



Hacettepe University Graduate School of Social Sciences

Department of Linguistics

**THE ANALYSIS OF THE L2 PERFORMANCES OF TURKISH  
SPEAKERS ON THE ISLAND CONSTRAINTS IN ENGLISH TO  
ASSESS THE VALIDITY OF THE INTERPRETABILITY  
HYPOTHESIS**

Sinan AKIR

A PhD Dissertation

Ankara, 2014



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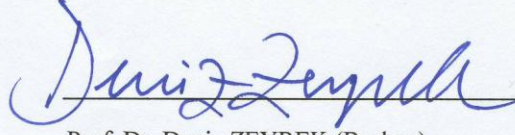
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## KABUL VE ONAY

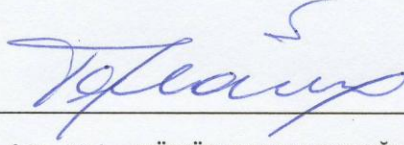
Sinan akır tarafından hazırlanan “The Analysis of the L2 Performances of Turkish Speakers on the Island Constraints in English to Assess the Validity of The Interpretability Hypothesis” başlıklı bu alıřma, 16/05/2014 tarihinde yapılan savunma sınavı sonucunda başarılı bulunarak jürimiz tarafından doktora tezi olarak kabul edilmiştir.



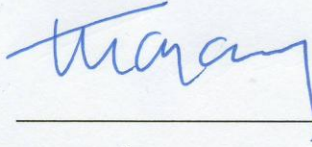
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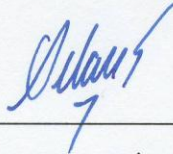
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Yukarıdaki imzaların adı geen öđretim üyelerine ait olduđunu onaylıyorum.

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Enstitü Müdürü



## BİLDİRİM

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Sinan ÇAKIR

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## ÖZET

ÇAKIR, Sinan. Yorumlanabilirlik Varsayımının Geçerliliğini Değerlendirmek İçin İngilizceyi İkinci Dil Olarak Edinen Türklerin İngilizcedeki Ada Kısıtlamaları Üzerindeki Performanslarının İncelenmesi, Doktora Tezi, Ankara, 2014.

Evrensel Dilbilgisi ve ikinci dil edinimi arasındaki ilişki üzerine geliştirilmiş son yıllarda öne çıkan varsayımlardan birisi Tsimpli ve diğerleri (2003), ve Tsimpli ve Dimitrakopoulou'nun (2007) ortaya attığı Yorumlanabilirlik Varsayımdır. Bu varsayıma göre sadece yorumlanabilir özellikler ve ana dilde var olan yorumlanamayan özellikler ikinci dil edinimi için erişilebilir durumdadır. Bu varsayımı destekleyen (Hawkins ve Hattori, 2006; Al-Thubaiti, 2011, gibi) ya da bu varsayıma karşı duruş sergileyen (Rothman ve diğerleri, 2010; Bond ve diğerleri, 2011, gibi) çok sayıda çalışma mevcuttur. Bir başka deyişle, bu konudaki tartışmalar henüz son bulmamıştır. Yorumlanabilirlik Varsayımı üzerine yapılmış mevcut çalışmaların hiçbiri Türkçe-İngilizce dil çifti üzerine odaklanmamıştır. İngilizcede var olan yorumlanamayan ne-özelliğinin Türk ikinci dil öğrencileri tarafından edinim sürecinin incelenmesi bu konudaki tartışma üzerine yararlı veriler ortaya sunacaktır.

Bu çalışma, İngilizceyi ikinci dil olarak edinen Türklerin İngilizcedeki ne-taşıma sırasında ortaya çıkan ada kısıtlamaları üzerindeki performanslarını inceleyerek Yorumlanabilirlik Varsayımının geçerliliğini değerlendirmeyi amaçlamaktadır. Çalışmanın verileri bir dilbilgisellik değerlendirme testi, ne-sorusu oluşturma testi ve Türkçeden İngilizceye çeviri testi vasıtasıyla toplanmıştır. İngilizce anadil konuşucularından oluşan bir kontrol gruba (N:58) beraber, yaşadıkları ülkeye (ABD ya da Türkiye) ve İngilizce yeterlilik düzeylerine (İleri düzey yada orta düzey) göre dört öğrenci grubu çalışmaya dahil olmuştur (sırasıyla N:46, N:38, N:20, N:30).

Toplanan veriler Kruskal Wallis H Testi ve Mann Whitney U Testi vasıtasıyla istatistiksel olarak incelenmiştir. Hedef dilde doğal veriye maruz kalmış ve bu dilde üst seviye yeterliliğe sahip ikinci dil öğrencilerinin ada yapılarını fark etmede ve dilbilgisel tümceler üretmede İngilizce anadil konuşucuları kadar başarılı olduğu gözlemlenmiştir. Türkçede yorumlanabilir olmayan güçlü ne özelliğinin (uw<sup>h</sup>\*) var olmadığı dikkate alındığında, bu katılımcıların performansı onların hedef dildeki parametrik değerleri edindikleri ve yorumlanabilir olmayan güçlü ne özelliğinin (uw<sup>h</sup>\*) ikinci dil edinimi için de edinilebilir olduğu sonucunu ortaya koymaktadır. Sonuç olarak çalışmanın bulguları Yorumlanabilirlik Varsayımına karşı çıkmakta ve Tam Transfer & Tam Erişim Varsayımını desteklemektedir.

Çalışmanın bulguları ikinci dil edinimi sırasında doğal veriye maruz kalmanın önemini de vurgulamaktadır. Yapılan testlerin sonuçları, (uw<sup>h</sup>\*) özelliğinin, sadece üst seviye İngilizce yeterliliğine sahip ve bu dilde doğal veriye maruz kalmış ikinci dil öğrencileri tarafından tam olarak edinilmiş olduğunu ortaya koymuştur. Bu açıdan, Evrensel Dilbilgisine erişim ve ikinci dil edinimi arasındaki

ilişkiyi inceleyen çalışmaların doğal veriye maruz kalan bireyler üzerinde yürütülmesi gerekliliği ortaya çıkmaktadır.

### **Anahtar Sözcükler**

Yorumlanabilirlik Varsayımı, İkinci Dil Edinimi, Evrensel Dilbilgisi, Ada Kısıtlamaları



## ABSTRACT

ÇAKIR, Sinan. The Analysis of the L2 Performances of Turkish Speakers on the Island Constraints in English to Assess the Validity of the Interpretability Hypothesis, A PhD Dissertation, Ankara, 2014.

The Interpretability Hypothesis (Tsimpli et. al., 2003; Tsimpli and Dimitrakopoulou; 2007) claims that uninterpretable features which are not instantiated in L1 are unavailable for L2 acquisition. This hypothesis is supported (e.g. Hawkins and Hattori 2006; Al-Thubaiti, 2011) and opposed (e.g. Rothman et. al., 2010; Bond et. al. 2011) by many other studies, and this hypothesis is still hotly debated. In such studies, different language pairs should be extensively analyzed to reach at more concrete results. None of the recent studies that focus on Interpretability Hypothesis focus on Turkish-English language pairs. The acquisition process of the uninterpretable wh-feature in English by Turkish L2 learners of English might provide fruitful results for this debate.

The present study aimed to analyze the validity of the Interpretability Hypothesis by analyzing the performances of the Turkish L2 learners of English on island constraints on wh-movement in English. The data of the study were collected through a Grammaticality Judgment Test, Wh-Question Formation Test and Translation Test. Along with a native control group (N:58), four learner groups were formed according to the place they live (USA or Turkey) and their level of proficiency in English (advance or intermediate) (N:46, N:38, N:20, N:30 respectively).

The data gathered were statistically analyzed by using two non-parametric tests: Kruskal-Wallis H Test and Mann-Whitney U Test. It was observed that L2 learners of English who are exposed to positive evidence in a naturalistic learning environment in the target language can deal with these island constraints as well as the native speakers of this language. Since their mother tongue lacks the uninterpretable strong wh-feature (uwh\*), this result suggests that they have already acquired the necessary L2 parameter values, and this uninterpretable feature is available in their L2 acquisition process. Hence, the findings of the present study support the Full Transfer Full Access Hypothesis, standing against the Interpretability Hypothesis.

The results of the study also emphasized the importance of positive evidence in L2 acquisition process. According to the results, the uninterpretable strong wh-feature (uwh\*) appeared to be available only for the highly proficient L2 learner of English who are exposed to natural input in this language, yet not for the other group who acquired this language only in their home country. As the results of the study suggest, to assess the availability of UG in SLA precisely, such studies should be carried out on the participants who are exposed to natural input in the target language.

**Key Words**

Interpretability Hypothesis, Second Language Acquisition, Universal Grammar, Island Constraints

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**LIST OF ABBREVIATIONS**

AIC	: Adjunct Island Constraint
ANOVA	: Analysis of Variance
BC	: Blocking Category
CED	: Condition on Extraction Domain
COMP	: Complementizer
CNPC	: Complex Noun Phrase Constraint
CP	: Complementizer Phrase
CSC	: Coordinate Structure Constraint
DP	: Determiner Phrase
ECP	: Empty Category Principle
FFFH	: Failed Functional Features Hypothesis
FocP	: Focus Phrase
GJT	: Grammaticality Judgment Test
IP	: Inflectional Phrase
LAD	: Language Acquisition Device
LBC	: Left Branch Constraint
LF	: Logical Form
L1	: First Language
L2	: Second Language
NP	: Noun Phrase

NSP	: Null Subject Parameter
OPC	: Overt Pronoun Constraint
PF	: Phonetic Form
PP	: Prepositional Phrase
RRC	: Right Roof Constraint
SLA	: Second Language Acquisition
SPEC	: Specifier
SPSS	: Statistical Package for Social Sciences
SSC	: Sentential Subject Constraint
TGG	: Transformational Generative Grammar
TP	: Tense Phrase
UG	: Universal Grammar
uwh	: Uninterpretable wh-feature
VP	: Verb Phrase
vP	: Light Verb Phrase
WIC	: Wh-Island Constraint

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## **CHAPTER 1**

### **INTRODUCTION**

Generative Grammar emerged in 1950's as a result of work performed by Noam Chomsky and it was developed since then by his and his colleagues' studies. One of the outstanding arguments of this new framework was that people possess a kind of *Language Faculty* which is a part of human natural biological qualities. The innate linguistic knowledge that enables practically any child to learn any of about 6000 existing languages at a given point in time is sometimes known as the 'Universal Grammar'.

Universal Grammar (UG hereafter) is a theory of linguistics which claims that there are principles of grammar shared by all languages, and they are thought to be innate to human beings. It attempts to explain language acquisition in general rather than describing specific languages. It is part of an innate biologically endowed language faculty. It places limitations on grammars, constraining their form as well as how they operate. It includes invariant principles, as well as parameters. Thus, according to Chomsky, the child's language faculty incorporates a theory of Universal Grammar which includes a set of universal principles and a set of structural parameters.

In this approach, it is claimed that human beings are pre-programmed for language learning. In other words, the acquisition of language is innate, and as soon as we are born, we start to acquire our native language by getting necessary input to our language acquisition faculty. According to Chomsky, there are some universal language principles that are shared by all languages, and language acquisition is an issue of parameter setting.

#### **1.1. UG IN L2 ACQUISITION**

When Generative Grammar was introduced by Noam Chomsky in 1950s, the accessibility of Universal Grammar on first language started to be discussed among linguistic environments. However, in the following years, another debate started to take

place among linguists: the accessibility of Universal Grammar in second language acquisition (SLA hereafter). Rod Ellis defines ‘Second Language Acquisition’ as, “the subconscious or conscious processes by which a language other than the mother tongue is learnt in a natural or a tutored setting” (1985, p. 6). This was a new area that had to be investigated by the generative grammarians. The accessibility of UG in this area had to be investigated as well. Hence, they started to have studies on this field as well as the ones on first language acquisition to assess the accessibility of UG.

In the accessibility of UG in SLA, different possible scenarios claimed by the linguists are open to consideration. The linguists who investigate different aspects of SLA have different ideas on the accessibility of UG in SLA. The original hypotheses are summarized by Waber and Czendik (2002) as:

1- *No Access Hypothesis*: UG is totally inaccessible to the adult L2 learner; learning takes place in terms of non-linguistic learning strategies.

2- *Partial Access Hypothesis*: UG is partially available to the learner; only those parametric values characterizing the L1 grammar are available, the rest must be learnt in terms of non-linguistic learning strategies.

3- *Full Access Hypothesis*: UG is fully available; differences in patterns of acquisition between L1 and L2 learners and the lack of completeness can be accounted for in other ways. It is possible to find supporters of all these hypotheses. As Herschensohn (1999) expresses;

incompleteness of L2 parameter setting, the inability of L2ers to be complete in resetting parameter values, has been taken as evidence for No Access or Partial Access to UG, while L2 acquisition of parameter values not available in L1 is taken to support full access (p. 115).

These three hypotheses are still alive today, yet with certain modifications and with different names. *No Access Hypothesis* which was originally developed by Clashes and Muysken (1986; 1989) and Bley-Vroman (1989) is also named as *Fundamental Difference Hypothesis*. In this hypothesis, L1 and L2 acquisition are claimed to be fundamentally different and L2 acquirers are believed to use other cognitive mechanisms in their acquisition process other than UG. Though UG is available for L1,

it is unavailable for L2 acquisition. Han (2004) and Long (2007) are some of the followers of this hypothesis.

Full Access Hypothesis which was developed by Schwartz and Sprouse (1996) is recently uttered as *Full Transfer & Full Access Hypothesis*. It claims that L2 acquirers transfer their L1 internal grammars and restructure them via UG operations upon being confronted with L2 data that cannot be accounted for by the L1 configurations. Montrul et al. (2006), Tanner (2008), Rothman et al. (2010) and Bond et al. (2011) are some of the scholars who adopted this view.

Partial Access Hypothesis which was developed in 1980's (White, 1986; Flynn, 1987) was modified in 1990's and named as *Failed Functional Features Hypothesis* (Tsimpli and Roussou, 1991; Smith and Tsimpli, 1995; Hawkins and Chan, 1997). This hypothesis proposes that grammars fossilize because functional features (like case or agreement) are only accessible during first language acquisition. Such features are not available for L2 acquirers. In the last decade, this hypothesis was modified again. Its newest version, *the Interpretability Hypothesis*, proposes that only uninterpretable features that are not instantiated in L1 are unavailable for L2 acquisition (Tsimpli et al., 2003; Hawkins, 2005; Hawkins and Hattori, 2006; Tsimpli and Dimitrakopoulou, 2007; Tsimpli and Mastropavlou 2007). This hypothesis maintains that uninterpretable features are subject to critical period constraints and they are inaccessible to L2 learners. L1 parametric values associated with these features resist re-setting in L2 acquisition; on the other hand, interpretable features are accessible to the L2 learner, even if L2 differs from the native language.

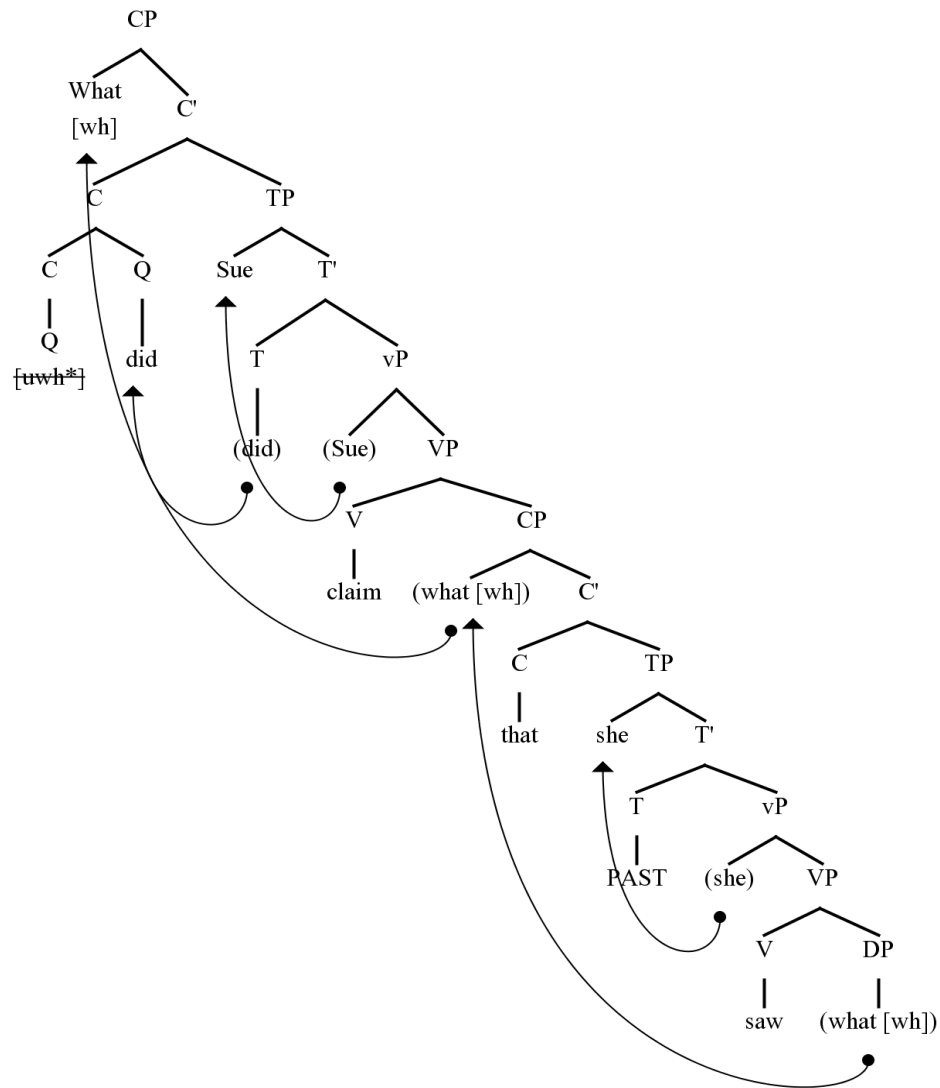
The interpretable and uninterpretable features were introduced by Chomsky in his checking theory in the minimalist program. According to this theory, the interpretable features (animate- inanimate; human-non-human; singular-plural etc.) have an effect on the semantic interpretation of the sentence while the uninterpretable features (uw, uD, uclausetype etc.) exist only for syntactic operations. They can be strong or weak according to the parametric differences among languages. These uninterpretable features and their interpretable counterparts must be checked against one another. The

checking procedure can be done in two ways. If the uninterpretable feature is strong, it forces its interpretable counterpart to move overtly to the specifier position of the projection where it exists. On the other hand, if it is weak, the checking procedure can be done via AGREE. That is, the uninterpretable feature searches for its interpretable counterpart by looking at its c-commanding domain. If it finds such a feature, it checks its features with this interpretable feature that stays in-situ, without forcing it to move to the specifier position of the projection it exists.

Once the uninterpretable and the related interpretable features match, the uninterpretable features are deleted from the derivation. If there are any uninterpretable features that are not deleted from the derivation before the final spell-out, the derivation crashes, and becomes grammatically unacceptable. Therefore, all uninterpretable features should be deleted after having been checked against their interpretable counterparts.

For instance, in the case of wh-movement in English, the uninterpretable, strong wh-feature [uwh\*] that exist in the matrix CP must be checked against its interpretable counterpart. The wh-word that carries the interpretable (wh) feature has to move to the matrix spec CP position since the uninterpretable (uwh) feature is strong in English. After the checking procedure, the [uwh\*] feature is deleted from the derivation. In the following derivation, this checking process is presented:

(1) What did Sue claim that she saw?



In this derivation, matrix C' contains a strong uninterpretable wh-feature, [uwh\*], which must be checked against an interpretable wh-feature. This interpretable wh-feature exists in the wh-word, 'what', which originates within the lower CP. Since the uninterpretable wh-feature is strong in English, this wh-word has to move to the spec CP position of the matrix clause. Once this movement is done cyclically, the interpretable and uninterpretable features are checked with each other and the uninterpretable wh-feature is deleted from the derivation.



According to Hawkins and Hattori (2006), the interpretable features should be available lifelong for all learners since they carry some semantic load. If they become unavailable after a critical period, some semantic information cannot be acquired by the second language acquirers, and this is implausible. Yet, the uninterpretable features do not have any effect on the semantic claims that only interpretable features are available for language learners lifelong.

The debate among these three hypotheses is very much alive today. The most remarkable debate is between the followers of the *Full Transfer & Full Access Hypothesis* (Montrul et al., 2006; Tanner, 2008; Rothman et al., 2009; Rothman et al., 2010, Bond et al., 2011) and the *Interpretability Hypothesis* (Tsimpli et al., 2003; Hawkins, 2005; Hawkins and Hattori, 2006; Tsimpli and Dimitrakopoulou, 2007; Tsimpli and Mastropavlou 2007).

The scholars who favor either of the hypotheses carry out research on language pairs in which an uninterpretable feature exists in the target language but lacks in the source language. According to the findings of the scholars who favor the Interpretability Hypothesis, L2 acquirers cannot acquire the target uninterpretable feature (e.g. Tsimpli and Mastropavlou, 2007, p. 178; Hawkins and Hattori, 2006, p. 269). They perform significantly worse than native speakers on the tests which focus on the acquisition of this uninterpretable feature. On the other hand, the scholars who favor the Full Transfer / Full Access Hypothesis present the cases in which such uninterpretable features are successfully acquired by L2 learners. Leaning on such findings, they claim that all features, interpretable or uninterpretable, are available for L2 acquisition.

## **1.2. STUDIES ON THE INTERPRETABILITY HYPOTHESIS & FULL TRANSFER / FULL ACCESS HYPOTHESIS DEBATE**

Tsimpli et al. (2003) examined the L2 acquisition of Greek clitics and determiners by native speakers of Russian and Serbian. As they expressed, these languages lack a determiner system that distinguishes between a definite and indefinite article. 20 adult subjects took part in the study. The persistent problems in the use of definite articles and

clitics were claimed to show a long-lasting (possibly fossilized) effect of L1 properties due to the misanalysed features borne by these elements. They conclude that the definite article and the 3rd person clitic are D elements which are not intrinsically specified for an uninterpretable feature. This, by assumption, causes learnability problems to L2 learners.

In a similar study, Tsimpli and Mastropavlou (2007) investigated the acquisition of pronominal clitics and determiners in Greek by adult and child native speakers of Turkish and Russian. They emphasize the fact that the definite article and the third-person clitic in Greek possess uninterpretable features only, whereas the indefinite article and first-/second-person clitics carry an interpretable feature of [- definiteness] and [person] respectively. In the study, it is argued that the inaccessibility of uninterpretable features leads to a misanalysis of the third-person clitic and the definite article in advanced L2 grammars. The results of their study supported this hypothesis. Adult L2 learners showed poor performance in the use of the definite article compared to child L2 learners, which was argued to stem from the inaccessibility of uninterpretable features. As for the use of third-person clitics, both child and adult L2 learners showed poor performance, which was interpreted by them as L1 influence, especially for the child L2 learners.

In another study, Tsimpli and Dimitrakopoulou (2007) investigated the use of subject and object resumptive pronouns in L2 *wh*-interrogatives. Resumptive pronouns are linked to *wh*-movement, regulated by uninterpretable functional features. While resumptives are not allowed in single-clause sentences in Greek and English, Greek optionally allows resumptives in two- and three-clause *wh*-questions. Therefore, these scholars predicted that the learners would have problems in abandoning the resumptive strategy in L2 *wh*-interrogatives. They got the following results: first, the abstract properties of subject-verb agreement in Greek were transferred to the learners' L2 grammar, more strongly by the intermediate learners than by the advanced ones. While the advanced group showed an object advantage in rejecting resumptives, the intermediate learners were hovering at about 40% incorrect acceptance with both subjects and objects. Secondly and thirdly, animacy and d-linking may have aided the

learners in making some progress in rejecting the L1 resumptive strategy. However, learners never got close to native speaker performance. Therefore, Tsimpli and Dimitrakopoulou (2007) concluded that uninterpretable formal features, such as (subject, object) agreement, cause learnability problems even at advanced stages of acquisition.

Similarly, Hawkins and Hattori (2006) had a study on the interpretation of English multiple *wh*-questions by Japanese speakers. They focused on the acquisition of the uninterpretable feature that forces *wh*-movement in interrogatives in English. Nineteen L1 speakers of Japanese (a *wh*-in-situ language that lacks the movement-forcing feature) who are highly proficient speakers of English were asked to interpret bi-clausal multiple *wh*-questions in English (like *Where did the professor say the students studied when?*). Their responses were compared with those of a native speaker control group. It is argued that the results are consistent with the unavailability of the uninterpretable feature. They concluded that there is a critical period for the selection of uninterpretable syntactic features for the construction of mental grammars.

Kong (2005) investigated the acquisition of obligatory overt arguments in L2 English by adult L1 Chinese speakers. The results supported the view that older learners (who passed the critical period) cannot reset their parameter values. He states that the learners were more successful in disallowing null matrix subjects than null arguments in other positions because they made a small adjustment to the use of topic chains while the parameter settings of Chinese are maintained. The results of his study suggest that parameter values associated with functional categories are inaccessible to L2 learners after the critical period, which opposes to Full Access Hypothesis.

Al-Thubaiti (2007) tested the “Interpretability Hypothesis” by examining the effect of age on the knowledge shown by proficient Saudi Arabic speakers of L2 English of two subtle linguistic properties associated with uninterpretable features: (i) the Gap Strategy in *wh*-interrogatives, and (ii) Reflexive Binding. While the former is differently instantiated in Arabic and English, the latter is similarly present in both languages. In the study, the advanced adult starters showed a persistent L1 effect (delearning problem)

in the acquisition of the gap strategy in *wh*-interrogatives, but hardly had any problems with reflexive binding. It was concluded that, fossilization is selective, and is a reflex of L1-L2 grammatical differences. For L2 adult starters, a persistent L1 effect is inevitable when the L1 property (resumptives) is associated with uninterpretable features encoded in the L1 lexicon, but not in the L2. On the other hand, where an L2 property (reflexive binding) is associated with uninterpretable features encoded similarly in L1 and L2, it can be successfully acquired by all age groups. Based on this evidence, he stated that a maturational account can be extracted from testing properties contrastively instantiated in L1 and L2.

Beside these studies that support the existence of a critical age for the parameter resetting in L2, there are also some studies which claim the opposite. For instance, Montrul et al. (2006) examined the influence of maturation in adult bilingualism in the acquisition of Spanish accusative clitics and word order. They analyzed whether early bilinguals (heritage speakers) have more native like knowledge than late (post-puberty) bilinguals (L2 learners) of Spanish clitics and alternative word order due to the fact that they were exposed to naturalistic input early in childhood. The overall results of the study showed that early and late bilinguals performed alike. Even though the late bilinguals were more inaccurate than the early bilinguals at rejecting sentences in some conditions, the two bilingual groups showed the same pattern of responses as the monolingual control group; that is, they correctly accepted grammatical sentences and correctly rejected ungrammatical sentences with ungrammatical word orders. In short, all groups knew that clitics precede finite verbs and follow nonfinite verbs in Spanish. The results of their study support the view that maturation does not play a significant role in UG-SLA relationship. L2 learners whose first language lacks clitics (i.e., English speakers) are able to acquire new functional projections not instantiated in their language, which supports the full access account.

In a case study, Tanner (2008) examined the role of critical age hypothesis in second language acquisition. He showed that DP concord in German is acquirable by English speakers who are acquiring German as a second language, although their native language lacks DP concord. The participants in the study showed success in matching

agreement features for elements within a DP, though he seems to have trouble acquiring inherent features of agreement-controlling nouns and properly spelling out case morphology, particularly dative. These facts are against the claim that uninterpretable features are unacquirable post-puberty. The results of this case study supported models of L2 acquisition which hold that uninterpretable features from the UG lexicon are available to post-puberty learners.

In another study, Rothman et al. (2009) investigated adult acquisition of the Overt Pronoun Constraint (OPC) and inflected infinitives by L1 English learners of L2 Portuguese. Their study challenges the Interpretability Hypothesis claimed by Tsimpli and colleagues. The data they obtained demonstrated that advanced learners of L2 Portuguese acquired the OPC and the syntax and semantics of inflected infinitives with native-like accuracy. Since inflected infinitives require the acquisition of new uninterpretable  $\phi$ -features, the data were claimed to provide evidence against Tsimpli and colleagues' Interpretability Hypothesis, supporting Full Transfer / Full Access Hypothesis.

Judy et al. (2008) focused on the narrow syntax of the Spanish DP, and examined the acquisition of gender and number features of nouns, adjectives and determiners by L1 English learners of adult L2 Spanish. These features determine DP internal word order (the adjective with respect to the noun), determiner-noun-adjective overt morphological accord and are both interpretable (on the head noun) and uninterpretable (on adjectives and determiners). After testing an intermediate and advanced group of adult English learners of L2 Spanish, they demonstrated across two linguistic tasks that L2 learners could acquire new features as evidenced by their knowledge of grammatical gender and the semantic construals of adjective placement in L2 Spanish. The results were against the approaches which claim that some features which are not instantiated in the L1 are no longer available to adult learners.

Bond et al. (2011) used event-related potentials to investigate two factors in the second language (L2) processing of agreement: the role of number and gender features in the native language (L1), and the impact of individual differences between learners. The

study contributed to the growing body of literature investigating the role of the L1 in L2 morpho-syntactic processing, providing evidence that adult learners even at low proficiency can exhibit development of native-like processing of (a) uninterpretable features that are not present in their L1, as well as (b) novel instantiations of features that are shared between the L1 and L2, supporting claims of full-access theories (e.g., Schwartz and Sprouse, 1994, 1996), and opposing to the Interpretability Hypothesis.

In another study, Rothman et al. (2010) explored the adult acquisition of L2 nominal phi-features. Specifically, they analyzed the acquisition of the uninterpretable N feature that triggers noun raising in Spanish. This feature exists in Spanish whereas lacks in English, and it causes different adjective-noun orders for set-denoting and kind-denoting interpretations for Spanish DP's. In the study, they focused on the syntactic and semantic reflexes in the related domain of adjective placement in two experimental groups: English-speaking intermediate ( $n = 21$ ) and advanced ( $n = 24$ ) learners of Spanish, as compared to a native-speaker control group  $n = 15$ ). Results of their study showed that, on some of the tasks, the intermediate L2 learners appear to have acquired the syntactic properties of the Spanish determiner phrase but, on other tasks, to show some delay with the semantic reflexes of pre-nominal and post-nominal adjectives. Crucially, however, their data demonstrated full convergence by all advanced learners and thus provided evidence opposite to the predictions of representational deficit accounts (e.g., Hawkins and Chan, 1997 ; Hawkins and Franceschina, 2004 ; Hawkins & Hattori, 2006) Hence, the results of the study support the full access account.

Mendez and Slabakova (2012) carried out a study as a response for Tsimpli and Dimitrakopoulou (2007) in which Greek native speakers' knowledge of gaps versus resumptive pronouns in English *wh*-movement was examined. Mendez and Slabakova (2012) focused on the resumptive pronouns in Spanish, which have similar characteristics to that of Greek. They divided Spanish native speakers into those who accept resumptives and those who do not; then they checked their acceptance of gaps and resumptives in English. Their results indicated that both groups of advanced learners, those that do and those that don't have resumptives in their individual grammars, have acquired the ungrammaticality of resumptives in English, opposing the

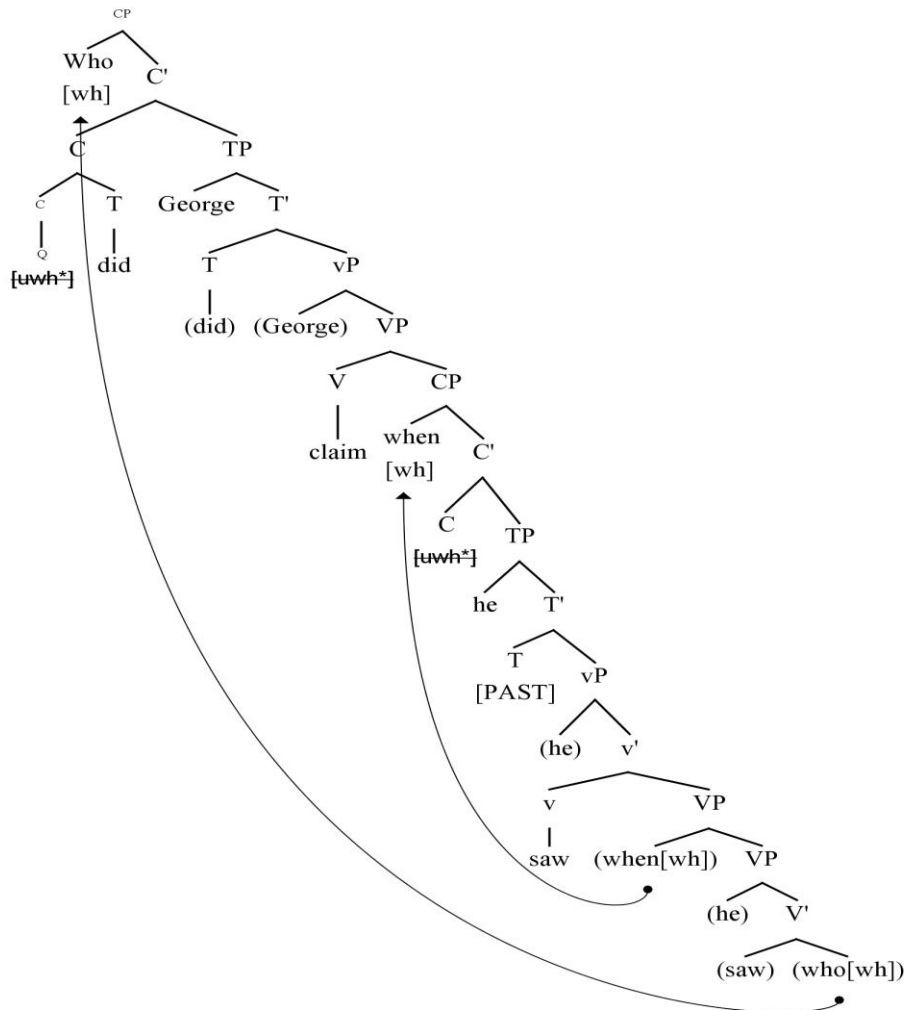


findings of Tsimpli and Dimitrakopoulou (2007). According to these results, they concluded that the uninterpretable features that are necessary for the use of the resumptive pronouns are available for L2 acquisition as well.

As it is seen, the Interpretability Hypothesis and Full Transfer Full Access Hypothesis are hotly debated in the recent studies that examine parameter resetting in L2 acquisition.

One of the grammatical structures that attract the attention of the scholars who carry out researches on the availability of Universal Grammar in second language acquisition process is the island constraints on movements (e.g. Johnson and Newport, 1991; White and Juffs, 1998; Li, 1998). Island structures are the ones that prohibit the movement of the elements to higher nodes in the derivation. The extraction of the items out of these structures causes ungrammaticality in the sentence. For instance, in the sentence below, the wh-island constraint is violated:

(2) Who did George claim when he saw?



The movement of the wh-word ‘who’ to matrix spec CP position is prohibited by the other wh-word ‘when’ which occupies the spec position of the lower CP. Such constraints were first introduced by Ross (1967) and extended since then. (See the Theoretical Concepts part for detailed information on wh-movement and the island constraint phenomena).

Before the introduction of the Minimalist Program, the reason for the interest of UG-SLA scholars on these structures was that the acquisition process of such constraints is the poverty of stimulus issue. If such constraints were acquirable for L2 learners, it meant that UG was accessible for them, if not, UG was inaccessible for L2 acquisition.

After the introduction of the Minimalist Program, such constraints maintain their importance on UG-SLA studies. In fact, the acquisition process of such locality constraints are still at the heart of such studies (e.g. Hawkins and Hattori, 2006). The reason for this interest is that such constraints are directly related with the existence or non-existence of an uninterpretable feature: [*uwh\**] in minimalist accounts, as well as being the poverty of stimulus issue. The languages that have overt wh-movement are claimed to have this uninterpretable feature, whereas the wh-in-situ languages are believed not to have this feature. Hence, having a study on the L2 acquisition of a language that has this [*uwh\**] feature by speakers whose mother tongue lacks it, is a valid research area for the scholars who carry out researches on UG-SLA relationship, and who particularly favor the Interpretability Hypothesis or Full Transfer& Full Access Hypothesis.

### **1.3. STATEMENT OF THE PROBLEM**

In the present study, it is hypothesized that uninterpretable features are available for L2 acquisition along with the interpretable features. Against the claims of the Interpretability Hypothesis, the source for the incompleteness in L2 acquisition cannot be rooted from inaccessibility to certain uninterpretable features. As Rothman (2010) also argues, empirical studies have demonstrated that L2 grammars provide robust evidence of incidental acquisition of target L2 properties, even despite a poverty of the stimulus for their instantiation. Support for this claim comes from Schwartz and Sprouse (2000) who argued that L2 competence for such properties constitutes robust evidence that adult SLA is guided by the same inborn linguistic properties as child L1 acquisition.

On the other hand, the results for the studies which claim that certain uninterpretable features are unavailable for L2 acquisition cannot be ignored altogether. Leaning on the performance of L2 acquirers, such studies claim that the target uninterpretable features are unavailable for second language learners. What seems to be problematic in such studies is that the reasons for the incompleteness in L2 acquisition process should be sought for in other sources. As Rothman (2010) further claims, inaccessibility to UG

cannot be the source of these problems. He argues that contemporary full access approaches maintain that L2 incompleteness does not necessarily result from deficits within the syntax but instead may emerge from external learnability constraints and interface vulnerabilities (See the Theoretical Concepts part for detailed information on the hypotheses which focus on the incompleteness in L2 acquisition process). Leaning on the findings of Sorace (2005), Rothman (2010) exemplifies that the syntax-morphology-phonology interface can be shown to be especially vulnerable in adult SLA. According to him, adult L2 acquirers, irrespective of their L1 and of the target L2, typically demonstrate target-deviant use of L2 functional morphology, differing from native adults and child L1 learners in their use of correct functional morphology (e.g., nominal agreement, verbal agreement, verbal tense, aspect, modal morphology) in discourse performance. Although incorrect L2 morphological production often decreases over time with an increase in proficiency levels, L2 morphological use rarely indistinguishably matches that of native speakers, even at the highest of L2 proficiency levels. Hence, he favors the Full Transfer / Full Access Hypothesis, which claims that interpretable or uninterpretable, all features are available for L2 acquisition. The present study supports this view, as well.

All in all, it is apparent that there is a need for further studies in this debate. In such studies, different language pairs should be extensively analyzed to reach at more concrete results. None of the recent studies that focus on Interpretability Hypothesis-Full Transfer, Full Access Hypothesis debate focus on Turkish-English language pairs. The acquisition process of the uninterpretable *wh*-feature in English by Turkish L2 learners of English might provide fruitful results for this debate.

#### **1.4. THE PURPOSE OF THE STUDY**

The main aim of the study is to analyze the island constraints that put restrictions on *wh*-movements in languages to examine the ‘Interpretability Hypothesis’ which was put forward by Tsimpli & Dimitrakopoulou (2007), and supported or opposed by many other linguists. Turkish is a *wh*-in situ language and such languages are claimed to lack the uninterpretable [*uwh*\*] feature (e.g. Hawkins, 2005, p.129). Therefore, the island

effects show unstable characteristics in Turkish. On the other hand, this uninterpretable feature exists in English and this language strictly obeys the island effects. Hence, having a study on the acquisition of the island constraints in English by Turkish learners may provide valuable data to support or refute “the Interpretability Hypothesis” mentioned above. The main purpose of this study is to provide data from Turkish L2 acquirers of English to examine the validity of the “Interpretability Hypothesis” in UG-SLA relationship. If the adult Turkish L2 acquirers can be as successful as the monolingual English speakers, the data obtained can be viewed as evidence that refutes the “Interpretability Hypothesis”. On the other hand, if these participants become significantly less successful compared to the other group, the results can be considered as a support for this hypothesis.

The study also aims to analyze the possible role of the positive evidence in a naturalistic learning environment. More specifically, the study aims to investigate if there are any differences between the performances of Turkish speakers who are exposed to positive evidence by living in a country where English is spoken as a mother tongue, with the ones who acquired this language completely in their home country. It is highly possible that being exposed to positive evidence in a naturalistic learning environment in L2 acquisition may influence the success of the language users. Some of the studies that favor the Interpretability Hypothesis and focus on UG-SLA relationship are carried out on the L2 learners who are exposed to positive evidence in the target language by living in an environment where this language is spoken as a mother tongue for a long time (e.g. Hawkins and Hattori, 2006; Tsimpli and Mastropavlou 2007); yet some others (e.g. Tsimpli and Dimitrakopoulou, 2007; Kong, 2005; Al-Thubaiti, 2007) were carried out just on the ones who acquired it in their home country. In this respect, being (not) exposed to positive evidence in a naturalistic learning environment in L2 acquisition might have played some role in the results obtained in such studies. The participants of Tsimpli and Dimitrakopoulou (2007) were native speakers of Greek acquiring English as a foreign language. They were students at Aristotle University in Thessaloniki. The participants of Kong (2005) were 75 Chinese speakers learning L2 English in China. Al-Thubaiti had a similar case as well; only one of his adult participants had stayed in an English-speaking country. Carrying out studies on the participants who had never stayed

in an English-speaking country might have influenced the results they obtained in their studies.

Another aim of the study is to detect the possible role of the mother tongue influence on L2 acquirers. As it has already been stated, English obeys the island constraints on wh-movement but these constraints show unstable characteristics in Turkish. While it is possible to interpret wh-arguments out of the islands in Turkish, it is not possible to do the same for wh-adjuncts. Hence, it is possible to conclude that while Turkish and English behave similarly on some structures, they differ in some others. However, such similarities and differences originate from different sources. While the requirement for the overt wh-movement to Spec CP to satisfy the [uwh\*] feature and the violation of island structures in this overt movement cause the ungrammatical structures in English, the government and binding relationships between the [Qu]-operator and wh-words in-situ cause the (un)grammaticality in Turkish. (See the Theoretical Concepts part for detailed information on the wh-movement phenomena in English and Turkish). Such patterns may play a role in the acquisition of the island constraints. Hence, the study aims to analyze the effects of the mother tongue parameter values on L2 acquirers.

The study also aims to investigate the possible avoiding strategies which can be applied by both native and L2 learners of English in order not to violate island structures. After the analyses of the results of the production tasks like wh-question formation task and translation task, it might be possible to determine the strategies that the participants make use of in order to escape island violations. In these tests, the participants are directed to violate target island structures by means of the context provided for them. The participants have to develop some strategies to avoid violating the island structures, and one of the aims of the present study is to detect these strategies (See the methodology part of the study for detailed information on the tests of the study).

The final aim of the study is to find out which island structures appear to be more problematic for L2 acquirers; that is to say, the study aims to find an answer for the question that among the four island constraints (Wh-island Constraint, Complex NP Constraint, Sentential Subject Constraint and Adjunct Island Constraint) which one of

them appear to be more difficult in L2 acquisition process. (See the methodology part of the study for detailed information on the island constraints that are focused on the study)

### **1.5. THE RESEARCH QUESTIONS**

The study aims to find answers for the following research questions:

- 1- Does the performance of late L2 acquirers of English (whose L1 is Turkish) on the island constraints in wh-movement support “the Interpretability Hypothesis” put forward by Tsimpli and Dimitrakopoulou (2007)? In other words, when the performance of these L2 acquirers is compared with that of native speakers of English, is there a significant difference in the results as asserted by “the Interpretability Hypothesis”?
- 2- Does being exposed to positive evidence in a naturalistic learning environment in L2 acquisition process influence the success of the L2 acquirers in their performance on the island constraints on wh-movement?
- 3- When the structural differences between L1 and L2 on the target island constraints are taken into account, do such patterns play a role on the performance of L2 acquirers? In other words, do the mother tongue parameter values have an influence on the L2 acquirers in their second language acquisition process?
- 4- What avoidance strategies, if any, do the participants make use of in order not to violate island structures?
- 5- Among the 4 island structures investigated in the study, on which structures the L2 acquirers perform better than the others?

### **1.6. SIGNIFICANCE OF THE STUDY**

Some of the studies that favor the Interpretability Hypothesis which focus on UG-SLA relationship are carried out on the L2 learners who are exposed to natural input in the target language by living in an environment for a long time where this language is

spoken as a mother tongue (e.g. Hawkins and Hattori, 2006; Tsimpli and Mastropavlou, 2007). Yet, some others (e.g. Tsimpli and Dimitrakopoulou, 2007; Kong, 2005; Al-Thubaiti, 2007) were carried out just on the ones who acquired it in their home country. In this respect, being (not) exposed to natural input in L2 acquisition might have played some role in the results obtained in such studies. That is to say, it is highly possible that exposure to positive evidence in a naturalistic learning environment might be playing some important role in determining the availability of universal grammar in second language acquisition process.

In the review of the literature, it was observed that none of the UG-SLA studies, which stand for or against the Interpretability Hypothesis, take into account the possible role of the positive evidence that is received in a naturalistic learning environment. That is to say, none of such studies contained two L2 learner groups: one acquiring it in home country alone, the other acquiring it in an environment where this language is spoken as a mother tongue. If the data of these studies had been collected from these two L2 learner groups, it would have been possible for us to determine the possible role of the exposure to positive evidence in a naturalistic learning environment.

In this respect, the present study is the first to take into account the possible role of positive evidence that is received in a naturalistic learning environment in second language acquisition process. It is hypothesized that the exposure to natural input in an environment where the target language is spoken as a mother tongue has an important role in determining the availability of UG in L2. To that end, the data of the present study have been collected both from Turkish L2 learners of English who live in their home country alone, and who live in a country where this language is spoken as a mother tongue. The comparison between the performances of these learner groups is presumed to display the role of the exposure to positive evidence in a naturalistic learning environment during L2 acquisition process.



## **CHAPTER 2**

### **THEORETICAL CONCEPTS**

In this chapter, elaborate information is presented on universal grammar-second language acquisition studies. In addition, wh-movement and the island constraint phenomena, which constitute the target structures of the study, are explained thoroughly.

#### **2.1. UG AND L1 ACQUISITION**

The logical problem of language acquisition has led to proposals that certain aspects of knowledge must be innately present in the first language learner in the form of Universal Grammar. As White (2003) points out, certain properties of language are too abstract, subtle and complex to be acquired without assuming some innate and specifically linguistic constraints on grammars and grammar acquisition (p. 3). This innateness hypothesis constitutes one of the fundamental aspects of Generative Grammar. In this framework, Universal Grammar is seen as a part of an innate, biologically endowed language faculty. It places limitations on grammars, constraining their form as well as how they operate. It includes invariant principles, as well as parameters. As Radford argues, “Since universal principles of grammatical structure do not have to be learnt, the child’s structural learning task is limited to that of parameter setting” (1997, p. 21).

#### **2.2. UG AND L2 ACQUISITION**

After the introduction of the innateness hypothesis in first language acquisition, another debate emerged: If language acquisition is innate and controlled by Universal Grammar, then what is the function of UG in second language acquisition? As Flynn (1989) suggests in her article;

as is well known UG as a theory of acquisition characterizes L1 learning but does not make explicit predictions about L2 acquisition. However, if principles of UG do not in fact characterize a language faculty that is biologically determined and that is necessary for the acquisition of an L1,

then it seems quite reasonable to assume that principles of UG also play a role in L2 acquisition (p. 92).

Naturally, while investigating the accessibility of UG in second language acquisition, all aspects of L2 acquisition cannot be dealt with at once. A specific aspect of it should be investigated in order to be able to get valuable data. Linguists usually prefer to investigate the acquisition of a parameter or a principle to assess the accessibility of UG in L2 acquisition. Initially, three different hypotheses were developed by the linguists who examined the role of UG in Second Language Acquisition in the first years of such studies:

### **2.2.1. Full Access Hypothesis**

UG is fully available; differences in patterns of acquisition between L1 and L2 learners and the lack of completeness can be accounted for in other ways. Schwartz and Sprouse (1996) are pioneers of this hypothesis. This theory maintains that the grammatical properties of a speaker's L1 constitute the initial state in L2 acquisition. Thereafter L2 speakers restructure their grammars on the basis of evidence from the target language which is not "parsable" by the initial-state grammar.

### **2.2.2. No Access Hypothesis**

Proponents of this position (e.g. Clashes and Muysken, 1986; 1989; Clashes, 1988; Bley-Vroman, 1989) assume that L1 and L2 acquisition proceed along the lines of fundamentally different cognitive processes. UG is totally inaccessible to the adult L2 learner; learning takes place in terms of non-linguistic learning strategies like distributional analysis, analogy, and hypothesis formation and testing. Freeman and Long, who are also proponents of this hypothesis, put forward that "Certain researchers argue against access because of incompleteness, because the innate capacity for language learning declines with age" (1987, p. 116).

### 2.2.3. Partial Access Hypothesis

UG is partially available to the learner (Tsimplici and Roussou, 1991; Smith and Tsimplici, 1995). As Waber and Czendik (2002) state, in this hypothesis, only those parametric values characterizing the L1 grammar are available, the rest must be learnt in terms of non-linguistic learning strategies (p. 1). As explained in Kong (2005, p. 230), there are three versions of this view: (a) Principles of UG are still available and constrain grammar building, but learners cannot reset parameters: that is to say, UG is only accessible through L1; (b) Adult L2 learners can in principle access principles and parameters of UG but are unable to access some of the features of functional categories; (c) A specific class of functional features, in particular, strength features, become inaccessible.

These hypotheses were in clear opposition to one another, incorporating sharp edges and making straightforward and precise predictions about the effects to follow. This rendered them easily testable and made them perfect subject for empirical research. However, the studies carried out on this field showed that the matters were more complex than it had seemed at first. As a consequence of that, all of the initial, straightforward hypotheses had to be redefined.

As Kaltenbacker (2001) points out, the basic problem of the original hypotheses was that they addressed the role of UG in L2 acquisition as one single topic, although the issue consists of two clearly distinct questions, which are:

1- What is the quality of the initial state? Is it constrained by UG, does it violate UG, or is it simply the L1 final state?

2- Which role does UG play in the process from the L2 initial state to the L2 final state? Is UG operative and are the learning strategies supplied by the LAD still active? Is UG non-operative, or does UG just provide passive knowledge that is accessible via the learners' L1?

White (2000) drafts five different approaches that address both issues independently. These five approaches can be described briefly as follows (pp. 134-139):

#### **2.2.4. Full Transfer / Partial Access**

Under this view, the L2 initial state consists of the L1 final state. Universal properties that are not instantiated in the L1, are lost in L2 acquisition. Parameter resetting is not possible under this approach. Knowledge of UG is only retrievable as far as it is embodied in properties of the L1.

#### **2.2.5. No Transfer/ Full Access**

This hypothesis assumes that the L2 grammar is acquired on the basis of UG principles and parameters interacting freely with L2 input. The L2 learner's initial state parallels that of the L1 acquirer, and L1 and L2 developing grammars are also expected to be similar. All universal principles and parameter settings as well as functional categories and feature values are available to learner. Features of UG that are not incorporated in the L1 are still fully accessible to the L2 learner at any age.

#### **2.2.6. Full Transfer / Full Access**

This hypothesis was developed by Schwartz and Sprouse (1996). It states that L1 and L2 differ with respect to their starting point, but are similar with respect to involvement of UG. Learners are assumed to transfer their L1 internal grammars and restructure them via UG operations upon being confronted with L2 data that cannot be accounted for by the L1 configurations. Again all UG options that are available to an L1 learner are also accessible by an L2 learner. This approach predicts that parameter resetting will take place once the input yields data that cannot be accounted for by the L1 internal grammar.

### **2.2.7. Partial Transfer / Full Access**

Proponents of this approach hold the view that the L2 initial state draws on properties of both the L1 and UG concurrently. There are however, different claims about the actual proportion of the L1 that is transferred. ‘Minimal Trees Hypothesis’ which was proposed by Vainikka and Young-Scholten (1994; 1998) suggests that only lexical categories are transferred into the L2, while the functional categories are not. In the initial state, L2 learners are assumed to project only NP and VP, but not DP, IP or CP. According to this hypothesis, L2 learners gradually project functional categories just as L1 acquirers are assumed to do. In other words, in this view it is believed that the emergence of functional categories is not dependent on the L1, and hence there is no transfer; rather they emerge in response to L2 input. An alternative suggestion (Eubank 1994; 1996) claims that both lexical and functional categories established in the L1 are transferred into the L2, but feature values, e.g. (+/- strong Agr), are not. This view is named as “Valueless Features Hypothesis”. Unlike the Minimal Trees Hypothesis, in this hypothesis it is asserted that both functional and lexical categories are available from the L1, but the strength of these features is not available. Acquisition involves acquiring the appropriate feature strength of the L2.

### **2.2.8. Partial Transfer / Partial Access**

This approach suggests that only some universal properties of the L1 are transferred, and some of the UG components that are not exhibited in early L2 interlanguage do not emerge. As stated above, partial Transfer/Full Access hypothesis claims that appropriate feature strengths (strong or weak) cannot be transferred from L1, but they can be acquired during the process of L2 acquisition. On the other hand, Partial Transfer/Partial Access Hypothesis asserts that certain functional features are never specified for strong/weak values during the course of L2 acquisition.

Along with these five hypothesis that claim that UG is accessible in L2 acquisition (partially or fully), the Fundamental Difference Hypothesis, which puts forward that adult second language learners do not have access to UG at all (Bley-Vroman, 1989;

1990; Clahsen and Muysken, 1986; 1989; Clahsen and Hong, 1995), is also alive today. Han (2004) and Long (2007) are some of the proponents of this view.

It is still possible to find supporters of all these hypotheses. However, in recent studies, two hypotheses came to fore and they are hotly debated. The first one is the Interpretability Hypothesis which is a revised version of the partial access account. This hypothesis puts forward that uninterpretable features are subject to critical age and they are inaccessible for L2 learners (Tsimpli and Dimitrakopoulou, 2007). The other one is a relatively older one: Full Transfer, Full Access Hypothesis (e.g. Schwartz and Sprouse, 1996; White, 2003) which claims that all features (both interpretable and uninterpretable) are available for L2 learners and the cause for the incompleteness in L2 acquisition should be explained in other ways.

### **2.3. THE INTERPRETABILITY HYPOTHESIS & FULL TRANSFER FULL ACCESS HYPOTHESIS**

Tsimpli et al. (2003), Hawkins (2005), Hawkins and Hattori (2006), Tsimpli and Dimitrakopoulou (2007) and Tsimpli and Mastropavlou (2007) put forward “The Interpretability Hypothesis”, which adopts assumptions regarding the critical period hypothesis for language acquisition. In particular, this hypothesis maintains that uninterpretable features are subject to critical period constraints and, as such, they are inaccessible to L2 learners. That is to say, L1 parametric values associated with these features resist re-setting in L2 acquisition; on the other hand, interpretable features are accessible to the L2 learner, even if L2 differs from the native language. In other words, the claim is that interpretable features are accessible to the L2 learner whereas uninterpretable features are difficult to identify and analyze in the L2 input due to persistent, maturationally-based, L1 effects on adult L2 grammars.

In fact, this hypothesis is not new. It is the updated version of the Failed Functional Features Hypothesis (FFFH hereafter) which was favored by Tsimpli and Roussou (1991), Smith and Tsimpli (1995), Hawkins and Chan, (1997) and Franceschina (2001; 2005). FFFH proposes that grammars fossilize because functional features are only accessible during first language acquisition. Interpretability Hypothesis is the re-

formulation of this hypothesis; yet it makes claims only on uninterpretable features. As a matter of fact, both of them are the revised versions of the partial access hypothesis, which claims that UG is only partially available for L2 learners. In the literature, these hypotheses are also named as the Representational Deficit Approach, which attributes L2 inflectional variability or error to a failure in the selection of parameterized formal features.

In contrast with the Interpretability Hypothesis and its older versions, Full Transfer Full Access Hypothesis claims that UG is fully accessible for the L2 learners. The researchers who favor this hypothesis (e.g. Montrul et al., 2006; Tanner, 2008; Rothman et al., 2009; Rothman et al., 2010; Bond et al., 2011) examine the acquisition of uninterpretable features that exist in the target L2 but lacks in L1 in order to get empirical evidence to refute the Interpretability Hypothesis. In fact, this approach does not ignore the fact that L2 acquisition cannot reach at ultimate attainment in general. It simply claims that this incompleteness does not stem from inaccessibility to UG. The reason for this incompleteness is usually sought for in different sources. Some of such hypotheses are summarized as follows:

### **2.3.1. Interface Hypothesis**

According to this hypothesis, the inability to reach at ultimate attainment in L2, that is to say, inability to become as proficient as a native language user in the second language, stems from the interaction between syntax and other grammar internal modules (syntax-semantics, syntax-phonology interfaces) or the grammar external modules (syntax-pragmatics, syntax-discourse). That is to say, the integration of syntactic knowledge with other types of information, especially with grammar external ones, is believed to be more problematic for L2 learners than properties that require only syntactic knowledge (Sorace, 2000; 2003; 2004; 2005; Valenzuela, 2006).

### **2.3.2. The Missing Surface Inflection Hypothesis**

According to this hypothesis, the lack of (or the variable use of) morphological forms in interlanguage grammars reflects a problem with the realization of surface

morphology, rather than an impairment in the domain of functional projections or feature strength. Learners' imperfect mapping of specific morphological forms to abstract categories may be the source of inability for ultimate attainment in L2. In cases like processing difficulties or communication pressures, learners may resort to defaults, forms that are underspecified in some features. However, it is argued that L2 learners have acquired the relevant features of the terminal nodes in the syntax and it is only the imperfect lexical access to the whole set of morpho-syntactic features that brings forward L2 learners' variability in production (Haznedar and Swartz, 1997; Prevost and White, 2000; Haznedar, 2003).

### **2.3.3. Feature Assembly Hypothesis**

This hypothesis views incompleteness in L2 acquisition as a mapping problem as well. Lardiere (2008) looks for the sources of morphological variability in the complexity of the morpho-syntactic knowledge that has to be acquired by L2 learners. Her hypothesis maintains that the ways in which grammatical features are morphologically combined and conditioned present formidable learning problems in L2 acquisition. The prediction of this account is that the more re-assembly of features the L2 learner must do, the more difficulty she will face, and such morphemes (and meanings) will take longer to acquire (Lardiere, 2008).

### **2.3.4. Morphological Underspecification Hypothesis**

According to this hypothesis incompleteness in L2 acquisition stems from representational deficits; not from deficits in syntactic but in morphological representation. Therefore, L2 morphology errors in this account involve the systematic substitution of underspecified, representationally-simpler forms across comprehension and production (McCarthy, 2007; 2008).

Although these four hypotheses (and many others) do not openly express their support for the Full Access Full Transfer Hypothesis, they serve such a function since they all



put forward that there is no representational deficit for syntax in L2 acquisition, and UG is fully accessible for L2 acquirers.

## **2.5. WH- PHRASES AND WH-MOVEMENT**

Since the present study focuses on island constraints on *wh*-movement to check the validity of the Interpretability Hypothesis, it is necessary to demonstrate the *wh*-phrase structures in the languages that the study focuses on. In general, languages differ with respect to the strategies they employ for *wh*-question formation. While in some languages *wh*-expressions are forced to move to matrix spec CP positions to form *wh*-questions, in some others, such obligatory movements to sentence initial positions are not observed. The *wh*-expressions in these languages can stay in their base positions in interrogative sentences. In that respect, languages have been mainly classified into *wh*-movement languages and *wh*-in-situ languages.

### **2.5.1. Wh-Movement in English**

English has overt syntactic *wh*-movement (Watanabe, 2003, p. 203). As Adger (2003) expresses, languages like English that have overt *wh*-movement possess a [uwh\*] feature in their CP's, which forces the *wh*-expressions to move to the specifier position of this phrase. This uninterpretable feature makes it impossible for the *wh*-expression to stay in-situ if the [uclausetype] feature in C is [Q], that is to say, if it is an interrogative sentence. If there are more than one *wh*-element in the clause, the [uwh\*] feature attracts only one of them, and it is the closest *wh*-item according to the "Attract Closest Principle". He further explains how echo questions (e.g. *Medea saw who?*) are excluded from this rule by stating that they are not questions in the usual sense of the word, and their C's do not bear a [Q] feature. Since their CP's do not bear a [Q] feature, there is no [uwh\*] feature in this phrase, either. Hence, *wh*-expressions in echo questions stay in-situ and do not move to the specifier of the CP. As he further points out, in complex sentences, where the matrix clause is interrogative and the *wh*-elements are located in the embedded clause, the *wh*-words must move to the specifier position of the matrix CP cyclically, moving through the CP of the embedded clause (341-370).

Hawkins and Hattori (2006) make a similar comment on this issue. They state that *wh*-word or phrase must be fronted in non-echo interrogative clauses in English (p. 274). Following Adger's statements, they summarize the *wh*-movement phenomenon in languages as;

in the case of a *wh*-question, there are two ways for feature checking. In *wh*-in-situ languages, valuing occurs directly between [C, Q] and the target *wh*-word/phrase in-situ, without any movement. In languages where *wh*-words/phrases are fronted, there is an additional requirement that valuing of [*uwh*:] occur within the immediate projection of interrogative C. This requirement is represented as an asterisked [*uwh*\*:] feature. This forces a *wh*-word/ phrase to move to the specifier of [C, Q, *uwh*\*:] to value [*uwh*\*:] (pp. 275-276).

In a similar fashion, Haegeman (1991) argues that *wh*-movement in English is not done by adjunction, but by substitution; *wh*-elements must move to spec CP (p. 355). She further claims that the landing site for *wh*-movement in English must be a position which is not specified for the phrasal category. Spec CP is a suitable position for this respect. A non-filled spec CP can receive phrasal constituents of any syntactic category (1991, p. 348). Hence, unfilled specifier positions of CP's are suitable landing sites for *wh*-movement in languages like English.

### **2.5.2. Wh-movement in Turkish**

In Turkish, *wh*-phrases are said to remain in-situ both in main and embedded clauses (Akar, 1990; Özsoy, 1996; Uzun, 2000; Kornfilt, 2003; 2008; İşsever, 2009; Çele and Gürel, 2011). *Wh*-in-situ languages lack the uninterpretable [*uwh*\*] feature, and do not have overt *wh*-movement (Adger, 2003). That is to say, the *wh*-words do not have to move to sentence initial position to form *wh*-questions. Although Özsoy (2009) claims that some specific scrambling structures should be regarded as overt *wh*-movement in Turkish, this claim does not change the main characteristics of Turkish language: it is a *wh*-in-situ language. As Özsoy (1996) states, Turkish does not possess a syntactic rule of *wh*-movement, i.e. the *wh*-phrase appears in situ in the surface structure in a Turkish *wh*-question. *Wh*-phrases like *Ne* (What), *Kime* (Whom), and *Ne zaman* (When) respectively occur in the positions in which their NP-counterparts would be found in a

regular Turkish sentence. They do not have to move to S-initial position as their English counterparts have (p. 3).

Huang (1982) developed a theory to explain the wh-formation strategy in wh-in-situ languages. According to this theory, the wh-phrases that do not move in S-structure move at Logical Form (LF hereafter). Thus, at LF, the wh-phrases in situ should have the same configurations as the syntactically moved wh-phrases (as cited in Tanaka, 1999, pp. 371-372). She further states that the difference between the wh-movement found in Turkish and a language like English is that while the rule applies at the syntactic level in the latter, it applies at LF in the former (p. 4). This LF movement hypothesis is supported and used by several scholars and it is still frequently encountered in the literature.

In fact, there are alternative views to the LF-movement approach in wh-in-situ languages. For instance, Aoun and Li (1993) put forward that wh-movement does not take place as a covert movement in LF in wh-in-situ languages like Chinese. The wh-words are claimed to be co-indexed and interpreted by means of a Question Operator (Qu-Operator) in overt syntax. Their claims are supported and adopted to Turkish case by Arslan (1999) and Görgülü (2006). According to these scholars, wh-movement in Turkish does not take place in LF, but in overt syntax through a binding relationship between the [Qu]-operator and the wh-words that remain in-situ. Following, Aoun and Li (1993), they propose that although the wh-word does not move, the Null operator, with which it is co-indexed, may move from its base position in the clause containing the wh-word to the matrix spec CP position. The movement of the Qu-operator is subject to ECP, which accounts for the asymmetry in the extraction of wh-arguments and wh-adjuncts (Arslan, 1999, p. 23). That is to say, since wh-arguments are lexically governed, the Qu-operator can be base generated within the matrix spec CP position. On the other hand, since wh-adjuncts are not lexically governed, they are in need of antecedent government. Therefore, the Qu-operator is generated in the same position where the wh-word is generated, and then, it moves to the matrix spec CP position. This movement is subject to ECP effects, which accounts for the adjunct argument asymmetry in Turkish.

On the other hand, İşsever (2009) claims that *wh*-movement takes place in overt-syntax in Turkish through feature movement. He takes into account the close interaction between *wh*-in-situ and focus in Turkish, and argues that the syntax of Turkish *wh*-in-situ includes a focus-driven movement of a focus-accented *wh*-phrase operator to the lower Spec FocP, whereby it is attracted to Spec CP to satisfy the [*uwh*\*] feature of C. In other words, he suggests that Turkish *wh*-phrases in-situ have a null operator in their spec positions, which undergoes movement in overt syntax. When the *wh*-words are focused in Turkish, the operator first moves to the Spec position of the FocP, then to the spec position of the CP to satisfy the [*uwh*\*] feature of C.

As a matter of fact, the Feature Movement Hypothesis proposed by İşsever (2009) appears to cause a great problem for the basic assumptions of the present study. As he asserts, Turkish has a [*uwh*\*] feature in its matrix CP's just like the overt *wh*-movement languages like English. If such a feature exists in Turkish, then it becomes impossible to assess the validity of the Interpretability Hypothesis in English-Turkish pair, since both languages contain the same uninterpretable feature. However, having such a conclusion out of this proposal might be misleading. It is certain that there is a difference between these two languages: one of them has compulsory *wh*-movement, but the other one does not. Hence, if syntax will continue to explain the motivation of the movements through existence or non-existence of interpretable-uninterpretable features, then it is for sure that English has an uninterpretable feature which Turkish lacks. It might not be the [*uwh*\*] feature which has been uttered so far, but an additional one, like [*uwhx*\*] feature which can only be satisfied through the movement of lexical items, rather than just the features. That is to say, what İşsever (2009) proposes is quite reasonable and offers new insights into *wh*-in-situ phenomena in Turkish, and it is not incompatible with the basic assumption of the present study: while there is a strong uninterpretable feature in English which causes the compulsory movement of the *wh*-words to the spec CP positions, such a feature does not exist in Turkish and *wh*-words can stay in-situ in this language. Besides, it should also be taken into account that there is a close relationship between (not) having compulsory *wh*-movement and island effects. Island constraints are strictly obeyed in *wh*-movement languages, which is not

the case for the *wh*-in-situ languages. Therefore, it can be deduced that the movement of the lexical items which carry some phonological load with themselves out of island structures cause problems, and this is not the case for the feature movements. In the present study, then, what is being examined is the relationship between the (non)existence of [uwhx\*] feature and island constraints, and this small change does not cause any problem for the general assumptions of the study. For the unity of the study, though, this feature will continue to be uttered as [uwh\*] feature in the following chapters.

In turn to other aspects of the *wh*-in-situ phenomena in Turkish, there are novel proposals produced by Görgülü (2006) and Arslan (1999), as well. As Görgülü (2006) asserts, *wh*-words in Turkish do not have inherent interrogative force by themselves but their interpretation is dependent on other elements in the structure. For instance, when “*ki*” particle exists in the CP, the *wh*-word receives only the non-interrogative reading. According to Görgülü, what this indicates is that the “*ki*” particle binds the *wh*-word yielding only the non-interrogative reading. He provides following example for this case:

(3) Cem **kim-i** sev-di ki!

Cem-NOM who-ACC love-PAST particle

(i) “Cem loved no one”.

(ii) \* “Who did Cem love?”

In the absence of such a particle in the CP, the sentence above receives only the interrogative reading, which indicates that the *wh*-word in-situ is bound by a null [Qu]-operator in CP.

(4) Cem **kim-i** sevdi?

Cem-NOM who-ACC love-PAST?

(i) \* “Cem loved no one”

(ii) “Who did Cem love?”

According to Görgülü (2006), in the absence of such CP level operators, it is claimed that the (non)existence of TP level operators like “Gen-operator” and “negation” determine the interpretation of the wh-words.

The [Qu]-operator hypothesis also provides a plausible explanation for the argument-adjunct asymmetry that exists on the island constraints on wh-movement, which form the focus of this study. As Arslan (1999) puts forward, although Özsoy (1996) successfully explains the argument-adjunct asymmetry in the Complex NP Constraint and Adjunct Island Constraint via LF movement analysis, this solution does not provide sufficient explanation for all structures. She further points out that the structures which fail to receive an explanation include examples that involve adjunct wh-phrases within a sentential subject; adjunct wh-phrases within postpositional phrases; and structures in which the wh-element co-occurs with the operator *yalnızca* 'only' (p .53).

## 2.6. THE ISLAND CONSTRAINTS ON WH-MOVEMENT

Munn (2007) defines island constraints as;

there are a number of constraints on movement. These constraints have been traditionally called island constraints based on the metaphor that a syntactic island is a phrase of which elements cannot get off, just as a person cannot get off of an island without extra help of a bridge or a boat (p. 2).

Although there are also some island constraints which put restrictions on NP movements, majority of such island constraints are viewed on wh-movements, and especially on languages like English which have overt syntactic wh-movement.

The earliest attempt to lay out a general principle to explain the constraints on movement comes from Chomsky (1964) where the A-over-A Condition is introduced (as cited in Lasnik, 2010, p.2; Hoffmeister and Sag, 2009, p.3). In this constraint, an element of category A cannot be extracted out of a phrase of category A. As Hoffmeister and Sag (2009, p.04) exemplify, this principle rules out all sentences where an NP has been extracted from an NP, as in the sentences below:

(5) \*What did he know [NP someone who has \_\_\_ ]?

(6) \*What did you see the man read [NP the book that was on ]?

However, Ross (1967) claimed that A-over-A constraint fails to provide correct explanations for all structures in which an element A is extracted from a category A. Besides, there are other structures in which movement of the elements are prohibited. Hoffmeister and Sag (2009) provide the following examples:

(7) \*Who would you approve of [NP my seeing ]?

(8) \*Which astronaut did you read [NP a book about ]?

(9) \*Which dignitaries do you think [[Sandy photographed the castle] and [Chris visited]]?

Counter examples like these led Ross to introduce a number of distinct island constraints that are still part of the descriptive vocabulary of the modern syntactic literature.

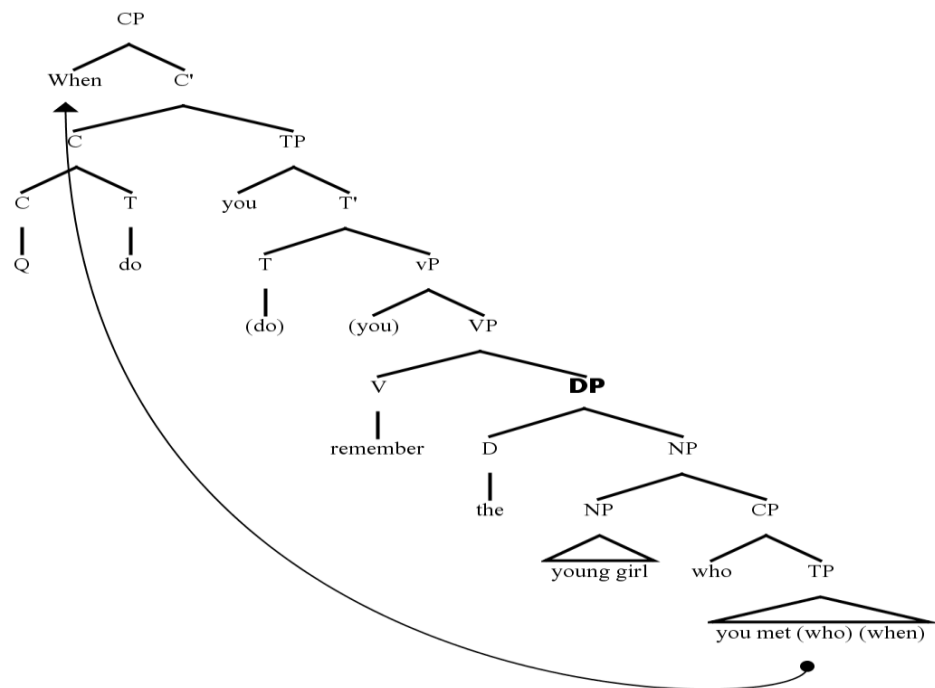
### **2.6.1. The Island Constraints Proposed by Ross (1967)**

Ross (1967) proposed that there are many types of syntactic islands, that is, constructions out of which it is not possible to move. Some of these constraints are given below:

#### **2.6.1.1. Complex NP Constraint (CNPC)**

Movement is prohibited out of a noun phrase which includes a clause, either a nominal complement clause, or a relative clause. For instance;

(10) \* When do you remember the young girl who you met?



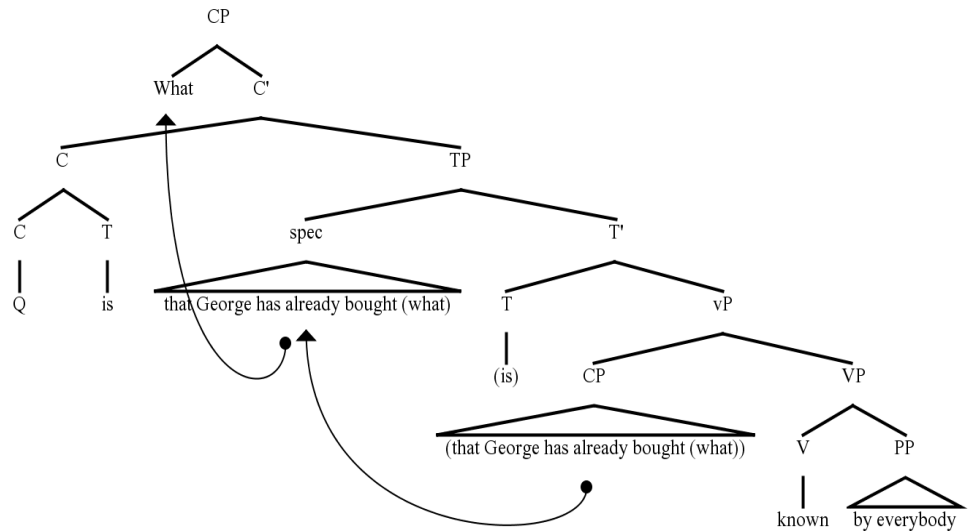
In this derivation, the wh-expression 'when' originates within the lower CP and moves to the specifier position of the matrix CP. However, this movement is prohibited by the DP that c-commands the lower CP. The derivation crashes and results in ungrammaticality. This constraint is called as the Complex NP Constraint.

#### 2.6.1.2. Sentential Subject Constraint (SSC)

No element can be moved out of the subject position of a clause. For instance;



(11) \* What is that George has already bought known by everybody?

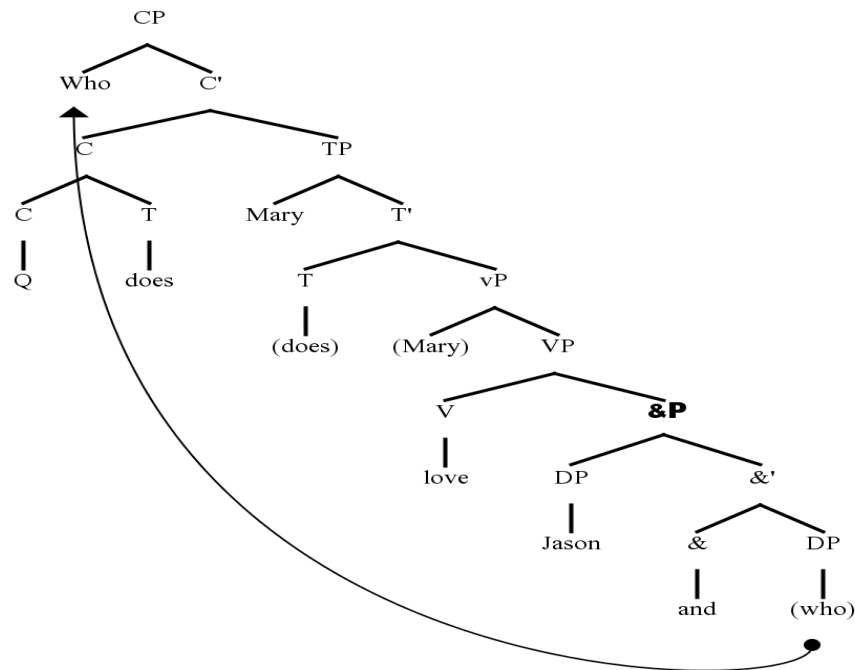


In this derivation, the wh-word ‘what’ originates within the lower CP which originates within the matrix spec vP. First, the whole lower CP moves to the matrix spec TP position for case checking purposes. Then, only the wh-word, ‘what’ moves to the matrix spec CP position to check its interpretable wh features. Yet, Sentential Subject Constraint claims that no elements can be moved out of sentential subject positions, in other words, from the matrix spec TP positions. Hence, this derivation is ungrammatical according to this constraint since the wh-word moves out of the sentential subject position.

### 2.6.1.3. Coordinate Structure Constraint (CSC)

In a coordinate structure, no coordinate may be moved, nor may any element contained in a coordinate be moved out of that coordinate unless it moves from all coordinates. For instance;

(12) \* Who does Mary love Jason and?



In this derivation, the *wh*-word ‘who’ originates within a coordinate structure and its movement to a higher node is prohibited by the Coordinate Structure Constraint.

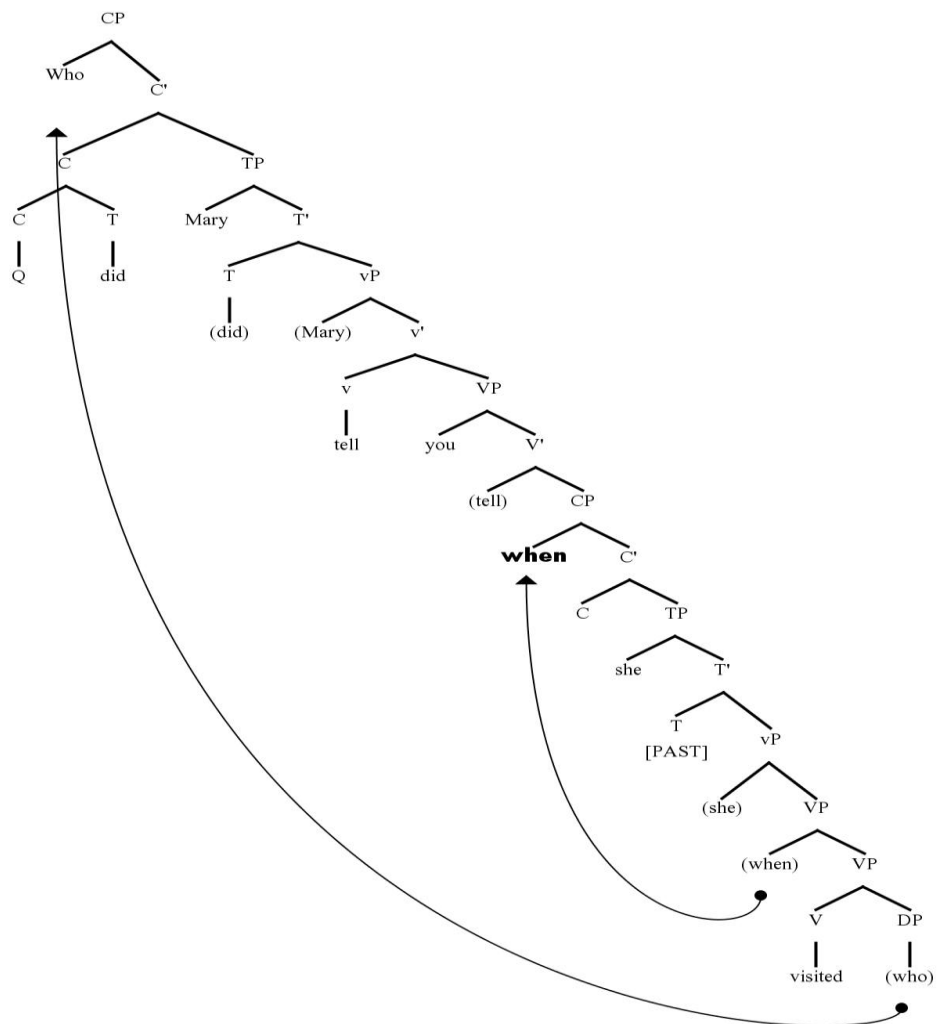
## 2.6.2. The Island Constraints Proposed After Ross (1967)

After Ross, (1967), the number of island constraints was extended with the works of the scholars like Kiparsky and Kiparsky (1970), Chomsky (1973), Ross (1984), Schafer (1995) etc.

### 2.6.2.1. Wh-Island Constraint (WIC)

*Wh*-extraction is prohibited out of another *wh*-clause. For instance;

(13) \* Who did Mary tell you when she visited?

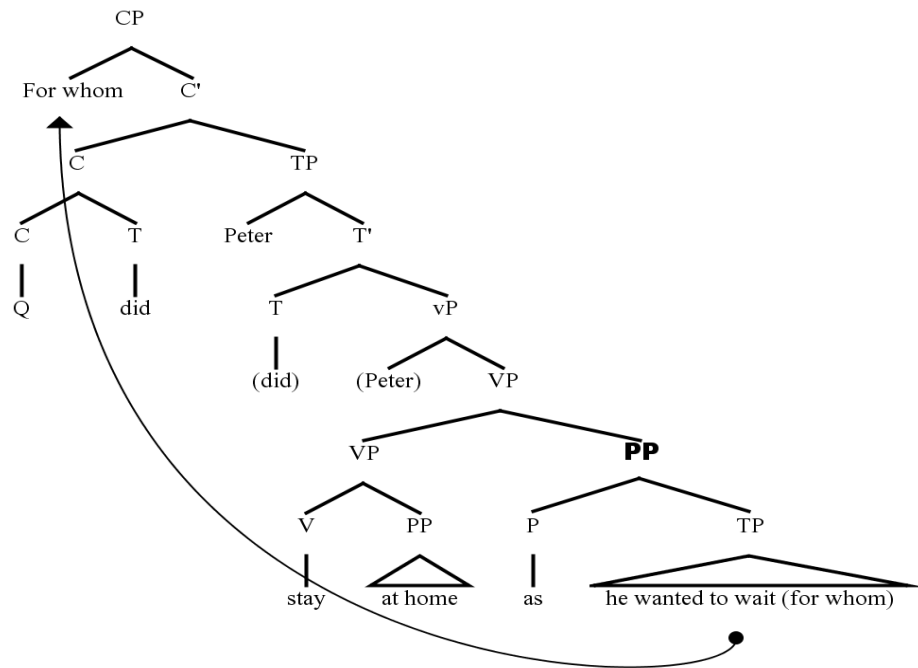


In this derivation, there are two *wh*-expressions both of which originate within the lower CP. One of these *wh*-words, 'when', moves to the spec position of the lower CP and fills this node. The other *wh*-word, 'who', has to move directly to the spec CP position of the matrix clause because the lower spec CP position has already been filled. Since this movement is not done cyclically, it violates the Wh-island Constraint.

### 2.6.2.2. Adjunct Island Constraint (AIC)

Movement is prohibited out of an adjunct/adverbial. For instance;

(14) \* For whom did Peter stay at home as he wanted to wait?



The wh-expression ‘for whom’ originates within the adjunct clause. When it moves to the matrix spec CP position, it violates the Adjunct Island Constraint.

Along with these island constraints, there are also others which are mentioned in the literature like Left Branch Constraint, Right Roof Constraint, Factive Island Constraint, Negative Island Constraint and Superiority Constraint.

### 2.6.2.3. Left Branch Constraint (LBC)

An island constraint which states that an NP which is the left branch of a larger NP is an island. For instance;

(15) \* [Which senator's] did you meet [*e* wife]?

#### 2.6.2.4. Right Roof Constraint (RRC)

The constraint, in English and some other languages, by which some element of a sentence which occurs further to the right than its expected 'logical' position cannot occur more than one clause boundary to the right of that position. For instance;

(16) \*That [it surprises you] [is amusing] [that Lisa smokes]

#### 2.6.2.5. Factive Island Constraint

Kiparsky & Kiparsky (1970) proposed Factive Island Constraint. They note that there are two classes of predicates, those that presuppose the truth of their sentential complements (factives) and those that do not (non-factives) (In Cuba 2006, p.123). They exemplify the factive verbs as: regret, resent, hate, comprehend, grasp, make clear, like; and nonfactives as: believe, claim, say, assert, is possible, conjecture. For instance;

(17)- \*How do you regret that you behaved *t* ?

(18)- How do you think that you behaved *t* ?

#### 2.6.2.6. Superiority Constraint

Chomsky (1973) stated that extractions cannot apply to an element if it could have applied to a superior element (p. 276). The sentences below exemplify this constraint:

(19) Who \_\_\_ saw what?

(20)\* What did who see \_\_\_?

### 2.6.2.7. Negative Island Constraint

Ross (1984) proposed Negative Island Constraint. Sentences like (20) in which an adjunct *wh*-phrase has been extracted over negation are judged less acceptable than sentences like (21) in which an object *wh*-phrase has been extracted (as cited in Gieselman et al, 2010, p.1).

(21) ??How precisely didn't the student report her results \_\_\_?

(22) ?Which results didn't the student report \_\_\_ very precisely?

### 2.6.3. Subjacency

As the number of the island constraints were extended, the scholars started search for principles or conditions to unify such constraints. The first attempt came from Chomsky (1973). He proposed the Subjacency condition to gather some of these island constraints under one title. Chomsky (1973) defines subjacency as:

1- if X is superior to Y in a phrase marker P [roughly, if X asymmetrically c-commands Y], then Y is 'subjacent' to X if there is at most one cyclic category C ... Y such that C contains Y and C does not contain X. Thus, if Y is subjacent to X, either X and Y are contained in all the same cyclic categories or they are in adjacent cycles.

2- No (movement) rule can involve X,Y; X superior to Y if Y is not subjacent to X (as cited in Lasnik, 2010, p.3)

In this condition, it is claimed that A-bar movement may not cross more than one bounding node. In English, bounding nodes were claimed to be the NP's and IP's. Hence, the grammar excludes examples like the following:

(23) \* It was a new company that Simon spread [NP the rumor that [IP they started]].

(24)\* What did [IP [NP the attempt to find] end in failure]? (pp. 4-5).

Yet, the Subjacency Principle was insufficient in unifying all island structures under one heading. Although it could successfully unify the island constraints like Complex NP Constraint, Wh-Island Constraint, Sentential Subject Constraint and Left-Branch Constraint, it was not taking into account the object-subject asymmetry and argument-adjunct asymmetry observed in languages. Moreover, it was not applicable for all island structures like Adjunct Island Constraint or Negative Island Constraint.

#### **2.6.4. The Condition on Extraction Domains and the Empty Category Principle**

Huang (1982) observed that extraction from adjuncts and specifiers were constantly worse than that of extraction from complements. Huang proposed the Condition on Extraction Domains (CED hereafter), which limits grammatical extraction to positions that are governed. (Roughly, government corresponds local c-command by a lexical [theta-role assigning] head or by an antecedent.) The heart of this idea is also contained in Chomsky's Empty Category Principle (ECP hereafter) which requires that the traces of A-bar movement must be governed. Chomsky (1986) attempted to unify the ECP, Subjacency and other locality conditions (such as the binding conditions) in a system called Barriers (as cited in Carnie, 2006, p.49).

#### **2.6.5. Barriers**

Chomsky developed a new formula to unify the island constraints in 1986. According to this theory, certain XP's act as barriers to movement or extraction, specifically XPs that are not theta-governed (or L-marked) by a lexical category, i.e. phrases not selected by a governing lexical head. The formula is given in Hoffmeister and Sag (2009, p.6) as:

- A is a BC [Blocking Category] for B if A is not L-marked and dominates B
- A is a barrier for B if and only if (a) and (b):
  - (a) A immediately dominates C; C a BC for B;
  - (b) A is a BC for B;  $A \neq IP$

Lasnik (2010) points out that the new formula was also successful in explaining the subject-object asymmetry and adjunct-argument asymmetry that Chomsky (1973) had failed to explain (p.4).

Although Barriers account was successful in unifying a considerable number of island constraints, it failed to do so for all structures. Moreover, after the introduction of the Minimalist Program in 1993, the utility of the applications or conditions like ECP, Blocking Categories, and Government started to be questioned. As such conditions exist at the core of the Bounding Theory, the Barriers account was not appropriate for the Minimalist Program. Hence, new formulas were needed for the Minimalist Framework. Within Minimalism, in which proper government and L-marking are not available as theoretical postulates, Chomsky attempted to capture the island effects by invoking new minimalist constructs.

#### **2.6.6. Island Constraints in the Minimalist Program**

Before the introduction of the Minimalist Program, Rizzi (1990) had stated that every kind of movement has some kind of locality constraint on the relationship between the displaced item and its starting position or trace. He put forward that in each case, the moved item must c-command the position it moves to, and there can be no potential intervening candidate for the element at the top of the movement chain. He named this approach as *Relativized Minimality* (as cited in Carnie, 2006, p. 49).

The Relativized Minimality Approach was very influential in the earlier versions of the Minimalist Program. The reason for this situation was that it was compatible with the economy principles of the Minimalist program. One of such principles of Minimalism, *Shortest Move*, was, in fact, a revised version of the Relativized Minimality Approach. This economy principle gives preference to the derivations where each movement moves to the closest potential landing site. Skipping that landing site (For example, when it is filled with another wh-word) will result in dispreferred derivation (Carnie, 2006, p. 50).



In 1995, Chomsky revised The *Shortest Move Principle* as *The Minimal Link Condition*. He introduced the *attract* operation, and claimed that any given site attracts the closest potential filler. Chomsky (1995, 311) defines the Minimal Link Condition as:

- K attracts  $\alpha$  only if there is no  $\beta$ ,  $\beta$  closer to K than  $\alpha$ , such that K attracts  $\beta$ .
- Closeness:  $\beta$  is closer to the target K than  $\alpha$  if  $\beta$  c-commands  $\alpha$ .

In the most recent version of the Minimalism, Chomsky (2001) proposed the *Phase Theory*. In this theory, local structures, known as phases, are generated piece by piece from the bottom of the tree. Operations may only apply within these phases, or from the topmost position within the phase (the phase edge). This ensures that each step in the movement will be limited to occur either within a given phase or between adjacent phases, giving rise to successive cyclicity. Thus, *Phase Impenetrability Condition* is:

- The domain of H is not accessible to operations outside HP; only H and its edge are accessible to such operations.

In this condition, CP's and vP's (may be DP's as well) are claimed to be the phases. Wh-elements that need to move to the Spec position of the Matrix CP for checking purposes, must land to the edges of the phases first. If these landing sites are unavailable for them, they cannot move upwards, and the derivation crashes. Boeckx and Grohmann (2007) note that the most recent phase-based approach to islandhood does not improve upon the previous approaches, and that "phases" are in many ways reincarnations of "bounding nodes" and "barriers" (as cited in Progovac 2009, p. 308). Hence, it is not possible to say that Phase Penetrability Condition could succeed to capture all island effects under one rule.

To sum up, although there have been many efforts to unify island constraints under one heading, it is not possible to state that these efforts have become successful up to date. None of the conditions or principles developed so far could capture all island effects under one title. Yet, the failure of such studies is not directly related with UG-SLA studies. Whether or not they can be gathered under one rule, such constraints exist and their acquisition processes reveal a lot for the UG-SLA studies. As Herschensohn (2000)

states, “in minimalist terms island constraints are considered on chains, not on s-structure derivation and this revision is insignificant considering L2 research” (p. 47).

### **2.6.7. The Island Constraints in Turkish**

Wh-in-situ languages and syntactic movement languages show different characteristics in island constraints as well. In general, the ones that have syntactic movements are subject to island effects; however, such effects are not observed (or at least not so strictly observed) in wh-in-situ languages. As Judy et al. (2008) state;

having or lacking an uninterpretable [ $uwh^*:$ ] feature play a role in this process. The languages like English that have this uninterpretable feature obey the island constraints on wh-movement; on the other hand, wh-in situ languages lack this uninterpretable feature and island constraints do not pertain to these languages (p.1).

Similarly, Huang (1982) argues that LF movement, unlike syntactic movement is free from island effects (as cited in Tanaka, 1999, p. 372). He notes that in Chinese, a language in which wh-movement is apparently not overt, no wh-island effects are observed (as cited in Richards, 1996, p. 2). However; Huang’s conclusion is challenged by Choe (1987) and Nishigauchi (1990). They claim that island effects are operative in wh-in-situ languages as well (as cited in Tanaka, 1999, p. 372).

When the island constraints in Turkish are taken into account, Kornfilt stands on Huang’s side. She claims that the wh-island constraint does not hold in Turkish; but given that wh-questions are in-situ in Turkish, this is not problematic (2003, p. 122). She also states that one would need to say that Subjacency doesn't hold at LF (2008, p.11). Uzun (2000) appears to agree with Kornfilt. He examined the situation of Wh-island Constraint and Complex NP Constraint in Turkish by providing examples, and concludes that these constraints do not hold in Turkish case. He explains this situation by stating that Turkish has two distinct characteristics compared to English: (1) Turkish is a wh-in situ language and wh- elements do not have to move overtly to the spec CP of the main clause; (2) As for the other elements of the sentences, wh- elements may scramble different positions in most cases in Turkish (pp. 84-85).

On the other hand, Özsoy (1996) claims that the Subjacency Principle, which attempts to provide a unified account for the island constraints, holds in wh-in-situ languages as well. She proposes an alternative solution to the seemingly subjacency violations in Turkish: As she asserts, what moves in LF to SPEC of the matrix clause in these constructions is indeed not the wh-phrase but the whole maximal projection that the wh-phrase is a constituent of. The wh-phrase moves only within the scope of its containing clause, not violating the subjacency condition (p.13). She provides the following examples to discuss her solution:

(25) [[Kim-in yaz-dıĝ-ı] mektub]-u oku-du-n?

Who-GEN write-NOM-POSS letter-ACC read-PAST-2sg

\* “Who did you read [the letter[t wrote]]?”

(26) \*[[Adam-in neden yaz-dıĝ-ı] mektup uzun?

Man-GEN why write-NOM-POSS letter long

\* “why is [the letter [the man wrote t] long?”

(27) Adam [kim-i gör-ünce] gül-dü?

Man who-ACC see-‘when’ laugh-PAST

\* “Who did the man laugh [when he saw t ]?”

(28) Kadın [nasıl konuş-arak ] kız-ı ikna et-ti?

Woman how speak-GER girl-ACC persuasion do-PAST

\* “How did the woman persuade the girl [speaking t ]?”

She states that the covert wh-movements in these sentences violate the island constraints – the Complex NP Constraint in (25) and (26) and Adjunct Island Constraint in (27) and (28). In (25) and (27) wh-movement has grammatically extracted the theta governed wh-phrases out of a complex NP and an adjunct island respectively. Successive cyclic movement in (26) and (28), on the other hand, has resulted in opposing grammatically. It has grammatically extracted an adjunct clause in (28), but extraction of an adjunct out of a complex NP has resulted in an ungrammatical structure.

She claims that the unexpected grammatical patterns in (25), (27) and (28) are due not to the irrelevance of subadjacency condition on Turkish wh-constructions, but rather to the fact that Turkish syntax has a rule of ‘feature copying’ which copies the lexical feature of the wh-phrase onto the dominating node which in turn is moved to the matrix COMP by pied-piping. She explains the ungrammaticality in (26) by leaning on the Principle of Categorical Identity which was claimed by Nishigauchi (1990). According to this principle, while it is possible to extract argument wh-words from theta governed maximal projections, it is not possible to move out the adjunct wh-words from these structures, which is the case in (26) above. Hence, she emphasizes the existence of argument-adjunct asymmetry in Turkish with regard to two island constraints on wh-movement: Complex NP and Adjunct Island constraints, and provides an LF movement based solution to this asymmetry.

Her claims on argument-adjunct asymmetry are supported and extended by other scholars. For instance, Arslan (1999) emphasizes the argument-adjunct asymmetry on island constraints by stating that argument wh-expressions can be interpreted outside of the islands, whereas the adjunct-wh expressions cannot. Instead of following the LF movement analyses of Huang (1982), she adopts the Qu-operator hypothesis that was put forward by Aoun and Li (1993). According to this hypothesis, the wh-element and the null question operator (Qu) have an operator-variable relationship in which Qu provides a binder (an antecedent) for the wh-element that is in-situ. The following generalizations have been developed to explain the argument-adjunct asymmetry on island constraints (Aoun and Li, 1993b, p. 219):

- a. A wh-in-situ in argument position need not have a local antecedent in the minimal clause in which it occurs.
- b. A wh-in-situ in adjunct position must have an antecedent (i.e., must be antecedent-governed) in the minimal clause in which it occurs.

The statements above mean that in a complex sentence which contains a wh-element in its embedded clause, the Qu-operator can be base generated in Matrix Spec CP directly if the wh-expression that remains in-situ is in an argument position. Since this

expression is theta-governed; it does not require a local antecedent and it is immune to the locality effects like island constraints. The following sentence and its LF representation exemplify this point (Arslan, 1999, pp. 69-70):

- (29) Sen [[kim-in yaz-dıĝ-ı] kitab] ı beĝen-di-n?  
 You who-GEN write-NOM-POSS book-ACC like-PAST-2sg  
 “Who (x) is it such that you like the book x wrote?”

However, if the wh-element that exists in the embedded clause is an adjunct, the Qu-operator that binds the adjunct wh-expression is base generated in the Spec CP position of the embedded clause. After binding the wh-element in-situ, the Qu-operator moves to the Matrix Spec CP for scope purposes. Yet, the island structures that intervene between the antecedent and trace obstruct proper government, and the wh-adjunct cannot be interpreted outside of the island structures as exemplified below (Arslan, 1999, pp. 69-70):

- (30)\*Sen [[o-nun niye yaz-dıĝ-ı] kitab] ı beĝen-di-n?  
 You (s)he-GEN why write-NOM-POSS book-ACC like-PAST-2sg  
 “Why (x) is it such that you like the book (s)he wrote x?”

This different behavior of Qu-operators while binding the argument and adjunct wh-expressions explains the argument-adjunct asymmetry on islands.

However, Arslan (1999) further points out that all adjunct extractions from island constraints may not be viewed as totally ungrammatical in Turkish. She states that there seems to be a dialectal difference in the acceptability of the structure like (28) below:

- (31) ?Sen Ayşe’yi nereye davet eden adama kızdın?  
 You Ayşe-ACC where-DAT invite-REL man-DAT get angry-PAST-2sg  
 “Where (x) is it such that you got angry at the man who invited Ayşe x?”

She asserts that even though the structure is acceptable to a certain extent, it is a marked construction. The wh-indexing analysis poses a problem for the acceptability of this structure. However, as Arslan (1999) expresses, the structure is interpretable in the sense of Pesetsky's D(iscourse)-linking or Reinhart's Choice-Function Analysis. The analysis of this structure along the lines of Pesetsky (1987) and Reinhart (1998) indicates that the wh-adverbials *nereye* 'where', *ne zaman* 'when', *nasıl* 'how' are VP internal adjuncts and they can be D-linked, whereas the reason denoting wh-adverbials *niye*, *neden*, *niçin* 'why' are VP external adjuncts and they cannot be d-linked (p.77). Therefore, it can be deduced that while extraction of d-linked wh-adjuncts from island constraints can be viewed as grammatical to some extent, the extraction of non-d-linked adjuncts are regarded as totally ungrammatical in Turkish. Hence, the sentence (i) above would be ungrammatical if it contained one of the non-d-linked wh-adjuncts:

(32)\**Sen Ayşe'yi niye/niçin/neden davet eden adama kızdın?*

You Ayşe-ACC why/why/why invite-REL man-DAT get angry-PAST-2sg

“Why (x) is it such that you got angry at the man who invited Ayşe x?”

Similarly, Görgülü (2006) examines the role of four island constraints in Turkish (Wh-island, Complex NP, Subject Island and Adjunct Island Constraints) and supports the view that there is argument-adjunct asymmetry on these island constraints in Turkish. (p. 81). He provides following sentences to exemplify the argument-adjunct asymmetry in Turkish with regard to the four island constraints (pp.70-75):

(33a) *Cem [[kim-in beğen-diğ-i] ev-i] satın al-dı?* (Complex NP Constraint)

Cem-NOM who-GEN like-NOM-POSS house-ACC buy-PAST

“Who (x) is it such that Cem bought the house which x likes?”

(33b)\* *Cem [[Ali-nin niye bin-diğ-i] araba-yı] gör-dü?* (Complex NP Constraint)

Cem-NOM Ali-GEN why get in-NOM-POSS car-ACC see-PAST

“Why is (x) such that Cem saw the car which got in x?”

(34a) *[Cem-in ne-yi kaybet-me-si] biz-i şaşır-t-tı ?* (Sentential Subject Constraint)

Cem-GEN what-ACC lose-NOM-POSS we-ACC surprise-CAUS-PAST  
 “What is (x) such that Cem lost x surprised us?”

(34b) \* [Cem-in niye bağır-ma-sı] bizi üz-dü?(Sentential Subject Constraint)  
 Cem-GEN why shout-NOM-POSS us worry-PAST  
 “Why (x) is it such that Cem’s shouting x worried us?”

(35a) Cem [kim-in ne-yi satın al-diğ-i-ni] sor-du? (Wh Island Constraint)  
 Cem who-GEN what-ACC buy-NOM-POSS-ACC ask-PAST  
 (i) “What does Cem ask who bought?”  
 (ii) “Who does Cem ask bought what?”

(35b) Cem [kim-in ne zaman gel-diğ-i-ni] sor-du?(Wh Island Constraint)  
 Cem who-GEN when come-NOM-POSS-ACC ask-PAST  
 (i) “Who does Cem ask came when?”  
 (ii) ?? “When does Cem ask who came?”

(36a) Cem [ne-ye bak-inca] kork-tu? (Adjunct Island Constraint)  
 Cem what-DAT look at-‘when’ get frighten-PAST  
 “What is (x) such that Cem got frightened when he looked at x?”

(36b).Cem [Ali ne zaman gid-ince] kork-tu? (Adjunct Island Constraint)  
 Cem Ali when go-‘when’ get frighten-PAST  
 “When is (x) such that Cem got frightened when Ali went x?”

In the (a) examples above, the wh- expressions that remain in-situ in overt syntax are in argument positions, whereas the (b) examples are in adjunct positions. Görgülü (2006) claims that except for the Adjunct Island Constraint, there is an argument-adjunct asymmetry in the other three island constraints. In other words, while it is possible for argument wh-expressions to take matrix scope and be interpreted outside the constraints like Wh-Island, Complex NP, and Sentential Subject Islands, it is not possible for

adjunct wh-expressions to take the matrix scope. As for the Adjunct Island Constraint, he claims that argument-adjunct asymmetry is not observed on this constraint. Yet, it should be taken into account that he does not make any analyses on the cases in which a wh-external, reason adjunct is interpreted outside of the Adjunct Island structures. That is to say, he does not refuse the claim that reason adjunct cannot be interpreted outside of the Adjunct Island structures. Therefore, it can be deduced that his claims are consistent with the analyses of Arslan (1999). His analyses support the view that argument-wh expressions can be interpreted outside of the island constraints, while VP external wh-expressions cannot. As for the extraction of VP internal wh-adjuncts, he regards extraction of these adjuncts from Wh-island, Complex NP and Sentential Subject Island structures as ungrammatical, while regarding the extraction of such adjuncts from Adjunct Island structures as grammatical.

After reviewing the literature, the interpretation of wh-elements outside of the island structures in Turkish can be summarized as follows:

- 1- Wh- arguments (e.g. *kimi*, 'who', *ne-yi*, 'what') can be interpreted outside of the island structures.
- 2- There are two dialects for the interpretation of VP internal wh-adjuncts (e.g. *nereye* 'where', *ne zaman* 'when', *nasıl* 'how') outside of the island constraints: one views them as grammatical, whereas the other views them as ungrammatical.
- 3- VP-external, reason denoting wh-adjuncts (e.g. *niye*, *niçin*, *neden* 'why') cannot be interpreted outside of the island structures.

The statements above can be summarized as in the table below:



*Table 1: The Interpretation of Wh-expressions out of the Island Constraints in Turkish*

	The Name of the Constraint	Wh-Arguments	Wh-Adjuncts	
			VP-Internal	VP-External
1	Complex NP Constraint	✓	✓ / x	x
2	Wh-Island Constraint	✓	✓ / x	x
3	Sentential Subject Constraint	✓	✓ / x	x
4	Adjunct Island Constraint	✓	✓ / x	x

In the table above, the ones which are shown with (✓) sign can take matrix scope and be interpreted outside the island constraints, while the ones shown as (x) cannot.

According to the [Qu]-operator hypothesis, the island constraints do not pertain to the lexically governed wh-expressions in Turkish. As Arslan (1999) expresses, argument wh-expressions are lexically governed; therefore, they do not require the antecedent government of the [Qu]-operator, which is base generated in Matrix Spec CP. On the other hand, adjunct wh-expressions are not lexically governed and they are in need of antecedent government. As the island structures block the antecedent government, the adjunct wh-expressions cannot be bound by the Qu-operator and therefore, they cannot take a matrix scope and be interpreted outside the islands. Yet, there are also some claims which assert that all adjunct wh-expressions cannot be counted as totally ungrammatical. Contrary to VP-external reason wh-adjuncts, the VP internal wh-adjunct are claimed to be d-linked and can be interpreted outside of the island structures. Although their grammaticality is thought to be worse compared to the wh-arguments, they are not considered to be totally ungrammatical according to one dialect of Turkish.

Çakır (2012) carried out a study to analyze the validity of the claims mentioned above relying on the intuitions of the native speakers of Turkish. In his study, 100 participants assessed the grammatical acceptability of the 27 interrogative sentences which contain three different island violations (Complex NP, Sentential Subject and Adjunct Island) in a scale 1 to 5. The results of the study showed that there are both argument & adjunct

and VP-internal & VP-external adjunct asymmetries in Turkish. In fact, the real asymmetry in Turkish appeared to be between wh-arguments and VP-external wh-adjuncts. As for the VP-internal wh-adjuncts, the results of the study suggested that VP internal wh-expressions do not violate island structures altogether. They show unstable characteristics in this language. In most cases, interpretation of such expressions out of island structures does not result in ungrammaticality. Yet, it is still evident that some cases are rather problematic. Leaning on the total numbers, however, it is not possible to mention a second dialect for Turkish which views all of them totally ungrammatical. Though they are worse than wh-arguments, the VP-internal wh-adjuncts appear to be grammatically acceptable in total numbers. Yet, the problematic cases need further explanation.

In conclusion, as far as the four island constraints which are frequently analyzed in the literature are taken into account, they show a more unified picture in English. All of them hold in this language. As for Turkish, the island constraints show a more divergent picture and they appear to hold only in some structures in Turkish. The difference between Turkish and English is claimed to be the result of having or lacking an uninterpretable feature. While English has this uninterpretable feature, Turkish lacks it. Hence, having a study on the acquisition of the island constraints in English by Turkish learners may contribute a lot to the ones that focus on UG-SLA relationship. Specifically, such a study may provide valuable data to support or refute the Interpretability Hypothesis which is commonly discussed in the literature.

## **CHAPTER 3**

### **METHODOLOGY**

In this part, the methodology of the study is presented.

#### **3.1. PARTICIPANTS**

In the study, there are four learner groups as well as a control group.

##### **3.1.1. The Control Group**

The control group consists of 58 participants (34 female, 24 male) who are all native speakers of English living in Gainesville, Florida- USA. These participants are the students at several departments at the University of Florida and their ages range from 18 to 24. In the selection of participants for this group, the most important criterion was that they should have no knowledge of Turkish or any other wh-in-situ language. The reason for setting up this criterion was to eliminate a possible L2 influence on their L1 performance. Hence, none of the participants selected for this group can speak Turkish. Another important criterion was that these language users should not have any formal knowledge on island constraints on wh-movement. Therefore, the tests were not given to the students in the Department of Linguistics. The participants were selected from departments like Sociology, Psychology, History.. etc. where island structures are not taught as subject-matter.

##### **3.1.2. The Learner Groups**

All learner group members are native speakers of Turkish who are acquiring English as a second language. These participants were distributed into four groups who fall into two categories according to the place they live.

### 3.1.2.1. Learner Groups who live in USA

The participants in these groups are native speakers of Turkish who are living in different parts of USA and who are acquiring English as a second language. There are 84 participants in these groups (51 female, 33 male) and their ages range from 20 to 68. These participants either attend to a university or work in several work fields in different parts of USA. Four criteria were formed in the selection of participants for these groups: 1- They should be living in USA at least for four years, 2- They should have started to live in USA (or any other country where English is spoken as a mother tongue) after the age of 15. 3- They should not have attended to a private school in Turkey during their primary and high school education. 4- They should not have any formal education on island constraints. The reason for setting up the first criterion was to make sure that language users are exposed to considerable amount of positive evidence in a naturalistic learning environment in the target language. Four years can be considered as a sufficient time period for being exposed to positive evidence in a naturalistic learning environment in L2 acquisition. The reason for setting up second and third criteria was to minimize the critical age effects on the participants. That is to say, if they had attended to private school in their primary school and high school education, they are more likely to be exposed to the target language to a great extent in a young age. Therefore, the ones who attended to state schools were selected as participants. Besides, if they had started to live in USA before puberty, their acquisition process is very likely to be influenced by pre-critical age effects. Hence, these criteria were executed to minimize the possible effects of critical age hypothesis. The last criterion was formed to make sure that participants do not have any overt knowledge on island constraints on wh-movement. There are two groups in this category:

#### 3.1.2.1. a. Learner Group 1

These participants scored better than 40 out of 50 questions of Michigan Placement Test. There are 46 participants in this group (26 female, 20 male).

### 3.1.2.1. b. Learner Group 2

The scores of these participants in Michigan Placement Test were between 30 to 40. Hence, they can be considered as intermediate/ upper intermediate language users. The name “low proficiency group” does not mean that these language users are in beginner or elementary levels. They are intermediate or upper intermediate level language users. There are 38 participants in this group (25 female, 13 male)

### 3.1.2.2. Learner Groups who live in Turkey

The participants in these groups are native speakers of Turkish who live in Turkey and who have never lived in a foreign country. There are 50 participants in these groups (31 female, 19 male) and their ages range from 21 to 38. These participants are either university students in an undergraduate /graduate program or work as an academician in a university or as a teacher in a high school. Three main criteria were formed in the selection of participants for this group: 1- They should never have lived in a foreign country, especially in a country like USA or England where English is spoken as a mother tongue. 2- They should not have had any formal education on island constraints. 3- They should not have attended to a private school during their primary and high school education. The reason for setting up the first criterion was to make sure that these participants are not exposed to positive evidence in an environment where the target language is spoken as a native language. The reason for setting up the second criterion was to make sure that the participants do not have any formal knowledge on the target structures. The last criterion was formed to avoid the critical age effects. There are two groups in this category:

### 3.1.2.2. a. Learner Group 3

As in Learner Group 1, the participants who scored better than 40 out of 50 questions of Michigan Placement test were placed in this group. There are 20 participants in this group (12 female, 8 male).

#### 3.1.2.2. b. Learner Group 4

The participants who scored between 30 and 40 in Michigan Proficiency Test were placed in this group. As in learner group 2, these participants can be considered as intermediate or upper intermediate language users. There are 30 participants in this group (19 female, 11 male).

### **3.2. DATA COLLECTION TOOLS**

In the study, the data were collected through some specifically designed tasks that aim to address the knowledge of the language users on island constraints on wh-movement in English. These tasks are (1) a grammaticality judgment test, (2) a wh-question formation task, and (3) a translation task. Beside these tasks, Michigan Placement Test was given to the participants in the learner groups to determine their level of proficiency in the target language. (All of the tests used in the study are presented in Appendix 1).

#### **3.2.1. Michigan Placement Test**

Michigan Placement test was given to the participants in the learner groups. It consists of 50 questions; 30 of which test their knowledge on vocabulary, and 20 of which test their knowledge on grammar. There are two reasons for the selection of this placement test in the study. Firstly, the participants in learner groups 1 and 2 live in USA and they are exposed to American English; therefore this test would be more appropriate for them compared to the placement tests like Oxford Quick Placement Test which appeal to British English. Secondly, although this test is shorter and less time consuming than many other placement test, it appeared to be giving reliable results. Because of these reasons this placement test was chosen for the study and it was given to the participants in the learner groups to determine their level of proficiency in the target language.

### 3.2.2. The Grammaticality Judgment Test

Grammaticality judgment tests are frequently used in the studies that focus on UG-SLA relationship. As White (2003) states, these tests can be used to find out whether sentences which are ruled out by principles of UG are also disallowed in the interlanguage grammar (p. 18). These tests may provide valuable data on the performance of both L1 language users and L2 language acquirers. In the present study, a grammaticality judgment test which contains 40 items was given to all participants in all groups. 20 of these test items are grammatically well-formed complex sentences that do not contain any island violations. The other 20 items in the test are the sentences that contain violation of any of the four target island constraint. That is to say, 5 of these test items contain wh-island violations, 5 of them contain complex NP island violations, 5 of them contain sentential subject island violations and 5 of them contain adjunct island violations. The distribution of the 5 test items in each category is as follows: In two test items of each group, wh-elements that move to Matrix Spec CP are wh-arguments ‘who’ and ‘what’, in two others the wh elements that cause island violations are VP-internal wh-adjuncts ‘where’ and ‘when’, and finally the other wh-element that cause island violation is VP external wh-adjunct ‘why’. The reason for including different types of wh-elements in the study is to assess the possible effects of Empty Category Principle, which asserts that the adjunct violations are worse than argument violations. Moreover, Turkish and English show different characteristics in this respect. While the violations made by arguments and VP-internal adjuncts do not cause grammaticality in Turkish, the violations made by VP-external adjuncts result in complete ungrammaticality. Therefore, containing wh-elements from different types might be helpful in assessing the possible mother tongue influence on the participants in the learner groups.

The results for the Grammaticality Judgment Test can provide valuable data on the Interpretability Hypothesis & Full Transfer / Full Access Hypothesis. If the participants in the learner groups can recognize the grammatical and ungrammatical patterns in English successfully and can perform as well as the ones in the control group, it means that they have already acquired the uninterruptable wh-feature in the target language,

which can be viewed as a support for the Full Transfer Full Access Hypothesis. On the other hand, if they perform significantly poorer; such a result would favor the Interpretability Hypothesis. Beside this point, the results for the test can provide important data on the other research questions like the importance of positive evidence in a naturalistic learning environment, and the mother tongue influence on the participants in the learner groups.

### 3.2.2.1. The Grammatical Test Items

Since the Grammaticality Judgment Test contains 20 ungrammatical sentences that contain island violations, it was necessary to add equal number of grammatically well-formed sentences to the test. These 20 grammatical sentences have complex structures containing a subordinate clause like a noun clause, a complement clause, a relative clause or an adverbial clause. Hence, their length and sentence complexity are similar with that of the ungrammatical sentences that contain island violations (In average, there are 10.7 words in grammatical sentences and 10.2 words in ungrammatical sentences). These grammatical test items were distributed randomly among the ungrammatical ones. These test items are as follows:

Test Item 3. What did Mike announce that he bought yesterday?

Test Item 4. When did Sue say that she had resigned from her job?

Test Item 7. Why do you think that she is innocent?

Test Item 8. What did you say to the man who lives next door?

Test Item 10. Why did you delete the messages that I had sent you earlier?

Test Item 12. Whom do you think Benjamin will date this summer?

Test Item 15. What will George suggest to the man who wants to apply for the job?

Test Item 16. Where did William hide the pictures when his mother came home?

Test Item 21. What did Sue say that she would buy for her mother?

Test Item 23. When did Jordan buy the dog that attacked me in front of his house?

Test Item 24. Who do you think will arrive first?

Test Item 26. Where did Laura say she put the keys?

Test Item 28. Who does Mary want to visit when she goes to Spain?



Test Item 29. Why are you angry with the man who phoned you this morning?

Test Item 32. Where do you think the next Olympics will be held?

Test Item 33. Why are you suspicious about the boy who is coming here every day?

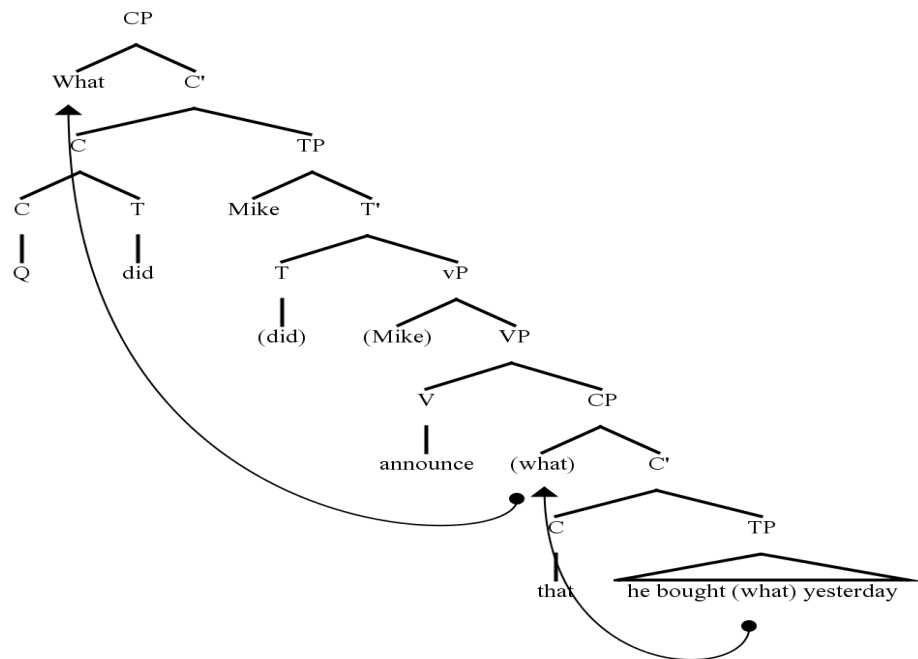
Test Item 35. When did Laura say that she did not have any money?

Test Item 37. When did the police officers announce that the burglar had been arrested?

Test Item 38. Who were you waiting for when I saw you in the park yesterday?

Test Item 40. Where does John want to go after finishing his homework?

The tree diagram of the first grammatical test item is given below:



In the derivation, the wh-word, ‘what’, originates within the lower CP. To check its interpretable wh-features against the uninterpretable wh-features of the matrix CP, it moves to the Spec CP position of the matrix CP cyclically. Since the spec position of the lower CP is empty, and since there are not any intervening island structures in the derivation, it can reach at this node without violating any island constraints.

Just like for this test item, none of the sentences in this group contain island violations, and all of them have got complex structures containing a subordinate clause like Noun Clause, Complement Clause, Relative Clause or Adverbial Clause.

### 3.2.2.2. The Test Items that Contain Wh-Island Violation

In the Grammaticality Judgment Test, there are five items that contain wh-island violation. These sentences are:

Test Item 1. Who did Jack tell you when he had seen?

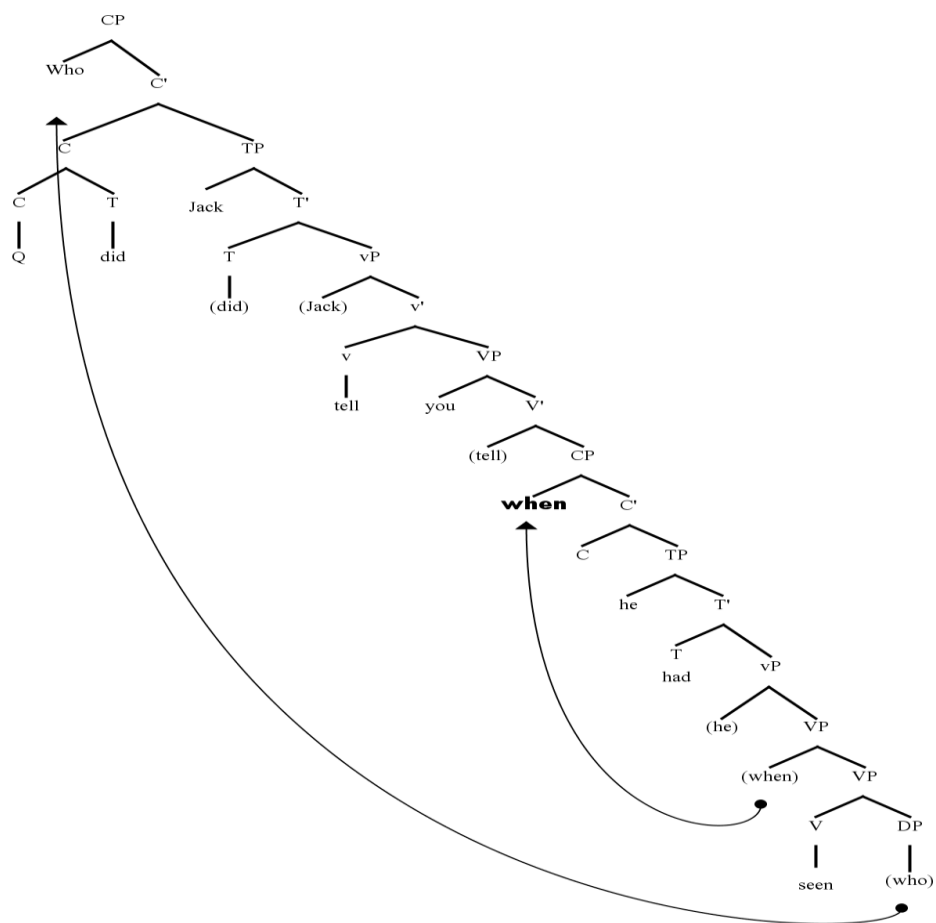
Test Item 6. What did Bill wonder whether Hilary liked?

Test Item 17. Where did Mary see out of her window what her husband was doing?

Test Item 18. When do you think who bought these books?

Test Item 36. Why does Tom believe whom Susan loves?

The tree diagram of the first one is given below:



The sentence above contains two wh-words and both of them originate in the subordinate clause. Both of these wh-elements move to the Spec CP positions to check their wh-features. However, the wh-word, ‘who’, has to raise directly to the Spec CP position of the matrix clause since the spec position of the lower CP has already been filled with the other wh-element, ‘when’. Since it is not possible for the wh-word, ‘who’, to move cyclically, its movement to upper spec CP violates the Wh-Island Constraint. All of these sentences in this group contain similar wh-island violations.

### 3.2.2.3. The Test Items that Contain Complex NP Island Violation

The GJT contains five test items that contain Complex NP violation. These test items are as follows:

Test Item 9. When do you know the old man who was killed in this house?

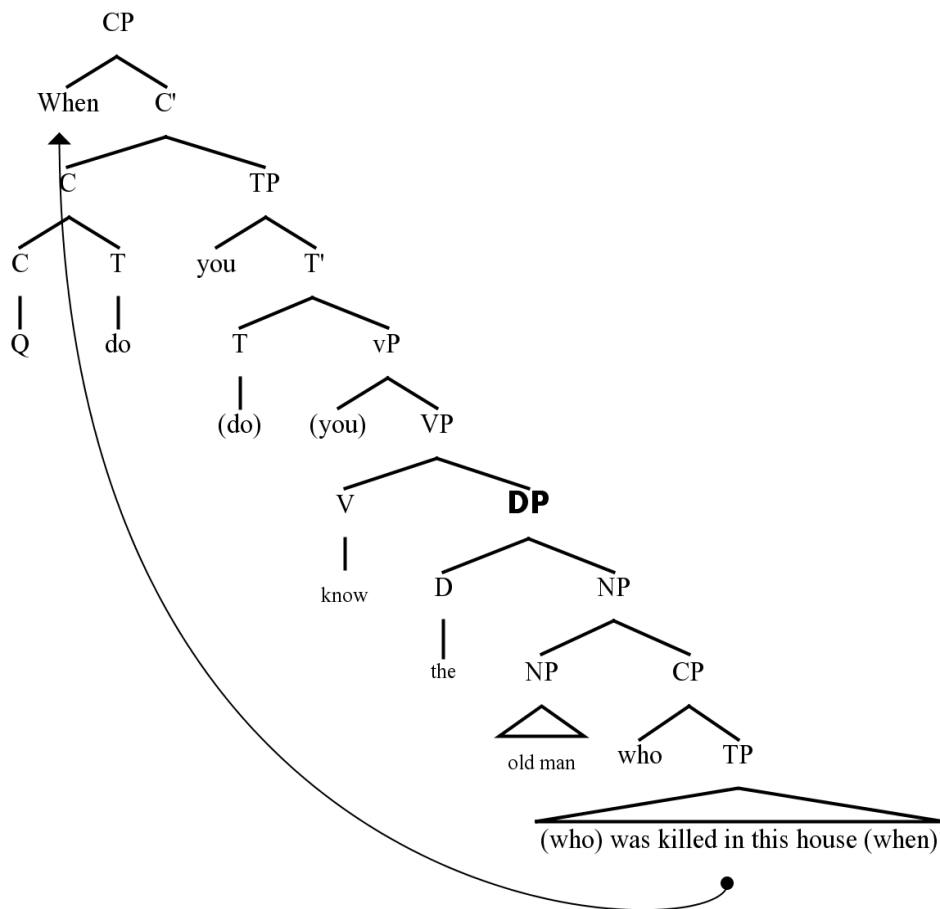
Test Item 11. Whom did John believe the claim that Bill killed?

Test Item 19. What does Mary love the boy who plays in the orchestra?

Test Item 20. Why did Sue refuse the claim that her husband had kidnapped a baby because she trusted him very much.

Test Item 30. Where did you like the boy whom you met?

The tree diagram for the first test item in this group is presented below:



In this derivation, the wh-word, ‘when’ originates within the lower CP. The DP which c-commands the lower CP, acts as a barrier for the movement of the wh-word to a higher node, according to the Complex NP Constraint. Since the wh-word, ‘when’ that originate in the subordinate clause must pass these DP to move to the spec position of the matrix CP, it violates this constraint. All of the sentences in this group contain similar Complex NP Constraint violations.

#### 3.2.2.4. The Test Items that Contain Sentential Subject Constraint Violation

The GJT contains five test items that contain Sentential Subject Constraint violation. These test items are as follows:

Test Item 5. When is that Germany will win the Eurovision Song Contest apparent?

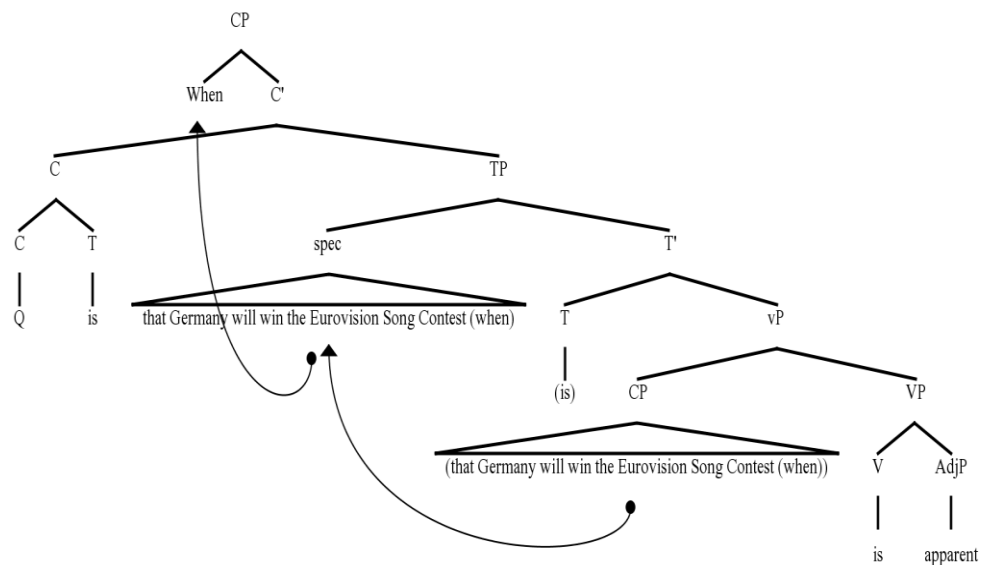
Test Item 13. Why is that William plays the guitar obvious?

Test Item 25. Whom did that Arthur beat please us?

Test Item 31. What did that Mary lost surprise us?

Test Item 34. Where is that Obama scolded Hillary known by everybody?

The derivation for the first test item in this group is as follows:



In these derivations, the wh-word, 'when' originates within the vP and moves to the spec TP position to check its case features. Then, to check its interpretable wh-features, it moves to the spec position of the Matrix CP; yet this movement is prohibited by the Sentential Subject Constraint. According to this constraint, none of the elements that exist within the sentential subjects can be moved out. All of the test items in this group contain similar Sentential Subject Constraint violations.

### 3.2.2.5. The Test Items that Contain Adjunct Island Constraint Violation

In the Grammaticality Judgment test, there are five test items that contain Adjunct Island Constraint violations. These sentences are as follows:

Test Item 2. Where was Mary going to the school when she saw Mark?

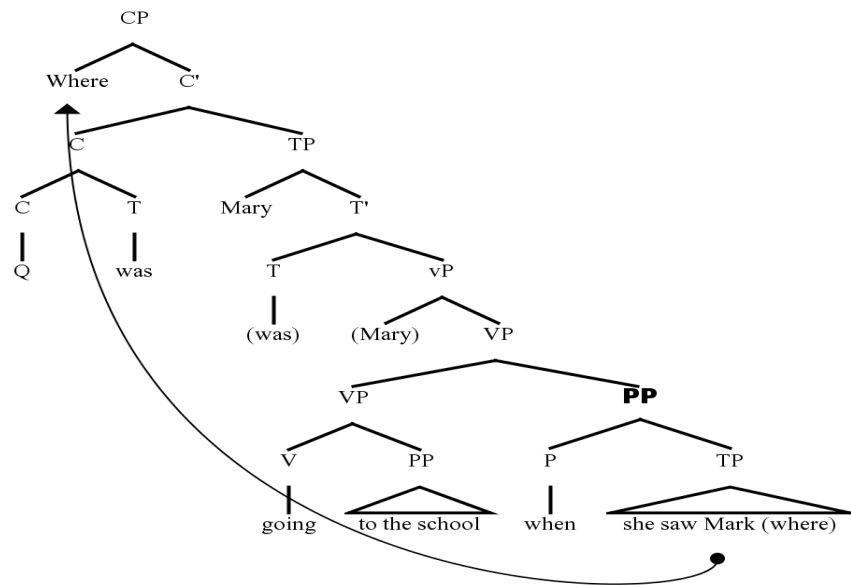
Test Item 14. When did Harry like the movie after watching it with his girlfriend?

Test Item 22. What did Bill woke up when he heard in the house?

Test Item 27. Why was the baby crying because her mother had gone out?

Test Item 39. With whom did Peter go out with Jennifer after he argued?

The derivation for the first test item in this group is presented below:



According to the Adjunct Island Constraint, the wh-words cannot move out of the adjunct clauses. Yet, in the derivation above, the wh-word, ‘where’ originates within the adjunct clause and moves to the spec position of the matrix CP for checking purposes. The PP that c-commands the lower TP prohibits the movement of the wh-word ‘where’ to a higher node. Therefore, the Adjunct Island Constraint is violated in the derivation. The same island constraint is violated in all of the test items in this group.

### 3.2.3. The Wh- Question Formation Task

The Wh-Question formation Task contains 25 items. In 20 of these test items, the participants were directed to set up sentences that contain island violations. That is to say, they were directed to produce sentences which violate the target island structures.

In each of these test items, short dialogues which take place between two people were given. After reading the dialogue, the participants were asked to form a wh-question about the dialogue and the replies for the questions they would form were given underneath. In other words, the participants were asked to form a wh-question which could be a valid question for the reply below it. Yet, they were not allowed to use any wh-word to form the question. They had to use the wh-word that was provided for each question. 5 of these test items were on wh-island constraint, 5 of them were on Complex NP Island Constraint, 5 of them were on Sentential Subject Constraint and 5 of them were on Adjunct Island Constraint. Beside these 20 items, in the other 5 test items the participants were not directed to violate any island constraints. That is to say, the sentence structure did not force them to violate any island constraint.

The Wh-Question Formation Task aims to collect data on the performances of the group members on island structures. If they violate the island structures in the wh-questions that they are asked to form, it means that they cannot cope with island structures in English and they have not acquired the uninterruptable wh-feature yet. On the other hand, if they produce grammatical wh-questions that do not contain any island violations, the results would suggest just the opposite. Hence, the results for this task would provide valuable data on the debate between Interpretability Hypothesis and Full Transfer Full Access Hypothesis. Moreover, the results for this task would provide fruitful data on other research questions like the role of being exposed to positive evidence in a naturalistic learning environment, the mother tongue effects on the participants and possible avoidance strategies that would be used by the participants.

### 3.2.3.1. The Test Items on Wh- Island Constraint

In the Wh-question Formation Task, there are five items on wh- island constraint. In these test items, the participants were provided such contexts that they would form a wh-question which violates wh-island constraint. One of these test items are given below:

## TEST ITEM 5

*Ashley: Bill was here a few minutes ago*

*Beth: What did he say?*

*Ashley: He wanted to learn if he could help us in the project.*

Test Item 5. Whom.....?

Bill wondered whether he could help Ashley and Beth in the project.

In the test item above, there is a short conversation between Ashley and Beth. After reading this conversation, the participants are expected to write a wh-question using the given wh-word, ‘whom’. The question that they form should be a valid question for the reply: “Bill wondered whether he could help Ashley and Beth in the project.” In this case, when they form a wh-question like “ Whom did Bill wonder whether he could help in the project?”, they violate the Wh-Island Constraint; because the spec CP position of the subordinate clause is already been filled with “whether”. The expression “whom” which originates in the subordinate clause cannot move to the spec CP position of the matrix clause cyclically. It must move this node directly, and this movement violates the wh-island constraint.

However, this is not the only option that the participants can follow. They can use other strategies to avoid violating this island constraint. For instance, when they form a question like “Whom did Bill think he could help in the project?”, or “Whom did Bill want to help in the project?”, they do not violate any island structure. In such sentences, the Spec CP positions of the subordinate clauses are available for the wh-expression which moves to the spec CP position of the matrix clause cyclically. In the study, such avoidance strategies are also examined, as well as the island violations.

### 3.2.3.2. The Test Items on Complex NP Island Constraint

There are five items that focus on Complex NP Constraint in the Wh Question Formation Task. In these test items, the participants are directed to form a wh- question in which they violate this island constraint. One of these test items are given below:



## TEST ITEM 1

*Thomas: What is Jim doing right now?*

*Sue: He is reading a book. He bought it yesterday.*

Test Item 1. When .....

Jim is reading the book which he bought yesterday.

In this test item, the participants are asked to set up a wh-question which could be a valid question for the reply “Jim is reading the book which he bought yesterday.” If they form an interrogative sentence like “When is Jim reading the book which he bought?”, they violate the Complex NP Constraint, because the wh-element, ‘when’, originates in the subordinate clause c-commanded by the NP, “the book”, and it moves to the spec CP position passing this NP. According to the Complex NP constraint, the wh- elements cannot pass the NP’s which exist in higher nodes. Hence, this movement violates the Complex NP Constraint. On the other hand, if the subjects form questions like “When did Jim buy the book which he is reading now?”, they do not violate any island structure. This can be counted as an avoidance strategy to escape violating this island constraint.

## 3.2.3.3. The Test Items on Sentential Subject Constraint

In the Wh-Question formation task, there are five items that focus on Sentential Subject constraint. One of these test items are given below:

## TEST ITEM 13

*Todd: George lost his wallet.*

*Craig: Really? Where?*

*Todd: He does not know exactly. But it was in his pocket while entering the canteen.*

*Hence, he must have lost it there.*

Test Item 13. Where.....?

That George lost his wallet in the school canteen is obvious.

In this test item, if the participants form a wh-question like “Where is that George lost his wallet obvious?”, they violate the Sentential Subject Constraint, since no element that exist in a sentential subject can be extracted out of it according to this constraint. However, they can escape violating this constraint by forming questions like “Where can be the place where John lost his wallet?” or “Where is it most likely for John to lose his wallet?” In such sentences, no island structure is violated.

#### 3.2.3.4. The Test Items on Adjunct Island Constraint

As for other target island constraints, there were five test items that focus on adjunct Island Constraint. One of these test items is presented below:

##### TEST ITEM 12

*Luke: Where was Peter last night?*

*Andrew: He stayed at home to wait for Ashley. She came home late last night.*

*Luke: Oh. I see.*

Test Item 12. For whom .....

Peter stayed at home as he wanted to wait for Ashley.

According to this island constraint, none of the elements that exist within an adjunct can be extracted out of it. Hence, if the participant form a sentence like “For whom did Peter stay at home as he wanted to wait?”, they violate this island constraint. However, if they form sentences like “ For whom did Peter wait at home last night?” or “For whom did Peter want to wait at home last night?”, they do not violate any island structure.

#### 3.2.3.5. The Test Items that do not Direct the Participants to Violate Island Structures

Beside the test items that provide contexts for the participants to violate the target island structures, five items did not have this notion. In these test items, the wh-questions that the participants are likely to form do not contain any island violations. In other words, the context that is provided for them do not direct them to produce sentences that

contain island violations. These test items were included in the study to test if the participants can perform well on producing complex sentences that do not contain any island violations. That is to say, if some participants cannot produce valid complex sentences for the test items that focus on the target island constraints and if they can do well on these five test items, it means that they understood what is expected from them very well, and their inability to produce valid responses for the other test items can be viewed as an avoiding strategy to escape violating the island structures. Because of this reason, these test items were also included in the study. One of these test items are given below:

#### TEST ITEM 18

*Joey: I saw a terrible car crash on the highway!*

*Alan: When did you see it?*

*Joey: Yesterday. I think the man in the car was dead.*

Test Item 18. What .....

Joey claimed that he saw a terrible car crash on the highway.

A possible response that the participants can produce for this test item is “What did Joey claim that he saw on the highway?”, which do not contain any island violation. The wh-expression, *what*, originates in the subordinate clause and moves to the lower Spec CP position first, and from there it moves to the Matrix Spec CP position to check it wh features. This cyclic movement of the wh expression does not violate any island structure. Other possible responses like “What did Joey say that he saw?” or “What did Joey claim to see on the highway?” do not contain any island violations, either.

#### **3.2.4. The Translation Task**

The third task that was given to the participants was The Translation Task. Since the control group members cannot speak any Turkish, this task could only be given to the participants in the learner groups. Hence, the results for this task can only be compared among the learner groups.

In this task, the participants were asked to translate 20 Turkish sentences into English. All of the Turkish sentences are grammatical in this language, yet their exact syntactic translations contain island violations. In other words, while Turkish sentences do not violate the island structures, the syntactic equivalences of these sentences in English contain island violations. The reason for this difference is the syntactic characteristics of these languages. English is an overt *wh*-movement language and island constraints are strictly obeyed in this language. On the other hand, Turkish is a *wh*-in situ language and island effects are not so strict. The movement of *wh*-arguments and VP-Internal *wh*-adjuncts do not seem to cause island violations in this language (Çakır, 2012). As for VP-external *wh*-adjuncts, the movement of these *wh*-elements out of island structures is ungrammatical in Turkish, as well. In the study, the sentences that were used in the study contain only *wh*-arguments and VP-Internal *wh*-adjuncts. The ones that contain VP-external *wh*-adjuncts were excluded, since it would not be right to ask participants to translate an ungrammatical sentence into another language.

4 of the test items used in the Translation Task are on Wh-Island Constraint, 4 of them are on Complex NP Island Constraint, 4 of them are on Sentential Subject Constraint and 4 of them are on Adjunct Island Constraint, which make 16 altogether. When the participants make a direct syntactic translation of these sentences into English, they violate the island structures in this language, which can be interpreted as their inability to cope with island effects in the target language. Such a result would be a support for the Interpretability Hypothesis. On the other hand, while making the translations, if the participants apply some strategies to avoid making island violations in the target language, it means that they are aware of the island effects in L2, which can be interpreted as the fact that the uninterpretable *wh*-feature that exist in the target language and lacks in the mother tongue is available for them, and they have already acquired this feature in L2. Such a result would be against the Interpretability Hypothesis. As well as proving data for the validity of this hypothesis, the results for this task can provide valuable data on the other research questions like the role of being exposed to positive evidence in a naturalistic learning environment in L2 acquisition

process, mother tongue influence on the participants, and the possible avoidance strategies that would be applied by the participants.

#### 3.2.4.1. The Test Items on Wh- Island Constraint

In the translation task, there are four test items that focus on Wh-Island Constraint. These test items are as follows:

##### TEST ITEM 4

Cem kimin ne zaman kendisini aradığını iddia ediyor?

Cem who-GEN when himself-ACC call-NOM-POSS-3sg claim-PRPROG

- (i) \* “When does Cem claim who called him?”
- (ii) \* “Who does Cem claim when called him?”

##### TEST ITEM 9

Meral senin neyi nereye koyduğunu iddia ediyor?

Meral you-GEN what-ACC where-DAT put-NOM-POSS-2sg claim-PRPROG

- (i) \* “What does Meral claim where you put?”
- (ii) \* “Where does Meral claim what you put?”

##### TEST ITEM 12

Tolga kimin ne satın aldığını düşünüyor?

Tolga who-GEN what buy-NOM-POSS-3sg think-PRPROG

- (i) \* “Who does Tolga think what bought?”
- (ii) \* “What does Tolga think who bought?”

##### TEST ITEM 14

Alev kimin neyi seyrettiğini sanıyor?

Alev who-GEN what-ACC watch-NOM-POSS-3sg think-PRPROG

- (i) \* “Who does Alev think what watches?”
- (ii) \* “What does Alev think who watches?”

In each of the Turkish sentences above, there are two wh-expressions which originate in the subordinate clause. Neither of these wh-expressions has to move to spec CP positions, since Turkish is a wh-in-situ language. The wh-island constraint is not violated in any of them. However, the exact syntactic translations of these sentences into English which are given in brackets result in ungrammaticality. Since there are two wh-expressions in each of the test items, there are two possible translations for English. In either of them one wh-expression moves to the Matrix Spec CP, while the other one moves to the lower spec CP. Neither of these possible syntactic translations is grammatical in English. Since the lower spec CP position is occupied with one of the wh-expressions, the other one has to move directly to the matrix spec CP position, violating the Wh-Island Constraint. Therefore, if the participants make a direct syntactic translation from Turkish to English, they make island violation in the target language. However, if they could apply a strategy to avoid violating the wh- island constraint, it means that they are aware of the island effects in English.

#### 3.2.4.2. The Test Items on Complex NP Constraint

Four of the test items in this task focus on Complex NP Constraint. These test items are:

##### TEST ITEM 6

Ahmet Ali'nin ne zaman yolladığı mektubu ancak bu sabah alabildi?

Ahmet Ali-GEN when send-NOM-POSS letter-ACC only this morning get-ABIL-PAST

\* “When could Ahmet get the letter this morning that Ali had sent?”

##### TEST ITEM 7

Sen Mustafa'nın neyi sakladığı odayı gördün?

You Mustafa-GEN what-ACC hide-NOM-POSS room-ACC see-PAST-2sg

\* “What did you see the room where Mustafa hid?”

## TEST ITEM 10

Burcu'nun kime yolladığı mektup postada kaybolmuş?

Burcu-GEN who-DAT send-NOM-POSS letter post-LOC be lost-PAST

\* “Who did Burcu send a letter which was lost in the post?”

## TEST ITEM 20

Cem Ayşe'nin nerede kaybolduğu iddiasına inanmıyor?

Cem Ayşe-GEN where-LOC be lost-NOM\_POSS claim-3sg-DAT believe-NEG-PRPROG

\* “Where does Cem not believe the claim that Ayşe was lost?”

In the Turkish sentences above, there is no island violation. The wh-expressions that remain in-situ do not cause any ungrammaticality in the sentences. However, the syntactic translations of these sentences into English result in ungrammaticality. The wh-expressions that originate within the subordinate clause must pass the NP which is at the topmost mode of the subordinate clause to reach at matrix spec CP position. If the participants produce responses given in brackets, they make such a violation. However, if they happen to translate this sentence in a different way, they may avoid violating this island constraint.

## 3.2.4.3. The Test Items on Sentential Subject Constraint

There are five items in this task the syntactic translations of which cause the violation of Sentential Subject Constraint. These test items are as follows:

## TEST ITEM 2

Ahmet'in nerede uyuyakalması seni kızdırdı?

Ahmet-GEN whereiLOC fall asleep-NOM-POSS you make angry-PAST

\* “Where did that Ahmet fell asleep make you angry?”

## TEST ITEM 5

Zeynep'in neyi okumuş olması herkesi şaşırttı?

Zeynep-GEN what-ACC read-PAST be-NOM-POSS everyone-ACC surprise-CAUS-PAST

\* “What did that Zeynep read make everyone surprised?”

## TEST ITEM 18

Cem'in kime sinirlenmesi herkesi üzdü?

Cem-GEN who-DAT get angry-NOM\_POSS everyone-ACC make upset-PAST

\* “Who did Cem got angry make everyone upset?”

## TEST ITEM 19

Cem'in ne zaman okula gitmesi çok sorunlu oldu?

Cem-GEN when school-DAT go-NOM\_POSS very problematic become-PAST

\* “When did that Cem went to school become very problematic?”

In these test items, the wh-expressions originate within the subordinate clauses which are the subject positions of the main clause. In other words, all of these wh-expressions are within a sentential subject. In Turkish sentences above, the wh-expressions that stay in-situ in sentential subject positions do not violate the SSC. On the other hand, their exact syntactic translations into English which are given in brackets violate this constraint since the wh-expressions in this language must move to the spec CP position of the matrix clause to check their wh-features.

## 3.2.4.4. The Test Items on Adjunct Island Constraint

In the translation task, there are four test items that focus on Adjunct Island Constraint.

These test items are as follows:

## TEST ITEM 1

Hırsız neyi çaldıktan sonra koşarak uzaklaştı?

Thief what-ACC steal-NOM-ABL after run-MADV become distant-PAST

\* “What did the thief run away after he stole?”



## TEST ITEM 13

Meral kimi gördükten sonra ağlamaya başladı?

Meral who-ACC see-NOM-ABL after cry-NOM-DAT start-PAST

\* “Who did Meral start to cry after she saw?”

## TEST ITEM 15

Ayşe nerede vakit kaybedince otobusu kaçırdı?

Ayşe where-LOC time lose-‘as’ bus-ACC miss-PAST

\* “Where did Ayşe miss the buss as she lost time?”

## TEST ITEM 16

Pamuk ne zaman ekilirse daha iyi ürün verir?

Cotton when plant-‘if’ more good crop give-PRES

\* “When does cotton yield better when planted?”

In these test items, wh-expressions that originate within the adjunct clauses do not cause any island violations. Since Turkish is a wh-in-situ language, there is no problem in the interpretation of wh-arguments and VP-internal wh adjuncts out of island structures do not result in ungrammaticality. On the other hand, their exact syntactic translations into English yield violation of the Adjunct Island Constraint. The wh- expressions must move out of the adjunct clauses, which is prohibited by this constraint. If the participants produce the responses given in brackets, it means that they are still not aware of the island effects in English. However, if they translate the sentences differently, they may escape violating the island structures in the target language.

## 3.2.4.5. The Test Items that Do Not Focus on Any Island Structure

Along with the test items that focus on an island constraint, the translation task contains four more items that do not have these characteristics. In these test items, neither the Turkish sentences, nor their syntactic equivalences in English contain an island violation. These test items are as follows:

## TEST ITEM 3

Kemal Ayşe'nin ne zaman geleceğini zannediyor?

Kemal Ayşe-GEN when come-NOM-POSS-3sg think-PRPROG

“When does Kemal think Ayşe will come?”

## TEST ITEM 8

Selim Elif'in kimi sevdiğini sanıyor?

Selim Elif-GEN who-ACC love-NOM-POSS-3sg think-PRPROG

“Who does Selim think Elif loves?”

## TEST ITEM 11

Murat Metin'in neyi caldığını iddia ediyor?

Murat Metin-GEN what-ACC steal-NOM-POSS-3sg claim-PRPROG

“What does Murat claim that Metin stole?”

## TEST ITEM 17

Emre cüzdanının nerede kaybolduğunu düşünüyor?

Emre wallet-3Sg-GEN where-LOC be lost-NOM-POSS-3Sg think-PRPROG

“Where does Emre think that his wallet was lost?”

Both the Turkish sentences and their syntactic translations into English which are given in brackets do not violate any island structures in these languages. The reason for including these tests items into the study was to assess the performance of the participants on the structures that do not contain any island violations. The sentence complexity of these test items is similar to that of other test items. Hence, if the participants have difficulty in the other test items while translating these four items easily, this result means that they are aware of the fact that they would violate some island structures in the target language and they are behaving cautiously. However, if they have difficulty in the translation of all test items, it would mean that the reason for their problem is not the existence of island constraints but their inability to deal with complex sentence structures in the target language. Because of this reason, these test items were included in the study.

### **3.3. DATA COLLECTION PROCESS**

The data of the study were collected in different times and in different forms. Before the application of the main study, some pilot studies were carried out as well.

#### **3.3.1. Pilot Studies**

Before the application of the main study, 4 pilot studies were carried out on 40 participants to check the validity and reliability of the test items. 2 of these pilot studies were implemented to native speakers of English living in USA-Florida, Gainesville. They are in total 25 students who attend several departments of the University of Florida. Another pilot study was carried out on the participants who have got similar qualities with the ones in Learner Group 1 or 2. These people are 5 native speakers of Turkish who live in Gainesville for at least four years and they are acquiring English as a second language. The last pilot study was carried out in Turkey on 10 native speakers of Turkish who are acquiring English as a second language. These participants have never lived in a country where English is spoken as a mother tongue.

The participants who attended to the pilot studies were later interviewed personally and they were asked some specific questions about their replies like why they found some test items as grammatically unacceptable, or why they would provide such a translation for a given test item. The reason for having these personal talks was to find out the real reasons for their choices. That is to say, if they had found a test item ungrammatical because of an outer reason like being semantically or discursively weird, rather than syntactically problematic, it would influence the validity of the tests. By taking their personal ideas, some modifications were done on the test items.

One of the modifications for the Grammaticality Judgment Test was that some test items were ambiguous for the participants. In other words, they had two syntactic readings: in the first reading the wh-words are generated within the embedded clauses and the movement of these wh-elements to matrix spec CP causes island violations. In their other readings, the wh-elements are generated within the matrix clause and their

movements do not cause any island violation. It was not possible to determine which reading the participants were using. Hence, these test items were modified in such a way that they could have only the first reading. One of these test items are given below:

Test Item 39. With whom did Peter go out with Jennifer after he argued?

The unmodified version of this test item was “With whom did Peter go out after he argued?” This version of the test item has two readings. In the first one, the wh-elements, ‘with whom’ are generated in the lower VP that exist in the adjunct clause. The movement of these elements out of the adjunct clause is prohibited by the Adjunct Island Constraint. Hence, this reading is ungrammatical in English. However, in the other reading of the test item, the wh-elements are generated in the matrix VP, and they can move to the matrix spec CP position without violating any island structure. Therefore; after the pilot studies, the complement position of the matrix VP was filled with the words “with Jennifer” and this test item lost its second reading. After the modification, it has got only one reading in which adjunct island constraint is violated. Three similar modifications were done on the Grammaticality Judgment Test after the pilot studies.

Another modification that was done on the Grammaticality Judgment Test was related with meaning. Some participants in the pilot studies claimed that a few of the test items were semantically weird. For instance;

Test Item 12. Whom do you think Benjamin will date this summer?

The earlier version of this test item was “Whom do you think Benjamin will marry this summer?” Yet, some participants in the pilot studies proposed that this test item is pragmatically weird, since we usually know the prospective bride that a friend of us will marry soon. Hence, the verb of the subordinate clause was changed from “marry” to “date”.

The last modification that was done on the Grammaticality Judgment Task was related with the methodology. In the first pilot study, the participants were asked to write the source of the ungrammaticality on the test items that they assessed as “grammatically unacceptable”, or “totally grammatically unacceptable”. However, it was observed that the participants could not provide the reason of the ungrammaticality in words. Therefore, after the first pilot study, the participants were not asked to state a reason for the ungrammaticality.

In the pilot studies, it was also noticed that the participants have a tendency to provide short, simplex sentences for majority of the test items in the Wh-Question Formation Task. Since the target island structures can only be violated in complex sentences, the data obtained from these participants might not be much helpful. Hence, the introductory part of the test was improved and all participants were required to set up complex sentences as much as they could.

As for the Translation Task, the number of the test items was increased to 20 after the pilot studies. The pilot studies contained 16 grammatically acceptable Turkish sentences, the syntactic translations of which were ungrammatical in English. Along with these 16 test items, 4 new test items were added to the test. In these 4 test items, both the Turkish sentences and their syntactic equivalences in English are grammatical. The reason for adding these tests items into the study was to assess the performance of the participants on the structures that do not contain any island violations. In the pilot studies, it was noticed that some participants were leaving the wh-elements in-situ while making the translations. There could be two possible reasons for this situation: First one is that they leave them in-situ because they have not acquired the wh-movement phenomena in the target language properly and they are deeply influenced by their mother tongue. The second one is that they do not have any problem with wh-movement, yet they left the wh-element in-situ to avoid violating island structures. That is to say, they may have left them in-situ as an avoidance strategy. In order to be able to assess which reason is valid for their replies, four new test items which were grammatical in both languages were added to the test.

### 3.3.2. Main Study

After making the necessary modifications in accordance with the pilot studies, the main study was given to the participants in different forms and in different places. That is to say, data collection process for the control group and the learner groups were slightly different, as explained below:

#### 3.3.2.1. Data Collection Process for the Control Group

The control group members are the native speakers of English who live in USA, Florida, Gainesville. They are having their university education in several departments of University of Florida. The researcher stayed in the University of Florida as a visiting scholar for five months and during this period the tests were conducted to the participants in the control group.

Only the Grammaticality Judgment Test and the Wh-Question Formation Test were given to the participants in the control group. Since they are native speakers of English, there was no need for the Michigan Placement Test. Besides, since they cannot speak any Turkish, the Translation Test could not be given to these participants, either.

The tests were given to the participants in online form with the use of “Surveygizmo” Survey Administration Program. The participants were required to provide certain information before starting to do the tests. Their age, their field of study at the university and their mother tongue were the questions that were asked to the participants in the introductory part of the survey. At the end of the tests, the participants were also given an option to write an e-mail address if they wished to get feedback on their performance.

In this way, the data for the control group was collected online from 60 participants with the use of “Surveygizmo” survey administration program.

### 3.3.2.2. Data Collection Process for Learner Groups 1 and 2

The participants in these groups live in different parts of USA. The researcher had contacted with 12 of them personally, yet the rest of the participants in these groups were reached through “Facebook” social network website. The researcher became a member of the facebook groups which were established for the Turkish Committees living in USA, and he requested other group members to participate in his study. In this way, he collected 97 responses from the Turkish people living in several parts of USA.

Four tests were given to the participants in these groups in online form: The Grammaticality Judgment Test, The Wh- Question formation Test, The Translation Test and Michigan Placement Test. At first, the participants were requested to do all test together; however, since there were so many test that they had to do, they were reluctant to participate in the study. Because of this reason, the researcher had to develop a new strategy to collect data from these participants. He divided the study into three. Along with the Michigan Placement Test, some participants took only Grammaticality Judgment Test, some others took only the Wh-Question Formation Test, and some others took only the Translation Test. That is to say, each participant in the study took two tests: one placement test, and one main test.

All participants were required to provide certain information before starting to do the tests. The following information were required from them:

- 1- “How old are you?”
- 2- “What is your occupation?”
- 3- “How old were you when you started to learn English?”
- 4- “Where did you start learning English?”
- 5- “If you started to learn it in Turkey, did you graduate from a private school in Turkey? (In primary and high school levels)”
- 6- “If yes, in what level did you attend to a private school in Turkey?”
- 7- “Have you ever lived in any country (other than USA) where English is spoken as a mother tongue?”

8- “If you lived in any other country before; where did you live? How long did you live there?”

9- “How old were you when you first came to the United States to live?”

10- “How long have you been in the United States?”

According to the information they provided, some participants who do not meet the necessary requirements of the study, were excluded from the study. These requirements were that they should have lived at least four years in USA or in any other country where English is spoken as a mother tongue; they should have started to live in USA after the age of 18; and they should not have attended to a private school when they had their education in Turkey. In total, 84 participants were observed to meet the requirements of the study, and the data obtained from them were used in the analysis part.

#### 3.3.2.3. Data Collection Process for Learner Groups 3 and 4

The participants in these groups are native speakers of Turkish who live in Turkey and who had never lived in a country where English is spoken as a mother tongue. As in the ones in learner group 1 and 2, these participants were given four tests: The Grammaticality Judgment Test, The Wh- Question formation Test, The Translation test and The Michigan Placement Test.

Contrary to the ones in learner groups 1 and 2, these participants took all of the tests. As they were personal acquaintances of the researcher, they agreed to take all tests, but in two sessions. First they were given the Michigan Placement Test and the Translation Test, and a week later, they took The Grammaticality Judgment Test, The Wh- Question formation Test. While some of the participants took the tests online, some others took them in paper form.

All participants were required to provide certain information before starting to do the tests. The following information was required from them:



- 1- “How old are you?”
- 2- “What is your occupation?”
- 3- “How old were you when you started to learn English?”
- 4- “Have you ever lived in a country where English is spoken as a mother tongue?”
- 5- “If yes, how long did you stay there?”
- 5- “Did you graduate from a private school? (In primary and high school levels)”
- 6- “If yes, in what level did you attend to a private school?”

According to the responses given by them, the ones who do not meet the requirements of the study were excluded. The requirements of the study were that they should not have lived in a country where English is spoken as a mother tongue more than 15 days, and they should not have attended to a private school in Turkey in primary and high school levels. The reason for setting up the second requirement was to eliminate possible Critical Age Effects. Since private school provides intensive language courses for young learners, the children who attend to these schools are exposed to English to a considerable degree. In order to take the study to safe grounds, the prospective participants who attended such schools were excluded from the study.

In total, 50 people were observed to meet the requirements of the study and the data obtained from them were used in the analysis.

### **3.4. ANALYSIS OF THE DATA**

The data gathered were first listed down in an excel document and from there it was transferred and analyzed in a statistics program. For all tasks of the study and for all parts of all tasks, statistical tables that demonstrate the frequencies or the percentages of the correct and incorrect responses of the subjects to the items were prepared. The tables and graphics demonstrate the performances of the five groups for each part of the study.

For the inferential analysis of the data, two non-parametric tests were applied with the use of a statistics program: Kruskal-Wallis H Test and Mann-Whitney U Test. The Kruskal–Wallis one-way analysis of variance by ranks (named after William Kruskal and W. Allen Wallis) is a non-parametric method for testing whether samples

originate from the same distribution. It is used for comparing more than two samples that are independent, or not related. The parametric equivalent of the Kruskal-Wallis test is the one-way analysis of variance (ANOVA). When the Kruskal-Wallis test leads to significant results, then at least one of the samples is different from the other samples. The test does not identify where the differences occur or how many differences actually occur. It is an extension of the Mann–Whitney U test to 3 or more groups. The Mann-Whitney would help analyze the specific sample pairs for significant differences. That is to say, Kruskal-Wallis H Test shows if there are any significant differences among the groups that take part in the study. Yet, it does not indicate the significance differences between group pairs. It just shows if there is any difference between the five groups or not. For this reason, The Mann-Whitney U Test was also applied in the study in order to be able to compare the target groups in pairs.

At the beginning of the statistical analysis, the researcher had planned to use a parametric test for the analysis of the data. However, the parametric tests, like ANOVA, require that the variances in the study should be homogenous. In other words, the results of homogeneity of variances test (like Levene's Test) should not be significant if a parametric test should be used. The researcher conducted the Levene's Test to test the homogeneity of the variances, and the results showed that the data of the study were not homogenous. Hence, using a non-parametric test instead of a parametric one appeared to be a more appropriate. For this reason two non-parametric tests, Kruskal Wallis H Test and Mann-Whitney U Test were used in the statistical analysis of the data. In the study, the alpha level was determined to be  $>0.05$ . That is, when the Kruskal Wallis H Test and Mann-Whitney U Test results are higher than 0.05 point, the measured difference is considered to be statistically insignificant. On the other hand, when the results are lower than this level, the measured difference is viewed as statistically significant.

### **3.5. LIMITATIONS**

Of all the island constraints that were proposed by Ross (1967) and other linguists, four of them were focused on in the study. These island constraints are:

- 1- Wh island Constraint
- 2- Complex NP Constraint
- 3- Sentential Subject Constraint
- 4- Adjunct Island Constraint

Beside the island constraint mentioned above, there are also other island structures proposed by several scholars like Coordinate Structure Constraint, Negative Island Constraint, Factive Island Constraint, Left Branch Constraint Right Roof Constraint..etc. Yet, the study has been limited to the ones which are encountered in the literature frequently. In this dissertation, it is assumed that the analysis of the performance of the subjects on these constraints may provide valuable data for the research questions of the study. However, it is for sure that other island structures can also be examined in further researches. The study will be limited to the four island constraints that are mentioned above.

Another limitation of the study was that only two proficiency groups were analyzed in the study: High proficiency and intermediate proficiency groups. The ones who took between 40 to 50 in Michigan Placement Test were placed in high proficiency groups, and the ones who got 30-40 in this test were placed in intermediate proficiency groups. The study excluded all others who could answer less than 30 questions of the Michigan Placement Test correctly. That is to say, the participants who are in beginner or elementary levels of their L2 acquisition process were not included in the study.

The data of the study were collected by three tests: a grammaticality judgment test, a wh-question formation test and a translation test, which happens to be another limitation of the study. In further studies, the number of the test types can be extended. Interpreting a picture, re-stating a paragraph can be some other test types that can be used in such studies.

## **CHAPTER 4**

### **FINDINGS OF THE STUDY**

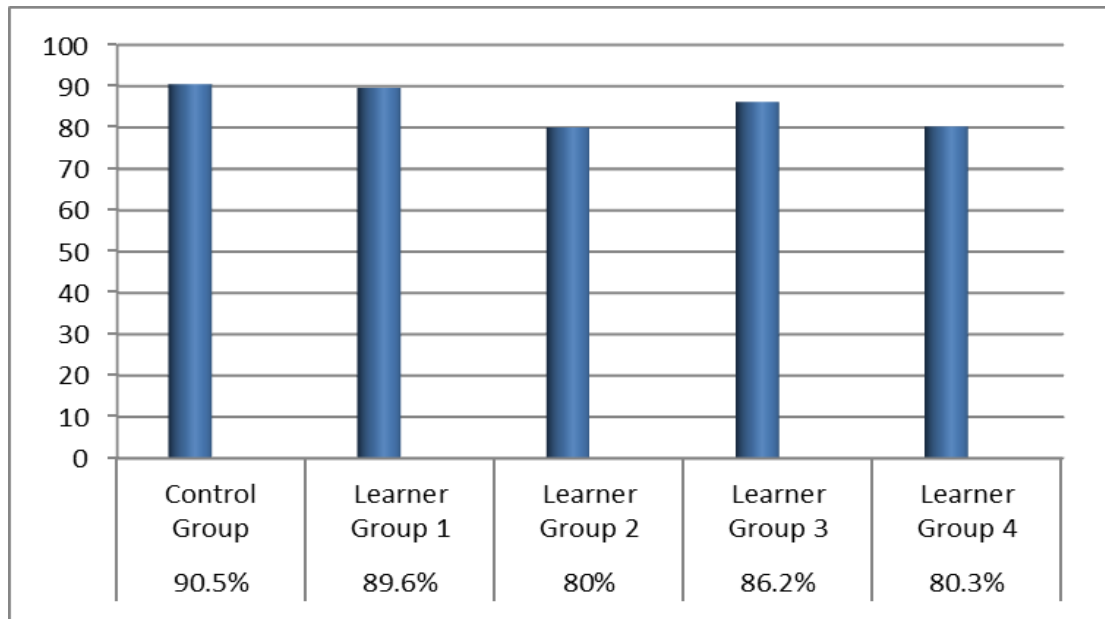
The data obtained in the study were statistically analyzed and assessed in accordance with the research questions. The results for the Grammaticality Judgment Task, Wh-Question Formation Task and the Translation Task are presented below.

#### **4.1. FINDINGS FOR THE GRAMMATICALITY JUDGMENT TEST**

The findings for the Grammaticality Judgment Task were tabulated in tables after having being analyzed in detail. The Kruskal Wallis H Test and Mann Whitney U Test results were also presented for each part of the task. The alpha level was determined to be  $>0.05$  for these non-parametric tests. That is, when results for these tests are higher than 0.05 point, the measured difference is considered to be statistically insignificant. On the other hand, when the results are lower than this level, the measured difference is viewed as statistically significant.

##### **4.1.1. The Overall Results for the Grammaticality Judgment Task**

The Table 1 below demonstrates the overall results obtained for the Grammaticality Judgment Task.



*Figure 1. The overall success of the groups in the Grammaticality Judgment Task*

The percentages given in the table present the overall success of the participants on both grammatical and ungrammatical test items. That is to say, these percentages were obtained after the success of the participants on grammatical and ungrammatical test items were unified. They constitute the most general results obtained for this part.

The Kruskal-Wallis H test showed that there was a significant difference among the five groups ( $H(4)=48.676$ ,  $p=0.001$ ), with a mean rank of 101.43 for the Control Group, 94.54 for the Learner Group 1, 44.02 for the Learner Group 2, 70.80 for the Learner group 3, and 44.23 for the Learner Group 4. It means that the performances of the groups on the items in this part were not alike and they significantly differed. Yet, Kruskal Wallis H Test results do not indicate the significance differences between group pairs; it just shows if there is any difference between the five groups or not. For this reason, The Mann Whitney U Test had to be applied in order to be able to compare the groups in pairs, and the results for this non parametric test are presented below.

The percentages above show that Control Group members and the participants in the first learner group performed rather similarly in GJT. There is only a little difference between these two groups: 90,5 per cent and 89,6 percent respectively. According to the results of the Mann-Whitney U Test, there is no significant difference between these

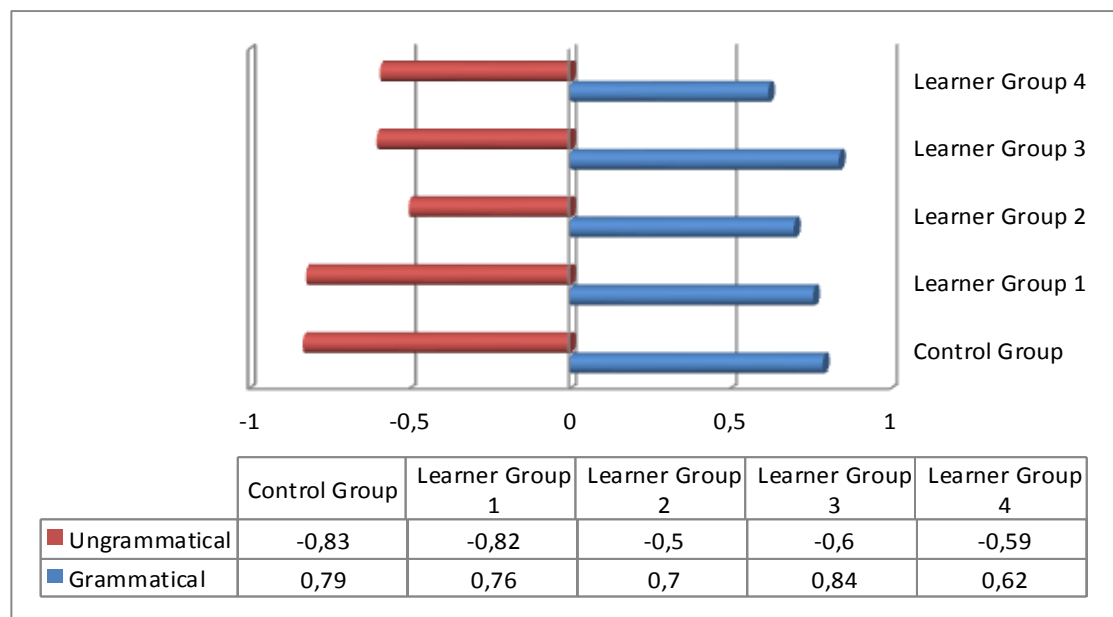
groups: ( $U=649$ ,  $p=0,450$ ). This finding is completely against the predictions of the 'Interpretability Hypothesis'. These L2 learners of English must have already acquired the necessary uninterpretable [uwh\*] feature in the target language, since they could perform as well as native speakers of English on a poverty of stimulus issue like the island constraints on wh-movement. If they had not acquired this uninterpretable feature yet, they would have performed significantly worse than the mother tongue users, as predicted in the Interpretability Hypothesis.

The percentage for the Learner Group 3 appears to be the closest one to these groups: 86,2 per cent; yet, the difference is still significant according to the Mann Whitney U Test: Control Group & 3. Learner Group ( $U=318$ ,  $p=0,003$ ); and Learner Group 1 & Learner Group 3: ( $U=160$ ,  $p=0,041$ ). This result demonstrates the importance of being exposed to sufficient amount of positive evidence in a naturalistic learning environment in the process of L2 acquisition. Since the participants in the Third Learner Group acquire English in their home country without living in an environment where English is spoken as a mother tongue, they performed significantly worse than native speakers of English on island constraints. Although they are equally proficient in the target language, their performance was significantly poorer than the ones who acquire this language among the native speakers as well.

The success of the lower proficiency groups differed significantly compared to that of Control Group as well: The Control Group & Learner Group 2: ( $U=202,5$ ,  $p=0,001$ ); The Control Group & Learner Group 4: ( $U=226,5$ ,  $p=0,001$ ). These data reveal that only the L2 learner of English who are exposed to positive evidence in a naturalistic learning environment in the target language and who are highly proficient in this language perform similarly to native speakers of English. There is a significant difference between the performances of the participants in the other groups compared to the ones in the English Control Group.

The performance of the participants in Learner Group 2 and Learner Group 4 appear to be rather similar, which is relatively lower than other groups. The Mann-Whitney U test results also showed that there is no significant difference between these groups:

( $U=293$ ,  $p=0,673$ ). Since the participants in these groups are in low proficiency level in English, this result was something predictable. As Full Transfer / Full Access Hypothesis proposes, the reason for their low performance can also be directly linked to the mother tongue influence on these participants. That is to say, these participants might be transferring the L1 parameter values to L2 as they have not reset these parameter values in their acquisition process yet. When the L1 and L2 parameter values on island constraints on wh-movement do not match, their success on these test items decreases accordingly. On the other hand, the participants in the higher levels of proficiency, (specifically the ones who are exposed to natural input in L2 acquisition process) seem to have already reset the necessary parameter values in L2 acquisition as they could be as successful as the native speakers of English on these structures. Table 2 below displays the overall performances of the five groups in grammatical and ungrammatical test items in (-1) –(+1) scale. In this scale, getting closer to (-1) indicates that the participants regarded the test items as grammatically unacceptable, whereas getting closer to (+1) means that they assessed these test items as grammatically acceptable.



*Figure 2. The overall success of the groups for the grammatical and ungrammatical test items in the Grammaticality Judgment Task*

The Kruskal-Wallis H test showed that there was a significant difference among the groups for both grammatical test items: ( $H(4)=17.805$ ,  $p=0.001$ ), with a mean rank of 87.79 for the Control Group, 76.24 for the Learner Group 1, 56.88 for the Learner Group 2, 99.25 for the Learner group 3, and 58.58 for the Learner Group 4; and for the ungrammatical test items: ( $H(4)=47.444$ ,  $p=0.001$ ), with a mean rank of 99.75 for the Control Group, 101.66 for the Learner Group 1, 48.02 for the Learner Group 2, 53.33 for the Learner group 3, and 51.10 for the Learner Group 4.

The similarity between the performances of the control group members and first learner group members is note-worthy. They had almost similar degree of success in the test. Both in the grammatical and the ungrammatical test items, they had similar degree of success. According to the results of the Mann-Whitney U Test, the difference between these two groups are not statistically significant neither in the grammatical test items: ( $U=613$ ,  $p=0,267$ ), nor in the ungrammatical test items: ( $U=665.5$ ,  $p=0,554$ ). This means that highly proficient L2 learners of English can deal with both grammatical and ungrammatical sentences in the target language as successfully as the native speakers of this language.

The performance of the other high proficiency group, namely the Third Learner Group, had differed in grammatical and ungrammatical sentences. Though they were even slightly more successful than the Control Group members on the grammatical sentences, they performed remarkably poor on ungrammatical test items. The Mann Whitney U test results also confirmed this fact. Although, there was not any significant difference between the performances of the participants in the Third Learner Group and the Control Group on the grammatical test items ( $U=510$ ,  $p=0,422$ ), the difference between these two groups were statistically significant in the ungrammatical test items: ( $U=191$ ,  $p=0,001$ ). Hence, it can be deduced that while the participants in the Third Learner Group can easily recognize the grammatical patterns in the target language, they have difficulty in dealing with the ones that contain island violations. Since island violations are poverty of stimulus issues, their insufficient exposure to the target language seem to become a problem for them to detect such patterns.



The low proficiency groups, namely Learner Group 2 and Learner Group 4 performed significantly worse than the native control group in both grammatical: [(U=375,5, p=0,009) and (U=548, p=0,005) respectively], and ungrammatical test items: [ (U=215, p=0,001) and (U=303, p=0,001) respectively]. Since these participants are not fully proficient in the target language yet, it is natural for them to perform relatively poorer than the participants in the high proficiency groups and the ones in the native control group. They seem not to have reset the necessary parameter values in their L2 acquisition process yet; and they still lean on the parameter values of their mother tongue.

#### **4.1.2. Grammaticality Judgment Task Results for Wh- Island Constraint**

In the GJT, there were five test items that contained violation of Wh-island Constraint. In the statistical analysis of the results for these test items, the Kruskal-Wallis H test showed that there was a significant difference among the groups ( $H(4)=34.440$ ,  $p=0.001$ ), with a mean rank of 94.68 for the Control Group, 101.26 for the Learner Group 1, 58.21 for the Learner Group 2, 54.10 for the Learner group 3, and 53.58 for the Learner Group 4. The performance of the participants on these test items in (-1) – (+1) scale are presented in the table below. In this scale, getting closer to (-1) indicates that the participants regarded the test items as grammatically unacceptable, whereas getting closer to (+1) means that they assessed these test items as grammatically acceptable.

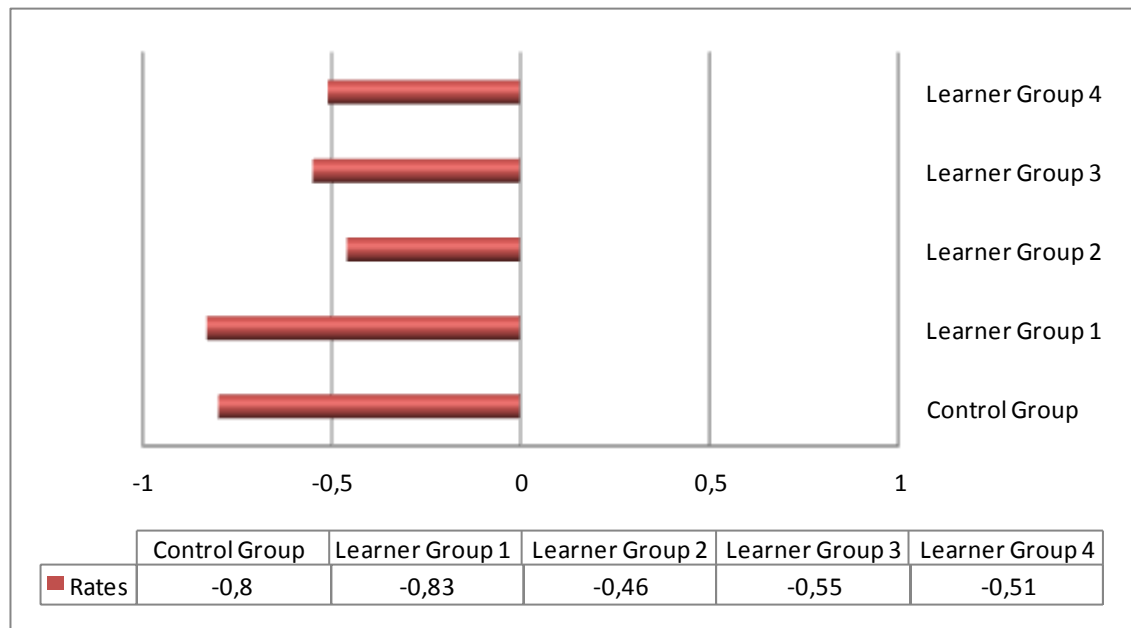


Figure 3. The Grammaticality Judgment Task results for Wh- Island Constraint

The participants who live in USA and who are in high proficiency level in English got slightly higher scores compared to the control group members in these test items. The Mann-Whitney U Test results showed that there was no significant difference between these two groups: ( $U=635$ ,  $p=0,360$ ). It means that the L2 learners of English who are highly proficient in the target language can perform as well as the native speakers of this language when they are exposed to enough positive evidence in a naturalistic learning environment in this language, which is against the predictions of the Interpretability Hypothesis. These participants must have already acquired the necessary uninterpretable [uw<sup>h</sup>\*] feature, as they can deal with the island constraints on the wh-movement in English as well as the native speakers of this language.

Another striking point in the table is the performance of the other high proficiency group, namely, Learner Group 3. Their performance is remarkably lower than the other high proficiency group and the Control Group: ( $U=96.5$ ,  $p=0,001$ ); and ( $U=250$ ,  $p=0,001$ ) respectively. In fact, they could perform very similarly to other low proficiency groups. There is no significant difference between the performance of this group neither with the Second Learner Group ( $U=208.5$ ,  $p=0,969$ ) nor with the Fourth Learner Group: ( $U=286$ ,  $p=0,780$ ). This data reveals the importance of being exposed

to positive evidence in L2 acquisition process. While the highly proficient language users who are exposed to positive evidence in English can perform as well as the native speakers of this language, the ones who are not exposed to positive evidence in L2 sufficiently performs significantly poorer.

#### 4.1.3. Grammaticality Judgment Task Results for Complex NP Island Constraint

The Grammaticality Judgment test contained five test items in which complex NP constraint is violated. In the statistical analysis of the results for these test items, Kruskal-Wallis H test showed that there was a significant difference among the groups ( $H(4)=36.390$ ,  $p=0.001$ ), with a mean rank of 99.99 for the Control Group, 89.42 for the Learner Group 1, 57.14 for the Learner Group 2, 61.18 for the Learner group 3, and 49.22 for the Learner Group 4. The performances of the participants on these test items in (-1) – (+1) scale are displayed in the table below. In this scale, getting closer to (-1) indicates that the participants regarded the test items as grammatically unacceptable, whereas getting closer to (+1) means that they assessed these test items as grammatically acceptable.

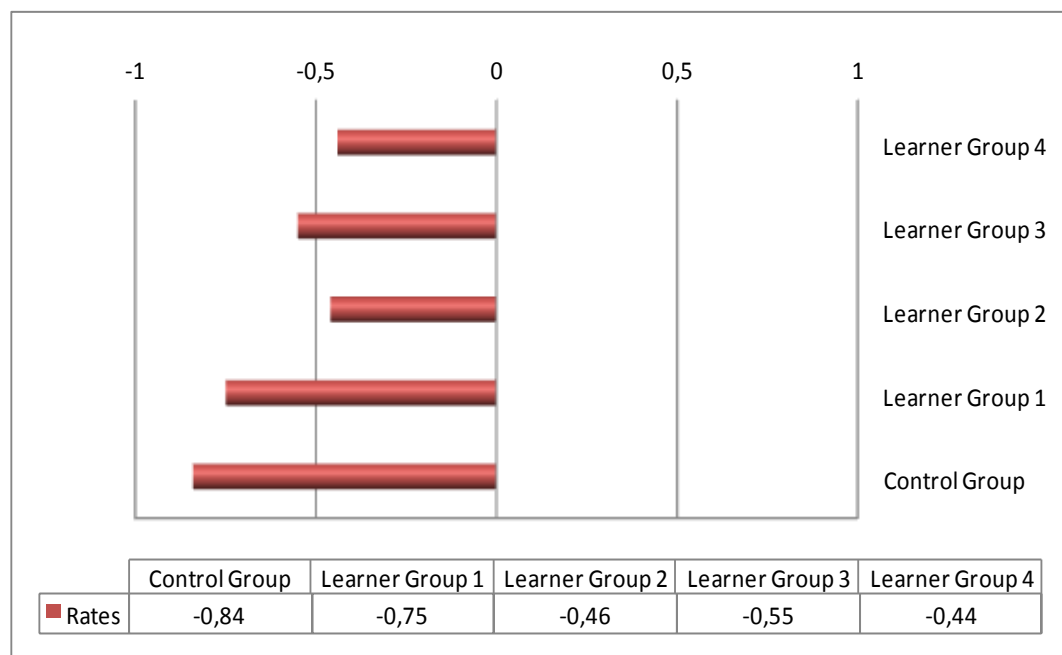


Figure 4. The Grammaticality Judgment Task results for Complex NP Island Constraint

The performance of the First Learner Group is very similar to that of native speakers. There is no significant difference between these two groups according to the results of the Mann-Whitney U Test: ( $U=631,5$ ,  $p=0,340$ ). In other words, the Turkish L2 learners of English living in USA with a high proficiency level in English could perform similarly to native speakers in the test items that focus on the Complex NP Island Constraint. This is another finding that stands against the “Interpretability Hypothesis”. When L2 learners are exposed to positive evidence in a naturalistic learning environment in the target language, they can deal with complex syntactic structures like island constraints on wh-movement successfully, just like L1 speakers.

The performances of other three groups are almost alike. As in the test items for the Wh-Island Constraint, Third Learner Group members performed remarkably poorer compared to native speakers and the other high proficiency group. The differences are significant: ( $U=275$ ,  $p=0,001$ ) and ( $U=157,5$ ,  $p=0,033$ ) respectively. They could not differentiate the grammatical wh-questions from the ones that contain Complex NP Island violations, as well as these two groups. The reason for their poor performance can again be linked to the fact that they are not exposed to positive evidence in a naturalistic learning environment in the target language adequately. Though they are highly proficient in English, they make mistakes while dealing with poverty of stimulus issues like the island constraints on wh-movement. In fact, they could perform just slightly better than the low proficiency groups: ( $U=192,5$ ,  $p=0,647$ ) compared to the Second Learner Group; and ( $U=246,5$ ,  $p=0,287$ ) compared to the Fourth Learner Group. Since the participants in these two groups are not proficient in the target language yet, it is natural for them to perform poorly, but the Third Learner Group should have performed better in these test items as they are proficient language users, and these results show the importance of being exposed to positive evidence in a naturalistic learning environment in the L2 acquisition process.

#### 4.1.4. Grammaticality Judgment Task Results for Sentential Subject Constraint

In GJT, there were five test items that contained Sentential Subject Constraint violations. The Kruskal-Wallis H test showed that there was a significant difference among the groups ( $H(4)=58.760$ ,  $p=0.001$ ), with a mean rank of 102.53 for the Control Group, 97.84 for the Learner Group 1, 45.57 for the Learner Group 2, 55.73 for the Learner group 3, and 49.03 for the Learner Group 4. The table below presents the performances of the groups on these test items in (-1) – (+1) scale. In this scale, getting closer to (-1) indicates that the participants regarded the test items as grammatically unacceptable, whereas getting closer to (+1) means that they assessed these test items as grammatically acceptable.

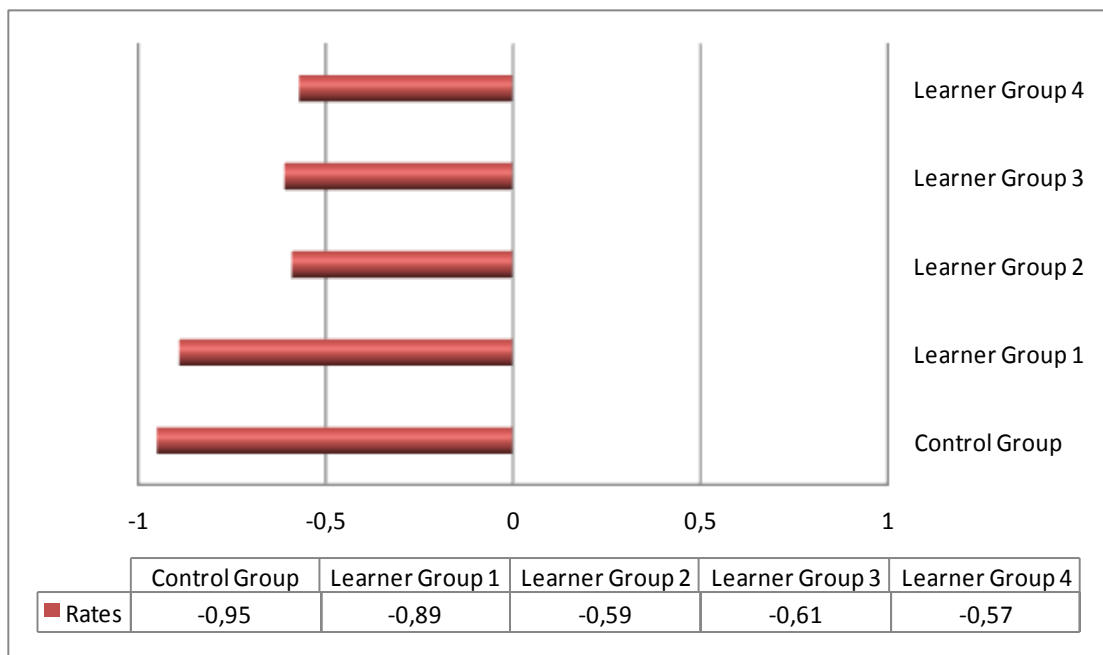


Figure 5. The Grammaticality Judgment Task results for Sentential Subject Constraint

The results for the Sentential Subject Constraint violations are very similar to the ones for the Wh-Island and Complex NP Constraint violations. The difference between the performances of the First Learner Group and the Native Control Group was insignificant according to the Mann-Whitney U Test: ( $U=701,5$ ,  $p=0,755$ ). This means that just like for the Wh-Island and Complex NP Constraints, highly proficient L2 learners of English who are exposed to positive evidence in this language sufficiently

can perform as well as the L1 speakers of this language as long as the Sentential Subject Island violations are concerned, which is another finding that stands against the Interpretability Hypothesis.

The performances of other three groups were relatively lower than these two groups and they are similar to one another. The Turkish L2 learners of English who are in high proficiency level in English and who are not exposed to positive evidence adequately in the target language could not perform as well as the native control group and the advance level L2 learners who are exposed to positive evidence in the target language. The differences are significant as well: ( $U=234$ ,  $p=0,001$ ) compared to the Native Control Group and ( $U=119.5$ ,  $p=0,001$ ) compared to the First Learner Group. Getting insufficient amount of natural input in the target language hindered their performance on the test items that focus on Sentential Subject constraint, just like for the Wh-Island and Complex NP Constraints. They could get slightly higher scores compared to the lower proficiency groups, which is not statistically significant: ( $U=199$ ,  $p=0,772$ ) compared to the Second Learner Group and ( $U=270$ ,  $p=0,549$ ) compared to the Fourth Learner Group. It means that they acted like a low proficiency group while dealing with the test items on Sentential Subject Constraint.

#### **4.1.5. Grammaticality Judgment Task Results for Adjunct Island Constraint**

Five test items contained Adjunct Island violations in the Grammaticality Judgment Test. In these test items, the wh-elements originate in the adjunct clauses and move to spec CP positions of the matrix clauses, violating the Adjunct Island Constraint. The Kruskal-Wallis H test showed that there was a significant difference among the groups ( $H(4)=18.071$ ,  $p=0.001$ ), with a mean rank of 74.14 for the Control Group, 94.92 for the Learner Group 1, 46.48 for the Learner Group 2, 76.15 for the Learner group 3, and 92.10 for the Learner Group 4. The performances of the groups for these test items in (-1) – (+1) scale are given below. In this scale, getting closer to (-1) indicates that the participants regarded the test items as grammatically unacceptable, whereas getting closer to (+1) means that they assessed these test items as grammatically acceptable.

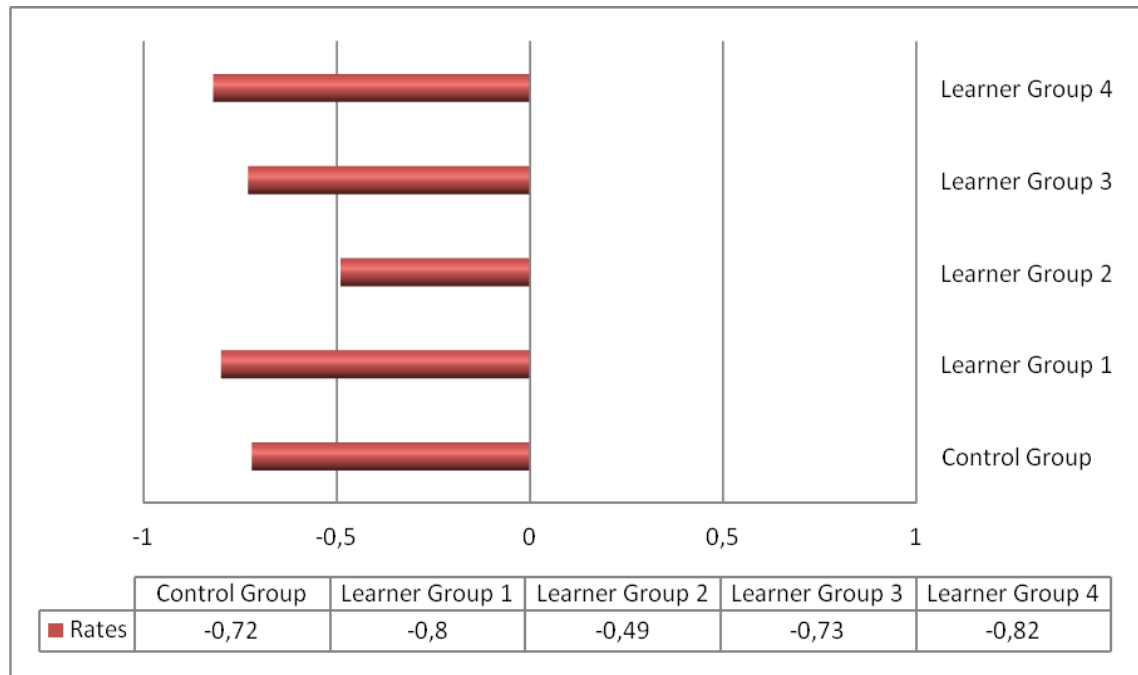


Figure 6. The Grammaticality Judgment Task results for Adjunct Island Constraint

The results obtained for these test items differ remarkably from the ones obtained for the other three target island constraints. Surprisingly, the native control group got lower scores than three learner groups: Learner Group 1, Learner Group 3, and Learner Group 4. When the performances of the groups are compared individually, the difference between the Control Group and First Learner Group should be examined cautiously. According to the Mann-Whitney U test results, there was little difference between these two groups since the result is just below the alpha point: ( $U=530$ ,  $p=0,048$ ). As for the comparison between the Control Group and the Third Learner Group, there was no significant difference between these two groups ( $U=552,5$ ,  $p=0,749$ ).

While the low scores of the Control Group is not significant compared to Learner Group 3, and slightly significant compared to Learner Group 1, they still attract attention. Since the first learner group members performed very similar to native control groups in the test items focusing other target island constraint, their higher scores is not surprising. However, the participants in the Third Learner Group had performed rather poorly in the other island constraints and their relatively high performance is remarkable.

What is more striking in the data above is the performance of the Forth Learner Group members, the low proficiency group who were not exposed to positive evidence in a naturalistic learning environment in the target language sufficiently. Surprisingly, this low proficiency group had the best performance on these test items. Though the difference is not significant, they could get scores higher than the Native Control Group, First Learner Group and the Third Learner Group: ( $U=657$ ,  $p=0,056$ ), ( $U=351.5$ ,  $p=0,679$ ) and ( $U=227.5$ ,  $p=0,142$ ) respectively.

The reason for this high performance might be related with the nature of Adjunct Island Constraint. The native speakers of English might have considered the possibility that the *wh*-words would be adjoined to the matrix clauses as well as the subordinate clauses in these test items. As they can analyze their mother tongue more flexibly, they might have thought that adjoining the *wh*-words to the matrix clauses would be discursively possible in English. That might be the reason why they assessed these test items grammatically more acceptable compared to other test items which focus on other island constraints. That is to say, they might have considered the option that the target *wh*-words were adjoined to the matrix clauses, which do not violate the Adjunct Island Constraint, at all. Though this option produces sentences which are not grammatically acceptable, the mother tongue users must have thought that they are, in a way, discursively possible. On the other hand, the Learner Groups must have skipped this option, and they must have taken into account the only possibility: adjoining the *wh*-words to the subordinate clauses. That might be the reason for the fact that they performed better than the native speakers of English in these test items.

Support for this claim comes from Keller (2000) and Sorace and Keller (2005). As Keller (2000) claims, the intuitive judgments of native speakers in grammaticality judgment tests may show divergence in accordance with the type of constraint violated in the sentence. As he expresses, there are two constraint types: soft constraints and hard constraints. Soft constraints lead to mild unacceptability when violated, while hard constraint violations trigger serious unacceptability (p.3). In the same vein, Sorace and Keller (2005) put forward that soft constraints are subject to context effects, while hard constraints are immune to context effects (p.14). They further point out that hard



constraints violations are equally unacceptable in all contexts, while soft constraint violations are context-dependent, that is, the degree of unacceptability triggered by a soft constraint violation can change from context to context. (p. 16). Therefore, it can be deduced that the control group members judged the grammatically unacceptable adjunct island violations as contextually possible, viewing them as mild constraint violations.

## 4.2. FINDINGS FOR THE WH-QUESTION FORMATION TASK

The results for the Wh-Question Formation Task are presented below in tables. The Kruskal Wallis H Test and Mann Whitney U Test results are also given to indicate the significance differences among the groups.

### 4.2.1. The Overall Results for the Wh-Question Formation Task

The Table below demonstrates the overall results for the Wh-Question Formation Task.

*Table 2. The overall results for the Wh-Question Formation Task*

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	1156	173	177	392	584
Island Violations	19	1	6	27	24
Percentage of island violations to total responses	1,64%	0,57%	3,38%	6,88%	4,10%

The Kruskal-Wallis H test showed that there was a significant difference among the groups ( $H(4)=20.493$ ,  $p=0.001$ ), with a mean rank of 53.84 for the Control Group, 47.33 for the Learner Group 1, 72.72 for the Learner Group 2, 85.93 for the Learner group 3, and 69.30 for the Learner Group 4.

Since the number of the participants in the group varied, the number of island violations made by the groups is not sufficiently informative. In order to be able to make correct

comparisons among the groups, the percentages of the island violations to the total responses given by the group members should be taken into account. In this respect, the most successful group in the wh-question formation task appears to be the First Learner Group: the Turkish people living in USA who had high proficiency in English. Only one island violation was observed in the responses of the participants in this group, which makes the 0,57 per cent of the total responses. The same percentage for the control group members is 1,67. The Mann-Whitney U test results showed that the difference between these two groups is not statistically significant: (U=237, p=0,509). It means that the participants in the First Learner Group became as successful as the native speakers of English. Though statistically not significant, they could even perform slightly better than the mother tongue speakers, which is an important finding of the study.

As for the other groups, they appear to be relatively less successful compared to these two groups. Their performances are significantly worse than the native control group, as presented below:

The Control Group & Learner Group 2: (U=178, p=0,041).

The Control Group & Learner Group 3: (U=288, p=0,001).

The Control Group & Learner Group 4: (U=661, p=0,019).

It is not surprising that the participants in Learner Group 2 and Learner Group 4 performed relatively poorer compared to the English Control Group. Since these participants are not fully proficient in the target language, their relatively poor performance is something expected. As Full Transfer / Full Access Hypothesis puts forward, these participants are still using the parameter values of their mother tongue as they have not reset these values in their L2 acquisition process. They seem to be under the influence of their first language while dealing with the target language structures.

What is surprising in the results is the performance of the participants in the Third Learner Group. Though these participants are highly proficient in the target language according to the results of Michigan Placement Test, they performed significantly worse

than English Control Group ( $U=288$ ,  $p=0,001$ ), and First Learner Group ( $U=34$ ,  $p=0,007$ ). Moreover, although it is not statistically significant, they got even lower scores compared to low proficiency groups: ( $U=67$ ,  $p=0,295$ ) compared to Learner Group 2, and ( $U=222.5$ ,  $p=0,101$ ) compared to Learner Group 4. The reason for this low performance can be related with two factors: The first one is that they are not exposed to enough positive evidence in a naturalistic learning environment in the target language, and therefore they have problems in dealing with poverty of stimulus structures like island violations. That is why they performed worse than the English Control Group and the learner groups that are exposed to positive evidence in a naturalistic learning environment in the target language. The second reason for their poor performance might be that they feel themselves competent enough to deal with complex syntactic structures in the target language, yet their insufficient exposure to positive evidence in a naturalistic learning environment caused them to produce more ungrammatical sentences. That is why they performed worse than the Fourth Learner Group. The number of the complex wh-questions produced by these two groups support this claim. While the 70,5 per cent of the responses produced by the participants in the Third Learner Group were complex wh-questions, the same percentage for the participants in the Fourth Learner Group is only 43,3. That is to say, the participants in the high proficiency group make more daring attempts to deal with complex sentence structures, yet they failed more in their attempts.

#### **4.2.2. Wh-Question Formation Task Results for Wh-Island Constraint**

The following table displays the results for the test items that focused on wh-island constraint in the Wh-Question Formation Task.

*Table 3. The Wh-Question Formation Task results for Wh-Island Constraint*

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	287	43	44	98	139
Island Violations	10	0	2	9	10
Percentage of island violations to total responses	3.4%	0	4.54%	9,18%	7.19%

The results for the Wh-island Constraint are in parallel with the overall results for the Wh-Question Formation Task. The First Learner Group made the best performance in the task without violating any island structures in the 43 wh-questions they formed. The Control Group members performance is lower than this group: 3,4 per cent of the responses produced by the native speakers of English contained island violations. The difference between these groups is not statistically significant: (U=220, p=0,208).

The Third and Fourth Learners Groups made more island violations compared to other groups. The participants in these groups live in Turkey and in their L2 acquisition process; they are not exposed to enough positive evidence in a naturalistic learning environment in the target language. Yet, both Kruskal Wallis and Mann Whitney U test results showed that none of the differences among the groups are statistically significant. Therefore, it is not possible to make some claims on the importance of being exposed to positive evidence in a naturalistic learning environment in the target language, just leaning on these data. However, since the difference between the performances of the Control Group and the learner groups are not significant, these data stands against the Interpretability Hypothesis firmly and it is totally against the predictions of the Interpretability Hypothesis.

#### **4.2.3. Wh-Question Formation Task Results for Complex NP Island Constraint**

The table below demonstrates the results for the test items that focused on Complex NP Island violations.

*Table 4. The Wh-Question Formation Task results for Complex NP Island Constraint*

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	290	43	45	99	148
Island Violations	9	1	4	6	12
Percentage of island violations to total responses	3.1%	2.32%	8.88%	6,06%	8.10%

The control group members and the participants in the first learner group performed slightly better than the ones in the other groups. Only 3,1, and 2,32 per cent of the responses produced by these participants contained island violations. The third learner group, which is formed by highly proficient L2 learners of English who are not exposed to enough positive evidence in a naturalistic learning environment in the target language, performed worse than the native control group and the L2 learners who are exposed to positive evidence in the acquisition process. The low proficiency groups performed worse than the other groups as expected, but all in all their performance cannot be underestimated altogether when their proficiency level in the target language is taken into account.

The Kruskal-Wallis H test showed that the difference among the groups was not statistically significant: ( $H(4)=7.461$ ,  $p=0.113$ ), with a mean rank of 57.77 for the Control Group, 56.72 for the Learner Group 1, 71.67 for the Learner Group 2, 68.15 for the Learner group 3, and 71.07 for the Learner Group 4. The Mann-Whitney U test results also showed that only the participants in the Fourth Learner Group performed significantly worse than the Control Group members: ( $U=688$ ,  $p=0,020$ ). The difference between other learner groups and the English Control Group is not significant at all. These results are also against the predictions of the Interpretability Hypothesis, since the participants in the learner groups performed as well as the ones in the native control group.

As it can be noticed, the results for the Wh-Island Constraint and Complex NP Constraint in the Wh-Question Formation Task show divergence compared to that of

Grammaticality Judgment Test. That is, while lower proficiency groups performed significantly worse than the Control Group members and First Learner Group members on these constraints in the GJT, their performance is not statistically different from that of native speakers and First Learner Group members in Wh-Question Formation Task. The reason for this situation might be related with the nature of the tasks: one of them is a judgment test, whereas the other one is a production task. While the Control Group and First Learner Group members got higher scores compared to other group members in the Wh-Question Formation Task just like in Grammaticality Judgment Test, the differences are not big enough to be statistically significant. All in all, these data are totally against the basic prediction of the Interpretability Hypothesis: that the difference between the performances of native speakers and L2 learners should be significant in all proficiency levels.

#### 4.2.4. Wh-Question Formation Task Results for Sentential Subject Constraint

The Table below shows the results for the test items that focused on Sentential Subject Constraint in the Wh Question Formation Task.

*Table 5. The Wh-Question Formation Task results for Sentential Subject Constraint*

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	289	44	44	98	150
Island Violations	0	0	0	10	0
Percentage of island violations to total responses	0	0	0	10,2%	0

The results for the Sentential Subject Constraint is remarkably different compared to the ones for the Wh-Island Constraint and Complex NP constraint. Four groups completed the task without violating the target island structures. The participants in the Third Learner Group were the only ones who committed island violations in the task, and their performance is remarkably poor. They made 10 sentential island constraint violations out of 98 responses, which is rather note-worthy. The Kruskal-Wallis H test also

showed that this difference was statistically significant: ( $H(4)=38.939$ ,  $p=0.001$ ), with a mean rank of 60.00 for the Control Group, 60.00 for the Learner Group 1, 60.00 for the Learner Group 2, 82.05 for the Learner group 3, and 60.00 for the Learner Group 4. The Mann-Whitney U test results also showed that the participants in the third learner group performed significantly worse than native control group: ( $U=337$ ,  $p=0,001$ ).

The reason for this low performance of the Third Learner Group members can be related with the fact that they are not exposed to positive evidence in a naturalistic learning environment in the target language sufficiently; yet, they feel themselves competent enough in English to deal with complex syntactic structures. They might be failing in their attempts for setting up wh-questions that contain one or more embedded clauses. The low proficiency groups, on the other hand, might not be so persistent while dealing with complex syntactic structures. It can also be deduced that they produce complex wh-questions in English under the influence of their mother tongue. In Turkish, sentential subject constraint is not violated when the wh-elements are moved to Spec CP positions of the matrix clauses from the sentential subjects where they originate. These might be the reasons for the case that they committed 10 sentential subject violations in this task.

As for the Interpretability Hypothesis, these results are also against the predictions of this hypothesis. Three learner groups performed as well as the control group. Especially the consistent performance of the participants in the first learner group stands against this hypothesis. Just like in the previous test items that focus on other island constraints, these participants performed as well as the native control group members in the test items that focus on Sentential Subject Constraint violations as well.

#### **4.2.5. Wh-Question Formation Task Results for Adjunct Island Constraint**

The following table demonstrates the results for the Adjunct Island Constraint in the Wh-Question Formation Task.

*Table 6. The Wh-Question Formation Task results for Adjunct Island Constraint*

	Control Group	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	290	43	44	97	147
Island Violations	0	0	0	2	2
Percentage of island violations to total responses	0	0	0	2,06%	1.36%

Three groups completed the Wh-Question Formation task without violating the Adjunct Island Constraint. These groups are the native control group and the groups which are exposed to positive evidence in a naturalistic learning environment in the target language by living in USA. The other two group members who live in their home country while acquiring English performed relatively worse than other three groups. Though only 2,06 and 1,36 percent of their responses contained the violations of the target island structure, the differences are still statistically significant according to the results of the Mann-Whitney U Test, as given below:

The Control Group & Learner Group 3: (U=522, p=0,015).

The Control Group & Learner Group 4: (U=812, p=0,048).

Their relatively poor performance can be directly linked to being exposed to insufficient amount of natural input in the target language. Especially, when we take into account the fact that the participants in the Third Learner Group are highly proficient in the target language, they would be expected to perform better. However, their performance was even worse than the ones who have low proficiency in English but who are exposed to positive evidence in this language by living in a place English is spoken as a mother tongue.

In turn to the Interpretability Hypothesis, it is refuted in these results as well. Specifically, the participants in the First Learner Group, performed as well as the ones in the native control group, just like in the other test items on other target island constraints.



#### **4.2.6. Avoidance Strategies Used by the Participants not to violate the Island Structures**

As the results of the study suggests, the great majority of the participants in all groups completed the wh-question formation task without violating the target island structures. The participants violated the target island constraint most were in the Third Learner Group. 6,88 per cent of the wh-questions formed by them contained island violations. This means that in 93,22 per cent of their responses, they could develop a strategy to escape violating the island structures, which is a remarkably high percentage. The other groups performed even better than this group, and this reveals that just like native speakers, L2 learners can avoid violating the target island constraints rather successfully. Yet, the question that arises is what kind of avoiding strategies they develop to escape island violations. In this part, these avoiding strategies are analyzed in detail. In the wh-question formation task, four avoiding strategies were observed.

##### **4.2.6.1. Providing a Short Response with a Simplex Clause**

A considerable number of participants formed simplex wh-questions and this is the most commonly used avoiding strategy. The participants might have recognized that forming a complex wh-question would have caused ungrammaticality with the use of the given wh-element. Hence, they might have produced just simplex wh-questions in order not to violate any island structure. However, the issue is not that straightforward. All of the short simplex clauses might not be formed for this reason. As it is well-known, forming a simplex clause is far easier than setting up a complex one. Though they had been required to set up full complex wh-questions for the test items, they might have set up simplex wh-question just for their easiness. All in all, since they escaped violating the island structures, using simplex wh-questions in the task can be viewed as an avoidance strategy used by the participants. Test Item 12 is given below to exemplify the use of this avoidance strategy by the participants.

TEST ITEM 12:

*Luke: Where was Peter last night?*

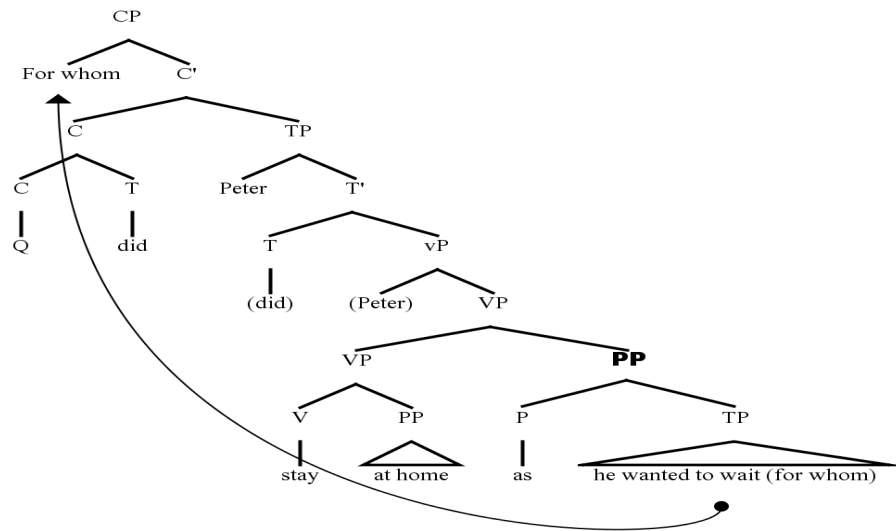
*Andrew: He stayed at home to wait for Ashley. She came home late last night.*

*Luke: Oh. I see.*

12- For whom .....

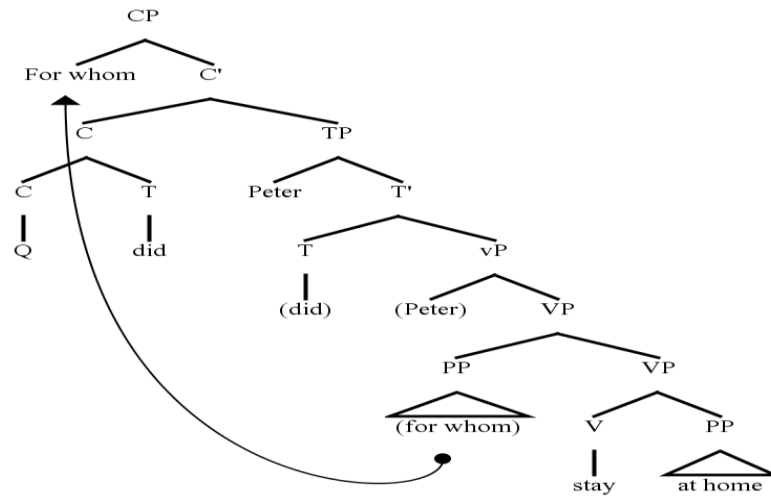
Peter stayed at home as he wanted to wait for Ashley.

In this test item, the participants are directed to set up a wh-question like “For whom did Peter stay at home as he wanted to wait?” Such a wh-question violates the Adjunct Island Constraint. The tree diagram for this sentence is given below:



The wh- elements, ‘for whom’ originate within the adjunct embedded clause and move to the spec CP position of the matrix clause for checking purposes, but such a movement is prohibited by the Adjunct Island Constraint. The PP that exists in the highest node of the embedded clause prohibits the movement of the wh-elements to a higher node.

However, instead of forming this interrogative sentence, the participants may prefer to set up a simplex wh-question like “For whom did Peter stay at home?”, which does not violate any island structure.



As it is seen in the tree diagram, there is not any embedded adjunct clause in the sentence. Hence, the Adjunct Island Constraint is not a problem for the movement of the wh-elements to the spec CP position.

The following sentences taken from the responses of the participants exemplify the use of this avoidance strategy in other test items:

- What made Matthew so angry?
- Why did Nigel buy the new sports car?
- What was Mary wondering?
- Why had Tom left his room?
- Why won't Andrew sit in the front seat?
- Where did Helen meet the boy?
- What did Sarah love?

The sentences above do not contain any subordinate clause and they have got simplex structure. Since the target island constraints can only be observed on complex wh-questions, these sentences are out of question so long as these island constraints are concerned. That is to say, forming simplex wh-questions is a reasonable way to avoid violating the target island structures.

4.2.6.2. Changing the Context

Changing the context was another avoiding strategy that was applied by the participants frequently. Instead of leaning on the context provided for them, they made some changes on it in order to escape violating the target island constraints. The first test item is given below as an example:

TEST ITEM 1:

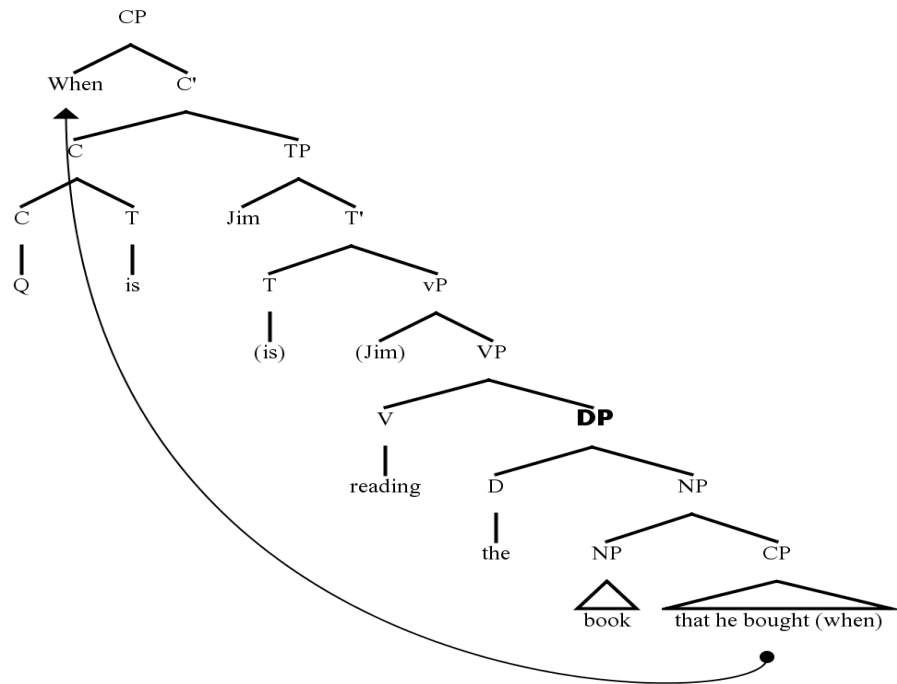
*Thomas: What is Jim doing right now?*

*Sue: He is reading a book. He bought it yesterday.*

1- When .....

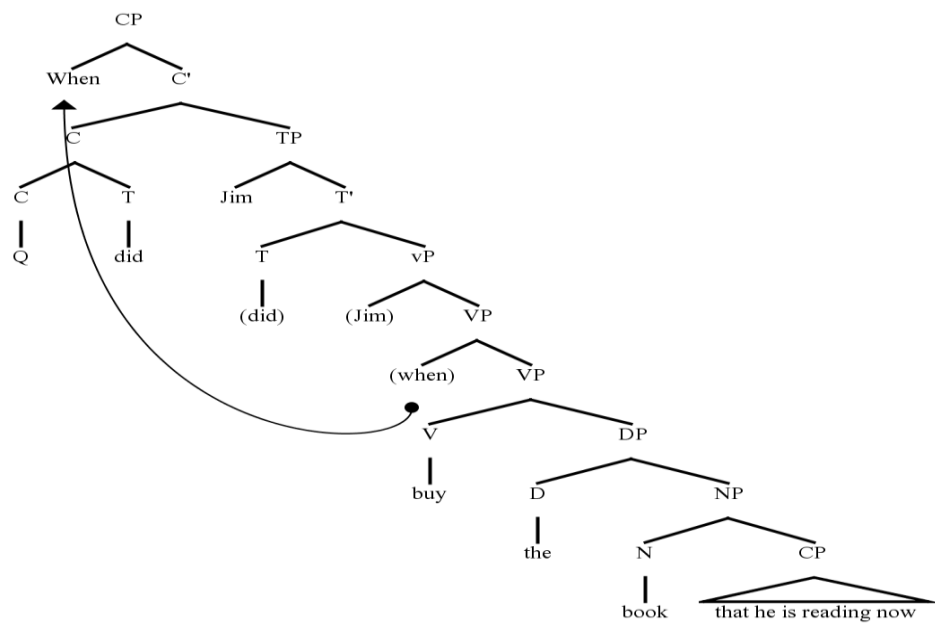
Jim is reading the book which he bought yesterday.

In this test, the participants are directed to form a wh- question like “When is Jim reading the book that he bought?” Forming such a sentence violates the Complex NP Constraint, as seen in the tree diagram below:



The wh-word, when, originates within the lower CP and moves directly to the spec position of the Matrix CP. However, it has to pass the DP node that exists above the lower CP. This node prohibits the movement of any of the constituents that it c-commands. Therefore, this movement violates the Complex NP Constraint.

However, some participants changed the context of the test item in order to escape violating this island constraint. They formed a wh- question like “When did Jim buy the book that he is reading now?”



After making this structural change in the test item, no island constraint is violated. In the derivation above, the wh-word, when, adjoins to the Matrix VP and then moves to the Matrix spec CP without confronting any island structure. However, this response is not a valid one for the given context. That is to say, they made a contextual reorganization on the test item and provided a response for a different context.

The following grammatical sentences on which the same avoidance strategy was applied are taken from the responses of the participants.

- Where did Helen meet the boy she's talking to?

- Why was it obvious that Nigel bought the new sports car?
- With whom did George claim that he was not together?
- Why had Tom been in his room before he went out?
- When his father died how did Mike feel?

In all of these example sentences, the participants changed the structure of the given context in order to escape violating the target island constraints.

#### 4.2.6.3. Parting the Sentence into Two with the Use of ‘And’ Conjunction

In order to avoid violating the island structures, some participants produced two simplex wh-questions connected with ‘and’ conjunction, instead of producing a complex wh-question that contains embedded clauses. Test Item 4 is given below to exemplify the use of this strategy:

##### TEST ITEM 4:

*Jack: We are all angry with Sue!*

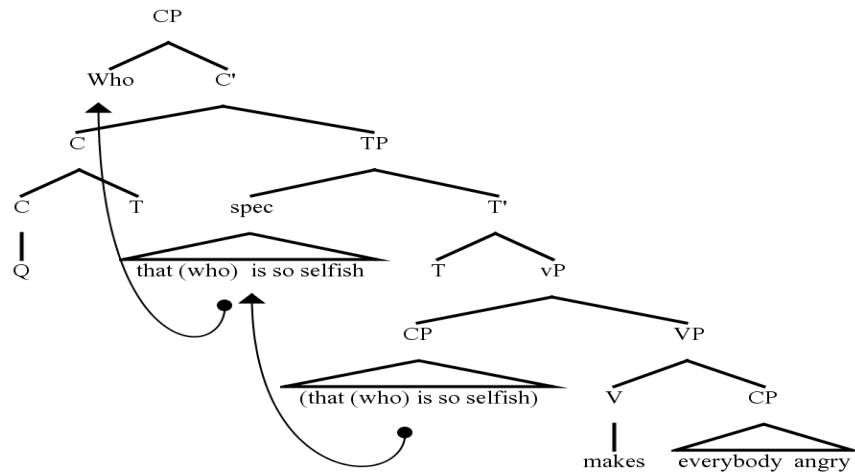
*Carl: But why?*

*Jack: Because she is always very selfish.*

4- Who .....

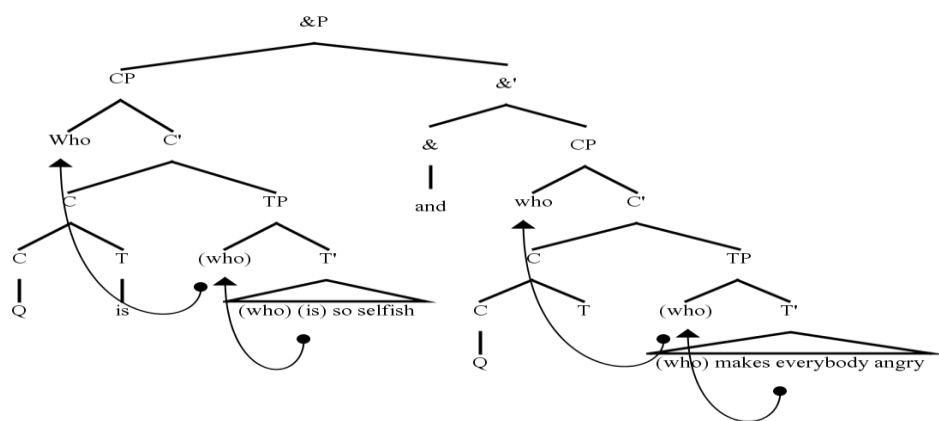
That Sue is so selfish makes everyone angry.

In this test item, the participants are directed to form a wh- question like “Who that is so selfish makes everybody angry?” When they form such a wh-question, they violate the Sentential Subject Constraint, as demonstrated in the tree diagram below:



The wh-word, who, originates within the sentential subject, and from there, it moves to the Matrix spec CP position. This movement results in ungrammaticality as Sentential Subject Island is violated.

In order to escape violating this island constraint, some of the participants divided the required wh-question into two by connecting these parts with ‘and’ conjunctions. They formed wh-questions like “Who is so selfish and makes everyone angry?” or “Who is so selfish and who makes everyone angry?”



The wh-words that originate within the coordinate structures move to the spec CP positions of their clauses without violating the Sentential Subject Constraint. Hence, the participants who form such an interrogative sentence can successfully avoid violating

this island constraint. This strategy is further exemplified in the following wh-questions which were selected from the responses of the participants.

- Who is so selfish and makes everyone angry?
- Where was Mark watching TV and where was his sister sleeping?
- Who is mad and why are they mad?
- With whom was George with yesterday and who told you?
- For whom did Peter stay up and wait?
- When will Anthony graduate and make his parents happy?
- Where did Mark watch TV and what was his sister doing?

In all of these wh-questions, the ‘and’ conjunctions are used to avoid violating the target island structures.

#### 4.2.6.4. Deleting the Item(s) that Causes Island Violation

Deleting the item(s) that causes island violation is another strategy used by the participants in the wh-question formation task. This strategy is mainly appropriate for Complex NP Island violations. The NP’s that exist in the highest node of the subordinate clauses act as barriers for the movement of the wh-elements from the subordinate clause to the Spec CP position of the matrix clause. Hence, deleting this NP is a plausible strategy to avoid making such a violation. Test Item 11 is given below as an example:

#### TEST ITEM 11:

*Peter: George said that he did not see Becky anywhere.*

*Carla: Did he say so? But, one of my friends told me that he saw them together in a café yesterday*

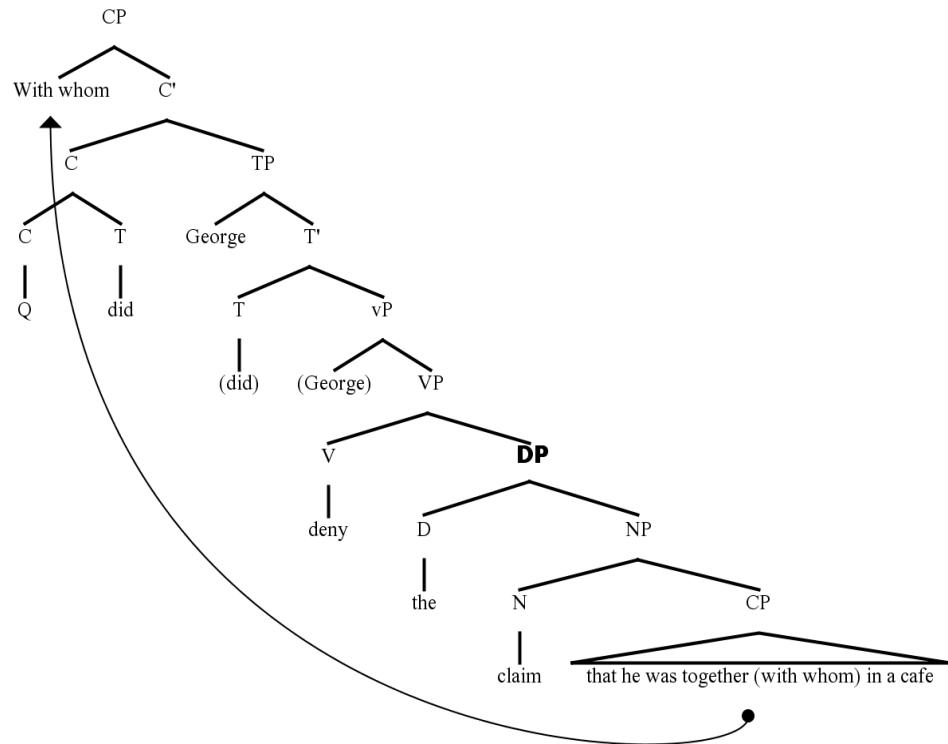
*Peter: Well, this is what he said to me.*

11- With whom .....

George denied the claim that he was together with Becky in a cafe.



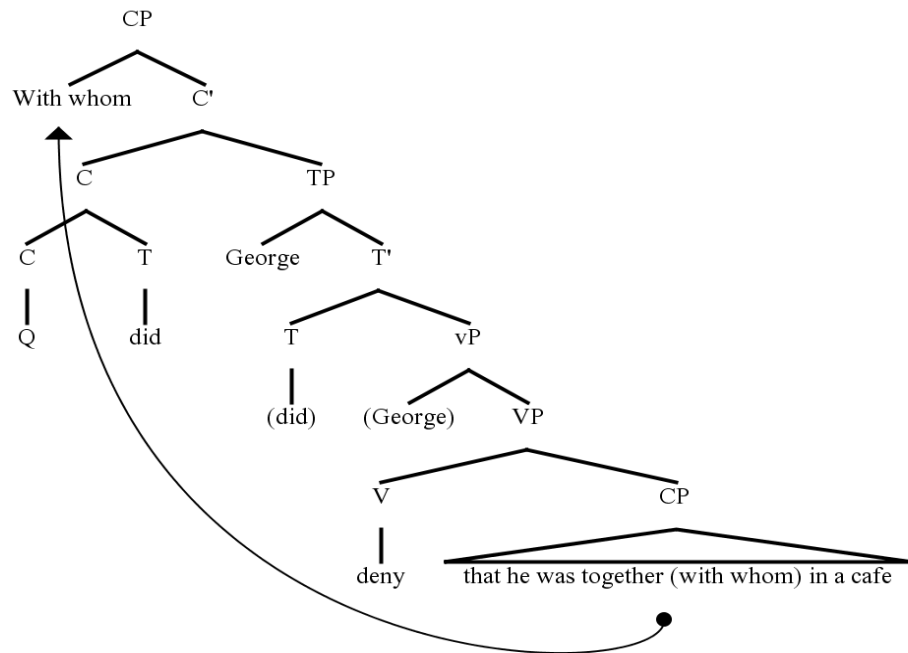
In this test item, when the participants set up a wh-question like “With whom did George deny the claim that he was together in a café?”, they violate the Complex NP Island Constraint. The DP, “the claim”, act as a barrier for the wh elements, “with whom”, to move from their original places to higher nodes in the derivation, as shown in the diagram below:



When this DP is deleted, the sentence does not violate the target island constraint.

Therefore, when the participants form a wh-question like “With whom did George deny that he was together in a café?”, they successfully avoid violating this island constraint.

The tree diagram of this sentence is presented below:



Since the sentence does not contain any DP's that c-command the embedded clause, the movement of the wh-words to the sentence initial position does not violate the target island constraint any more. In the following examples which are taken from the responses of the participants the same strategy was used.

- Why doesn't Andrew accept that he can't sit in the front seat?
- With whom did George deny being in a cafe?
- With whom did George deny being together in a cafe with?

This avoidance strategy is appropriate for saving Complex NP violations. The sentences given above are grammatically acceptable after the DP's that existed in them were deleted by the participants.

#### 4.2.7. Individual Analysis of Some Salient Items in the Wh-Question Formation Task

In the Wh- Question Formation Task, 77 island violations were observed in total numbers. However, this number is not distributed to all test items equally. It was seen that while participants never violated island structures in many test items, they performed rather poorly in some others. 59 of these island violations were observed in only 6 items. These 6 items are analyzed individually below.

##### TEST ITEM 5

*Ashley: Bill was here a few minutes ago*

*Beth: What did he say?*

*Ashley: He wanted to learn if he could help us in the project.*

Test Item 5. Whom.....?

Bill wondered whether he could help Ashley and Beth in the project.

This test item focuses on Wh-Island Constraint. In total, 23 Island violations were counted in this test item. 9 of these island violations were committed by the native control group, 8 of them were committed by the low proficiency group living in Turkey, 5 of them were committed by the Second Learner Group and 1 of them was committed by the Third Learner Group. These participants produced a response like “Whom did Bill wonder whether he could help?” In this sentence, the wh- word “whether” that exist at the Spec-CP position of the subordinate clause act as a barrier for the movement of the other wh-element, ‘who’, to the matrix Spec-CP position. This test item was violated by more participants compared to other test items. Especially the performance of native speakers is note-worthy. They violated this test item more than others. It seems that they found this sentence acceptable disregarding the weak island violation. The Fourth Group also performed rather poorly in this test item with 8 island violations. The First Learner Group is the only group that never violated the island structure in this test item.

## TEST ITEM 10

*Helen: Do you think that Sarah loved the present?*

*Paige: Certainly. She got very happy when she saw it.*

Test Item 10. What .....

That Sarah loved the present was apparent.

In this test item, the participants are directed to move the DP ‘the present’ to the Spec CP position of the matrix clause violating the Sentential Subject Constraint. They are expected to produce a sentence like ‘What was that Sarah loved obvious?’ Only three participants produced this sentence and interestingly, they are all in the high proficiency group living in Turkey.

## TEST ITEM 11

*Peter: George said that he did not see Becky anywhere.*

*Carla: Did he say so? But, one of my friends told me that he saw them together in a café yesterday*

*Peter: Well, this is what he said to me.*

Test Item.11 With whom .....

George denied the claim that he was together with Becky in a cafe.

In this test item, participants are directed to form a sentence like ‘With whom did George deny the claim that he was together in a café’. This sentence contains Complex NP Island violation since the NP, ‘the claim’ act as a barrier for the movement from the subordinate clause to the Matrix Spec-CP. In total, 9 participants violated this island structure: 3 native speakers, 3 from the Fourth Learner Group, and 1 participant from each of the other three groups. The participants who did not violated the island structure in this sentence, deleted the NP, ‘the claim’ as an avoidance strategy and formed a sentence like ‘With whom did George deny that he was together in a café?’

## TEST ITEM 12

*Luke: Where was Peter last night?*

*Andrew: He stayed at home to wait for Ashley. She came home late last night.*

*Luke: Oh. I see.*

Test Item 12. For whom .....

Peter stayed at home as he wanted to wait for Ashley.

In this test item, the participants are directed to form a sentence like ‘For whom did Peter stay at home as he wanted to wait for?’, which contains an adjunct island violation. Since the subordinate clause ‘as he wanted to wait for Ashley’ is an adjunct to matrix clause, none of the elements in this subordinate clause can be moved upwards. While native speakers and Turkish participants living in USA could avoid violating this island structure, 3 participants living in Turkey could not do so: 2 from the low proficiency group living in Turkey, and 1 from the high proficiency group living in Turkey.

## TEST ITEM 13

*Todd: George lost his wallet.*

*Craig: Really? Where?*

*Todd: He does not know exactly. But it was in his pocket while entering the canteen.*

*Hence, he must have lost it there.*

Test Item 13. Where.....?

That George lost his wallet in the school canteen is obvious.

In this test item, the participants were directed to form a sentence like ‘Where was that George lost his wallet obvious?’ which is another sentential subject violation. According to the Sentential Subject Constraint, elements cannot be moved to matrix spec CP from the sentential subjects. Only five participants who are all in the Second Learner Group committed this island violation. In fact, the performance of this group in all sentential subject structures is relatively poorer than other groups including the low

proficiency group living in Turkey. This is an interesting finding of the study. The reason for this situation might be that they feel themselves sufficient in syntax, yet they were not exposed to in L2 acquisition process sufficiently and they are still severely influenced by their mother tongue.

#### TEST ITEM 23

*Derrick: Andrew cannot sit in the front seat.*

*Raven: Why not?*

*Derrick: Because he is still too young!*

*Raven: But he does not accept it. He says he has already grown up.*

Test Item 23. Why .....

Andrew does not accept the fact that he cannot sit in the front seat because of his age.

This test item focuses on Complex NP Island Constraint. 22 island violations were counted for this test item, which is the second biggest number after the one for test item 5. The distribution of the 22 island violations to the groups is as follows: 6 from the native control group, 8 from the Fourth Learner Group, 5 from the Second Learner Group, and 3 from the Third Learner Group. These participants produced sentences like ‘Why does Andrew not accept the fact that he cannot sit in the front seat?’ violating the Complex NP Island Constraint. Like test item 11, the DP ‘the fact’ act as a barrier for the movement from the subordinate clause to Matrix Spec CP. It was observed that only the participants in the First Learner Group did not violate this island structure.

### 4.3. FINDINGS FOR THE TRANSLATION TASK

The Translation Task was only given to the participants in the learner groups since control group members cannot speak any Turkish. The following results were obtained for this task.

### 4.3.1. The Overall Results for the Translation Task

The following table displays the overall results for the Translation Task.

*Table 7. The overall results for the Translation Task*

	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4
Number of Responses	192	121	305	572
Island Violations	2	4	18	30
Percentage of island violations to total responses	1,04%	3,30%	2.20%	5.24%

The Table above displays the number of the island violations made by the participants during the translation process. Since the number of the participants who took part in the task was not equal, these numbers are not sufficiently informative unless their percentages to the number of the responses are taken into account. That is to say, in order to be able to make certain comments on the performance of the participants in the translation task, the percentages for the number of the island violations to the number of the total responses should be analyzed, which are given in the last column.

The results show that all groups were rather successful in the Translation Task. The participants in Learner Group 4 made the worst performance in the study, yet the percentage of the island violations committed by them is only 5,24. This means that they could successfully translate the Turkish sentences into English without violating any island structure with 94,76 per cent success, which is in fact rather successful. The First Learner Group members had the best performance in the Translation Task. Only, 1,04 per cent of their responses contained island violations. The participants in the third and second learner groups followed them. Only 2.20 and 3.30 per cent of their responses contained island violations respectively. The Kruskal-Wallis H Test results showed that there was not any significant difference among the groups ( $H(3)=5.518$ ,  $p=0.138$ ), with a mean rank of 26.08 for the Learner Group 1, 30.72 for the Learner Group 2, 37.05 for the Learner group 3, and 39.50 for the Learner Group 4.

Although the results obtained in the Translation Task go hand in hand with the ones obtained for the Grammaticality Judgment Test and Wh-Question Formation Task to a great extent (in that First Learner Group got higher scores compared to other learner groups), they do not directly support or refute the Interpretability Hypothesis since there was not a control group for this task. The control group members did not have any knowledge on Turkish; hence this task was not given to them. The reason for the application of this task was to compare the learner groups with one another to get data on the importance of (not) being exposed to positive evidence in a naturalistic learning environment in the target language.

When the performances of the four learner groups are compared, it is observed that the First Learner Group members got higher scores than the Third Learner Group members and the Second Learner Group members got higher scores than the Fourth Learner Group members. These results are consistent with the claim on the importance of positive evidence in L2 acquisition process. Yet, according to the non-parametric test results, the differences are not statistically significant. This might be again related with the nature of the task: it is a production task, and in production tasks it might be difficult to obtain significant differences among groups. All in all, the magnitudes obtained in the test are still very valuable. If one group produces sentences which contain less island violation than another group, this is still a valuable finding, and the data obtained from this task can be assessed as a weak support for the importance of positive evidence which L2 acquirers are exposed to in a naturalistic learning environment in their L2 acquisition process.

#### **4.3.2. The Distribution of the Island Violations to the Groups**

The following Table demonstrates the distribution of island violation types to the groups.



*Table 8. The distribution of the island violations to the groups*

	Learner Group 1	Learner Group 2	Learner Group 3	Learner Group 4	TOTAL
Wh-Island Constraint	1	0	5	1	7
Complex NP Constraint	0	0	1	2	3
Sentential Subject Constraint	0	4	10	25	39
Adjunct Island Constraint	1	0	2	2	5

The distribution of the island violation types to the groups reveal that the target island constraints are not equally problematic for L2 learners. The great majority of the island violations were observed on the sentences that focus on Sentential Subject Constraint. 39 of the total 54 island violations were sentential subject violations and 35 of these violations were done by the participants in the Third and Fourth Learner Groups, the ones who learn English in their home country without being exposed to positive evidence in a naturalistic learning environment in this language adequately.

Specifically, the participants in the Fourth Learner Group performed remarkably poor on these test items. Compared to the participants in the First Learner Group, their performance is significantly worse according to the Mann-Whitney U Test: ( $U=102$ ,  $p=0,03$ ). This is one of the most striking findings of the study. The reason for this result may be linked with the mother tongue influence on these participants. The wh-elements can be extracted out of sentential subjects without causing any ungrammaticality in the sentence in Turkish. While making transitions from their mother tongue to English, these participants may be influenced by their mother tongue immensely. It is true that Turkish and English differ from each other in other island constraints as well; yet as the data suggest, the mother tongue influence on these participants was more visible on the movement of wh-elements out of sentential subjects. Although the other target island constraints were not much problematic for the participants who are not exposed to positive evidence in a naturalistic learning environment in the target language

adequately, Sentential Subject Constraint seems to be rather problematic for them. The parameter values of their mother tongue seem to have influenced their performance on wh-extractions out of sentential subject while making translations from Turkish into English. The participants in the First Learner Group did not make any sentential subject violations. This shows that participants with high proficiency in English who are exposed to positive evidence in a naturalistic learning environment in the target language do not use the parameter values of their mother tongue any more. They can successfully deal with wh-extractions out of sentential subjects in the target language without violating this constraint. This situation again reveals the importance of being exposed to positive evidence in a naturalistic learning environment in the target language.

As for the other target island constraints, they do not seem to be problematic for any of the groups much since they made only a few island violations on these constraints.

#### **4.3.3. Avoidance Strategies Used by the Participants not to Violate the Island Structures**

As in the Wh-Formation Task, majority of the responses given by the participants did not contain any island violations. In the Translation task, the syntactic equivalences of the Turkish sentences in English were containing island violations. Hence; while making transitions from their mother tongue into English, the participants had to use some avoidance strategies to escape producing ungrammatical sentences as well. The following avoidance strategies were observed in the Translation Task.

##### **4.3.3.1. Pied-Piping**

Pied-piping is a syntactic application which takes place when not only the target element but also the whole clause in which it originates is moved to the desired node. In wh-movement case, not only the wh-items but also the whole clause in which the wh-items take place is moved to the spec CP position of the matrix clause for checking purposes.

In the Translation Task, pied-piping was one of the most frequently used avoidance strategy to escape making island violations. The first test item is given below to exemplify the use of this avoidance strategy.

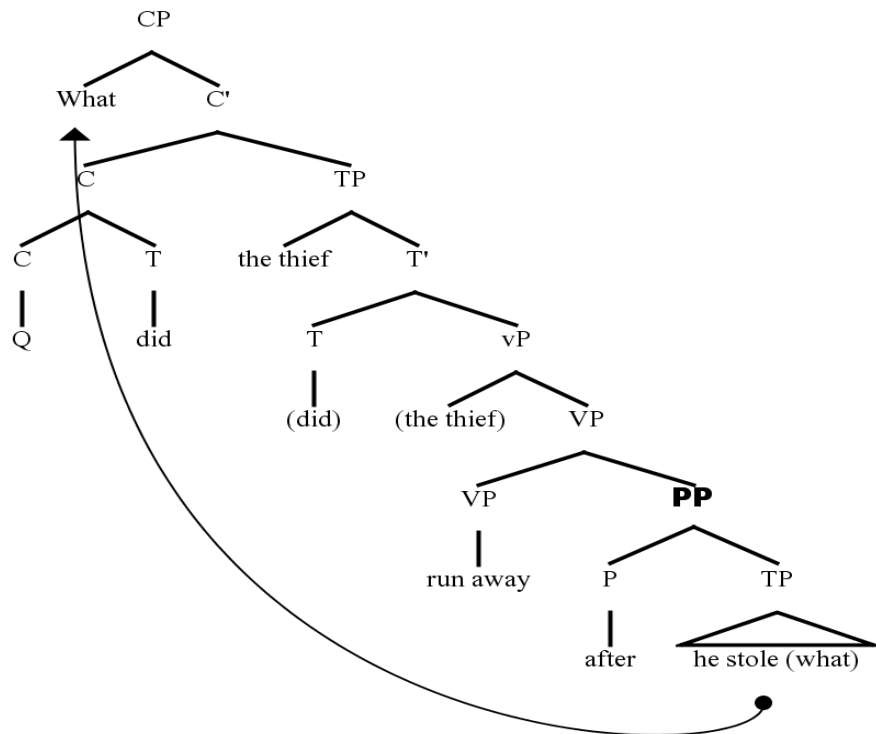
TEST ITEM 1

Hırsız neyi çaldıktan sonra koşarak uzaklaştı?

Thief what-ACC steal-NOM-ABL after run-MADV become distant-PAST

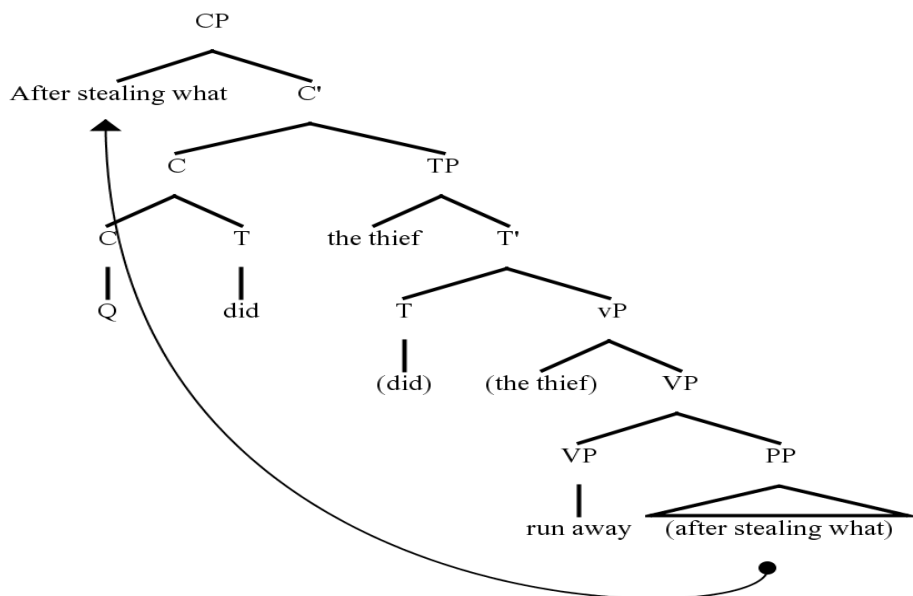
\* “What did the thief run away after he stole?”

The exact syntactic equivalence of this Turkish sentence in English is “What did the thief run away after he stole?” Though the Turkish sentence does not contain any island violation, its English correspondence contains Adjunct Island Constraint violation. Therefore, when the sentence is translated into English in this way, this island constraint is violated. The tree diagram of this sentence is given below:



The wh-word, when, originates within the adjunct clause and moves to the spec CP position of the matrix clause to check its wh-features. However, this movement is prohibited by the Adjunct Island Constraint since the wh-word has to pass the PP that act as a barrier for its movement.

Some participants, however, used the pied-piping avoidance strategy in order not to produce ungrammatical sentences. They translated this Turkish sentence into English as “After stealing what did the thief run away?” That is to say, they moved not only the wh element ‘what’ but also the whole clause in which it originates to the spec CP position of the matrix clause. Since the whole adjunct clause is moved to the upper node, Adjunct Island Constraint is not violated in this sentence, as seen in the tree diagram below:



Whole adjunct clause is moved to the spec CP position of the matrix clause, therefore the Adjunct Island Constraint is not violated in the derivation. Pied-piping avoidance strategy was also used in the following sentences taken from the responses of the participants:

- After seeing whom did Meral start crying?
- What claim on where Ayşe got lost doesn't Cem believe?

- What location that Ahmet fell asleep made you mad?
- What did you put where claims Meral?
- Who bought what does Tolga think?
- After what he stole did the thief run away?
- Zeynep's reading what made everyone surprised?

In all of these translations, not only the wh-elements, but also the whole clauses in which the wh-elements exist are moved to the spec CP positions for checking purposes. The participants successfully avoided violating the target island constraints by applying this strategy.

#### 4.3.3.2. Changing the Sentences Structurally and Semantically

Some participants made structural and semantical changes on the sentences while making translations from Turkish to English. Test Item 13 is given below to show how this strategy was applied by them.

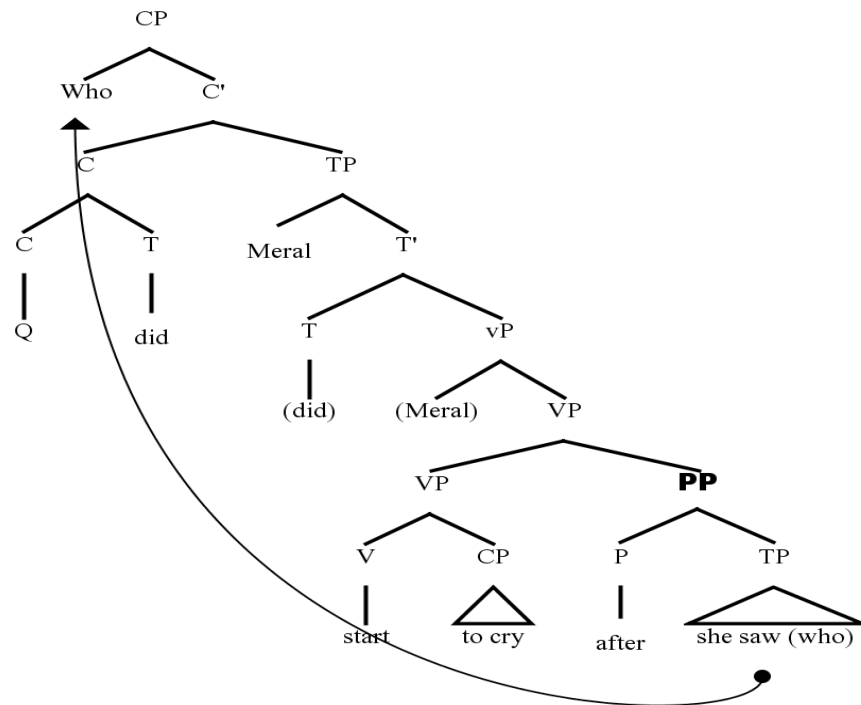
##### TEST ITEM 13

Meral kimi gördükten sonra ağlamaya başladı?

Meral who-ACC see-NOM-ABL after cry-NOM-DAT start-PAST

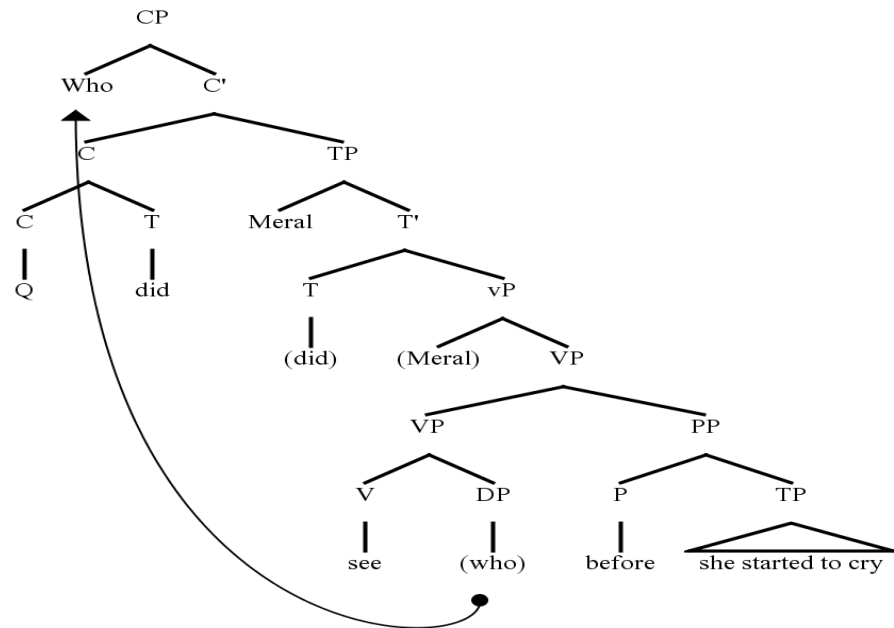
\* “Who did Meral start to cry after she saw?”

This Turkish sentence can be translated into English as “Who did Meral start to cry after she saw? This translation is grammatically unacceptable in English, since the adjunct island constraint is violated. The wh-element that originates within the adjunct clause cannot move to a higher node in the derivation. The tree diagram for this sentence is as follows:



The wh-word, ‘who’, has to move to the sentence initial position to check its interpretable wh-features with the uninterpretable wh-features that exist in matrix CP. However, this movement is prohibited by the Adjunct Island Constraint. The wh-word cannot pass the PP node that c-commands it.

In order not to violate this island constraint, some participants changed the structure of the sentence. They translated this sentence into English as “Who did Meral see before she started to cry?” They changed the sentence structure in such a way that the embedded clause became the matrix clause and the matrix clause became the embedded clause of the sentence. The time adverbial ‘after’ is replaced with ‘before’ as well. This is a valid translation of the given Turkish sentence as long as the semantics is concerned. It does not violate any island constraint, either. Its tree diagram is given below:



The wh-word adjoins to the matrix VP and from there, it moves to the matrix spec CP position. There are not any nodes which prohibit this movement and no island constraint is violated. The participants who formed this sentence could successfully avoid violating the target island structures. In the following translations made by the participants, the same avoidance strategy was used.

- What did the burglar steal before he ran away?
- What did Zeynep read that everyone was surprised that she read it?
- When did Ali sent the letter which Ahmet finally received this morning?
- Where did Ayse stall so she ended up missing the bus?
- Did you see the room what Mustafa was hiding?
- Whom did Meral see before she started crying?
- Where doesn't Cem believe that Ayse got lost?
- When should one plant the cotton seeds to get the best quality product?

The translations above do not contain any island violations after their structures were modified.

#### 4.3.3.3. Parting the Sentence into Two with the Use of ‘And’ Conjunction

Parting the sentence into two with the use of ‘and’ conjunction was an avoidance strategy used by the participants in the Wh-Question Formation Task as well. In the Translation Task, this strategy was used by the participants again while making transitions from Turkish to English. Instead of producing a complex wh-question for the test items, some participants produced two simplex clauses connected with the ‘and’ conjunction. Test Item 14 is given below to exemplify how this strategy was applied in the Translation Task.

##### TEST ITEM 14

Alev kimin neyi seyrettiğini sanıyor?

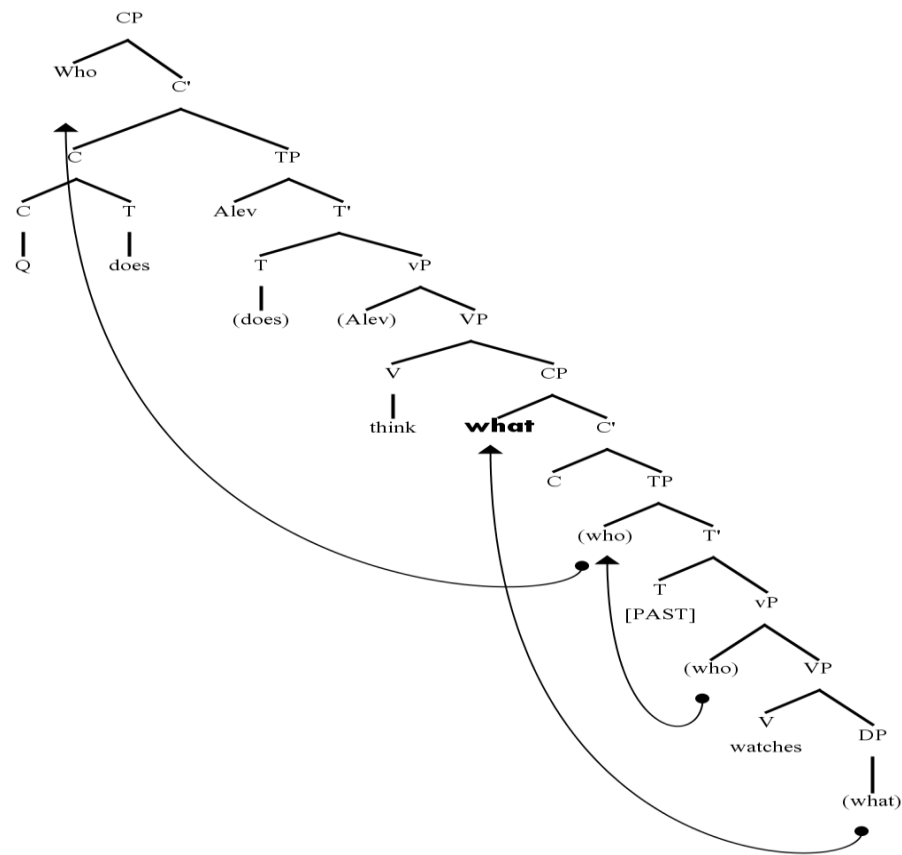
Alev who-GEN what-ACC watch-NOM-POSS-3sg think-PRPROG

(i) \* “Who does Alev think what watches?”

(ii) \* “What does Alev think who watches?”

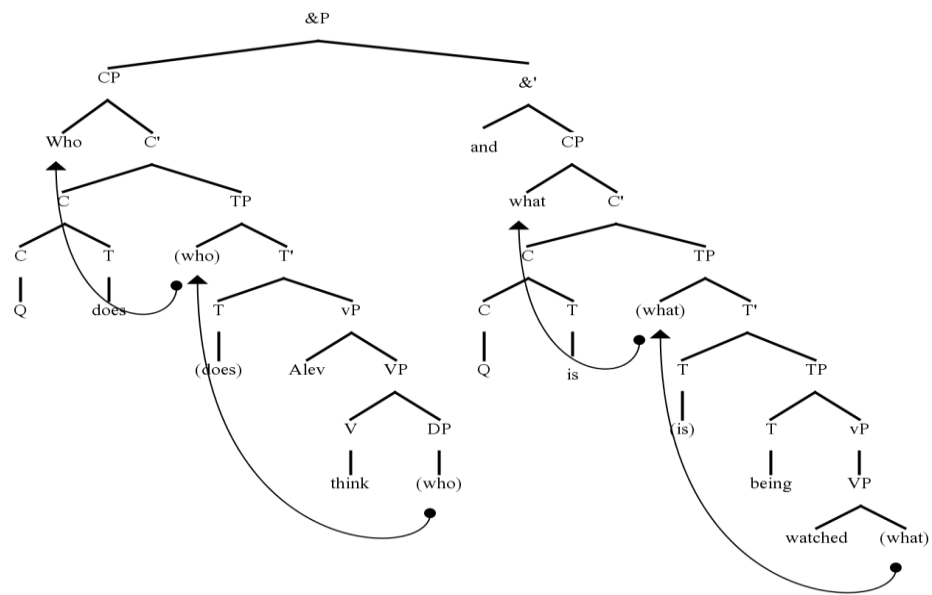
This Turkish sentence can be translated into English as “Who does Alev think what watches?” or “What does Alev think who watches?”. In both of these translations, Wh-Island Constraint is violated. The first wh-element that is moved to the spec position of the embedded clause acts as a barrier for the movement of the other wh-element out of the subordinate clause. Its tree diagram is presented below:





Both of the wh-words originate within the lower CP. While one of them moves to the higher spec CP, the other one moves to the lower spec CP. However, the one which moves to the lower spec CP hinders the movement of other wh-word according to the Wh-Island Constraint.

In order to escape violating this island constraint, some participants produced two separate clauses connected with the ‘and’ conjunction. They translated this Turkish sentence into English as “Who does Alev think and what is being watched?” or “Who does Alev thinks watching something and what is he watching” In these translations the Wh Island Constraint is not violated.



The wh-words move to the spec CP positions of the clauses that they originate in, and they do not hinder one another's movement. Hence, the Wh-Island Constraint is not violated in the derivation. The following translations are the other cases in which this avoidance strategy was used.

- Who does Cem allege that called him and at what time?
- Which room did you see Mustafa hiding something and did you see what he hid?
- Who does Tolga think that bought something and what does he think was being bought?
- Who exactly Cem claims called him -and when did he call according to him?
- To whom did Cem get angry and everybody got upset?
- Who and when does Cem claim that gave him a call?
- Who is Cem claiming to have called him, and when?
- What did the thief steal and run?

In the translations above the island structures are not violated. The use of 'and' conjunctions saves the grammaticality of the sentences.

#### 4.3.3.4. Leaving in-situ

Leaving the wh-item(s) in-situ is another avoidance strategy used by the participants in the Translation Task. Instead of moving the wh-element(s) to the spec CP position of the matrix clause, some participants left them in their original positions in order not to violate the island structures. That is to say, they are well aware of the fact that when the wh-elements are moved from their original places to a higher node in the derivation, an island constraint is violated; therefore they left them in situ. Although English is a language that requires the overt movement of the wh-elements, leaving them in-situ appears to be a more acceptable application in this language compared to making island violations. Test Item 12 is given below to show how this strategy was applied by the participants.

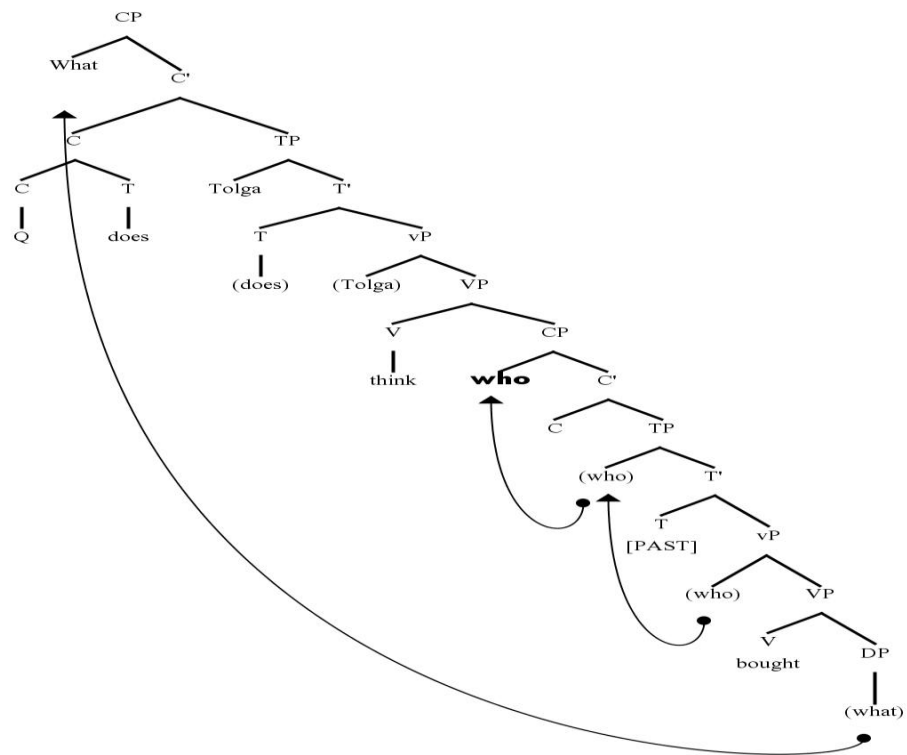
#### TEST ITEM 12

Tolga kimin ne satın aldığını düşünüyor?

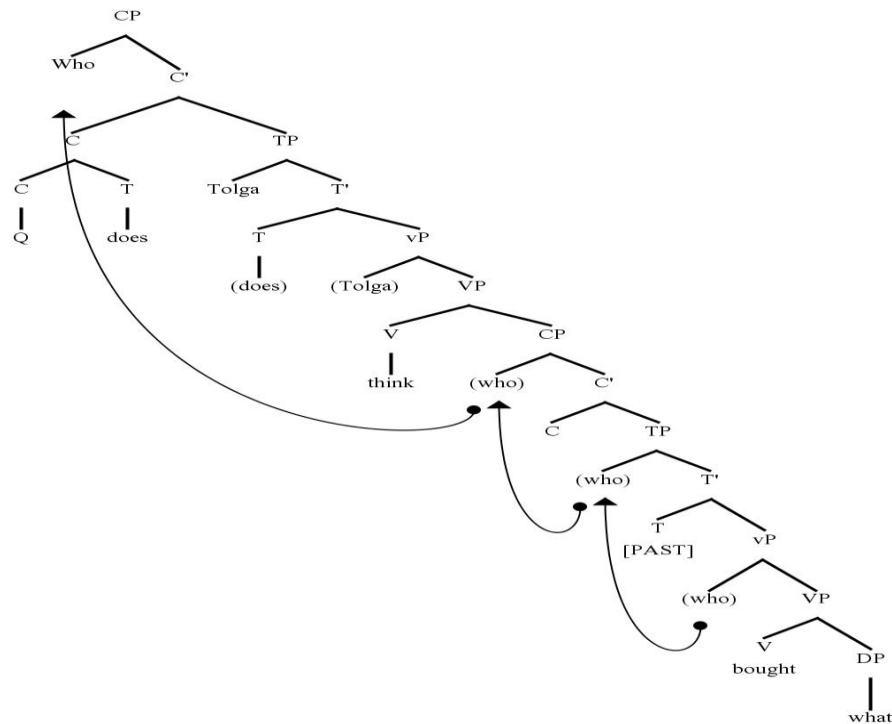
Tolga who-GEN what buy-NOM-POSS-3sg think-PRPROG

- (i) \* “Who does Tolga think what bought?”
- (ii) \* “What does Tolga think who bought?”

This sentence can be translated into English as “What does Tolga think who bought?” or “Who does Tolga think what bought?” In both of these translations, the Wh-Island Constraint is violated. As there are two different wh-elements in the sentences, the first one which occupies the lower spec CP does not allow the movement of the other wh-element, as seen in the derivation below:



In the derivation, the wh word, ‘what’, cannot move to the sentence initial position cyclically since the lower spec CP position has already been occupied by the other wh-word, ‘who’. In order not to violate this island constraint, some participants left one of the wh-elements in-situ. They translated this sentence into English as “Who does Tolga think bought what?” While moving one of the wh-elements to the spec CP position of the matrix clause, they left the other one in-situ, to avoid violating the Wh-Island Constraint.



Since the lower spec CP position is empty, the wh-word ‘who’ can cyclically move to the sentence initial position. The Wh-Island Constraint is not violated in the derivation. This avoidance strategy was used in the following translations as well.

- Where does Meral claim that you put what object?
- What does Meral claim you put and where is it that she claims you put it?
- Meral is claiming that you put what item where?
- Meral started crying after she saw who?
- Cem does not believe the claim that Ayse got lost where?
- What does Meral claim that you placed where?
- Tolga is thinking who purchased which items?

In the sentence above none of the island constraints are violated. The participants could escape violating island structures by leaving the wh-elements in-situ.

#### 4.3.3.5. Using an Extra Wh- word in the Sentence

This avoidance strategy is, in fact similar to the previous one, with one difference: another wh-element is merged to the derivation. That is to say, the participants are aware of the fact that if they moved the wh-word(s) to the spec CP position of the matrix clause, they would violate an island structure. Therefore, they left the wh-word(s) in-situ in order not to violate any island constraint. However, they filled the spec CP position of the matrix clause with another wh-item, which is in fact necessary for checking purposes. They could avoid violating the island constraints by this insertion. Though the sentences they produced are not grammatically acceptable in English, it is apparent that they were used in this way as an avoidance strategy. Test Item 9 is given below to exemplify the use of this avoidance strategy.

#### TEST ITEM 9

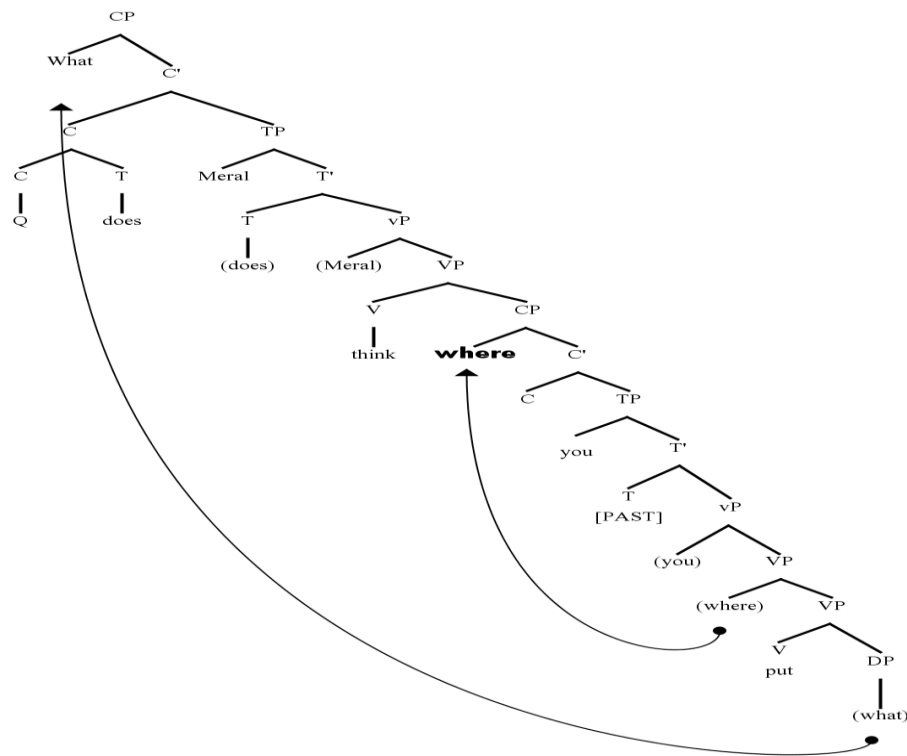
Meral senin neyi nereye koyduğunu iddia ediyor?

Meral you-GEN what-ACC where-DAT put-NOM-POSS-2sg claim-PRPROG

(i) \* “What does Meral claim where you put?”

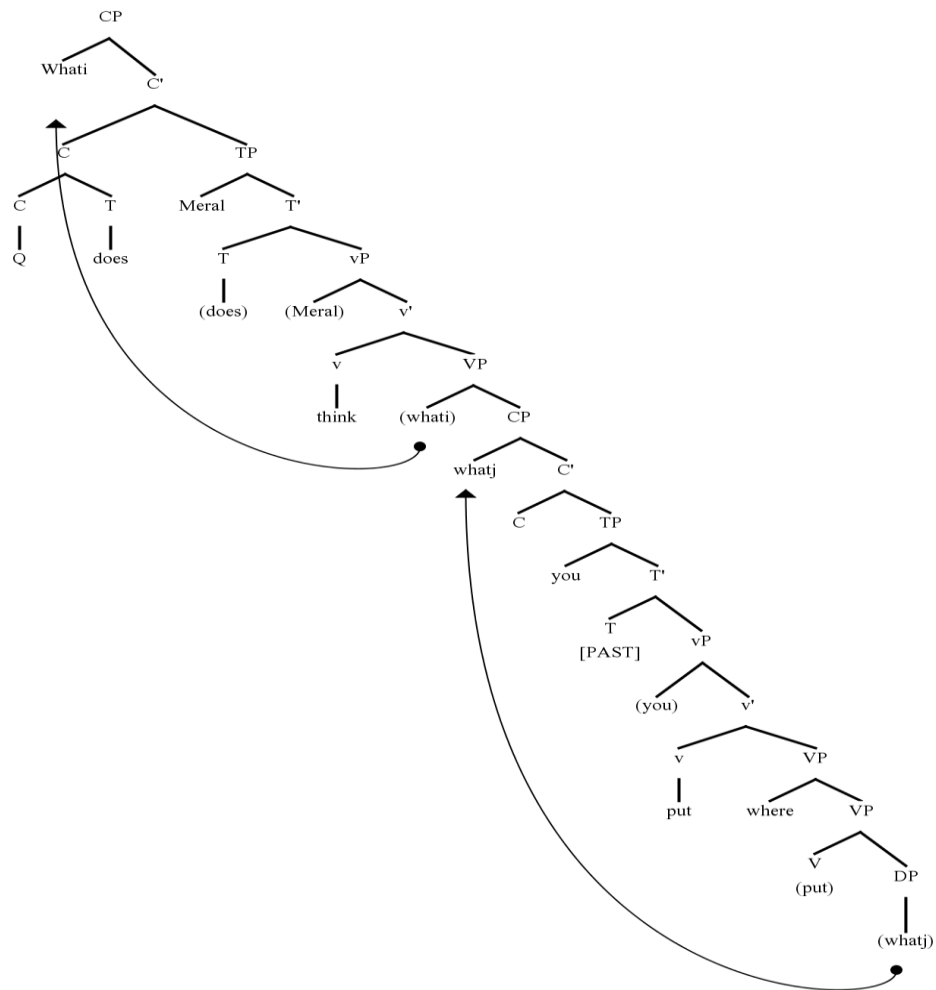
(ii) \* “Where does Meral claim what you put?”

This sentence can be translated into English as “What does Meral think where you put?” or “Where does Meral think what you put” In both of these translations, Wh-Island Constraint is violated.



Just like in all wh-island violations, the wh-word that occupies the lower spec CP position hinders the cyclic movement of the other wh-word.

In order not to violate this island constraint, some participants added another wh-word to the sentence and translated it into English as “What does Meral claim what you put where?” In this sentence, one of the wh-elements was left in situ, while the other one was moved to the lower spec CP position. And finally the higher spec CP position was filled with an extra wh-word. Though this sentence is not grammatically acceptable in English, it does not contain the violation of any island structure. Hence, it can be counted as an avoidance strategy applied to escape violating an island structure.



The additional wh-word merges with the matrix VP and from there, it moves to matrix spec CP. As for the other wh-words, one of them stays in-situ while the other one moves to the lower spec CP. Since the wh-movement do not cross pass each other in the derivation, the Wh-Island Constraint is not violated. In the following translations taken from the responses of the participants, this avoidance strategy was used as well.

- What does Tolga think who bought what?
- What is it that you saw Mustafa hiding what?
- Who does Alev think that who is watching what?

In these sentences, the wh-word(s) were left in-situ in order not to violate any island structure. Yet, the spec CP position of the matrix clause was filled with another wh-item.



Though they produced grammatically unacceptable sentences in English, they could escape violating the target island constraints.

#### **4.3.4. Individual Analysis of Some Salient Items in the Translation Task**

In total, 54 island violations were observed in the Translation task. As in the Wh-Question Formation Task, the distribution of these island violations to the test items is not equal. While some items were successfully translated into English without any island violations, in some others participants could not do so. The distribution of the island violations to the groups is also note-worthy: 30 of these violations were committed by the participants who are living in Turkey and who have got low proficiency level in English. Another interesting finding is that 25 of the island violations committed by this group contain sentential subject violations. In other words, 25 island violations out of 54 are sentential subject violations committed by low proficiency group living in Turkey. These results indicate that these participants who are not exposed to positive evidence in a naturalistic learning environment in their L2 acquisition process are severely influenced by their mother tongue while making translations from L1 to L2.

##### **4.3.4.1. Analysis of the Test Items for Sentential Subject Constraint**

Test items 2, 5, 18 and 19 focus on Sentential Subject Constraint. Three of these test items are presented below. The other one was analyzed individually.

###### **TEST ITEM 2**

Ahmet'in nerede uyuyakalması seni kızdırdı?

Ahmet-GEN whereiLOC fall asleep-NOM-POSS you make angry-PAST

\* “Where did that Ahmet fell asleep make you angry?”

## TEST ITEM 5

Zeynep'in neyi okumuş olması herkesi şaşırttı?

Zeynep-GEN what-ACC read-PAST be-NOM-POSS everyone-ACC surprise-CAUS-PAST

\* “What did that Zeynep read make everyone surprised?”

## TEST ITEM 18

Cem'in kime sinirlenmesi herkesi üzdü?

Cem-GEN who-DAT get angry-NOM\_POSS everyone-ACC make upset-PAST

\* “Who did Cem got angry make everyone upset?”

Exact translations of these test items contain sentential subject violations. That is to say, if they are translated into English as given above, they violate the Sentential Subject Constraint. It was counted that there were 14 violations in the translation of Test Item 2, 10 in test item 5 and 15 in test item 18, and these violations were mainly committed by the participants in low proficiency group who are living in Turkey (25 out of 39), and by the participants in high proficiency level who are living in Turkey (10 out of 39). These results indicate that these participants who are not exposed to positive evidence in a naturalistic learning environment in English adequately are severely influenced by their mother tongue while making translations from L1 to L2, because movement out of sentential subject structures in Turkish is not prohibited as in English. In fact the number of sentential island violations could be higher if the other test item, (test item 19) that targeted Sentential Subject Constraint had not been excluded from the study.

## TEST ITEM 19

Cem'in ne zaman okula gitmesi cok sorunlu oldu?

Cem-GEN when school-DAT go-NOM\_POSS very problematic become-PAST

\* “When did that Cem went to school become very problematic?”

This test item was excluded from the study due to methodological concerns. In this sentence, the VP internal adjunct, ‘when’ can adjoin both to the subordinate clause and the matrix clause. If it adjoins to the matrix clause, the sentence does not violate any island structure; however, if it adjoins to the subordinate clause, sentential subject

constraint is violated. While analyzing the data, the researcher could not determine whether the participants adjoined this adjunct to the matrix clause or the subordinate clause. Hence, he excluded this test item from the study. However, if it were not excluded, the number of Sentential Subject violations would be even higher.

Beside the test item that targeted on Sentential Subject Constraint, in four other test items island structures were violated remarkably more. These test items are: Test item 12, 14, 16 and 20.

#### TEST ITEM 12

Tolga kimin ne satın aldığını düşünüyor?

Tolga who-GEN what buy-NOM-POSS-3sg think-PRPROG

- (i) \* “Who does Tolga think what bought?”
- (ii) \* “What does Tolga think who bought?”

The wh-question in this test item contains two wh-elements. It is possible to move both of the wh-words from their original places in Turkish. Yet, such movements violate the wh-island constraint in English. Therefore, the syntactic translation of this Turkish sentence into English results in ungrammaticality. Three participants violated the target island constraint in this test item and they are all in the high proficiency group living in Turkey.

#### TEST ITEM 14

Alev kimin neyi seyrettiğini sanıyor?

Alev who-GEN what-ACC watch-NOM-POSS-3sg think-PRPROG

- (i) \* “Who does Alev think what watches?”
- (ii) \* “What does Alev think who watches?”

Like in test item 12, wh-island constraint is violated in the translation of this Turkish sentence into English. If both of the wh-elements are moved to Spec CP positions from their original places, the first wh-element that fills the Spec CP position of the subordinate clause acts as a barrier for the movement of the other wh-element. Two

participants violated this island constraint in their translations: one from the low proficiency group living in Turkey and one from the high proficiency group living in Turkey.

#### TEST ITEM 16

Pamuk ne zaman ekilirse daha iyi ürün verir?

Cotton when plant-‘if’ more good crop give-PRES

\* “When does cotton yield better when planted?”

Syntactic translation of test item 16 causes adjunct island violation, since the subordinate clause starting with ‘when’ functions as an adjunct adjoined to the matrix clause. This island violation was observed in the groups that live in Turkey: two in low proficiency group and two others in high proficiency group. Other participants could successfully avoid violating this island constraint.

#### TEST ITEM 20

Cem Ayşe'nin nerede kaybolduğu iddiasına inanmıyor?

Cem Ayşe-GEN where-LOC be lost-NOM\_POSS claim-3sg-DAT believe-NEG-PRPROG

\* “Where does Cem not believe the claim that Ayşe was lost?”

The syntactic translation of this sentence into English contains Complex NP Island violation. The NP ‘the claims’ act as a barrier for upwards movement. Only two participants violated this island constraint and they are both in the low proficiency group living in Turkey.

The findings of the study are compared and contrasted with the previous studies that are reviewed in the literature and they are discussed in detail in accordance with the research questions.

## **CHAPTER 5**

### **DISCUSSION**

The recent account of partial access to UG approach is the Interpretability Hypothesis which was put forward by Tsimpli (2003), Hawkins and Hattori (2006) and Tsimpli and Dimitrakopoulou (2007). According to this hypothesis, uninterpretable syntactic features are unavailable for second language speakers after a critical period, but interpretable features are available for them lifelong. If the uninterpretable features are not selected in the construction of a mental grammar during a ‘critical period’ when all such features are available, they totally disappear, and become unavailable for L2 acquisition. The question that arises is why the uninterpretable features are problematic for the L2 acquirers while the interpretable features are always available for them.

According to Hawkins and Hattori (2006), the reason for this difference is that uninterpretable features exist only for syntactic operations; they do not have any semantic content. They are specified on a small number of closed class items belonging to functional categories. On the other hand, the interpretable features have semantic content and they should be available for L2 acquirers all the time. They are required for constructing new open class lexical items. Individuals can and do learn new items at all ages, and languages are constantly adding to their stock of open class items. Hence, according to the Interpretability Hypothesis, the interpretable features are not subject to critical period.

Hawkins and Hattori (2006) further claim that there may be functional disadvantages to having all the uninterpretable features of the UG inventory permanently available. Support for their claim comes from Eubank and Gregg (1999, 93);

...if there is a pro-drop parameter, for instance, it would not do for English native speakers to be continually thrown into doubt over its value every time they heard an imperative sentence.’ (cited in Hawkins and Hattori, 2006:272).

Hence, according to Hawkins and Hattori (2006), all the options for uninterpretable features need to be available to the child initially because the child cannot know in

advance whether the linguistic input to be encountered will show evidence of pro-drop or not, involve *wh*-movement or not, will have gender concord between Ns and Ds and As, or not, and so on. But it may be functionally economical if, after a given period during which the required features are selected, unselected uninterpretable features cease to be available.

The full access account that stands against the partial access approach of the Interpretability Hypothesis maintains that the narrow syntax properties, that is, the properties that appeal solely to syntactic operations, are acquired straightforwardly. In other words, L2 learners acquire the abstract syntactic properties of the target L2 including new interpretable and uninterpretable features. According to this account, interpretable or uninterpretable, all features are available for L2 acquirers. However, this approach does not claim that second language learners can be as successful as native speakers in all aspects. Incompleteness in L2 acquisition process is taken into account by this approach as well, yet the source of the incompleteness is not sought in the availability or unavailability of certain features. According to the Full Transfer / Full Access Hypothesis, the inability to reach at ultimate attainment in L2 acquisition is argued to be rooted in other sources like interface problems. That is to say, the integration of syntactic knowledge with other types of information, especially with grammar external ones, is claimed to be more problematic for L2 learners than properties that require only syntactic knowledge. For instance, the syntax-morphophonology interface (Prévost and White, 2000; Lardiere, 1998; 2005), the syntax-prosody/phonology interface (Goad and White, 2006) and/or the syntax-pragmatics interface (Sorace, 2003; 2005; Sorace and Filiaci, 2006) are the levels which were claimed to be problematic for L2 acquisition process in the literature.

For instance, Sorace and Filiaci (2006) tested native English speakers of Italian and monolingual Italian controls on their interpretation of null and overt pronouns in forward and backward anaphora contexts in Italian. Their results indicated that the near-native speakers have acquired the necessary syntactic licensing features (interpretable and uninterpretable features) as well as target-like processing strategies for null subjects in Italian; however, they differed from native speakers in their choice of antecedent for

overt pronouns in the backward anaphora condition. The authors concluded that this difference was the likely result of indeterminacy at the syntax–pragmatics interface, since preferences for antecedents of overt pronouns among Italian native speakers reflect sensitivity to pragmatic factors like avoiding potential miscommunication (cited in Lardiere, 2006, p. 241).

Similarly, Rothman (2010) claims that the syntax-morphology-phonology interface is vulnerable in adult SLA. According to him, adult L2 acquirers demonstrate target-deviant use of L2 functional morphology (e.g., nominal agreement, verbal agreement, verbal tense, aspect, modal morphology) in discourse performance. He states that L2 morphological production gets better along with the increase in the proficiency level; yet it rarely matches that of native speakers, even at the highest of L2 proficiency levels. Hence, according to him, the reason for the incompleteness in L2 acquisition process should be related with syntax-morphology-phonology interface.

Apart from the Interface Hypothesis, there are other hypotheses which try to explain the source of L2 incompleteness. The Prosodic Transfer Hypothesis (Goad and White, 2006) and the Missing Surface Inflection Hypothesis (Haznedar and Schwartz, 1997; Prévost and White, 2000) are two of such hypotheses, both of which claim that L2 feature specification is target-like, at least in advanced grammars. The latter maintains that incompleteness in L2 acquisition process ensues from a failure to properly map features onto their corresponding morpho-phonological forms (a mapping problem or problem at the level of spell-out, but not within the syntax itself) while the former claims that L2 speakers have difficulty producing some functional morphology based on L1 prosodic interference. Learners' imperfect mapping of specific morphological forms to abstract categories may be the source of inability for ultimate attainment in L2. In cases like processing difficulties or communication pressures, learners may resort to defaults, forms that are underspecified in some features. That is to say, problems arise when the L2 morphology requires a prosodic representation absent from the L1 (as cited in Rothman 2009, p. 264).

Along with these hypotheses, Feature Assembly Hypothesis and Morphological Underspecification Hypothesis also claim that the reason for L2 incompleteness does not stem from representational deficits as the Interpretability Hypothesis put forward. The former was proposed by Lardiere (2008). According to her, incompleteness in L2 acquisition is a mapping problem and she claims that the ways in which grammatical features are morphologically combined and conditioned present formidable learning problems in L2 acquisition. She asserts that the more re-assembly of features the L2 learner must do, the more difficulty they will face, and such morphemes will take longer to acquire. The latter was proposed by McCarthy (2007; 2008). He claims that L2 acquisition stems from representational deficits; not from deficits in syntactic but in morphological representation. Therefore, L2 morphology errors in this account involve the systematic substitution of underspecified, representationally-simpler forms across comprehension and production

Although these hypotheses (and many others) do not openly express their support for the Full Access / Full Transfer Hypothesis, they agree with its core ideas since they all put forward that there is no representational deficit for syntax in L2 acquisition, and UG is fully accessible for L2 acquirers.

The claims put forward by the full and partial access approaches make predictions which are open to empirical research. That is to say, when it is shown that the uninterpretable features can be accessed by the L2 acquirers along with the interpretable features, the Interpretability Hypothesis loses its ground. On the other hand, if the studies show that certain uninterpretable studies are unavailable for L2 acquirers, the data obtained in such studies support the Interpretability Hypothesis, standing against the claims of the Full Access / Full Transfer Hypothesis. Hence, having studies that focus on the acquisition of certain uninterpretable features that exist in the target language but lacks in the first language may provide valuable data to support or refute the Interpretability Hypothesis.

The results of the present study support the predictions of the Full Transfer / Full Access Hypothesis standing against the claims of the Interpretability Hypothesis. In all



tasks of the study, it was observed that advance level L2 acquirers who are exposed to positive evidence in a naturalistic learning environment can perform rather successfully on the island constraints on wh-movement. Both in the Grammaticality Judgment Task and in the Wh-Question Formation Task, advance level L2 acquirers who live in USA became as successful as the control group members. There was not any significant difference between these two groups in these tasks either. Moreover, when the parts of these tasks are analyzed individually, it was observed that there was no significant difference between these two groups in any of them. That is to say, in both Grammaticality Judgment Task and Wh-Question Formation Task, the performances of these two groups were alike. The results for the Translation Task were also in parallel with the ones for these tasks. As there was not any control group for this task, no comparison could be made between the mother tongue users and L2 learners. Yet, the results still revealed the remarkable success of the L2 learners in the Translation Task. These findings of the study are all against the claims of the Interpretability Hypothesis. If this hypothesis were right, none of the participants in the learner groups could perform as well as the native speakers. There should have been statistically significant difference in the performances of the L2 acquirers and mother tongue users of English. Since the results of the study suggest the opposite, they oppose this hypothesis firmly. Island constraints are poverty of stimulus issues which are rooted in the existence or non-existence of [uw<sup>h</sup>\*] feature that exist in matrix CP. In order for L2 acquirers to deal with these structures successfully, they must have already acquired this uninterpretable feature. As the results of the study suggest, they seem to have acquired this uninterpretable feature in their L2 acquisition process, as they could perform as well as the native speakers of English.

The findings of the present study are consistent with the previous studies that were carried out by Montrul et al (2006), Tanner (2008), Rothman et al. (2009), Judy et al. (2008), Rothman et al. (2010), Bond et al. 2011 and Mendez and Slabakova (2012). These researchers carried out studies on the acquisition of certain uninterpretable features by L2 acquirers whose first language lacks these features. The results for their studies refuted the Interpretability Hypothesis as well. The uninterpretable features that they focused on their studies were observed to be available for L2 acquisition.

On the other hand, the studies that were carried out by Tsimpli (2003), Kong (2005), Hawkins and Hattori (2006), Tsimpli and Dimitrakopoulou (2007), Tsimpli and Mastropavlou (2007) and Al-Thubaiti (2007) had opposing results. In these studies, the researchers had found that the uninterpretable features that they focused on were unavailable for L2 acquirers and there were significant differences between the performances of L2 learners and mother tongue users. The question that arises, then: What might be the reasons for the fact that in these studies L2 acquirers became significantly less successful than native speakers in the acquisition of the target uninterpretable features while in some others, including the present study, they performed equally successful?

Bong (2010) had an analysis of the study carried out by Tsimpli and Dimitrakopoulou (2007), which puts forward the Interpretability Hypothesis most vividly. According to Bong, the uninterpretable features employed in their study do not appear to be good examples for arguing for the unavailability or inaccessibility, since they are assumed to be instantiated in the L1, Greek, in their study (2010, p158). As he further claims, what the Greek speaking learners of English had to do with learning the English properties of the ‘gaps’ from where wh-phrases are extracted was to figure out its [-PF] property (phonologically null). He asserts that the learners did not have to access to any LF-uninterpretable features that are interpretable at PF that are not instantiated in the L1, but they need to access other features such as interpretable [+/- animate] or [d-linking] as discussed in the study at stake. According to him, their argument for the Interpretability Hypothesis was more to do with properties of DPs such as pronouns and clitics that are constructed with a bundle of interpretable features. He further asserts that their data tells nothing about accessibility to any LF-uninterpretable features that are interpretable at PF that are not instantiated in the L1, but a lot about accessibility to other features such as interpretable [+/- animate] or [d-linking] as between L1 and L2 feature inventories (p.158).

Similarly, Mendez and Slabakova (2012) carried out a study as a replication for Tsimpli and Dimitrakopoulou (2007) on resumptive pronouns in Spanish, which have similar

characteristics to that of Greek. They claim that individual variation among the participants of Tsimpli and Dimitrakopoulou with respect to acceptance or rejection of resumptives in their native Greek might have affected their ‘poor’ performance on the test. In their own study, they selected speakers of Spanish (from different dialects) to participate in their experiment because they thought that such individual and dialectal variation in acceptance of resumptives exists among Spanish speakers, too. They divided both their advanced and intermediate proficiency groups into two subgroups, those learners of English who accept resumptives in their native Spanish (the +R groups) and those that do not (the –R groups). According to this scholars, it was logical to predict that the +R groups, both advanced and intermediate, would have a harder task in acquiring English *wh*-questions than the –R groups, because the former would have to overcome their native resumptive strategy and learn that English does not use resumptive pronouns (at least at these levels of embedding). On the other hand, Tsimpli and Dimitrakopoulou (2007) assumed the optionality of resumptives across all Greek speakers, in their study. In this respect, Mendez and Slabakova (2012) asserted that the group results for Tsimpli and Dimitrakopoulou (2007) did not take inter-speaker variation into account and pointed to insurmountable difficulty in preempting resumptives, even among their advanced speakers, and the results for their study could not be regarded as a support for the unavailability of the uninterpretable features in L2 acquisition.

The analyses of Bong (2010) and Mendez and Slabakova (2012) might be correct, yet it is for sure that their claims concern only one study. There are also many others whose results support the interpretability hypothesis as presented in the literature. It is not plausible to state that all such studies had false bases. For instance, Hawkins and Hattori (2006) focused on Japanese-English narrow syntax and studied the subjacency and superiority violations. In some respects, this study resembles the present study as subjacency which is a generalized principle for island constraints is focused on. In their study nineteen L1 speakers of Japanese who are highly proficient speakers of English were asked to interpret bi-clausal multiple *wh*-questions in English. In the results, it was seen that the Japanese speakers of English allowed both embedded and matrix readings for a main clause *wh*-word, where such readings were possible; however, they also

allowed embedded readings that violate the Attract Closest Principle. The responses of these participants were not significantly different on these two types, although they were less likely to accept what are traditionally called ‘subjacency’ violations than ‘superiority’ violations. In contrast, native speaker controls showed significant differences in their acceptance of the grammatical and the ungrammatical readings. Leaning on their data, Hawkins and Hattori claimed that high proficiency speakers of English have failed to represent [*uwh\**] in interrogative C. The nineteen Japanese L2 learners of English who took part in their study stayed in an English-speaking country between 9 months to 18 years. However, the authors do not explicitly state exact length of residence for each participant.

In this respect, the studies that were carried out by Tsimpli and Dimitrakopoulou (2007), Kong (2005) and Al-Thubaiti (2007) appear to be more problematic. These scholars carried out their studies on the L2 learners who acquire the target language in their home country. The participants of Tsimpli and Dimitrakopoulou (2007) were native speakers of Greek acquiring English as a foreign language. They were students at Aristotle University in Thessaloniki. The participants of Kong (2005) were 75 Chinese speakers learning L2 English in China. Al-Thubaiti had a similar case as well; only one of his adult participants had stayed in an English-speaking country. Carrying out studies on the participants who had never stayed in an English-speaking country might have influenced the results they obtained in their studies.

As a matter of fact, the present study would be supporting the Interpretability Hypothesis, if the data of the study were collected only from the participants who are acquiring English in their home country. Both in the Grammaticality Judgment Test and Wh-question Formation Task, the advance level Turkish L2 acquirers of English performed significantly worse than native control group. Since the Translation Task was not given to the control group members, no comparison could be made; yet it was observable that these Turkish participants were not very successful in this test, either. These results all stand for the Interpretability Hypothesis. These Turkish L2 acquirers of English performed significantly worse than native speakers on the island constraints on wh-movement, which means that they could not reset the L2 parameter values in their

acquisition process. Therefore, the results of the study would mean that the [uwɰ\*] feature that exists in the target language but lacks in their mother tongue is no longer available for L2 acquisition.

However, the data obtained from the participants who have been living in USA at least for four years stood against the Interpretability Hypothesis firmly. In all tasks of the study, the participants who are exposed to positive evidence by living in an environment where English is spoken as a mother tongue performed as well as native speakers of this language. There were not any significant difference in the performances of these L2 acquirers and control group members. They could deal with island structures as well as the mother tongue users, which indicates that they have already acquired the necessary [uwɰ\*] feature in the target language. In fact, the results of the present study fully support the Full Transfer / Full Access Hypothesis. The participants who are not fully proficient in the target language might lean on the parameter values of their mother tongue, yet when they become fully proficient in L2, they start to use the parameter values of the target language in full sense.

The importance of (not) being exposed to positive evidence in a naturalistic learning environment can be viewed in similar studies as well. For instance, Demir (2012) tested the processing and acquisition of island constraints by Turkish L2 learners of English to test the validity of the Full Transfer/ Full Access Hypothesis. He collected data through online / offline questionnaires in English from 60 L2 learners of English who live in Turkey (30 in intermediate level and 30 in advance level). 30 native speakers of English took part in the study for the control group, as well. The results of his study showed that there was a significant difference between the performances of native control group and the learner groups. He assessed these results as compatible with the predictions of Full Transfer / Full Access Hypothesis. Leaning on White (2007), he put forward that the presence of UG-constrained representations in second language learners in a consistent manner is sufficient to claim access to UG in the relevant domain, even if L2 learners' performance lag behind that of native speakers in that domain. His claims are reasonable within certain predictions of Full Transfer / Full Access Hypothesis, since this hypothesis claims that ultimate attainment in L2 acquisition process on certain grammatical patterns might not be possible due to some mapping or interface problems. However, according to this hypothesis, the

source of the problem should also be distinguished to show that there is no impairment in the grammar. When the results obtained by Demir (2012) are analyzed from this perspective, they can be viewed as a support for the Interpretability Hypothesis, as well. In his study, it was observed that attaining native-like competence on island structures was not possible even in the final stage of the acquisition process, which can be viewed as an indication for the fact that their grammars are impaired. That is to say, UG appears to be partially accessible to these learners and some uninterpretable features must be unavailable for them.

On the other hand, it should also be noted that the data of Demir (2012) were collected from participants who acquire the target language in their home country. Hence, not being exposed to positive evidence in a naturalistic learning environment might have played some role in the performances of his participants.

Isabelli (2004) carried out a study to check the importance of getting positive evidence in L2 acquisition process in a naturalistic learning environment. Her study focused on the acquisition of the Null Subject Parameter by English L2 learners of Spanish. Her participants stayed in Barcelona, Spain for 9 months and the data of the study were collected before and after the stay. Grammaticality Judgment Test and Oral Narrative Tests were given to 31 adult intermediate L2 learners of Spanish. The results showed that the performance of the participants on Null Subject Parameter increased remarkably after the stay. All necessary L2 properties were observed to be acquired by them since they were as successful as the natives on NSP after being exposed to positive evidence in the target language by living in an environment where it is spoken as a mother tongue. These results show the beneficial effects of getting positive evidence in a naturalistic learning environment in L2 acquisition.

The importance of getting positive evidence in second language acquisition process is also emphasized by Schwartz (1993). She states that all linguistic behavior is the overt manifestation of some type of underlying knowledge that is represented in the mind/brain of an individual and exposure to linguistic data is necessary for growth of the system of knowledge. As she asserts, only positive data can effect the construction of an interlanguage grammar that is comparable to the knowledge system that characterizes the result of first language acquisition.

Similarly, Felix and Weigl (1991) investigated the factors that may potentially increase or block UG-access in second language acquisition process and they analyzed whether such factors can be related to certain properties of the learning environment. In their study, they examined the acquisition process of English as a second language by 77 German high school students who learned and were exposed to English exclusively during classroom hours. These students were tested for their ability to correctly judge grammaticality contrasts in English that are standardly attributed to UG principles. Their results suggested that these students did not show any evidence of having UG-access. Rather, they utilized a number of strategies that (a) tied them very tightly to properties of German and (b) prevented them from making any generalizations that went beyond what had been explicitly taught in the classroom. Hence, leaning on their findings, they concluded that formal school environments would not be ideal places to assess the accessibility of universal grammar in second language acquisition process.

As the studies carried out by Isabelli (2004), Swartz (1993) and Felix and Weigl (1991) also suggest, L2 learners should be exposed to positive evidence in order to be able to access to UG like native speakers of the target language. Having education in formal school environments may not be enough for them to reset the L2 parameter values in full sense. Hence, as the present study also puts forward, getting positive input in a naturalistic learning environment in second language acquisition has vital importance to reach at native-like performance in the target language. It is for sure that (not) being exposed to positive evidence in a naturalistic learning environment may not be the only factor that has an influence on the performance of the L2 users. There might be other factors like methodological issues or the characteristics of the grammatical structures that are focused on in the target language pairs. However, as the findings of this study suggest, exposure to positive evidence in a naturalistic learning environment does play a role in this process. Therefore, the studies that focus on UG-SLA relationship should take into account the importance of the positive evidence that the participants get in a naturalistic learning environment while assessing the availability of UG in second language acquisition process.

## 5.1. ANALYSIS OF THE FINDINGS IN ACCORDANCE WITH THE RESEARCH QUESTIONS

The findings of the study can be summarized in accordance with the research questions of the study in the following way:

RQ 1- Do the performances of late L2 acquirers of English (whose L1 is Turkish) on the island constraints in wh-movement support “the Interpretability Hypothesis” put forward by Tsimpli and Dimitrakopoulou (2007)? In other words, when the performances of these L2 acquirers are compared with that of native speakers of English, is there a significant difference in the results as asserted by the Interpretability Hypothesis?

The statistical results of the study do not support the Interpretability Hypothesis; since the Turkish participants who are living in USA and who are highly proficient in this language performed as well as the native speakers of this language. There were not any significant differences between the performances of these two groups. The results for the Grammaticality Judgment Task and Wh-Formation Task show that these participants are aware of island structures and they avoid violating them. Their performance is slightly better than that of the native speakers in some cases, and their general performance is just slightly worse than that of the native speakers in these tasks. They were quite successful in the Translation Task as well. These results are directly against the Interpretability Hypothesis.

The performance of the advance level L2 learners who are living in Turkey was significantly worse than native control group members in both Grammaticality Judgment Task and Wh-Question Formation Task. Since the Translation Task was not given to the Control Group, no comparison could be made, but these L2 learners were not very successful in this task, either. These data would support the Interpretability Hypothesis on its own if the study had not been given to L2 learners who are living in an English-speaking country. Hence, these results reveal the importance of being



exposed to positive evidence in a naturalistic learning environment in L2 acquisition process.

RQ 2- Does being exposed to natural input in the target language influence the success of the L2 acquirers in their performances on the island constraints on wh-movement?

The effects of exposure to positive evidence in a naturalistic learning environment in the target language were clearly observed in the data. The highly proficient L2 learners of English who live in an English-speaking country became significantly more successful than the ones who acquire the target language in their home country. Compared with the native control group, the ones who are exposed to positive evidence in a naturalistic learning environment were as successful as the mother tongue users and there were not any statistical difference between these two groups. On the other hand, the L2 learners of English who acquire this language in a formal school environment were significantly less successful than control group members according to the Mann-Whitney U test results.

Interestingly, there was not any significant difference between the lower proficiency groups who live in USA and Turkey. In all tests of the study, L2 learners who are exposed to positive evidence in the target language performed slightly better than the ones who acquire the target language in their home country. However, the differences between these two groups were not statistically significant according to the non-parametric test results. These data suggest that in the earlier levels of L2 acquisition the effects of positive evidence might not be vividly observable. The mother tongue influence can have an effect in this case as well. However, in order to be able to reach at native like performance in the target language, L2 learners should be exposed to positive evidence in English by living in an environment where this language is spoken as a mother tongue.

RQ 3- When the structural differences between L1 and L2 on the target island constraints are taken into account, do such patterns play a role on the performance of L2 acquirers? In other words, do the mother tongue parameter values have an influence on the L2 acquirers in their second language acquisition process?

According to Full Transfer / Full Access Hypothesis, mother tongue influence can be observed in low proficiency groups and when the proficiency level increases, the participants are expected to reset the necessary parameter values and perform native-like. The results for the Grammaticality Judgment Task and the Translation Task seem to be consistent with this hypothesis. That is, while low proficiency groups performed a bit poorer, the performances of high proficiency groups were close to that of native speakers. However, only the ones who are exposed to positive evidence in a naturalistic learning environment in the target language could perform as well as the mother tongue users according to the statistical test results.

As for the Wh-Question Formation Test results, the claims of Full Transfer / Full Access Hypothesis are valid for the groups who get sufficient positive evidence in the target language. While the highly proficient L2 learners of English who live in USA became as successful as native speakers of this language, the performances of the ones with low proficiency indicated mother tongue influence. On the other hand, the results for the learners groups who have never lived in an English-speaking country did not support the claims of the Full Transfer / Full Access Hypothesis. There were not any significant differences between the low and high proficiency groups who are not exposed to positive evidence in a naturalistic learning environment in L2 acquisition process. That is to say, mother tongue influence was observable even on the participants who are highly proficient in the target language.

Hence, mother tongue influence should be evaluated along with the effects of positive evidence. As the results of the study suggest, mother tongue influence is related with being exposed to positive evidence in a naturalistic learning environment in the target language. The claims of Full Transfer / Full Access Hypothesis are perfectly valid for the learner groups which get positive evidence sufficiently by living in an English-

speaking country. However, as for the groups which lack it, the mother tongue influence can be observed even in the high proficiency levels.

RQ 4- What avoidance strategies, if any, do the participants make use of in order not to violate island structures?

The following avoidance strategies were observed to be used in the Wh-Question Formation and Translation Tasks. It was noticed that the participants in both control and learner groups made use of similar avoidance strategies.

In the Wh- Question Formation Task:

- 1- Changing the context
- 2- Providing a short response with a simplex clause
- 3- Connecting two simplex clauses by ‘and’ conjunction
- 4- Deleting the item that causes island violation

In the Translation Task:

1. Pied-Piping
2. Changing the sentences structurally and semantically
- 3- Connecting two simplex clauses by ‘and’ conjunction
- 4- Leaving in-situ
- 5- Using an extra wh-item in-situ

The avoidance strategy, “connecting two simplex clauses by ‘and’ conjunction”, was observed in both tasks. The other strategies were used only in either test. It was also observed that the participants in different groups were using similar avoidance strategies. That is to say, these strategies were observed to be used by all groups, not just by a single group. This situation reveals that these strategies lean on a general tendency to avoid violating the island structures. Since the native speakers and L2 learners make use of similar mechanisms dealing with the island structures, these result

may be assessed as an indication for the availability of UG in L2 acquisition process, as well.

RQ 5- Among the 4 island structures investigated in the study, on which structures the L2 acquirers perform better than the others?

The participants showed divergent success on the tasks; hence it is not possible to specify an island type that is remarkably more difficult for them to cope with. Native speakers were relatively less successful on adjunct island structures in the Grammaticality Judgment Task, yet they made no errors on these island structures in Wh-Question Formation Task. In this task, they appeared to be less successful on the items which contain Wh-Island and Complex NP Island violations.

The Wh-Island and complex NP Constraints appear to be the most difficult island structures for the learner group members who are exposed to positive evidence in a naturalistic learning environment in the target language. In this respect their performance is similar to that of native language users. When the performances of the learner groups who acquire the target language in their home country are analyzed, it is observed that they performed remarkably poor on the test items that focus on Sentential Subject Constraint violations. Their performances on other island structures were poorer compared to other groups, as well.

## **CHAPTER 6**

### **CONCLUSION**

The study was carried out to assess the validity of the Interpretability Hypothesis which was put forward by Tsimpli and Dimitrakopoulou (2007) and supported by other scholars. This hypothesis is the recent account of Partial Access Hypothesis and it claims that uninterpretable features that are not instantiated in L1 are unavailable for L2 acquisition. Full Transfer & Full Access Hypothesis stands against this hypothesis by claiming that all features, interpretable or uninterpretable, are accessible for L2 learners. It claims that the reason for incompleteness in L2 acquisition process should be sought for in other sources like mapping issues or internal and external interfaces between syntax and other language units.

The island constraints on wh-movement, which are analyzed in the study, are poverty of stimulus issues that get their motivation from the movement of the wh-elements to the matrix spec CP positions to check their interpretable wh features against the uninterpretable [uw<sup>h</sup>\*] feature that exists in this node. In the study, it was observed that L2 learners of English who are exposed to positive evidence in a naturalistic learning environment in the target language can deal with these island constraints as well as the native speakers of this language. Since their mother tongue lacks the [uw<sup>h</sup>\*] uninterpretable feature, this result suggests that they have already acquired the necessary L2 parameter values, and this uninterpretable feature is available in their L2 acquisition process. Hence, the findings of the present study support the Full Transfer / Full Access Hypothesis, standing against the Interpretability Hypothesis.

The results of the study also emphasize the importance of positive evidence in L2 acquisition process. In this respect, the present study is the first to take into account the possible role of positive evidence that is received in a naturalistic learning environment in L2 acquisition process. In none of the previous studies which examine the UG-SLA relationship, the possible role of the positive evidence that is received in a naturalistic learning environment had been taken into account. In other words, in none of such studies the data had been collected both from participants who acquire the target

language in their home country alone and who acquire it in an environment where this language is spoken as a mother tongue. The present study is unique in this respect. As the findings of the study suggest, this variable has an important role in determining the availability of UG in SLA. While the participants who are exposed to positive evidence in the target language by living in an English-speaking environment can perform as well as the mother tongue users on the target island constraints, the ones who acquire this language only in their home country perform significantly worse than native speakers. If the study had only been carried out on the participants who learn the target language only in formal school environment, the results of the study would have supported the Interpretability Hypothesis. The performances of the participants who live in USA, however, stand against this hypothesis. This situation reveals the importance of exposure to positive evidence in a naturalistic learning environment in L2 acquisition. Hence, while carrying out studies that focus on the relationship between SLA and UG access, the importance of exposure to positive evidence in a naturalistic learning environment should not be disregarded.

Mother tongue influence was observed on the L2 learners who are not fully proficient in the target language yet. Since they make significantly more errors while dealing with island constraints, it means that they have not reset the parameter values of the target language in full sense yet and they are still leaning on the parameter values of their mother tongue to some extent. Another finding of the study was that mother tongue influence is also strictly connected with exposure to positive evidence in a naturalistic learning environment. The participants who are exposed to positive evidence can achieve to use the parameter values of the target language when they become fully proficient in L2; however, the mother tongue influence can be observed on the ones who do not get enough positive evidence in second language acquisition even in high proficiency levels.

The study also determined the avoidance strategies that were used by the participants. In the Wh-Question Formation and the Translation Tasks of the study, the participants had to use some strategies in order to avoid violating the target island structures. Only a small percent of the responses given by the participants in all groups contained island

violations and they successfully avoided violating these island constraints in most cases. The avoidance strategies that were determined in the study are as follows: 1- Changing the context, 2- Providing a short response with a simplex clause, 3- Connecting two simplex clauses by 'and' conjunction and 4- Deleting the item that causes Island Violation. 5- Pied-Piping, 6- Changing the sentences structurally and semantically, 7- Leaving in-situ, and 8- Using an extra wh-item in-situ. "Connecting two simplex clauses by 'and' conjunction" was used in both tasks. The others were observed only in either of them. It was also observed that there was not any difference among the groups on the choice of the avoidance strategies. That is to say, all groups used these seven avoidance strategies in their responses. However, it is for sure that the findings of the study are limited to the data of the study. In order to find universal avoidance strategies that are used by L1 users and L2 learners, further studies should be carried out.

The results of the study also showed that different island structures were problematic for different groups. That is to say, there was not a specific island structure that was problematic for all language users. Nevertheless, the number of the Sentential Subject violations made by the L2 learners who acquire this language in their home country is note-worthy. For the other participants of the study, Complex NP Constraints seem to be the most problematic one.

The findings of the study add just a new brick to the UG-SLA studies. That is to say, the debates among the scholars which have got different claims on the availability of UG in second language acquisition exist for a few decades and it seems that they will not end in the near future. It appears that there will be scholars who favor one of these hypotheses. One thing for certain is that there is a need for further studies on different grammar points between different language pairs. The L2 acquisition of the uninterpretable [uwh\*] feature that has been analyzed in this study can also be analyzed in different language pairs. Besides, the acquisition of any other uninterpretable features that exist in the target language but do not exist in the source language can also be studied to examine the validity of the Interpretability Hypothesis. In such studies, the role of having or lacking positive evidence in the target language should not be ignored as well. As the present study suggests, being exposed to positive evidence in a

naturalistic learning environment in the target language has an important role in determining the availability of universal grammar in L2 acquisition.

Moreover, there should be more studies on the Hypothesis like Interface Hypothesis, Missing Surface Inflection Hypothesis, Morphological Underspecification Hypothesis, and Feature Assembly Hypothesis as well. These hypotheses stand against the Interpretability Hypothesis claiming that all features are available for L2 acquisition and the reason of L2 incompleteness should be sought for in other sources. Finding more empirical support for these hypotheses may help to determine to what extent UG is available in L2 acquisition process.

Beside the island constraint examined in the study, there are also other island structures proposed by several scholars like Coordinate Structure Constraint, Negative Island Constraint, Factive Island Constraint, Left Branch Constraint Right Roof Constraint..etc. Yet, the present study has been limited to the ones which are encountered in the literature frequently. It is for sure that other island structures can also be examined in further researches.

Another limitation of the study was that the data of the present study were collected by three tests: a grammaticality judgment test, a wh-question formation test and a translation test. In further studies, the number of the test types can be extended. Interpreting a picture, re-stating a paragraph, making use of eye-tracker can be some other test types that can be used in such studies.



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## APPENDICES

### APPENDIX 1: MICHIGAN PROFICIENCY TEST

#### 1. Vocabulary (30 Points)

1. When I came in, I found a great surprise \_\_\_\_\_ me.  
a. expecting                      b. celebrating                      c. awaiting                      d. disregarding
2. The guard wore \_\_\_\_\_ on his uniform that had his name on it.  
a. a badge                      b. a staple                      c. a digit                      d. an adhesive
3. To be well-prepared for studies at a university, you should take \_\_\_\_\_ courses in school.  
a. rigorous                      b. feeble                      c. porous                      d. extravagant
4. This kind of life \_\_\_\_\_ me just fine.  
a. shows                      b. acts                      c. finds                      d. suits
5. My grandmother is over 100 years old. My family has a history of \_\_\_\_\_.  
a. maturity                      b. longevity                      c. ancestry                      d. oblivion
6. We don't know him very well. He's just a casual \_\_\_\_\_ of ours.  
a. relative                      b. fraternity                      c. acquaintance                      d. occupant
7. Theresa must be shy. She seems \_\_\_\_\_ to answer questions in class.  
a. eloquent                      b. radiant                      c. enchanted                      d. reluctant
8. The teacher \_\_\_\_\_ the answers until all the test papers had been collected.  
a. withheld                      b. undertook                      c. overhead                      d. subdued
9. Peter had a difficult time \_\_\_\_\_ his car into the small parking spot.  
a. mobilizing                      b. maneuvering                      c. manipulating                      d. motoring



20. His excuse for missing work wasn't very \_\_\_\_\_.  
a. conceivable      b. plausible      c. comparable      d. foreseeable
21. Peter does everything himself because he doesn't like to \_\_\_\_\_ control.  
a. extinguish      b. relinquish      c. vanish      d. elicit
22. We're pleased with our progress; we've made great \_\_\_\_\_.  
a. hikes      b. footsteps      c. strides      d. stretches
23. I need to study more for the test. I don't have a very good \_\_\_\_\_ of the material.  
a. abstract      b. grasp      c. hint      d. gist
24. The boss \_\_\_\_\_ Joyce to open all the mail while he was away.  
a. disposed      b. manifested      c. specified      d. designated
25. Hunting is not allowed in the animal \_\_\_\_\_.  
a. sanctuary      b. asylum      c. terrain      d. dominion
26. Scientists \_\_\_\_\_ many wonderful discoveries in the last century.  
a. did      b. made      c. put      d. found
27. The police \_\_\_\_\_ the woods looking for the lost child.  
a. scoured      b. integrated      c. traced      d. encountered
28. The couple \_\_\_\_\_ under the umbrella to keep dry.  
a. enclosed      b. muffled      c. huddled      d. augmented
29. The new accounting system \_\_\_\_\_ all my work useless.  
a. transformed      b. rendered      c. transposed      d. converted
30. The teacher tried to \_\_\_\_\_ a response from her students by asking thoughtful questions.  
a. elicit      b. transmit      c. project      d. assemble

## 2. Grammar (20 Points)

31. I'd like \_\_\_\_\_ this with you before the meeting.

- a. to discuss about      b. discussing about      c. the discussing of      d. to discuss

32. "I'm tired of taking the bus to work every day."

"I wish I had a car \_\_\_\_\_ give you a ride."

- a. that I can              b. that I could              c. so that I can              d. so that I could

33. Jane's late again. Why \_\_\_\_\_ be on time?

- a. can she ever              b. she can never              c. can't she ever              d. doesn't she ever

34. "Do you like chocolate?"

"Yes, I think \_\_\_\_\_ people do."

- a. the most of              b. almost              c. most of              d. most

35. I've read many books, the most interesting \_\_\_\_\_ was War and Peace.

- a. which              b. of which              c. that              d. of that

36. The teams were ready to play, but the referee had not \_\_\_\_\_ arrived.

- a. yet              b. still              c. just              d. already

37. I searched everywhere in the kitchen for some sugar but \_\_\_\_\_ none.

- a. have not found              b. did not find              c. found              d. finding

38. Bob came very \_\_\_\_\_ the lottery.

- a. closely won              b. closely to winning              c. close to win              d. close to winning

39. Only by working three jobs \_\_\_\_\_ able to support his large family.

- a. he was              b. he is              c. he's being              d. was he

40. "What kind of hotel room would you like?"  
"I would like \_\_\_\_\_ a room with an ocean view."
- a. its being                      b. that it is                      c. it to be                      d. that being
41. John couldn't decide \_\_\_\_\_ to go to the meeting or to finish his report.
- a. either                      b. whether                      c. between                      d. if
42. I think that \_\_\_\_\_ may have to help Theresa plan the party.
- a. all us                      b. us all                      c. we all                      d. all we
43. "Did Sam give the taxi driver a big tip?"  
"Yes, \_\_\_\_\_ told it wasn't necessary, he did."
- a. has not been                      b. he has not been                      c. not having been                      d. his not being
44. The boss didn't know what to do, \_\_\_\_\_ the rest of us.
- a. so did                      b. either                      c. neither                      d. nor did
45. Leon is very rich, so he \_\_\_\_\_ about money.
- a. has not concerns                      b. is not concerned                      c. does not concern                      d. does not concerning
46. Sam worked \_\_\_\_\_ he could to finish the job on time.
- a. so fast that                      b. as fast as                      c. faster than                      d. faster so
47. "Did the Director of the school answer you yet?"  
"No, but \_\_\_\_\_ I hear from him by 5 pm, I'll let you know."
- a. might                      b. could                      c. would                      d. should
48. "Is this your purse?"  
"No, it's \_\_\_\_\_ purse."
- a. somebody's else                      b. somebody else's                      c. somebody's else's                      d. somebody else
49. Peter is so busy that he \_\_\_\_\_ has time to sleep.
- a. almost                      b. even                      c. hardly                      d. nearly

50. \_\_\_\_\_ we have enough money, where would you like to travel this summer?

- a. so that                      b. provided that c. unless                      d. despite the fact that

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## **APPENDIX 2: THE MAIN TESTS OF THE STUDY**

### **A. BASIC INFORMATION**

**Please provide the basic information required below, before doing the tests.**

1- How old are you?

2- What is your gender?

3- What is your occupation?

4- How old were you when you started to learn English?

5- Where did you start learning English? (Skip the questions 6. and 7., if you did not start learning it in Turkey)

6- Did you graduate from a private school in Turkey? (In primary and high school levels)

7- If yes, in what level did you attend to a private school in Turkey?

8- Have you ever lived in any country (other than USA) where English is spoken as a mother tongue?

9- If you lived in any other country before; where did you live? How long did you live there ?

10- How old were you when you first came to the United States to live?

11- How long have you been in the United States?

### **B. WH-QUESTION FORMATION TASK**

**WH-QUESTION FORMATION TASK**

Fill in the blanks to form a grammatical wh-question. The sentence given below the blanks should be a possible answer for the wh-question you formed. (Note: There is NO exact response, and whatever you produce is acceptable. Yet, please try to ask complex questions that cover the responses FULLY. Please do not to produce simple questions like `Where is John?` that address only half of the response)

For instance;

**Jack: There is a big mouse in my room!**

**Sue: Are you sure?**

**Jack: Yes, I saw it running under my bed.**

What .....

Jack claimed that he saw a big mouse in his room.

\_\_\_What did Jack claim that he saw in his room?\_\_\_

**Thomas: What is Jim doing right now?**

**Sue: He is reading a book. He bought it yesterday.**

1- When .....

Jim is reading the book which he bought yesterday.

○

**Nancy: Who is the boy Helen is talking to?**

**Paige: I do not know. She said that she met him on the street.**

2- Where .....

Helen is talking to the boy whom she met on the street.

○

**William: Matthew seems very angry. Do you know why?**

**Beth: He got angry after learning the results of the exam.**

3- What .....

Matthew got angry after learning the results of the exam.

○

**Jack: We are all angry with Sue!**

**Carl: But why?**

**Jack: Because she is always very selfish.**

4- Who .....

That Sue is so selfish makes everyone angry.

**Ashley: Bill was here a few minutes ago**

**Beth: What did he say?**

**Ashley: He wanted to learn if he could help us in the project.**

5- Whom.....?

Bill wondered whether he could help Ashley and Beth in the project.

○

**Arthur: Why do you think Nigel bought a new sports car?**

**Laura: To impress Sarah. It is very obvious.**

6- Why .....

That Nigel bought the new sports car to impress Sarah was obvious.

○

**7- Mary: Do you know where John put the files?**

**Julie: I do not know.**

What .....

Mary wondered where John put the files.

○

**Police Officer: Who is Gordon?**

**Gordon: It is me!**

**Police Officer: Did you lose your passport in Italy?**

**Gordon: Yes, I lost it there last summer.**

8- Where .....

The police officer asked who lost his passport in Italy.

○

**Rebecca: Ashley told me that she saw Jack two days ago!**

**Mae: Really! Did she tell it?**

**Rebecca: Yes, she did.**

9- Whom .....

Ashley said that she saw Jack two days ago.

○

**Helen: Do you think that Sarah loved the present?**

**Paige: Certainly. She got very happy when she saw it.**

10- What .....

That Sarah loved the present was apparent.

**Peter: George said that he did not see Becky anywhere.**

**Carla: Did he say so? But, one of my friends told me that he saw them together in a café yesterday**

**Peter: Well, this is what he said to me.**

11- With whom .....

George denied the claim that he was together with Becky in a cafe.

○

**Luke: Where was Peter last night?**

**Andrew: He stayed at home to wait for Ashley. She came home late last night.**

**Luke: Oh. I see.**

12- For whom .....

Peter stayed at home as he wanted to wait for Ashley.

○

**Todd: George lost his wallet.**

**Craig: Really? Where?**

**Todd: He does not know exactly. But it was in his pocket while entering the canteen. Hence, he must have lost it there.**

13- Where.....?

That George lost his wallet in the school canteen is obvious.

○

**Linda: Where is Bruce?**

**Jennifer: He is in the living room. He will call someone for a job interview.**

**Linda: Really! How nice!**

**Jennifer: Yes, he said he had met a businessman on the road and took his card.**

14- What .....

Bruce will call the man who had given him his card.

○

**Beth: Where is Michael lately? Have you seen him?**

**Susan: Yes, I saw him in a restaurant. I think it was on Wednesday.**

15- Where .....

Susan claimed that she saw Michael in a restaurant.

**Susan: Where is Tom? He was in his room all day. But I cannot find him now.**

**Arthur: I think he went out a few minutes ago.**

**Susan: Why did he go out?**  
**Arthur: To see his girlfriend.**

16- Why .....?  
 Tom had been in his room before he went out to see his girlfriend.

○

**Zack: Who cleaned my room?**  
**Nicole: I think it was your mom.**  
**Zack: Did she do that this morning?**  
**Nicole: I think so.**

17- When .....?  
 Zack asked Nicole who cleaned his room that morning.

○

**Joey: I saw a terrible car crash on the highway!**  
**Alan: When did you see it?**  
**Joey: Yesterday. I think the man in the car was dead.**

18- What .....?  
 Joey claimed that he saw a terrible car crash on the highway.

○

**Jack: What is the problem with Mike? He looks terrible.**  
**Lisa: He lost his father after a heart attack.**  
**Jack: Really! When?**  
**Lisa: Last night.**

19- When .....?  
 Mike is very upset because his father died suddenly last night.

○

**Luke: Why was that poor man killed?**  
**Alice: For his money, of course.**  
**Luke: I cannot understand who would be so cruel to kill someone just for money!**

20- Why.....?  
 Luke wondered who would kill a man just for money.

**Samantha: Is Susan at home now?**  
**Julia: No, she is not. She went to the library two hours ago.**  
 21- When .....?  
**Julia said that Susan went to the library two hours ago.**

○

**Kelvin: Will Anthony be able to graduate soon?**

**Sandra: As far as I know, he will graduate next year. His parents are very happy for that.**

22- When .....

That Anthony will graduate from the University next year makes his parents very happy.

**Derrick: Andrew cannot sit in the front seat.**

**Raven: Why not?**

**Derrick: Because he is still too young!**

**Raven: But he does not accept it. He says he has already grown up.**

23- Why .....

Andrew does not accept the fact that he cannot sit in the front seat because of his age.

○

**Annette: What did you do all day?**

**Mark: I watched TV while my sister was sleeping.**

**Annette: Where was she sleeping?**

**Mark: In her room.**

24- Where .....

Mark watched TV in the living room while his sister was sleeping in her room.

○

**Jeff: What does Adam want? Is he asking for some loan?**

**Sue: Yes, he asked for 2000 dollars.**

**Jeff: what will he do with that money?**

**Sue: He wants to buy a new car.**

25- Why .....

Adam told Sue that he needed 2000 dollars to buy a new car.

○

## C. GRAMMATICALITY JUDGEMENT TEST

### GRAMMATICALITY JUDGMENT TASK

Judge the grammatical acceptability of the sentences given below by using the following scale:

- a) -2 points: Totally Grammatically Unacceptable
- b) -1 point: Grammatically Unacceptable
- c) Not sure
- d) 1 point: Grammatically Acceptable
- e) 2 points: Totally Grammatically Acceptable

For instance;

1- The students is watching TV right now.

- ) -2
- b) -1
- c) Not sure
- d) 1
- e) 2

2- My brother can swim very well.

- a) -2
- b) -1
- c) Not sure
- d) 1
- ) 2

1. Who did Jack tell you when he had seen?

2- Where was Mary going to the school when she saw Mark?

3- What did Mike announce that he bought yesterday?

4- When did Sue say that she had resigned from her job?

5- When is that Germany will win the Eurovision Song Contest apparent?

6- What did Bill wonder whether Hilary liked?

7- Why do you think that she is innocent?

8- What did you say to the man who lives next door?

**9- When do you know the old man who was killed in this house?**

○

**10- Why did you delete the messages that I had sent you earlier?**

○

**11- Whom did John believe the claim that Bill killed?**

○

**12- Whom do you think Benjamin will date this summer?**

○

**13- Why is that William plays the guitar obvious?**

○

**14- When did Harry like the movie after watching it with his girlfriend?**

○

**15- What will George suggest to the man who wants to apply for the job?**

○

**16- Where did William hide the pictures when his mother came home?**

○

**17- Where did Mary see out of her window what her husband was doing?**

○

**18- When do you think who bought these books?**

○

**19- What does Mary love the boy who plays in the orchestra?**

○

**20- Why did Sue refuse the claim that her husband had kidnapped a baby because she trusted him very much.**

○

**21- What did Sue say that she would buy for her mother?**

○

**22- What did Bill woke up when he heard in the house?**

○

**23- When did Jordan buy the dog that attacked me in front of his house?**

○



**24- Who do you think will arrive first?**

○

**25- Whom did that Arthur beat please us?**

○

**26- Where did Laura say she put the keys?**

○

**27-Why was the baby crying because her mother had gone out?**

○

**28-Who does Mary want to visit when she goes to Spain?**

○

**29- Why are you angry with the man who phoned you this morning?**

○

**30- Where did you like the boy whom you met?**

○

**31- What did that Mary lost surprise us?**

○

**32- Where do you think the next Olympics will be held?**

○

**33- Why are you suspicious about the boy who is coming here every day?**

○

**34- Where is that Obama scolded Hillary known by everybody?**

○

**35- When did Laura say that she did not have any money?**

○

**36- Why does Tom believe whom Susan loves?**

○

**37- When did the police officers announce that the burglar had been arrested?**

○

**38- Who were you waiting for when I saw you in the park yesterday?**

○

**39- With whom did Peter went out with Jennifer after he argued?**

○

**40- Where does John want to go after finishing his homework?**

#### **D. TRANSLATION TASK**

**Please translate the following sentences into English.**

**For instance;**

**1- Ali dün senin nereye gittiğini zannediyor?**

**.....Where does Ali think that you went yesterday.....?**

**1- Hırsız neyi çaldıktan sonra koşarak uzaklaştı?**

○

**2- Ahmet'in nerede uyuyakalması seni kızdırdı?**

○

**3- Kemal Ayşe'nin ne zaman geleceğini zannediyor?**

○

**4-Cem kimin ne zaman kendisini aradığını iddia ediyor?**

○

**5- Zeynep'in neyi okumuş olması herkesi şaşırttı?**

○

**6-Ahmet Ali'nin ne zaman yolladığı mektubu ancak bu sabah alabildi?**

○

**7- Sen Mustafa'nın neyi sakladığı odayı gördün?**

○

**8- Selim Elif'in kimi sevdiğini sanıyor?**

○

**9-Meral senin neyi nereye koyduğunu iddia ediyor?**

○

**10- Burcu'nun kime yolladığı mektup postada kaybolmuş?**

○

**11- Murat Metin`in neyi caldığını iddia ediyor?**

○

**12- Tolga kimin ne satın aldığını düşünüyor?**

○

**13- Meral kimi gördükten sonra ağlamaya başladı?**

○

**14- Alev kimin neyi seyrettiğini sanıyor?**

○

**15- Ayşe nerede vakit kaybedince otobusu kacırdı?**

○

**16- Pamuk ne zaman ekilirse daha iyi ürün verir?**

○

**17- Emre cüzdanının nerede kaybolduğunu düşünüyor?**

○

**18- Cem'in kime sinirlenmesi herkesi üzdü?**

○

**19- Cem'in ne zaman okula gitmesi çok sorunlu oldu?**

○

**20- Cem Ayşe'nin nerede kaybolduğu iddiasına inanmıyor?**

○

**(For info) Please state a valid e-mail address if you wish to get feedback**