] and [ $\pm$ agreement]. Pollock (1998) proposed the split Infl hypothesis, which separates the structure of IP into two functional categories: Tense (T) and Agreement (Agr). These two categories head their own maximal projection, TP and AgrP, respectively. However, the AgrP has been eliminated under the Minimalist Program proposed by Chomsky for languages like English and French (1993, 1994, 1995). According to Chomsky (1995), Agr only consists of strong features which induce overt movement. Since such movements are not induced by Agr in languages like French or English, it is not necessary to assume the existence of Agr in these languages.

Following Chomsky's Minimalist Program (1995), there is only one inflectional node in the verbal phrase structure of French and English: the category TP. This category contains all verbal functional features, such as [ $\pm$ finite/tensed], [ $\pm$ agreement]
between person and number and [ $\pm$ past]. Consider the verbal structure of French and English depicted in the following syntactic tree:


Figure 4. Syntactic representation of English and French verbal domain Note Adapted from Leung (2002, p. 15)

The functional feature [ $\pm$ finite] can be considered to be the same as [ $\pm$ tensed] and it is treated as the categorical feature of T projection (Meisel, 1994). [+Finite] includes every conjugated form of the verb whereas [-finite] includes infinitives, participles and gerunds. While [+past] indicates the past tense, [-past] refers to both the present tense and the future tense. Nonetheless, the agreement between person and number is only visible in the third person singular in English, and except for the third person singular form, the infinitive form of the verb is identical to conjugated forms in the
present tense ${ }^{17}$. In French, on the other hand, the infinitive form of the verb is always different from the conjugated forms of the verb. (See example (18) below)

Even though the category Agr is no longer applicable to languages like English and French, the agreement features (ie. person and number) are still present. While the agreement between person and number is much more visible in French, it is only visible in the third person singular in English. Consider the following examples:
a. Je vais
"I go"
b. Tu vas
"You go"
c. II/Elle va
"He/She goes"
d. Nous allons
"We go"
e. Vous allez
"You go"
d. Ils/Elles vont
"They go"

Despite the lack of differences in verb conjugations in English, most of languages (i.e., Chinese and Korean) do not have agreement between the subject and the verb. Therefore, "correct agreement marking in L2 English and French is direct evidence of the presence of agreement (i.e., person and number) feature in interlanguage grammar" (Leung 2002, p. 15).

17 For this reason, some linguists actually suggest that T and Agr should fused or unsplit for English-type languages. (See Halle \& Marantz, 1993; Giorgi \& Pianesi, 1997)

Another syntactic property that distinguishes French from English is the notion of verb movement. According to Pollock (1989), a verb movement is allowed when a language has has a strong agreement system related to the richness of subject-verb agreement. Hence, a verb moves out of its VP onto the head of T (ense) and create a variable to bind the [+finite] T operator. Pollock suggests that the French language has verb movement that requires all finite verbs to rise to Infl while English does not.

Under Chomsky's Minimalist Program, the verb movement function can be explained by the notion of feature strength and the mechanism of feature checking. In fact, according to Chomsky (1995), there is a distinction between [+interpretable] features and [-interpretable] features; namely, the interpretability at LF. While [+interpretable] features have a semantic content and contribute to the interpretation of meaning at LF, [-interpretable] features do not have semantic content and must be removed before LF. Moreover, a strong [-interpretable] feature prompts overt movements for feature checking purposes whereas a weak [-interpretable] feature allows covert movements and forces the movement and feature checking to procrastinate until LF. In English, T features are considered to be weak and the verb movement occurs at LF, while in French T features are considered to be strong which induces overt verb movement.

One of the consequences of this difference of the T feature between French and English is the placement of adverbs. Consider the following sentences:
a. Jean mange toujours du fromage. Jean eats always some cheese
b. *Jean toujours mange du fromage. Jean always eats some cheese
a. Jean always eats cheese.
b. *Jean eats always cheese.

While the adverb has to be placed after the verb and before the direct object in French as in (19), the adverb can only be placed before the verb in English as in (20).

In regards to negation, since the $T$ feature is weak in English, the thematic verb must remain in-situ in a negative sentence. Negation with thematic verb in English requires an insertion of the auxiliary 'do' and the negative adverb 'not' or the negative affix 'n't'. Both of the auxiliary and the negative marker must be placed in front of the thematic verb in English. Consider the following example:
(21) I do not like vegetables.

Contrary to English, since the T feature is strong in French, the thematic verb must move out of VP and be raised for feature checking purposes. In French, a negative clause requires a finite verb (thematic or auxiliary) and is categorized by the insertion of the negator 'ne' and the negative adverb 'pas'. The negator 'ne' is treated as an affix, which is cliticized to the finite verb and must be raised together with the verb ${ }^{18}$.

Consider the following sentence:
(22) Je (n')aime pas les légumes.

I NEG like ADV the vegetables
"I don't like vegetable."

### 3.2.2. Chinese

It is a well-recognized fact that the Chinese language does not have overt tense or agreement markings and that the feature of agreement between person and number is inexistent as well. Consider the following examples:
a. wo chi fan

I eat rice
"I eat"
b. ni chi fan

You eat rice
"You eat."
c. ta chi fan

He eat rice
"He eats"
d. women chi fan
we eat rice
"We eat"
e. nimen chi fan

You eat rice
"You eat."
f. tamen chi fan

They eat rice
"They eat."
a. ta chi fan

He eat rice
"He eats."
b. ta mingtian gen wo chi fan He tomorrow with me eat rice "He will eat tomorrow with me."
c. ta zhoutian gen wo chifan He yesterday with me eat rice "He ate with me yesterday."

In example (23), it is obvious that there is no morphological marker that distinguishes the verb forms of each person. Also, the verb forms are identical in past tense, future tense and present tense, as shown in (24).

It is however quite unclear if the Chinese language has the feature of [ $\pm$ finite]. Some linguists argue that there is indeed a distinction between finite and non-finite in Chinese. For example, according to Ernst (1994), despite being considered as a morphologically impoverished language, Chinese is still equipped with a universal Infl node containing the feature of $[ \pm \text { finite }]^{19}$. Similarly, Gu (1994) argues that while aspect markers in Chinese may only be lexical elements rather than morphological ones in the

19 Ernst (1994) suggests that the universal Infl is equated as finiteness.
functional category Asp, there is still a need for a TP, which contains [ $\pm$ finite] in order to dominate AspP for the assignment of the Nominal Case. Furthermore, C-T. J. Huang (1984) posits that Chinese expresses finiteness by using auxiliary, or more specifically, modal and aspectual morphological elements. In fact, certain modal or aspectual markers cannot co-occur with certain others in order to avoid a semantic incompatibility (See Leung, 2002 for a detailed summary).

However, other researchers support that Chinese has neither an Infl node nor a distinction between finite and non-finite (Cheng, 1997; Hu, Pan \& Xu, 2001). For example, according to Cheng (1997), Asp heads an independent projection and is not a substitute for Infl. Also, in the study of Hu, Pan and Xu (2001), they provide counterexamples to disapprove the existence of finiteness in Chinese. They argue that the evidence put forward by other linguists in favor of the existence of finiteness in Chinese is problematic, and that the issue of modal and aspectual markers seems to be more semantic rather than syntactic.

Although our study does not examine the issue of finiteness, we follow these latter linguists by assuming that the feature of [tensed/finite] does not exist in Chinese, and that this issue is neither morphological nor syntactic, but rather semantic and pragmatic. Consider the following verbal structure of Chinese:


Figure 5. Syntactic representation of Chinese verbal domain
Note Adapted from Leung (2002, p. 26)

Chinese sentences are considered to be AspP. The formal feature [ $\pm$ finite/tensed] and therefore [ $\pm$ past] are absent in Chinese. There is no agreement between person and number, as shown in (23). Moreover, the feature strength of Asp is considered to be weak. Thus, there is no overt verb raising in Chinese. Since there is no verb movement, Chinese shares similar adverb placement as English in that adverbs always appear before the verb. Consider the following examples:
(25) ta manmande chi le yi wan fan He slowly eat-ASP one-CL rice "He slowly ate a bowl of rice."

As for negation, Chinese negative clauses are mainly expressed by two negative markers 'bu' and 'meiyou'. Whereas 'bu' is a neutral negation, 'meiyou' negates the completion of an event. Both markers must precede the verb since the weak feature strength of Chinese does not allow the verb to raise out of VP. 'Bu' is analyzed as a clitic-like element that negates the item closest to it in its c-command domain. Consider the following example:
(26) Wo bu xiehuan chi shoucai

I NEG like eat vegetable
I do not like to eat vegetables.

### 3.2.3. Korean

Korean is quite different from Mandarin, English and French with respect to basic word order. Whereas Mandarin, English and French are all head-initial languages (SVO), Korean is a head-final language (SOV). As mentioned before, due to its highly developed particle system, the word order is relative-free in Korean as well. Except for the verb, every other element is able to move around freely in a sentence. Consider the following examples demonstrated by Han (1991):
(27) a John-i ku sonyen-eykey chayk-ul cwu -ess -da

NOM that boy-DAT book -ACC give-PST-DEC
"John gave that boy a book"
b. John-i chayk-ul ku sonyen-eykey cwu -ess -da
c. ku sonyen-eykey John-i chayk-ul cwu -ess -da
d. ku sonyen-eykey chayk-ul John-i cwu -ess -da
e. chayk-ul John-i ku sonyen -eykey cwu -ess -da
f. chayk-ul ku sonyen-eykey John-i cwu -ess -da

All the variations shown in (27) have the same syntactic structure and they also express the same meanings. All arguments in free order languages are able to maintain their grammatical functions identified by the specific postpositional case markers (Han, 1991). According to Han (1991), "[s]ince the roles of arguments can be uniquely identified by the attached particles no matter where they are located, the movement seems to be inadequate if we consider how GF's are given to nominal arguments." (p. 22)

Similar to Chinese, there is no agreement feature between person and number in Korean. Consider the following examples:
a. Na -nun muk -ta

I -NOM eat -DEC
"I eat"
b. Nuh -nun muk-ta

You -NOM eat -DEC
"You eat"
c. Gu -nun/ Gu nyuh -nun muk -ta

He-NOM/ She -NOM eat -DEC
"He/She eats"
d. Woori -nun muk-ta

We -NOM eat -DEC
"We eat"
e. Nuh nae dul-eun muk -ta

You PL-NOM eat -DEC
"You eat"
f. Gu dul-eun/ Gu nyuh dul -eun muk-ta They PL - NOM/ They PL -NOM eat -DEC "They eat"

Nevertheless, the feature of [ $\pm$ finite/tensed] is present in Korean. In fact, some linguists argue that there is only [ $\pm$ tense] and no [ $\pm$ aspect] in Korean (Choi, 1989), while others maintain that [ $\pm$ aspect] is more important than [ $\pm$ tense]. According to Suh (1996), [ $\pm$ tense] and [ $\pm$ aspect] are inseparable under the Infl category. Despite these different interpretations, there are two distinct tense forms in Korean: past tense and non-past. Consider the following verbal structure of Korean:


Figure 6. Syntactic representation of Korean verbal domain Note adapted from Yoon (1990, p. 346)

It is generally recognized that CP, AspP, TP and VP are independent maximal projections in Korean. (See Yoon, 1990 for a more detailed explanation) However, the
existence of AgrP in Korean is highly questionable due to two reasons. First, there is no agreement feature between person, number or gender in Korean. Second, the honorific marker ${ }^{20}$, which does not affect the grammaticality of the sentence, only affects the sentence in a pragmatic sense (Yoon, 1990).

Some linguists argue that Korean has verb movement that is responsible for the amalgamated complex verbal form (e.g., Yoon, 1990). Others however, maintain that verbs do not raise in Korean despite whether it is the main verb or the auxiliary verb (e.g., Park, 1998). However, it is agreed that in head-final languages, like Korean, a rightward adjunction is prohibited. As a result, adverbs can only be leftward adjoined to VP or a higher category.

Moreover, it is a well-known fact that there are two types of negation in Korean: pre-verbal and post-verbal. The pre-verbal negation is often referred as short form negation or main verb negation whereas the post-verbal negation is referred as long form negation or ha- negation. Both negations are used in Korean, but some studies have shown that Korean children produce post-verbal negation much later than preverbal negations (Hahn, 1981; Lee, 1986). Consider the following examples:

> a. Mary-ka John-ul an manna -ss -ta Mary -NOM John-ACC not meet -PST-DEC "Mary did not meet John."
b. Mary-ka John-ul manna-ci an -ha-ass -ta Mary-NOM John-ACC meet-NOM not-do-PST-DEC "Mary did not meet John."

Similar to Chinese, the pre-verbal negation is formed by placing the negative marker 'an' (not) directly in front of the main verb, as in (29a). However, the post-verbal negation, as in (29b) utilizes the expletive auxiliary 'ha' (do) with the negative marker placed directly in front while a nominalizer 'ci' is added to the main verb.

20 Korean, like Japanese, has a so-called honorific marker in order to show politeness, however, these markers are considered as a simple lexical suffix which can be added to the verb.

### 3.2.4. Summary

Table 3.3 summarizes similarities and differences of the verbal domain in French, English, Chinese and Korean.

Table 3.3. Cross-linguistics comparison of verbal domain in French, English, Chinese and Korean

|  | French | English | Chinese | Korean |
| :---: | :---: | :---: | :---: | :---: |
| [ $\pm$ finite] | $\checkmark$ | $\checkmark$ | x | $\checkmark$ |
| Aspect | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| [ $\pm$ agreement] | $\checkmark$ | $\checkmark$ | X | X |
| basic word order | SVO | SVO | SVO | SOV |
| verb raising | $\checkmark$ | x | x | $\sqrt{ } / \mathrm{x}$ |
| Negation | Postverbal | preverbal | preverbal | pre/postverbal |

### 3.3. Predictions

As we mentioned before, four syntactic structures will be examined in our study: distinction between definite and indefinite articles, placement of adjectives, placement of verbs and negations. Here are some of the predictions we are able to formulate according to the L1 Factor, the Cumulative-Enhancement Model, the L2 Status Factor and the Typology Primacy Model.

According to the L1 Factor, an extension of the Failed Function Feature Hypothesis, properties not initiated in the L1 will no longer be accessible for activation by the input of the L2 or the L3. In other words, the initial state of L3 can only be the steady state of L1. With regards to the distinction between definite and indefinite articles, the L1 Factor predicts that there will not be any DPs in the L3 French of both Korean and Chinese groups. Also, while Chinese (Mandarin) learners may overgeneralize indefinite article to all definite and indefinite contexts, Korean learners may have more difficulty in distinguishing between definite and indefinite articles. As for the placement of adjectives, since adjectives in both Chinese and Mandarin are strictly prenominal, their L3 French will consist of prenominal adjectives. While Chinese participants would not have verb movement in their L3 production due to its absence in Chinese, Korean participants may
be able to transfer verb raising parameters from their L1, if, of course, there is verb raising in Korean.

The Cumulative-Enhancement Model supports that L1 and L2 can both be the source of transfer if and only if they provide positive transfers. Following this model, we expect Korean and Chinese participants to transfer the usage of articles from their L2 English into their L3 French. While Chinese participants will not have difficulty transferring SVO word order from their L1 and their L2, Korean participants should be able to transfer the basic word order of their L2 into their L3. In regards to the placement of adjectives, there will not be any transfer from the previous languages since these languages all have prenominal adjectives. While the L1 or the L2 of our Chinese subjects will not be able to provide any positive transfer of verb movement, Korean subjects may be able to transfer it from their L1.

L2 Status Factor argues that L2 will block the direct access of L1 even when L1 is typologically more similar to L3. In a way, this theory is not applicable to our study since the L2 of our participants is typologically more similar to the L3. Nonetheless, following L2 Status Factor, we predict that our participants will transfer their knowledge of articles from English into the L3. With regards to verb raising parameters, if there is verb movement in Korean, this parameter will be blocked from transferring by their L2 English.

Finally, Typology Primacy Model predicts that transfer will come from the language that is typologically more similar to the target language, even if it is not the most economical choice. Since English is typologically more similar to French than Chinese and Korean, we predict that the L2 will be the primary source of transfer. Both participant groups are expected to transfer the Article Choice Parameter (Ionin, Ko \& Wexler, 2004) from English into French. Similar to the prediction of L2 Status Factor, the verb raising parameter may not be transferred from Korean participants' L1. Also, our participants should be able to transfer the SVO word order from English. It is important to point out that it is uncertain how L2 Status Factor and Typology Primacy Model will predict, in regards to the placement of adjectives, since this particular syntactic structure is not typologically similar to the L1 or the L2 of our participants.

## 4. Methodology

In this chapter, we will present the demographics of our participants, as well as their English background. We will also explain our experimental procedures and how they will be utilized to investigate the four syntactic structures of French chosen for this study.

### 4.1. Participants

A total of 8 Korean and 8 Chinese learners of French participated in our study. At the moment of data collection, these individuals had similar English proficiency as determined by an on-line placement test. All these participants are undergraduate students enrolling in FREN 120 at Simon Fraser University in Vancouver, BC. This course is designated for students who have never studied French before. In other words, the selected participants are true French L3 beginners.

These participants were asked to fill out a short survey composed of some questions concerning their English background. (See Appendix C). Most of these L3 French students started learning English around the age of 10, but as early as 5 years old (See table 4.1 and 4.2 below). All but one of the participants started learning English in a formal classroom setting. Approximately half of the participants did not start learning English until they moved to Canada. Most of them claimed that they use English mostly at school, but we assume they use some English for their daily interactions.

Some of the Korean participants have some knowledge of Japanese or Mandarin. We do not expect their knowledge of the Japanese language to have substantial effects on the syntactic structure tested in our study. However, their knowledge of Mandarin could have some minor effects, mainly the verb placement as mentioned in Chapter 3.

Table 4.1. Korean Participants - English L2 Background

|  | Age of <br> First Contact | Learning <br> Setting | Place of <br> First Contact | Usage | Other language |
| :--- | :---: | :---: | :---: | :---: | :---: |
| K1 | 12 | School | Korea | School | Japanese |
| K2 | 15 | School | Canada | School | Japanese |
| K3 | 12 | School | Korea | School | - |
| K4 | 6 | Tutor | Korea | School | - |
| K5 | 8 | School | Canada | School | - |
| K6 | 17 | School | USA | School | - |
| K7 | 14 | School | Canada | School/Work | Mandarin |
| K8 | 8 | School | Korea | School | Chinese |

Table 4.2. Chinese Participants - English L2 Background

|  | Age of <br> First Contact | Learning <br> Setting | Place of <br> First Contact | Usage | Other language |
| :--- | :---: | :---: | :---: | :---: | :---: |
| C1 | 12 | School | Canada | School | Cantonese |
| C2 | 14 | School | Canada | School | - |
| C3 | 11 | School | China | School/Home | - |
| C4 | 10 | School | China | School | - |
| C5 | 15 | School | China | School | - |
| C6 | 7 | School | China | School | - |
| C7 | 8 | School | China | School | - |
| C8 | 5 | School | Taiwan | School/Home | - |

In our survey, we also asked the participants to describe the reason for learning French. While some expressed personal interests of learning a different language, most of them admit that the French course is merely a degree fulfillment for their studies. Thus, we can expect that motivation is a potential factor influencing the learning outcome (See Garner, 2010 and Dörnyel \& Schmidt, 2001).

### 4.2. Experimental Tasks

First, the participants were asked to do the Oxford Online English Grammatical Placement Test in order to determine the proficiency of their English grammar. The Oxford English Placement Test consists of three parts: Grammar, Listening, and Reading. Since our study focuses only on a certain number of basic syntactic structures, we feel that the grammatical part of the placement test will suffice.

The main experiment consists of two questionnaires in both French and in English. In order to facilitate the analysis, the French and English questionnaires are identical in regards to the experimental tasks and the distribution of different types of questions. In these two questionnaires, we implemented 4 experimental tasks designed to examine four basic grammatical structures: the distinction of definite and indefinite articles, the placement of adjectives, the placement of verbs and the negation.

### 4.2.1. Elicited written production task

In regards to the distinction between definite and indefinite articles, an elicited written production task was employed. The format of this task is adopted from Schafer and De Villiers (2000) who examined the oral production of children learning English as a L1. Participants were asked to provide a short answer to questions, which aimed to elicit a noun with an article. Three specific conditions of articles were examined during this elicit written production task: the (specific) definite, the specific indefinite and the unspecific indefinite. The following are three examples representing each type of article:
(30) Specific definite

Il y a une pomme et une banane sur la table. Laquelle voulez-vous?
There is an apple and a banana on the table Which want you
"There is an apple and a banana on the table. Which do you want?"
(31) Specific indefinite

Je suis sûr que vous avez quelque chose dans votre sac. Qu'est-ce que c'est? I am sure that you have something in your bag What it is?
"I am sure you have something in your bag. What is it?"

Unspecific indefinite
Tu vas prendre le métro. Qu'est-ce que tu dois acheter?
you go take the metro What you must buy "You are going to take the metro. What do you need to buy?"

In addition, we implemented two types of distractor questions to examine the strength of the L2 transfer: bare plurals and country name. Specifically, in English, the partitive article 'some' is often omitted but is always required in French. Compare these two following sentences:
(33) Je veux acheter des pommes.

I want buy some apples
(34) I want to buy (some) apples.

As for country name, the English language does not require the usage of definite articles, while French always does. Consider the following examples:
(35) Je voudrais visiter la France.

I woud like visit the France
(36) I would like to visit France.

Therefore, in order to examine the usage of partitive articles and definite articles in these two special contexts, we added a few of the following types of questions:
(37) Bare plurals

Tu veux faire une tarte. Quels fruits vas-tu acheter au supermarché?
You want make a pie which fruits go you buy at the supermarket "You want to make a pie. Which fruits are you going to buy at the supermarket?"

Definite article with Country
Quel pays voudrais -tu visiter?
Which country would like you visit
"Which country would you like to visit?"

A total of 17 questions were included in the elicit written production task. There were 4 questions each for (specific) definite, specific indefinite and unspecific indefinite,

3 questions for bare plurals and 2 questions for definite articles with country (see Appendix $A$ and $B$ for the complete set of questions).

### 4.2.2. Grammaticality judgment and correction task

In order to examine the relative placement of adjectives and nouns, the grammaticality judgment and correction task was employed. The participants were asked to judge if the underlined section of a sentence (mainly the adjective and the noun) was grammatical or not. If the underlined section was grammatical, they were asked to leave the sentence alone. If the underline section is ungrammatical, they were asked to make the necessary changes.

There were a total of 14 test items: 7 grammatical tickets and 7 ungrammatical tickets. Out of these 14 sentences, there were 2 questions containing the construction of double adjectives. Even though this special construction has not yet been taught to the students participating in this study, it will be interesting to see how these participants approach these questions. This task also contained 2 true distractor questions (eee Appendix $A$ and $B$ for the complete set of questions.) The following are examples from this task:
(39) Grammatical ticket J'aime bien la cuisine française.
I like well the cuisine French
"I love French cuisine."
(40) Ungrammatical ticket
*Elle aime beaucoup les vertes pommes. She likes a lot the green apples "She really likes green apples."
(41) Double adjectives

Tu as rencontré une jeune fille charmante.
You have met a young girl charming "You met a young, charming girl."

### 4.2.3. Element rearrangement task

This task is designed to test the knowledge of adjective placement and verb placement. The participants were asked to rearrange a series while making all the necessary changes to form a grammatical sentence. The concept of element rearrangement is widely used by second language education, because it demands the language learners not only to recognize the individual words but also to be able to put them in a grammatical order. (See Appendix A and B) Consider the following example:
une/rouge/tu/vouloir/pomme a/red/you/want/apple

The correct sentence structure for the above example would be 'tu veux une pomme rouge' or 'you want a red apple'. As explained in Chapter 3, both French and English share the same SVO structure in regards to verb placement. While the adjectives are generally post-nominal in French, they are pre-nominal in English. Nonetheless, we are leaving behind the issue of verb conjugations due to the ambiguity between conjugated verb and the infinitive form in English.

### 4.2.4. Negation task

As we mentioned before, Chinese, Korean, English and French have a different constructions for negative sentences. In this task, the participants were asked to simply answer a question with a negative sentence. This task is designed to examine what happens when neither L1 nor L2 is typologically similar to L3, at least for Chinese participants since there may be verb raising in Korean (see Appendix A and B). The following are two examples from both French and English questionnaires:
(43) French questionnaire

Parles-tu français?
Speak you French
"Do you speak French?"
(44) English questionnaire

Do you like apples?

To summarize, 4 syntactic structures will be investigated throughout our study: the distinction between definite and indefinite articles, the placement of adjectives, the placement of verbs and the negation. It is essential to underline that we specifically want to examine what will happen when a particular syntactic construction is typologically similar to neither the L1 nor the L2. In other words, how will the L1 or the L2 affect the learning process of the L3 when neither of them provides any positive source of transfer? This particular issue will be investigated by the results of adjective placement and negation placement.

## 5. Results and Data

In this chapter, we will present our data collected during our experiment. Our study consists of 16 participants (8 Korean and 8 Chinese), divided into two groups according to their L1. The results of each group are juxtaposed in order to facilitate the comparison and the analysis. Our results are indicated both in raw numbers and percentage. The percentage ones have been rounded-up to the first decimal for the ease of presentation.

### 5.1. Results of English proficiency

We begin with the results of the participants' English proficiency. A language learner is only able to transfer elements from a previous acquired language when a certain proficiency of that language has been achieved (Leung, 2002). The Oxford Online English Grammatical Proficiency Test determined the proficiency results.

Table 5.1. Oxford online English placement test results - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 | 35 | 41 | 36 | 34 | 28 | 34 | 38 | 35.625 |
| $78 \%$ | $70 \%$ | $82 \%$ | $72 \%$ | $68 \%$ | $56 \%$ | $68 \%$ | $76 \%$ | $71.3 \%$ |

Table 5.2. Oxford online English placement test results - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 39 | 33 | 36 | 31 | 32 | 34 | 30 | 46 | 35.125 |
| $78 \%$ | $66 \%$ | $72 \%$ | $62 \%$ | $64 \%$ | $68 \%$ | $60 \%$ | $92 \%$ | $70.3 \%$ |

As shown in table 5.1, the overall Korean participants' English proficiency result is $71.3 \%$. Most of the Korean participants scored within the 60-80\% range. One participant (K6) scored below 60\% and another (K3) scored above 80\%. Similarly, as
shown in table 5.2, the overall Chinese group's English proficiency is $70.3 \%$, with most of the Chinese participants scoring within the 60-80\% range, with one participant scoring above $90 \%$. These results indicate that most of our participants are in between the intermediate and advanced level range.

### 5.2. Results of articles from French questionnaire

Now, we turn to the results of the elicited written production task from the French Questionnaire. This is intended to examine the knowledge of the distinction between definite and indefinite articles. Our data is divided into three categories: correct, replace and omit. 'Replace' indicates the misuse of an article, and 'omit' indicates the absence of one.

As shown in table 5.3 and 5.4, in the French questionnaire, the success rate of the Korean participant group (56.6\%) is a little higher than the Chinese group (50.7\%). This minor difference between the two groups is considered to be insignificant. The replacement rate for both participant groups is about $25 \%$. The omission rate of the Chinese group (20\%) is higher than the Korean group (15.4\%). Individual results show that most of the Korean and Chinese participants were not very successful at distinguishing the usage of definite from the indefinite articles as most of had a success rate below 70\%. One Korean participant (K2) and one Chinese participant (C2) had a success rate below $30 \%$, but the omission rate of these two participants is relatively high as well. One of the Korean participants (K4) has a surprisingly high success rate of 94.1\% and 0\% of omission rate. There is some correlations between the English Proficiency and the omission rate. Participants (K3 and C8), whose English proficiency higher is than $80 \%$, have an omission rate of $0 \%$ in the French questionnaire. We did not, however, observe a clear correlation between the English proficiency and the success rate of the usage of articles in French.

Table 5.3. Overall article result per participant - French questionnaire - Korean

|  | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| correct | 8 | 3 | 12 | 16 | 9 | 7 | 11 | 11 | 9.625 |
|  | $47.1 \%$ | $17.7 \%$ | $70.6 \%$ | $94.1 \%$ | $52.9 \%$ | $41.2 \%$ | $64.7 \%$ | $64.7 \%$ | $56.6 \%$ |
| replace | 4 | 6 | 4 | 1 | 5 | 6 | 2 | 4 | 4 |
|  | $23.5 \%$ | $35.3 \%$ | $23.5 \%$ | $5.9 \%$ | $29.4 \%$ | $35.3 \%$ | $11.8 \%$ | $23.5 \%$ | $23.5 \%$ |
| omit | 5 | 8 | 0 | 0 | 3 | 4 | 2 | 0 | 2.75 |
|  | $29.4 \%$ | $47.1 \%$ | $0 \%$ | $0 \%$ | $17.7 \%$ | $23.5 \%$ | $11.8 \%$ | $0 \%$ | $16.2 \%$ |

Table 5.4. Overall article result per participant - French questionnaire - Chinese

|  | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| correct | 7 | 5 | 8 | 12 | 10 | 7 | 9 | 11 | 8.625 |
|  | $41.2 \%$ | $29.4 \%$ | $47.1 \%$ | $70.6 \%$ | $58.8 \%$ | $41.2 \%$ | $52.9 \%$ | $64.7 \%$ | $50.7 \%$ |
| replace | 6 | 6 | 2 | 3 | 3 | 8 | 3 | 4 | 4.375 |
|  | $35.3 \%$ | $35.3 \%$ | $11.8 \%$ | $17.7 \%$ | $17.7 \%$ | $47.1 \%$ | $17.7 \%$ | $23.5 \%$ | $25.7 \%$ |
| omit | 4 | 6 | 7 | 2 | 2 | 1 | 5 | 0 | 3.375 |
|  | $23.5 \%$ | $35.3 \%$ | $41.2 \%$ | $11.8 \%$ | $11.8 \%$ | $5.9 \%$ | $29.4 \%$ | $0 \%$ | $19.9 \%$ |

Table 5.5. Overall article results - French questionnaire - Groups

|  | Korean Group | Chinese Group | French Control Group |
| :--- | :---: | :---: | :---: |
| Correct | 9.625 | 8.625 | 17 |
|  | $56.6 \%$ | $50.7 \%$ | $100 \%$ |
| Replace | 4 | 4.375 | 0 |
|  | $23.5 \%$ | $25.7 \%$ | $0 \%$ |
| Omit | 2.75 | 3.375 | 0 |
|  | $16.2 \%$ | $19.9 \%$ | $0 \%$ |

Table 5.5 shows that both the Korean and Chinese groups have a much lower success rate than the French Control group; however, it is important to point out that one native French speaker has a tendency to use possessive adjectives instead of definite or indefinite articles. Consider the following example:
(45) Tu vas à la plage, qu'est-ce que tu vas porter? Mon maillot de bain. "You are going to the beach, what are you going to wear? My swimsuit."

This phenomenon will be further examined in the discussion below. Nonetheless, it is clear that the omission of articles is not acceptable for native French speakers in our experiment.

Table 5.6 and 5.7 illustrate the results of each type of article for Korean and Chinese participants. Even though the Chinese participants (50.7\%) have a lower overall success rate than the Korean participants (56.6\%), they have a higher success rate for the usage of definite articles (40.6\%). As shown in table 5.2.4 and 5.2.5, the Chinese participant group successfully identified $40.6 \%$ of the definite articles whereas the Korean group only identified $18.8 \%$. The omission rate of definite articles is extremely low for both groups. This shows that when a definite article is needed, the participants would replace it with an indefinite article rather than omit it.

Table 5.6. Overall article results per type - French questionnaire - Korean

|  | Definite <br> Article | Unspecific <br> Indefinite | Specific <br> Indefinite | Bare <br> Plural21 | Country | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Correct | 6 | 26 | 20 | 17 | 8 | 77 |
|  | $18.8 \%$ | $81.3 \%$ | $62.5 \%$ | $71 \%$ | $50 \%$ | $56.6 \%$ |
| Replace | 25 | 1 | 4 | 2 | 0 | 32 |
|  | $78.1 \%$ | $3.1 \%$ | $12.5 \%$ | $6.3 \%$ | $0 \%$ | $23.5 \%$ |
| Omit | 1 | 5 | 7 | 5 | 4 | 22 |
|  | $3.1 \%$ | $15.6 \%$ | $21.9 \%$ | $21 \%$ | $25 \%$ | $16.2 \%$ |

[^4]Table 5.7. Overall article results per type - French questionnaire - Chinese

|  | Definite <br> Article | Unspecific <br> Indefinite | Specific <br> Indefinite | Bare Plural | Country | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Correct | 13 | 23 | 19 | 9 | 5 | 69 |
|  | $40.6 \%$ | $71.9 \%$ | $59.4 \%$ | $37.5 \%$ | $31.3 \%$ | $50.7 \%$ |
| Replace | 18 | 4 | 4 | 9 | 0 | 35 |
|  | $56.3 \%$ | $12.5 \%$ | $12.5 \%$ | $37.5 \%$ | $0 \%$ | $25.7 \%$ |
| Omit | 1 | 5 | 7 | 5 | 9 | 27 |
|  | $3.1 \%$ | $15.6 \%$ | $21.9 \%$ | $20.8 \%$ | $56.3 \%$ | $19.9 \%$ |

In order to facilitate our analysis, we decided to break down our data by questions. The tables below illustrate the results for each individual question grouped together by types of articles: definite, unspecific indefinite, specific indefinite, bare plural and country.

Table 5.8. Definite article - French questionnaire - Korean

|  | Q1 | Q9 | Q11 | Q16 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 2 | 2 | 1 | 1 | 6 |
|  | $25 \%$ | $25 \%$ | $12.5 \%$ | $12.5 \%$ | $18.8 \%$ |
| Replace | 6 | 5 | 7 | 7 | 25 |
|  | $75 \%$ | $62.5 \%$ | $87.5 \%$ | $87.5 \%$ | $78.1 \%$ |
| Omit | 0 | 1 | 0 | 0 | 1 |
|  | $0 \%$ | $12.5 \%$ | $0 \%$ | $0 \%$ | $3.1 \%$ |

Table 5.9. Definite article - French questionnaire - Chinese

|  | Q1 | Q9 | Q11 | Q16 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 2 | 3 | 4 | 4 | 13 |
|  | $25 \%$ | $37.5 \%$ | $50 \%$ | $50 \%$ | $40.6 \%$ |
| Replace | 6 | 5 | 3 | 4 | 18 |
|  | $75 \%$ | $62.5 \%$ | $37.5 \%$ | $50 \%$ | $56.3 \%$ |
| Omit | 0 | 0 | 1 | 0 | 1 |
|  | 0 | 0 | $12.5 \%$ | 0 | $3.1 \%$ |

As for unspecific indefinite articles, both the Korean and Chinese group performed fairly well, with the Korean group at $81.3 \%$ (table 5.10) and the Chinese group
at $71.9 \%$ (table 5.11). The omission rate is fairly low for both groups as well. There are only a few cases where an unspecific indefinite article is replaced with a specific article. We also observed a few cases where an English word was used as an answer, and interestingly, both cases had a null article. Strangely, there is also a higher replacement rate for one of the questions in the Chinese group (i.e., Q13). We will discuss this phenomenon further in the following chapter.

Table 5.10. Unspecific indefinite article - French questionnaire - Korean

|  | Q2 | Q4 | Q10 | Q13 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 4 | 8 | 7 | 7 | 26 |
|  | $50 \%$ | $100 \%$ | $87.5 \%$ | $87.5 \%$ | $81.25 \%$ |
| Replace | 0 | 0 | 0 | 1 | 1 |
|  | $0 \%$ | $0 \%$ | $0 \%$ | $12.5 \%$ | $3.125 \%$ |
| Omit | 4 | 0 | 1 | 0 | 5 |
|  | $50 \%$ | $0 \%$ | $12.5 \%$ | $0 \%$ | $15.625 \%$ |

Table 5.11. Unspecific indefinite article - French questionnaire - Chinese

|  | Q2 | Q4 | Q10 | Q13 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 6 | 7 | 5 | 5 | 23 |
|  | $75 \%$ | $87.5 \%$ | $62.5 \%$ | $62.5 \%$ | $71.9 \%$ |
| Replace | 1 | 0 | 0 | 3 | 4 |
|  | $12.5 \%$ | $0 \%$ | $0 \%$ | $37.5 \%$ | $12.5 \%$ |
| Omit | 1 | 1 | 3 | 0 | 5 |
|  | $12.5 \%$ | $12.5 \%$ | $37.5 \%$ | $0 \%$ | $15.6 \%$ |

Table 5.12 and 5.13 compare the correct usage of specific indefinite articles with unspecific indefinite articles. We noticed that the success rate is lower for the former category for both the Korean group (62.5\%) and Chinese group (59.4\%). The omission rate is slightly higher for both groups as well. Interestingly, the replacement rate for one of the questions (i.e., Q5) is higher than the other questions for both groups of participants.

Table 5.12. Specific indefinite article - French questionnaire - Korean

|  | Q3 | Q5 | Q7 | Q14 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 7 | 4 | 4 | 5 | 20 |
|  | $87.5 \%$ | $50 \%$ | $50 \%$ | $62.5 \%$ | $62.5 \%$ |
| Replace | 0 | 3 | 1 | 0 | 4 |
|  | $0 \%$ | $37.5 \%$ | $12.5 \%$ | $0 \%$ | $12.5 \%$ |
| Omit | 1 | 1 | 2 | 3 | 7 |
|  | $12.5 \%$ | $12.5 \%$ | $25 \%$ | $37.5 \%$ | $21.9 \%$ |

Table 5.13. Specific indefinite article - French questionnaire - Chinese

|  | Q3 | Q5 | Q7 | Q14 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 7 | 4 | 3 | 5 | 19 |
|  | $87.5 \%$ | $50 \%$ | $37.5 \%$ | $62.5 \%$ | $59.4 \%$ |
| Replace | 0 | 3 | 1 | 0 | 4 |
|  | $0 \%$ | $37.5 \%$ | $12.5 \%$ | $0 \%$ | $12.5 \%$ |
| Omit | 1 | 1 | 2 | 3 | 7 |
|  | $12.5 \%$ | $12.5 \%$ | $25 \%$ | $37.5 \%$ | $21.9 \%$ |

As for the usage of bare plurals, table 5.14 and 5.15 indicate that the Korean group has a $71 \%$ success rate whereas the Chinese group scored $37.5 \%$. However, not all participants answered these questions with bare plural nouns. There are cases where a singular noun is used with an indefinite article. The replacement rate for the Chinese group (37.5\%) is much higher than the Korean group (6.3\%). The omission rate of the two participant groups for the usage of bare plurals is around $21 \%$.

Table 5.14. Bare plural - French questionnaire - Korean

|  | Q8 | Q12 | Q17 | Total |
| :--- | :---: | :---: | :---: | :---: |
| Correct | 7 | 6 | 4 | 17 |
|  | $87.5 \%$ | $75 \%$ | $50 \%$ | $71 \%$ |
| Replace | 0 | 0 | 2 | 2 |
|  | $0 \%$ | $0 \%$ | $25 \%$ | $6.3 \%$ |
| Omit | 1 | 2 | 2 | 5 |
|  | $12.5 \%$ | $25 \%$ | $25 \%$ | $21 \%$ |

Table 5.15. Bare plural - French questionnaire - Chinese

|  | Q8 | Q12 | Q17 | Total |
| :--- | :---: | :---: | :---: | :---: |
| Correct | 4 | 3 | 2 | 9 |
|  | $50 \%$ | $37.5 \%$ | $25 \%$ | $37.5 \%$ |
| Replace | 4 | 3 | 2 | 9 |
|  | $50 \%$ | $37.5 \%$ | $25 \%$ | $37.5 \%$ |
| Omit | 0 | 1 | 4 | 5 |
|  | $0 \%$ | $12.5 \%$ | $50 \%$ | $20.8 \%$ |

Table 5.16 and 5.17 shows the obligatory usage of a definite article with countries in French. Korean participants have a higher success rate (50\%) than Chinese participants do (31.3\%). On the other hand, Chinese participants have a higher omission rate $(56.3 \%)$ than Korean participants do ( $25 \%$ ).

Table 5.16. Country - French questionnaire - Korean

|  | Q6 | Q15 | Total |
| :--- | :---: | :---: | :---: |
| Correct | 4 | 4 | 8 |
|  | $50 \%$ | $50 \%$ | $50 \%$ |
| Replace | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 2 | 2 | 4 |
|  | $25 \%$ | $25 \%$ | $25 \%$ |

Table 5.17. Country - French questionnaire - Chinese

|  | Q6 | Q15 | Total |
| :--- | :---: | :---: | :---: |
| Correct | 3 | 2 | 5 |
|  | $37.5 \%$ | $25 \%$ | $31.3 \%$ |
| Replace | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 4 | 5 | 9 |
|  | $50 \%$ | $62.5 \%$ | $56.3 \%$ |

### 5.3. Results of articles from English questionnaire

We will continue by presenting the results of the elicited written production task of the English questionnaire. During the experiment, having completed the French questionnaire, our participants were asked to fill out a survey on their English background (See Chapter 4) before starting the English questionnaire.

Shown in table 5.20, a different set of results can be observed from the English questionnaire. Chinese participants had a higher overall success rate (55.9\%) than Korean participants (46.3\%). The omission rate for both groups is higher than the French questionnaire: Chinese group (28.7\%) and Korean group (35.3\%).

Table 5.18. Overall article result per participant - English questionnaire - Korean

|  | K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| correct | 9 | 4 | 10 | 11 | 3 | 7 | 7 | 13 | 8 |
|  | $52.9 \%$ | $23.5 \%$ | $58.8 \%$ | $64.7 \%$ | $17.7 \%$ | $41.2 \%$ | $41.2 \%$ | $76.5 \%$ | $47.1 \%$ |
| replace | 4 | 0 | 4 | 4 | 2 | 4 | 1 | 4 | 2.875 |
|  | $23.5 \%$ | $0 \%$ | $23.5 \%$ | $23.5 \%$ | $11.8 \%$ | $23.5 \%$ | $5.9 \%$ | $23.5 \%$ | $16.9 \%$ |
| omit | 3 | 13 | 3 | 2 | 12 | 6 | 9 | 0 | 6 |
|  | $17.7 \%$ | $76.5 \%$ | $17.7 \%$ | $11.8 \%$ | $70.6 \%$ | $35.3 \%$ | $52.9 \%$ | $0 \%$ | $35.3 \%$ |

Table 5.19. Overall article result per participant - English questionnaire - Chinese

|  | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| correct | 10 | 9 | 6 | 9 | 9 | 7 | 10 | 16 | 9.5 |
|  | $58.8 \%$ | $52.9 \%$ | $35.3 \%$ | $52.9 \%$ | $52.9 \%$ | $41.2 \%$ | $58.8 \%$ | $94.1 \%$ | $55.9 \%$ |
| replace | 4 | 0 | 0 | 4 | 2 | 0 | 4 | 1 | 1.875 |
|  | $23.5 \%$ | $0 \%$ | $0 \%$ | $23.5 \%$ | $11.8 \%$ | $0 \%$ | $23.5 \%$ | $5.9 \%$ | $11.0 \%$ |
| omit | 3 | 8 | 11 | 2 | 6 | 8 | 1 | 0 | 4.875 |
|  | $17.7 \%$ | $47.1 \%$ | $64.7 \%$ | $11.8 \%$ | $35.3 \%$ | $47.1 \%$ | $5.9 \%$ | $0 \%$ | $28.7 \%$ |

Table 5.20. Overall article result - English questionnaire - Groups

|  | Korean Group | Chinese Group | English Control Group |
| :--- | :---: | :---: | :---: |
| Correct | 8 | 9.5 | 17 |
|  | $47.1 \%$ | $55.9 \%$ | $100 \%$ |
| Replace | 2.875 | 1.875 | 0 |
|  | $16.9 \%$ | $11.0 \%$ | $0 \%$ |
| Omit | 6 | 4.875 | 0 |
|  | $35.3 \%$ | $28.7 \%$ | $0 \%$ |

However, the replacement rate is much lower than the French questionnaire (see table 5.5), which shows that both Korean and Chinese participants would rather omit an article than replace it with a wrong article. Similar to the results of the French questionnaire (see table 5.5), both the Korean and Chinese groups have a much lower success rate than the English Control group. Evidently, the omission of articles is not acceptable to the native English speakers in our experiment. However, we did observe similar usage of possessive adjectives instead of definite or indefinite articles in the English Control group (see discussion in chapter 6).

Table 5.21. and 5.22. illustrate the results of each type of article for Korean and Chinese participants. Even though the overall omission rate of the definite article is higher than the French questionnaire (see table 5.5), it is still the lowest out of the 3 article categories in the English questionnaire. Similar to the French questionnaire results, the success rate of unspecific indefinite articles is the highest. Interestingly, table 5.21 shows that the Korean participants have a 0\% replacement rate for all article categories except for the definite article. Overall, these results demonstrate an incomplete mastery of the distinction between definite and indefinite articles.

Table 5.21. Overall article results per type - English questionnaire - Korean

|  | Definite <br> Article | Unspecific <br> Indefinite | Specific <br> Indefinite | Bare Plural | Country | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Correct | 0 | 17 | 14 | 17 | 16 | 64 |
|  | $0 \%$ | $53.1 \%$ | $43.8 \%$ | $70.8 \%$ | $100 \%$ | $47.1 \%$ |
| Replace | 23 | 0 | 0 | 0 | 0 | 23 |
|  | $71.9 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $16.9 \%$ |
| Omit | 9 | 14 | 18 | 7 | 0 | 48 |
|  | $28.1 \%$ | $43.8 \%$ | $56.3 \%$ | $29.1 \%$ | $0 \%$ | $35.3 \%$ |

Table 5.22. Overall article results per type - English questionnaire - Chinese

|  | Definite <br> Article | Unspecific <br> Indefinite | Specific <br> Indefinite | Bare Plural | Country | Total |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Correct | 15 | 19 | 11 | 15 | 16 | 76 |
|  | $46.9 \%$ | $59.4 \%$ | $34.4 \%$ | $62.5 \%$ | $100 \%$ | $55.9 \%$ |
| Replace | 7 | 2 | 5 | 1 | 0 | 15 |
|  | $21.9 \%$ | $6.3 \%$ | $15.6 \%$ | $4.1 \%$ | $0 \%$ | $11.0 \%$ |
| Omit | 9 | 10 | 13 | 7 | 0 | 39 |
|  | $28.1 \%$ | $31.3 \%$ | $40.6 \%$ | $29.1 \%$ | $0 \%$ | $28.7 \%$ |

Tables below illustrate the results of each question grouped together according to article type. Shown in table 5.23 and 5.24 , similar to the French questionnaire result, the Chinese participants outperformed the Korean participants with a success rate of $46.9 \%$. Surprisingly, the Korean group has a $0 \%$ success rate for the usage of definite articles. Both groups have an omission rate of $28.1 \%$, which is much higher than the French questionnaire. Moreover, the Korean group had a much stronger tendency to replace a definite article with an indefinite article, with a replacement rate of $71.9 \%$.

Table 5.23. Definite article - English questionnaire - Korean

|  | Q1 | Q5 | Q12 | Q13 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 0 | 0 | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| Replace | 7 | 6 | 5 | 5 | 23 |
|  | $87.5 \%$ | $75 \%$ | $62.5 \%$ | $62.5 \%$ | $71.9 \%$ |
| Omit | 1 | 2 | 3 | 3 | 9 |
|  | $12.5 \%$ | $25 \%$ | $37.5 \%$ | $37.5 \%$ | $28.1 \%$ |

Table 5.24. Definite article - English questionnaire - Chinese

|  | Q1 | Q5 | Q12 | Q13 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 3 | 3 | 3 | 6 | 15 |
|  | $37.5 \%$ | $37.5 \%$ | $37.5 \%$ | $75 \%$ | $46.9 \%$ |
| Replace | 3 | 3 | 1 | 0 | 7 |
|  | $37.5 \%$ | $37.5 \%$ | $12.5 \%$ | $0 \%$ | $21.9 \%$ |
| Omit | 2 | 1 | 4 | 2 | 9 |
|  | $25 \%$ | $12.5 \%$ | $50 \%$ | $25 \%$ | $28.1 \%$ |

Table 5.25 and 5.26 indicate that both groups performed fairly well in regards to the usage of unspecific indefinite articles: the Chinese group had a $59.4 \%$ success rate whereas the Korean group scored $53.1 \%$. The omission rate is much higher in comparison with the French questionnaire: the Korean group (43.8\%) and the Chinese group (31.3\%). There are only a few cases where the participants replaced an indefinite article with a definite article.

Table 5.25. Unspecific indefinite article - English questionnaire - Korean

|  | Q2 | Q6 | Q9 | Q15 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 5 | 4 | 4 | 4 | 17 |
|  | $62.5 \%$ | $50 \%$ | $50 \%$ | $50 \%$ | $53.1 \%$ |
| Replace | 0 | 0 | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 3 | 3 | 4 | 4 | 14 |
|  | $37.5 \%$ | $37.5 \%$ | $50 \%$ | $50 \%$ | $43.8 \%$ |

Table 5.26. Unspecific indefinite article - English questionnaire - Chinese

|  | Q2 | Q6 | Q9 | Q15 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 4 | 5 | 5 | 5 | 19 |
|  | $50 \%$ | $62.5 \%$ | $62.5 \%$ | $62.5 \%$ | $59.4 \%$ |
| Replace | 0 | 1 | 1 | 0 | 2 |
|  | $0 \%$ | $12.5 \%$ | $12.5 \%$ | $0 \%$ | $6.3 \%$ |
| Omit | 3 | 2 | 2 | 3 | 10 |
|  | $37.5 \%$ | $25 \%$ | $25 \%$ | $37.5 \%$ | $31.3 \%$ |

As shown in table 5.27 and 5.28 , the success rate of specific indefinite articles is lower than the success rate of unspecific indefinite articles for both participant groups. The Korean group scored $43.8 \%$ whereas the Chinese group scored $34.4 \%$. The omission rate of specific indefinite articles is the highest out of the 3 article categories with Korean participants at $56.3 \%$ and Chinese participants at $40.6 \%$. Once again, Chinese participants had a stronger tendency to replace an indefinite article with a definite article. There were of couple cases where a possessive pronoun is used in lieu of a specific indefinite article.

Table 5.27. Specific indefinite article - English questionnaire - Korean

|  | Q3 | Q7 | Q10 | Q16 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 2 | 6 | 4 | 2 | 14 |
|  | $25 \%$ | $75 \%$ | $50 \%$ | $25 \%$ | $43.8 \%$ |
| Replace | 0 | 0 | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 6 | 2 | 4 | 6 | 18 |
|  | $75 \%$ | $25 \%$ | $50 \%$ | $75 \%$ | $56.3 \%$ |

Table 5.28. Specific indefinite article - English questionnaire - Chinese

|  | Q3 | Q7 | Q10 | Q16 | Total |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Correct | 1 | 6 | 2 | 2 | 11 |
|  | $12.5 \%$ | $75 \%$ | $25 \%$ | $25 \%$ | $34.4 \%$ |
| Replace | 1 | 1 | 3 | 0 | 5 |
|  | $12.5 \%$ | $12.5 \%$ | $37.5 \%$ | $0 \%$ | $15.6 \%$ |
| Omit | 4 | 1 | 3 | 5 | 13 |
|  | $50 \%$ | $12.5 \%$ | $37.5 \%$ | $62.5 \%$ | $40.6 \%$ |

Table 5.29 and 5.30 show the results of the bare plural questions. Both participant groups performed well for the usage of bare plurals, with success rate of $70.8 \%$ for Korean participants and $62.5 \%$ for Chinese participants. Similar to the French question, not all of them were answered with a plural noun. In fact, a few participants answered some of these questions with a singular noun and an indefinite article.
However, there are quite a few cases where the participants answered the question with a singular noun and a null article.

Table 5.29. Bare plural - English questionnaire - Korean

|  | Q8 | Q11 | Q17 | Total |
| :--- | :---: | :---: | :---: | :---: |
| Correct | 4 | 8 | 5 | 17 |
|  | $50 \%$ | $100 \%$ | $62.5 \%$ | $70.8 \%$ |
| Replace | 0 | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 4 | 0 | 3 | 7 |
|  | $50 \%$ | 0 | $37.5 \%$ | $29.2 \%$ |

Table 5.30. Bare plural - English questionnaire - Chinese

|  | Q8 | Q11 | Q17 | Total |
| :--- | :---: | :---: | :---: | :---: |
| Correct | 4 | 6 | 5 | 15 |
|  | $50 \%$ | $75 \%$ | $62.5 \%$ | $62.5 \%$ |
| Replace | 0 | 0 | 1 | 1 |
|  | $0 \%$ | $0 \%$ | $12.5 \%$ | $4.2 \%$ |
| Omit | 4 | 1 | 2 | 7 |
|  | $50 \%$ | $12.5 \%$ | $25 \%$ | $29.2 \%$ |

As shown in table 5.31 and 5.32 , both groups performed perfectly in regards to null article with countries in English. There is no case where a definite article is used with a country in the English questionnaire. This is grammatically correct in English.

Table 5.31. Country - English questionnaire - Korean

|  | Q4 | Q14 | Total |
| :--- | :---: | :---: | :---: |
| Correct | 8 | 8 | 16 |
|  | $100 \%$ | $100 \%$ | $100 \%$ |
| Replace | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |

Table 5.32. Country - English questionnaire - Chinese

|  | Q4 | Q14 | Total |
| :--- | :---: | :---: | :---: |
| Correct | 8 | 8 | 16 |
|  | $100 \%$ | $100 \%$ | $100 \%$ |
| Replace | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |
| Omit | 0 | 0 | 0 |
|  | $0 \%$ | $0 \%$ | $0 \%$ |

### 5.4. Results of adjective placement

As we mentioned in Chapter 4, in order to examine the adjective placement, we used a grammatical judgment test. We asked the participants to judge the grammaticality of an underlined section in a sentence containing a noun and an adjective. They were instructed to correct the ungrammatical section and leave alone the grammatical ones. As shown in table 5.33 and 5.34, both Korean and Chinese groups succeeded fairly well in the French questionnaire.

Table 5.33. Grammatical judgment test - French questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | 9 | 12 | 11 | 8 | 10 | 9 | 11 | 10 |
| $83.3 \%$ | $75 \%$ | $100 \%$ | $91.7 \%$ | $66.7 \%$ | $83.3 \%$ | $75 \%$ | $91.7 \%$ | $83.3 \%$ |

Table 5.34. Grammatical judgment test - French questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 8 | 11 | 10 | 11 | 12 | 10 | 9 | 10.375 |
| $100 \%$ | $66.7 \%$ | $91.7 \%$ | $83.3 \%$ | $91.7 \%$ | $100 \%$ | $83.3 \%$ | $75 \%$ | $86.5 \%$ |

However, a different set of results of the French adjective placement is observed in part 3 of the experiment, where the participants were asked to rearrange a series of elements to form a grammatical sentence. Shown in table 5.35 and 5.36 , the Korean group had a perfect success rate, but the Chinese group had a success rate of $97.5 \%$. However, we believe that this minor discrepancy is not significant.

Table 5.35. Element rearrangement - French questionnaire -Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.36. Element rearrangement - French questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4.875 |
| $100 \%$ | $80 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $97.5 \%$ |

Table 5.37. Adjective placement - French questionnaire - Groups

|  | Korean Group | Chinese Group | French Control Group |
| :---: | :---: | :---: | :---: |
| Grammatical judgment | 10 | 10.375 | 12 |
|  | $83.3 \%$ | $86.5 \%$ | $100 \%$ |
| Element Rearragment | 5 | 4.875 | 5 |
|  | $100 \%$ | $97.5 \%$ | $100 \%$ |

Tables $5.38,5.39,5.340$ and 5.41 below show the adjective placement results broken down by questions: grammatically correct and grammatically incorrect. It was observed that the errors consisted more of cases where an ungrammatical ticket was not corrected. There were only a few cases where a grammatical ticket was tended to incorrectly. The success rate of most questions from both categories was above $62.5 \%$. Interestingly, Korean participants had a low success rate for Q13 (25\%) whereas Chinese participants had a low success rate for Q6 (37.5\%).

Table 5.38. Grammatically incorrect tickets - French questionnaire - Korean

| Q2 | Q8 | Q9 | Q12 | Q13 | Q14 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 6 | 8 | 7 | 2 | 7 | 40 |
| $62.5 \%$ | $75 \%$ | $100 \%$ | $87.5 \%$ | $25 \%$ | $87.5 \%$ | $72.9 \%$ |

Table 5.39. Grammatically incorrect tickets - French questionnaire - Chinese

| Q2 | Q8 | Q9 | Q12 | Q13 | Q14 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 6 | 8 | 7 | 6 | 6 | 40 |
| $87.5 \%$ | $75 \%$ | $100 \%$ | $87.5 \%$ | $75 \%$ | $75 \%$ | $83.3 \%$ |

Table 5.40. Grammatically correct tickets - French questionnaire - Korean

| Q1 | Q3 | Q4 | Q6 | Q7 | Q10 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 7 | 8 | 6 | 8 | 8 | 45 |
| $100 \%$ | $87.5 \%$ | $100 \%$ | $75 \%$ | $100 \%$ | $100 \%$ | $93.8 \%$ |

Table 5.41. Grammatically correct tickets- French questionnaire - Chinese

| Q1 | Q3 | Q4 | Q6 | Q7 | Q10 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | 8 | 8 | 3 | 8 | 8 | 45 |
| $100 \%$ | $100 \%$ | $100 \%$ | $37.5 \%$ | $100 \%$ | $100 \%$ | $93.8 \%$ |

Shown in table 5.42 and 5.43, the grammatical judgment test on the English adjective placement is successfully executed by both groups. Both Korean and Chinese groups have a near perfect performance. This is not surprising since the English adjective placement coincides with both the Korean and Chinese languages.

Table 5.42. Grammatical judgment test - English questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 11.875 |
| $100 \%$ | $91.7 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $99 \%$ |

Table 5.43. Grammatical judgment test - English questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 11.75 |
| $91.7 \%$ | $91.7 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $98 \%$ |

Similar results of English adjective placement are observed in the rearrangement of elements test (table 5.44 and 5.45). Both participant groups performed perfectly when they were asked to rearrange a series of elements to form a grammatical sentence.

Table 5.44. Element rearrangement - English questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.45. Element rearrangement - English questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.46. Adjective placement - English questionnaire - Groups

|  | Korean Group | Chinese Group | English Control Group |
| :---: | :---: | :---: | :---: |
| Grammatical judgment | 11.875 | 11.75 | 12 |
|  | $99 \%$ | $98 \%$ | $100 \%$ |
| Element Rearragment | 5 | 5 | 5 |
|  | $100 \%$ | $100 \%$ | $100 \%$ |

### 5.5. Results of verb placement

As for verb placement, both Korean and Chinese groups have an almost perfect performance (tables 5.47, 5.48, 5.49 and 5.50 ). There is only one case where a Chinese participant failed to rearrange the different elements to form a grammatical sentence. This is perhaps due to the incapability to recognize certain words of vocabulary. We also noticed that a few participants failed to conjugate the verb and simply left the verbs in the infinitive form. The issue of finiteness is not examined in our study.

Table 5.47. Verb placement - French questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.48. Verb placement - French questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4.875 |
| $100 \%$ | $80 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $97.5 \%$ |

Table 5.49. Verb placement - English questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.50. Verb Placement - English questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.51. Verb placement - Groups

|  | Korean Group | Chinese Group | French Control <br> Group | English Control <br> Group |
| :--- | :---: | :---: | :---: | :---: |
| French | 5 | 4.8 | 5 | - |
| Questionnaire | $100 \%$ | $97.5 \%$ | $100 \%$ | 5 |
| English | 5 | 5 | - | $100 \%$ |
| Questionnaire | $100 \%$ | $100 \%$ |  |  |

### 5.6. Results of negation

As for negation, while the Korean participants performed perfectly in both the French and English questionnaires (table 5.52 and 5.54 respectively), a few of the Chinese participants had difficulty with the French negations (table 5.53). There are two cases where the 'pas' is left out of the negation. One of the Chinese participants (C7) failed to follow the instructions for this test by answering all the questions positively.

Table 5.52. Negation - French questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.53. Negation - French questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 4 | 5 | 4 | 5 | 5 | - | 5 | 4.71 |
| $100 \%$ | $80 \%$ | $100 \%$ | $80 \%$ | $100 \%$ | $100 \%$ | - | $100 \%$ | $94.3 \%$ |

Table 5.54. Negation - English questionnaire - Korean

| K1 | K2 | K3 | K4 | K5 | K6 | K7 | K8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |

Table 5.55. Negation - English questionnaire - Chinese

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 | 5 | 5 | 5 | 5 | 5 | - | 5 | 5 |
| $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | - | $100 \%$ | $100 \%$ |

Table 5.56. Negation - Groups

|  | Korean Group | Chinese Group | French Control <br> Group | English Control <br> Group |
| :--- | :---: | :---: | :---: | :---: |
| French | 5 | 4.71 | 5 | - |
| Questionnaire | $100 \%$ | $94.3 \%$ | $100 \%$ | 5 |
| English | 5 | 5 | - | $100 \%$ |
| Questionnaire | $100 \%$ | $5 \%$ |  |  |

## 6. Discussion

Interestingly, we observed that Chinese participants have a higher success rate for the usage of definite articles in the French questionnaire than Korean participants. Since neither Chinese nor Korean language has the distinction between definite and indefinite articles, this phenomenon can only be explained by the success rate for the usage of definite articles in the English questionnaire. As we mentioned before, English and French are more typologically similar in the syntactic representation of DPs and they share the same distinction between definite and indefinite articles. Therefore, Chinese participants' higher success rate for the usage of definite article can be interpreted as evidence in support of a positive transfer of the L2 into the L3 This also support the Typology Primacy Model since English is typologically similar to French.

Effectively, when we compare the success rate of the usage of definite articles in English for Chinese and Korean participants (table 5.20), a huge discrepancy can be observed in our data. While Chinese participants have a success rate of $46.9 \%$, Korean participants have a success rate of $0 \%$ in the usage of definite articles. We can therefore conclude that Chinese participants have successfully transferred their usage of definite article from their L2 into their L3, despite the incomplete mastery of the distinction between definite and indefinite articles.

It is extremely interesting to observe that Korean participants had a success rate of $0 \%$ in the usage of definite articles in the English questionnaire, yet a success rate of $18.8 \%$ in the French questionnaire. We have to ask ourselves what the justification for this discrepancy is. As we mentioned before, there is no definite or indefinite article in the Korean language-- how is it possible that when the distinction between definite and indefinite articles seems to be non-existent in Korean participants' L2, there is an evidence of incomplete mastery of this distinction in their L3? Unfortunately, we cannot find a possible answer to explain this phenomenon. Nor are we able to interpret this as L1 influence since we predicted that Korean participants would not be able to
differentiate between definite or indefinite article if the category $D$ has not been fully developed and if these learners treat D as CL . This is because CL in Korean denotes specificity or non-specificity. It is perhaps important to note that there were different sections of FREN 120, and that not all Korean participants were recruited from the same section whereas all Chinese participants came from the same section. Thus, it is possible that the amount of time spent on articles instruction were different in each section.

We observed that when a definite article is needed, our participants would replace it with an indefinite article rather than omit it. This phenomenon can be explained by the fact that questions designated to test for the usage of definite article mentioned the object with an indefinite article. Consider the following examples:
(46) Il y a une pomme et une banana sur la table. Laquelle voulez-vous? "There is an apple and a banana on the table. Which do you want?
(47) Au cinéma, il y a un film d'aventures et un film d'amour. Lequel voudrais-tu voir?
"At the movie theatre, they are featuring an adventure film and a romance film. Which one would you like to watch?"

It is possible that the presence of articles in these questions triggered the usage of one instead of omission.

Despite the high omission rate, indefinite articles were better produced than definite articles for both the Chinese and Korean groups. As mentioned before, a crosslinguistic transfer can manifest itself in different subcategories of linguistics: phonology, morphology, syntax... etc. Perhaps it is easier for language learners with a classifier system to associate the indefinite article with the counter 'one', even though the counter 'one' is optional in these languages. In other words, it is possible for Chinese and Korean participants in our study to associate words like 'a' or 'an' in English and 'un' or 'une' in French to the counter 'one' in Chinese and Korean. On the other hand, there are no words in Chinese or Korean that are equivalent to definite articles in English or French. Therefore, in order for the participants to demonstrate correct usage of definite articles, it is necessary for them not only to replace the Numeral Phrase from their native language with DP but also acquire the morphology expressing the definiteness in English (the) and in French (le/la/l'/les).

We also observe a slightly higher success rate for unspecific indefinite articles than specific indefinite articles for both groups. This contrast, perhaps, is due to the referentiality of the definite and indefinite articles. Lyon (1999) posits that specific definite articles and specific indefinite articles refer to specific referent, whereas unspecific indefinite article does not. Moreover, if we follow Abney's (1987) interpretation that DPs are generally considered to be referential and specific, then we can assume specific definite articles and specific indefinite articles to be DPs, and unspecific indefinite articles to simply be NumPs (see also Ritter, 1991). Following this concept of unspecific indefinite articles being simply NumPs, it is quite evident that Chinese and Korean learners of English and French are more capable of producing an unspecific indefinite article than a specific indefinite article since it is typologically similar to the NumP in their L1.

We would also suggest that the wording of the questions of specific indefinite article might have played an influential role in the selection process of articles. Consider this following question as an example:
(48) Indiquez quelque chose de grand dans votre salle de séjour "Indentify something big in your living room"

The usage of possessive pronoun (votre = 'your' in English) in this example can be misleading to the participants. It is possible for our participants to misinterpret the possessiveness with definiteness. In other words, the fact that we asked the participants to indicate something specific in their living room triggered the usage of a definite article in order to show that the item they are referring to belongs to them and nobody else.

Clear evidence to support this analysis can be found in the answers of one participant of our French Control Group and one from our English Control Group. Consider these following examples:
(49) Indiquez quelque chose de grand dans votre salle de séjour. Mon canapé. "Indicate something big in your living room. My sofa."
(50) Vous avez probablement quelque chose dans votre sac. Qu'est-ce que c'est? Mon portefeuille.
"You probably have something in your bag. What is it? My Wallet."
(51) I am sure there is something in your bedroom that you sleep on. What is it? My bed.

In the examples above, it is clear that native French speakers and native English speakers used the possessive pronoun to show the specificity of the object.

Interestingly, there are a few cases where a question designed for an unspecific indefinite article is misinterpreted by the participants. Consider the following example:
(52) Tu vas prendre le métro, qu'est-ce que tu dois acheter? Le ticket de metro. "You are going to take the metro, what do you have to buy? The metro ticket." (C1, C3, C7, K2)

Perhaps the context (or scene setting) of this question misleads the participants to believe a definite article is necessary in this case. It is possible that the participants consider buying a ticket to be the only obvious choice of action before taking the metro. If so, we can assume that the participants use the definite article to express the limited choice of action in this specific context, by opposing the definiteness of the object being referred to.

As for the special construction of bare plurals, there is slight evidence of a L2 transfer. As mentioned before, while the partitive article 'some' is often omitted in English, it is never omitted in French. Even though not all the questions of bare plurals in the French questionnaire were answered with a plural noun, there are two cases where a plural noun is used without an article. We interpret this observation as an influence of the L2 English.

However, one could argue that the omission of article in cases where a plural noun is used without an article is evidence of the L1 transfer. This argument is only possible for Korean students, since the plural marker '-dul' in Korean can be added to countable nouns in a similar manner as English. However, this does not seem likely to
us for the Chinese participants since the nouns in question are successfully marked with the plural marker ' $s$ ', which does not exist in Chinese. Moreover, Chinese has plural classifiers, which render the semantic partitioning of count nouns lexically visible (Leung, 2002). It is, therefore, difficult for us to consider the usage of plural nouns without articles as an evidence of an L1 influence for Chinese participants.

Looking at our data, it is clear that both Korean and Chinese participants have not mastered the distinction between definite and indefinite articles in the French questionnaire. This observation could be explained by the continuing influence of their L1, since neither the Korean nor the Chinese language has this crucial distinction between definite and indefinite articles. However, we can also explain this phenomenon by the transfer of the incomplete mastery of definite/indefinite article distinction in English. But why is there a persistent incomplete mastery of this critical distinction between definite and indefinite articles for language learners whose L1 lacks of this distinction? To answer this question, we must first ask ourselves what is definiteness? How can the majority of the world's languages function without the formal marking of this concept through articles? (Trenkic, 2009)

Nominal definiteness relates to being able to identify referents in discourse. A discourse referent is definite when the speaker means to refer to it. A referent is only definite when it pre-exists in a discourse and "is unique in one of the pragmatically delimited domains mutually manifesting to speaker and listener in real time" (Trenkic, 2009, p. 117; cf. Hawkins, 1991). On the other hand, a referent is indefinite when it is not uniquely identifiable in a pragmatically constrained domain. In other words, definiteness can be simply defined as a "universal category of meaning or an element of interpretation in all languages" (p. 117). A referent can therefore be identified as definite or indefinite in the absence of a nominal marker (Trenkic, 2009).

Consider this example as illustrated in Trenkic's study (2009): imagine two people are standing in the kitchen. There are 4 white mugs and a black mug on the table. To make some tea, one person asks the other to pass a mug to him. A native speaker of a language like English or French, which have definite articles would say:
(53) Pass me the black mug, please

The definiteness of the nominal phrase is marked by the definite article 'the', which is necessary in this case because the referent is uniquely identifiable in a pragmatically constrained domain for the two people in the kitchen.

However, a native speaker of a language, like Chinese, which does not have definite articles, would simply say:
(54) qing gei wo heisede beizi

Please give me black mug
"Give me a (a/the) black mug."

It is clear that the nominal phrase in the sentence above is not marked for definiteness, but the definite context remains the same: the referent exists and is uniquely identifiable in a pragmatically constrained environment to the speaker and the listener. Thus, even though this nominal phrase in Chinese is not marked for definiteness, the referent is defined as definite. In other words, the speaker would not expect this utterance to be misunderstood by the intended listener. We can also expect the outcome of the Chinese utterance to be the same as the English one.

Let us now reconsider the same situation in an indefinite context, where the speaker requests a white mug instead of a black one. Evidently, a native speaker of a language that has indefinite articles would express this request by saying:

> Pass me a white mug, please

The nominal phrase above is marked by an indefinite article 'a' and therefore defined as indefinite. The indefiniteness indicates that the referent is not uniquely identifiable in a pragmatically constrained environment: the nominal phrase 'white mug' can refer to any of the 4 white mugs on the table.

On the contrary, a native speaker of a language without definite articles would simply request for a white mug by saying:
(56) Qing gei wo (yige) baisede beizi Please give me (one) white mug
"Give me (a) white mug please"

The classifier 'one' is optional in the Chinese language, but the nominal phrase in Chinese is not marked by an indefinite article. Similar to the example of the usage of definite articles, the context is the same in the Chinese command and the English command. The referent, a white mug in this case, exists in front of the speaker and the listener, but it is not unique since the listener would expect any one of the white mugs to be the potential referent. In other words, if the speaker wanted a specific white mug, he/she would have to provide additional information on the mug (e.g. pass me the white mug with a chip on it). Since there is no additional information provided on the white mug in the Chinese utterance, the hearer would have to interpret this nominal phrase in an indefinite context.

From the examples above, it is clear that a nominal phrase can be pragmatically defined as definite or indefinite without a specific marker of (in)definiteness to confirm it. We can also go a step further to suggest that the indefinite and definite markers in languages with articles, English and French for example, are redundant (Brown, 1973; Hawkins, 2004; Throne, 1972), since the end results of the Chinese and English command is the same.

As we have mentioned above, a definite article can only be used in a context where the referent is uniquely identifiable. If the criteria of unique identifiability is not met, an indefinite article will be used. Therefore, the identifiability status of a referent in a particular context restricts the selection of articles. We could, perhaps, consider the feature [ $\pm$ definite] to be in the position of N (see figure 2 in Chapter 3 ), instead of being in the position of $D$ (Trenkic, 2009).

Moreover, according to Hawkins (2004), there are no convincing semantic or pragmatic reasons to explain why articles are needed, in certain languages, to express something perfectly expressible in languages without articles. Hawkins also suggests that articles are used to introduce a nominal phrase when the processibility of nominal phrases becomes less efficient due to the effects of other structural changes. One of the predominant examples of structural change is the systematic loss of case inflection on nouns. In early Germanic, nouns and their modifiers are all marked for cases, which facilitate the processing of the utterance argument structure by signaling thematic roles in a described event (Bates \& MacWhinney, 1989). However, when Germanic nouns lost
their case inflection, processing of the utterance argument structure becomes less efficient, especially where bare nouns are involved. This loss of case inflection triggers not only the emergence of the definite article from demonstrative, but also the emergence of indefinite articles from numeral 'one’.

Presumably due to the higher fixed word order, articles do not have case marking functions anymore, at least in English. They do, however, act as a noun marker by differentiating the ambiguity caused by nouns and verbs sharing the same spelling. For example: to drink/a drink, to book/a book, to view/a view... etc. Thus, it would seem plausible that the purpose of an article is not so much to express the concept of definiteness or indefiniteness, but rather to reduce the processing speed of an utterance by signaling the presence of a noun phrase (Trenkic, 2009). Indubitably, every millisecond is important in regards to processing efficiency.

Assuming that the referent limits the selection of articles and that the articles are used to reduce the processing speed of an utterance, it is possible that a second language eliminates the usage of articles due to their peripheral meanings. According to Trenkic (2009), when the brain is challenged with higher processing demands, the simpler expression (null article noun, for example) will be favored over the more complex expression (article + noun). This could explain why the participants in our study have a higher omission rate in the English questionnaire than the French one. Nonetheless, we will not exclude fatigue as a probable influence factor for the higher omission rate since our participants were asked to complete the French questionnaire following the English one, with only a short break in between.

In our experiment, we specifically wanted to examine what the participants would do when the syntactic structure in the L3 (French) is not typologically similar to either of the syntactic structure of their L1 or L2. As mentioned in a previous section, the adjective placement in French is syntactically different from English, Chinese and Korean. Most adjectives in French are post-nominal whereas they are pre-nominal in English, Chinese and Korean. We expected that both Korean and Chinese participants transferred the syntactic properties of their L1 and L2 into the beginner stage of their L3. It is, however, impossible to differentiate the L1 from the L2 in the adjective placement since there is no syntactic difference in Chinese, Korean and English.

However, our results contradict our hypothesis as both Korean and Chinese participants had a success rate above $80 \%$ in the grammatical judgment test and a perfect score in the element rearrangement test. Although extremely weak ( $16 \%$ for Korean subjects and $13 \%$ for Chinese subjects), there is some evidence of syntactic transfer from either the L1 or the L2. Consider this following example from the grammatical judgment test:
(57) *Elle aime beaucoup les vertes pommes. She likes a lot the green apples "She likes green apples a lot."

Some of the Korean and Chinese participants did not successfully judge this utterance as ungrammatical and they left the underlined section uncorrected. This is a clear example of a syntactic transfer from a previous learned language, even though it is not possible to determine if the transfer came from their L1 or L2.

There is a discrepancy between grammatically correct tickets and the grammatically incorrect tickets as both Korean and Chinese participants are more successful at judging the grammatically correct tickets than correcting the grammatically incorrect tickets. This observation is not surprising since certain previous studies in the generative field have shown that learners of a second or third language have a tendency to accept not only grammatical sentences, but also ungrammatical sentences. This phenomenon can be explained by a premature intuition for the target language, which has not been fully developed (White, 1989; Flege et al. 1999; Bardel \& Falk 2010). We can also explain this observation by insecurity. More specifically, it is perhaps easier for language learners to accept rather than to reject new elements.

Nonetheless, it is very interesting that most of the Chinese and Korean participants have a success rate higher than $80 \%$ in the grammaticality judgment test and a perfect success rate in the element rearrangement test. This phenomenon could be an evidence of direct access to UG as the French L3 learners were able to reset the parameter. This allowed them to successfully produce post-nominal adjectives since the Num feature in French is assumed to be strong, which attracts the noun to move up for the purpose of feature checking at Num head. Moreover, when a specific UG feature of a target language is completely opposite from previous acquired languages (i.e.,
weak/strong Num feature strength), this would perhaps allow the new feature to be acquired more easily. In other words, the absence of conflict in parameter values facilitates its acquisition.

There is, however, a very interesting pattern in which the L3 French learners acquire this syntactic construction. Consider this following example:
(58) Tu as rencontré une jeune fille charmante.

You have met a young girl charming
"You met a young, charming girl."

As we mentioned, some adjectives are obligatory pre-nominal in French ${ }^{22}$. Even though this sentence is grammatically correct in French, some of the participants displaced the adjective (jeune) behind the noun (fille), which causes the sentence to be grammatically incorrect. Perhaps some sort of learning strategies, developed in the acquisition process of a non-native language, can explain this phenomenon. More specifically, it is possible that the French L3 learners assume all adjectives have to be placed behind the noun in all cases in French.

We notice similar results in the negation task. Both Korean and Chinese participants have near perfect performance in regards to the placement of negation. The fact that a couple of the Chinese participants failed to place the 'pas' behind the verb can be interpreted as evidence of the L1 lexical influence, assuming that they consider the ' $n e$ ' as the main negative item. Consider the following examples:
*Je n'aime les legumes.
I NEG like the vegetables.
"I don't like vegetables."

22 Normally, adjectives which describes beauty, age, good, bad, and size are placed in front of the noun in French. However, this specific rule has not yet been formally taught to participants in our study.

Wo bu xihuan shucai
I NEG like vegetables.
"I don't like vegetables."

Despite these two failed cases, all other negation questions were answered successfully. These results can be interpreted as a direct access to UG where the L3 French learners are able to reset the parameter in order to raise the verb to Infl for agreement checking purposes. However, similar to adjective placement, we would not exclude the idea that some sort of learning strategies permitted these language learners to memorize the negation structure of French. In other words, it is perhaps too early to suggest the availability of UG since our participants had only received little amount of instruction of French at the time of the experiment.

As for Korean participants, as mentioned before, linguists support that verb raising is responsible for the amalgamated complex verbal form in the Korean language (Yoon, 1990). If there is verb raising in Korean, then the successful results of negation production by our Korean participants can be interpreted as a positive transfer of the L1. Moreover, the existence of post-verbal negation in Korean should facilitate the production of negation in French, which is strictly post-verbal. This observation seems to contradict the L2 Status Factor; according to which, a L2 would block direct access to a L1 even when the L1 would be better source of positive transfer. In other words, their L2 English of our Korean participants did not prevent them from transferring post-verbal negation from their L1.

As for basic word order, both Chinese and Korean groups have near perfect success rates in both the English and French questionnaire ${ }^{23}$. It is not surprising for Chinese participants to succeed in this syntactic structure, since both their L1 and their L2 have the identical SVO construction. However, the fact that Korean participants, whose L1 has SOV construction, are also successful at producing correct SVO construction in French can be clear evidence of transfer from their English L2. This result
${ }^{23}$ One of the Chinese participants (C2) failed to correctly rearrange the elements to form a grammatical sentence, but it is believed to be due to incomprehension of the vocabulary.
also seems to contradict the L1 Factor, which supports the idea that the L1 can cause persistent fossilization if the L1 features do not match the features in the L2 or L3.

### 6.1. Revisiting Research Questions

Let us now revisit those 5 research questions mentioned in Chapter 2 and endeavour to answer them in light of our results of the four syntactic structures investigated in our study: the distinction between definite and indefinite articles, the placement of adjectives, the placement of verbs and the negation.

1. Does a L1 always play a prominent role in TLA as it does in SLA?
2. Does a L2 block the access of a L1 even when the L1 would be a more suitable source for positive transfer?
3. Is there a clear division between a L1 and L2 or should they be considered as a whole?
4. Is a typologically more similar language always considered as a preferred source of transfer?
5. What would happen when a syntactic structure of a L3 is not typologically similar to a L1 or L2?

Questions 1, 3 and 4 can be analyzed by our results of the distinction between definite and indefinite articles. It is clear that this distinction is continuingly problematic in both French and English for both Korean and Chinese participants. While some positive transfers of L2 English were observed, their L1 seems to have a perpetuated influence on their L3 French; however, this does not suggest that L1 always provide the prominent source of transfer in TLA. We believe that neither the L1 nor the L2 of our participants was considered to be the primary source of transfer with regards to the distinction; instead, they both have effects on the L3 French. This observation supports the idea of multi-competence, where a second language learner's mind is viewed as a whole instead of a distinct L1, L2 and Ln (Cook, 1996). However, there is another possible explanation: the L2 English, being typologically more similar to French, is the preferred source of transfer and that these French L3 learners transferred the incomplete mastery of this distinction from their L2 into their L3.

Question 4 is supported by the results of basic word order. We did not expect that this structure would pose any difficulties for the Chinese participants, since their L1 and L2 both have the same SVO structure as French. Interestingly, our Korean participants whose L1 has SOV structure, performed as successfully as our Chinese participants. We can interpret this result as a positive transfer from L2 English which is the typologically more similar language than Korean. This also refutes that L1 would always play the prominent role in TLA as in SLA, as probed in question 1. While our results of basic word order may seem to support the Typology Primacy Model, it would be interesting to compare our data to a group of French L3 learners who have English as a L1 and Korean as a L2. If this new group of participants demonstrates difficulty with SVO construction, their results would be a strong evidence for the L2 Status Factor. This supports that the L2 blocks the direct access to the L1 in the acquisition of a new language even when the L1 would provide more suitable positive transfers.

As stated in question 5 , one of the objectives of this study is to investigate what would happen when a specific syntactic structure is not typologically similar to L1 or to L2. More specifically, how does the L3 learning process differ when neither L1 nor L2 provides positive transfer? We dealt with this particular question by examining the placement of adjectives and the negation. Interestingly, both Korean and Chinese participants were able to correctly produce post-nominal adjectives, even though these two languages have strictly pre-nominal adjectives. This positive result could be argued in favour of the availability of UG in the acquisition of L3. In other words, our French L3 learners are able to reset the nominal parameter by acquiring the strong Num feature of French, which attracts the noun to move up for the purpose of feature checking at Num head.

Moreover, a similar observation was found with regards to the production of negative sentences. As mentioned, while English and Chinese do not have the verb raising parameter, there is debate over whether this parameter exists in Korean. Thus, the fact that most of our Chinese participants have successfully produced French negation is evidence for direct access to UG. As for our Korean participants who were also successful with French negation, on the one hand, if there is no verb-raising in Korean, then our analysis will coincide with our Chinese participants. On the other hand, if in fact there is verb-raising in Korean, then we would have to interpret our data as a
positive transfer from the L1. If the latter is true, then our finding would refute question 2 by contradicting the L2 Status Factor, according to which L2 blocks direct access to L1 even when the L1 would provide more suitable positive transfers for syntactic properties.

Nonetheless, as mentioned before, we would not exclude the idea that some sort of learning strategies allowed these language learners to memorize the adjective placement and negation structure of French. In other words, it is perhaps too early to suggest the availability of UG since our participants had only received little amount of instruction of French at the time of the experiment.

## 7. Conclusion

In this thesis, we investigated the acquisition of 4 syntactic constructions of French and compared the results of Korean participants with Chinese participants, both of whom were true beginners in the acquisition of French as a third language. As we mentioned in chapter 2, it is not necessarily pertinent to apply transfer theories of SLA to the TLA process due to the increased complexity created by the addition of a third language. One of the major obstacles is to be able to determine if the L1 and/or the L2 is the main source of transfer in the TLA. Thus, several theories of transfer have been proposed specifically for the TLA: L1 Factor, Cumulative-Enhancement Model, L2 Status Factor and Typology Primacy Model.

With regard to the distinction of definite and indefinite articles, while our data shows that the L3 French learners have to some degree successfully transferred this crucial distinction from English into French at the beginning of the acquisition, there is also evidence of the L1 influence, since neither Korean nor Chinese possesses this distinction. These findings do not support the Cumulative-Enhancement Model, which purports that any previous acquired languages will only exert positive transfer, or else, will remain neutral. However, it does seem to suggest that the interlanguage (i.e., L1+L2) should be viewed as a whole instead of a distinct L1 or L2. In other words, both the L1 and the L2 can influence the acquisition of a new language in both a positive and negative manner.

Moreover, the ability to master this distinction is very questionable, even in English. As we have discussed in the previous chapter with the kitchen mug example, while this distinction may seem crucial for native speakers of English and French, it may seem futile for a L2 or a L3 language learner whose L1 does not have the necessity of this distinction in order to function (i.e., Chinese and Korean). In other words, the final results of the English request and the Chinese request are exactly the same. Also, we do not deny the possibility that when the brain is challenged with a higher processing
demand, the simpler expression is favoured to a more complex expression-- especially when the final results are the same.

Finally, we specifically wanted to examine what would happen when a particular syntactic structure is typologically similar to neither the L1 nor the L2. In other words, how would the L1 or the L2 affect the learning process of the L3 when neither of them provides any positive source of transfer? This issue is investigated by the placement of adjectives and the negation in our study. Our data shows that most of our participants were able to successfully produce the correct answers. This suggests that these participants have access to UG at the initial stage of the acquisition of the L3 in order to readjust the parameters to match the target language. However, another possible interpretation of the results of adjective placement seems to suggest that some sort of learning strategies developed during the learning process of the L2 allowed these language learners to be successful. In other words, a longitudinal experiment will allow us to truly suggest the availability of UG.

We admit that this is only a pilot study that allowed us to investigate syntactic constructions that are relatively simple. Due to the limited understanding of French in our participants, we were not able to examine more complex syntactic constructions at this moment. However, it would be very interesting to conduct the same study, with the same participants, at later stage in the acquisition and compare the results. This is especially true for the distinction between definite and indefinite articles. Also, it would be pertinent to compare our results to other groups of participants who have English as the L1 and Korean or Chinese as the L2. This would allow us to shed more light on which learned language is more likely to be the main source of transfer in the acquisition of a new language.

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## Appendices

## Appendix A.

## French Questionnaire

## A. Answers these questions with short answers

1. Il y a une pomme et une banane sur la table. Laquelle (which one) voulez-vous?
2. Il pleut. Qu'est-ce que tu vas utiliser (use)?
3. Vous avez probablement quelque chose (something) dans votre sac. Qu'est-ce que c'est?
4. II fait froid. Qu'est-ce que tu vas porter?
5. Indiquez (indicate) quelque chose de grand (big item) dans votre salle de séjour.
$\qquad$
6. Quel pays voudrais-tu visiter?
7. Je suis sûr que vous avez quelque chose (something) dans votre chambre sur lequel (on which) dormir. Qu'est-ce que c'est?
8. Tu veux faire une tarte (pie). Quels fruits vas-tu acheter au supermarché?
9. Au cinéma, il y a un film d'aventures et un film d'amour. Lequel voudrais-tu voir?
10. Tu vas à la plage, qu'est-ce que tu vas porter?
11. Dans un restaurant, un sandwich coûte $\$ 10$ et un hamburger coûte $\$ 13$. Lequel est plus cher?
12. Le nouveau semestre commence. Qu'est-ce que tu dois acheter à la librairie (bookstore)?
13. Tu vas prendre le métro, qu'est-ce que tu dois (have to) acheter?
14. Je suis sûr que vous avez quelque chose (something) sur votre bureau (desk). Qu'est-ce que c'est?
15. Nommez (name) un pays en Europe.
16. Dans un magasin, il y a une chemise rose et une chemise noire. Laquelle vas-tu acheter.
17. Qu'est-ce qu'on peut trouver dans une salle de classe?
B. Determine if the underlined section in each sentence below is grammatical or not. If it is, do nothing. If not, make the necessary changes
18. J'aime bien la cuisine française.
19. Elle aime beaucoup les vertes pommes.
20. Un étudiant intelligent vient toujours en classe.
21. Nous aimons les pommes délicieuses.
22. Une fière (proud) de son fils mère parle au professeur.
23. Tu as rencontré une jeune fille charmante.
24. Je vais acheter une voiture noire.
25. Vois-tu la violette chemise?
26. Vous allez prendre une française bière.
27. Il veut acheter une chemise rose.
28. Un étudiant content (happy) de sa note danse sur la table.
29. Ils n'aiment pas les chinois films.
30. J'habite dans une maison grande ancienne.
31. Nous portons des blanches sandales.
C. Rearrange the elements to form a grammatical sentence. Make all the neceassary changes.
32. une/rouge/tu/vouloir/pomme
33. chaussures/je/noires/porter/des
34. Il/une/acheter/voiture/verte
35. aimer/films/vous/canadiens/les
36. elles/les/adorer/jeans/bleus
D. Answer these questions with a negative sentence
37. Parles-tu français?
38. Est-ce que les enfants aiment aller au restaurant?
39. Habite-t-elle dans un appartement?
40. Préfères-tu le cinéma américain?
41. Est-ce que nous mangeons le déjeuner à l'université?

## Appendix B.

## English Questionnaire

A. Answer these questions with short answer

1. There is an apple and a banana on the table. Which one do you want?
2. It's snowing. What are you going to wear?
3. You probably have something in your kitchen that you put frozen food in. What is it?
4. Paris is the capital city in what country?
5. A farmer has two animals, a pig and a horse. He decides to sell one. Which one do you think it is?
6. At a movie theatre, what do you need to buy?
7. I am sure you have something in your bag that you write tests with. What is it?
8. You are going to make a pie. Which kind of fruits are you going to buy?
9. You are going to a wedding. What are you going to wear?
10. I am sure you have something in your bathroom that you use every morning. What is it?
11. A new semester begins, what do you need to buy at the bookstore?
12. At the movie theatre, they are featuring a French film and an Indian film. Which one are you going to watch?
13. There is a white iPad and a black iPad. Which one do you like?
14. Which country would you like to visit the most?
15. At a restaurant, what are you going to order?
16. I am sure there is something in your bedroom that you sleep on. What is it?
17. What could you usually find in a classroom?
B. Determine if the underlined section in each sentence below grammatical or not. If it is, do nothing. If not, make the necessary changes
18. I really like the shoes red in the store.
19. You met some famous celebrities in Hollywood.
20. The hot climate is unbearable in Africa.
21. You met a young charming girl.
22. A mother proud of his son is talking to the teacher.
23. She couldn't lift the boxes heavy.
24. Can I borrow a blue pen, please?
25. I live in a big old house.
26. The black dress is more expensive.
27. I want a silver necklace for my birthday.
28. A happy with his results student is dancing on the table.
29. Mary bought some apples delicious.
30. They really enjoyed the film French.
31. I love the movies horror.
C. Rearrange the elements to form a grammatical sentence. Make all the necessary changes.
32. an/eat/he/green/apple
33. you/shoes/like/black
34. he/films/prefer/French/the
35. they/scary/a/write/book
36. she/new/a/car/want
D. Answer these questions with a negative sentence
37. Do you like apples?
38. Does Anna live in a house?
39. Does John like his sisters?
40. Do French people like to eat cheese?
41. Are you Italian?

## Appendix C.

## Background Survey

1. When and where did you start learning English?
$\qquad$
$\qquad$
$\qquad$
2. In what context did you learn English? (at school? at home? Etc.)
$\qquad$
$\qquad$
$\qquad$
3. How often do you use English? (at school? at home? Etc.)
$\qquad$
$\qquad$
$\qquad$
4. What other language do you speak?
$\qquad$
$\qquad$
$\qquad$
5. Why do you want to learn French?
$\qquad$
$\qquad$
$\qquad$

## Appendix D

## Consent Form

## Source of Transfers in the Acquisition of French as a Third Language

You are being invited to participate in a research study about the source of language transfer and the effects of English proficiency for native Chinese speakers and native Korean speakers at the beginning of the acquisition of French as a third language. This study is being conducted by Etienne (Steve) Lee and supervised by Dr. Réjean Canac-Marquis, from the Department of French at Simon Fraser University. This study is being conducted as part of a graduate student thesis under the auspices of SFU.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide will help us understand the effects of $1^{\text {st }}$ languages (Chinese and Korean) and of $2^{\text {nd }}$ language proficiency (English in this case) on the acquisition of a 3 rd language (French in this case) at the beginning of the language acquisition. The experiment will take about approximately 1.5 hours to complete. You will be asked to complete a series of tasks consisting of an on-line English proficiency test and two questionnaires in both English and French.

There are no known direct benefits if you decide to participate in this research study. However, the results of this study would help researchers and educators to understand better about the acquisition of French as a third language for students who has an Asian language as a first language.

Your participation in this study is voluntary and anonymous. You are able to withdraw from the study at any moment without any penalties. If you choose to participate in this study, please do not write your name on the questionnaires. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. You will be given a number at the beginning of the experiment by which you are identified throughout the study. This number is strictly used to facilitate the collection of results and the analysis of this study.

All individual data collected will be kept anonymous. We will keep these data in a secure place: in a locked filing cabinet in my office WMC 1625. Only the principal investigator and the faculty supervisor mentioned above will have access to this information. The raw data will be stored for minimum of two years.

Once the individual data will be compiled in tables and analyzed, the individual records and questionnaires will be destroyed in 2014.

The committee of graduate studies of the department of French at Simon Fraser University may inspect these records. Should the data be published, no individual information will be disclosed. There will not be any future contact.

If you have any questions about the study or if you are interested to obtain the research results, please contact:

| Primary person: | Etienne Lee, Principal investigator <br> WMC 1625, Simon Fraser University Burnaby, B.C.,Canada V5A 1S6 |
| :--- | :--- |
|  |  |
| Secondary person: | Dr. Réjean Canac-Marquis, Supervisor |
|  | WMC 1640, Simon Fraser University, Burnaby, |
|  | B.C., Canada V5A 1S6 |
|  | (778) $782-3546$, |

The Office of Research Ethics of Simon Fraser University has reviewed my request to conduct this study. If you have any concerns about your rights in this study and if you have any complains, please contact:

Primary person: Dr. Réjean Canac-Marquis, Supervisor
WMC 1640, Simon Fraser University, Burnaby, B.C., Canada V5A 1S6
(778) 782-3546,

Secondary person: Hal Weinberg, Director, Office of Research Ethics, Simon Fraser University, Burnaby, B.C., Canada V5A 1S6
(778) 782-6593,


Please also provide the application number: [2012s0228] along with your concerns or complains.

I $\qquad$ , have understood all my rights and agreed to participate in this study.

Signature: $\qquad$ Date: $\qquad$


[^0]:    5 This hypothesis can be also considered as a modern version of the "L2 parameter resetting" (White, 1985, 1989).

[^1]:    6 Interestingly, the Full Transfer Full Access hypothesis is not only applicable to adults L2 learners, but also applicable to children L2 learners. (see Haznedar, 1997).

[^2]:    11 A word order shared by all Germanic language, except English, where the negation sentence is post-verbal in the main clause due to raising of both thematic and non-thematic verbs to a complementizer head (Bardel \& Falk, 2007).

[^3]:    ${ }^{12}$ Economic option refers to the system which provides the best source of transfer despite being the language that is most (psycho)typologically similar to the L3.

[^4]:    21 Not all bare plural questions were answered with a plural noun. Instead, some participants answer these questions by a singular noun with or without articles.

