THE VARIABILITY IN THE INTERPRETATION OF DIFFERENT TYPES OF WH-ADJUNCTS WITHIN ISLAND STRUCTURES IN TURKISH

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Abstract

The interpretation of the reason and purpose denoting wh-adverbials in Turkish, *neden, niye, niçin* 'why' are always problematic within syntactic islands (Arslan, 1999, Görgülü, 2006, Çakır, 2015; 2016). Reinhart (1998) focuses on the different behaviors of the wh-adverbials 'why e.g.' and which-NP constructions 'which student e.g.' in-situ and proposes a choice-function analysis for them. Following her claims, Arslan (1999) proposes that wh-adverbials *niye, neden, niçin* 'why' cannot be interpreted within syntactic islands in Turkish while the interpretation of the which-NP constructions like *hangi amaçla* 'for what reason' or *hangi sebeple* 'with what purpose' in such structures are possible since they dominate an N-set from which an individual can be selected. These wh-adverbials, in fact, underwent a phonological attrition process and lost some of their phonetic substances: ne + için = niçin, ne+diye = niye, ne+ABL= neden. The full forms of these wh-expressions can be viewed as wh-pronominals within postpositional phrases whose noun sets are empty. Hence, the use of *ne için 'for what'* instead of *niçin 'why'* within island structures might produce more acceptable results. In the present study, the characteristics of different types of wh-adjuncts in Turkish are analyzed through a grammaticality judgment test and a missing word completion task. The findings of the study indicate that all wh-adjuncts do not behave similarly: the acceptability of wh-adverbials, wh-pronominals in postpositional phrases and which-NP constructions differ from one another, which shed light on the adjunct & argument asymmetry observed in Turkish. The syntactic explanations for the variation in the acceptability of different types of wh-adjuncts have been presented in the study as well.

Keywords: Wh-in-situ, Turkish, Adjunct & Argument Asymmetry, Wh-adjuncts, Island Constraints.

1. Introduction

In Turkish, wh-phrases remain in-situ both in main and embedded clauses (Kornfilt, 2003; 2008; Çele and Gürel, 2011) Wh-in-situ languages lack the uninterpretable $[u$wh*$]$ feature, and do not have obligatory *wh*-movement (Adger, 2003). That is to say, the wh-words do not have to move to sentence initial position to form wh-questions. 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 Matrix Spec CP position like their English counterparts.

Wh-in-situ languages and overt wh- movement languages show different characteristics in island constraints as well. In general, while overt wh-movement languages like English obey island constraints firmly; such effects display different characteristics in wh-in situ languages like Turkish. For instance, the interpretations of the reason and purpose denoting wh-adverbials in Turkish, *neden, niye, niçin* 'why' are always problematic within syntactic islands, while that of

wh-arguments do not have similar problems in such structures. This case is often uttered as adjunct & argument asymmetry in Turkish (Özsoy, 1996; Arslan, 1999; Görgülü, 2006; Çakır, 2015; 2016). According to this asymmetry, wh-adjuncts and wh-argument behave differently. While the interpretation of argument wh-words within island structures does not result in ungrammaticality, the interpretation of wh-adjuncts within such structures results in ungrammaticality. For instance, while the Complex NP Island Constraint (DP Island Constraint) which prohibits movement out a noun phrase is not violated in the sentence containing a wh-argument (1), this constraint is violated in the one which contains a wh-adjunct (2):

(1) [[Kim-in yaz-dığ-ı] mektub]-u oku-du-n?

     Who-Gen write-Nom-Poss letter-Acc read-Past-2sg

     *Who did you read [the letter[_t_ wrote]]?

(2) *Cem [[o-nun neden yaz-dığ-ı] kitab]-ı beğen-di?

     Cem   he-gen why   write-Nom-Poss book-Acc like-Past

     *Why did Cem like [the book[he wrote _t_]]?

Similarly, while the Adjunct Island Constraint which prohibits movement out of an adjunct is not violated in (3), it is violated in (4) below:

 (3)   Meral [kimi görünce] ağlamaya başladı.

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Meral who-Acc see-Ger cry-ANom-Dat start-Past.

*Who did Meral start to cry [when she saw _t_]?

(4) Meral [Ahmet neden bağırınca] ağlamaya başladı?

Meral Ahmet why shout-Ger cry-ANom-Dat start-Past

*Why did Meral start to cry [when Ahmet shouted_t_]

Çakır (2016) carried out a study to assess the characteristics of these wh-elements (both wh-adjuncts and wh-arguments) within lower CPs that are (not) subject to island effects. The findings of his study indicate that the interpretation of wh-arguments is not problematic in any sentence structures -no matter being subject to island effects or not. On the other hand, the interpretation of wh-adjuncts in lower CPs is problematic even if there are not any intervening island structures. When there are island structures as well, their interpretations have significantly worse results, though. In short, the interpretation of the wh-adverbials *neden, niye, niçin 'why'* within lower CPs are always problematic, no matter they are subject to island effects or not.

The question that arises at this point is whether this generalization is valid for all types of reason and purpose denoting wh-adjuncts or not. These wh-adjuncts in Turkish can be categorized into three groups: (1) wh-adverbials: *neden, niye, niçin 'why'*; (2) which-NP constructions: *hangi amaçla 'for what reason', hangi sebeple 'with what purpose'* and (3) wh-pronominals within post positional phrases: *ne için, ne diye 'for what'*.

The analysis for the first and second category, namely: wh-adverbials and which-NP constructions functioning as wh-adjuncts, comes from Arslan (1999) leaning on Reinhart (1998). Reinhart (1998) focuses on the different behaviors of the wh-adverbials and which-NP constructions in-situ and proposes a choice-function analysis for them. According to this proposal, which-NP constructions (*which student, which book* e.g.) having an N-set can be interpreted via choice functions selecting an individual from a set. Wh-adverbials (*why* e.g.), however, do not have an N-set and thus, cannot select an individual from a set. Following her claims, Arslan (1999) proposes that wh-adverbials *niye, neden, niçin* 'why' cannot be interpreted within syntactic islands in Turkish while the interpretations of the which-NP constructions like *hangi amaçla 'with what purpose'* or *hangi sebeple 'for what reason'* in such structures are possible since they dominate an N-set from which an individual can be selected.

As for the third category targeted in this study, the following claims can be proposed. The three reason and purpose denoting wh-adverbials in Turkish *niçin, niye, neden* 'why' in fact, have nominal characteristics in nature. That is, the original expressions *ne için, ne diye* and *ne+ABL* underwent a phonological attrition process and lost some of their phonetic substances to become one-word wh-adverbials: ne + için = niçin, ne+diye = niye, ne+ABL= neden. In other words, these wh-adjuncts are in fact, reduced forms of these wh-expressions, all of which contain wh-pronominal *ne 'what'*. After this phonological attrition process, these wh-adverbials lost their nominal characteristics by becoming one-word wh-adverbials. The original forms of these wh-phrases can be viewed as wh-pronominals within postpositional phrases. Hence, the use of *ne için* instead of *niçin*, and *ne diye* instead of *niye* within island structures might produce more acceptable results.

The present study aims analyze different types of wh-adjuncts in Turkish. In other words, its purpose is to assess the characteristics of (1) wh-adverbials, (2) which–NP phrases and (3) wh-pronominals in post positional phrases within island structures in Turkish. The island structures focused on in the study are: The Complex NP Constraint (DP Islands), Sentential Subject Constraint (Subject Condition) and Adjunct Island Constraint. The reason for selecting these three island constraints among others is that they are the most frequently analyzed ones in the literature on island constraints phenomena in Turkish. The study tries to find empirical support for the question of whether all types of wh-adjuncts in Turkish behave similarly or not. The findings of the study would shed light on the status of the island constraints and the argument & adjunct asymmetry observed in Turkish.

2. Method

The data of the study were collected through a grammaticality judgment test and a missing word completion task.

2.1. The Grammaticality Judgment Test

It was given to the participants in three different forms. All forms contained 12 items, half of which targeted on the use of wh-adjuncts in question, and the other half on wh-arguments like *kim 'who'*, or *ne 'what'*. The first application of the test focused on the use of the wh-adverbials *niye* and *niçin* 'why' within either of the Complex NP Constraint, Sentential Subject Constraint, or Adjunct Island Constraint. In the second application, these wh-adjuncts were replaced with *ne diye* and *ne için* 'for what' in the same structure. And lastly, in the final application, the wh-adjuncts *hangi amaçla 'with what purpose'* and *hangi sebeple* 'for what reason' were used in the test. The test item given below contains the violation of the Sentential Subject Constraint and it exemplifies the three applications of the study respectively:

Test Item 11: [Ahmet'in kızına okul taksitleri için para göndermesi] eski eşini kızdırdı.
Ahmet-Gen daughter-Poss-Dat school instalment-3.pl-Acc for money send-ANom-3.sg ex wife-3.sg-Acc make angry-Past
([That Ahmet sent Money to his daughter for her school installments] made his ex-wife angry.)
In the First App. : **[**Ahmet'in kızına niçin para göndermesi] eski eşini kızdırdı?
Ahmet-gen daughter-poss-dat why money send-ANom-3.sg ex wife-3.sg-acc make angry-past
(#Why did [that Ahmet sent Money to his daughter _t_] make his ex-wife angry?)
In the Second App.: **[**Ahmet'in kızına ne için para göndermesi] eski eşini kızdırdı?
Ahmet-Gen daughter-Poss-Dat what for money send-ANom-3.sg ex wife-3.sg-Acc make angry-Past
(#For what did [that Ahmet sent Money to his daughter_t_] make his ex-wife angry?)
In the Third App.: **[**Ahmet'in kızına hangi sebeple para göndermesi] eski eşini kızdırdı?
Ahmet-Gen daughter-Poss-Dat which reason-with for money send-ANom-3.sg ex wife-3.sg-Acc make angry-Past
(#For what reason did [that Ahmet sent money to his daughter_t_] make his ex-wife angry?)

Notice that both the declarative and interrogative versions of the test item were given to the participants in all applications of the test. The reason for providing the declarative sentences before the interrogative ones was that the researcher wanted to make sure that the participants would not regard the sentences as scrambled wh-questions in which wh-words originated within matrix clauses and moved to the embedded clauses. That is to say, the researcher did not want the participants have a reading like "Ahmet'in kızına para göndermesi eski eşini niçin kızdırdı?" (Why did [that Ahmet sent Money to his daughter] make his ex-wife angry _t_?)

The reason for using similar structures in all applications was to reduce possible contextual effects on the assessment of the participants. That is to say, by only changing the wh-adjuncts in the test items, they become the unique variable in the applications. When the participants' assessments vary from one application to the other, the reason for this variance can only be the change in the wh-adjunct used in the test items. Other contextual variables like sentence complexity or vocabulary choice do not interfere in the process. All applications were carried out after 4 weeks intervals from one another in order to ensure that the participants do not remember what they did in the previous application. 118 participants (66 female, 52 male) were asked to judge the grammatical acceptability of the total 36 items in -2,+2 Likert Scale: -2: Totally Grammatically Unacceptable, -1 Grammatically Unacceptable, 0: I am not sure, 1: Grammatically Acceptable, 2: Totally Grammatically Acceptable. It was emphasized that they were required to assess only the interrogative sentences rather than their declarative versions. (Please see the appendices to get the tests of the study.)

All of the participants are native speakers of Turkish who live in different parts of Turkey. Their age ranges from 21 to 40 (mean age: 24,7). They are either university students or university graduates. They have no prior knowledge of the island constraints on wh-movement.

2.2. The Missing Word Completion Task

There were 12 items in this task, half of which targeted the use of reason or purpose denoting wh-adjuncts and the other half focused on the use of wh-arguments which were used as fillers. The task was given to 64 participants (39 female, 25 male) who did not take part in the GJT. Their ages ranges between 19 to 34 (mean age: 23,4). The layout of the task was similar to that of GJT with one major difference: there were blanks in the places of wh-words, and the participants were asked to fill in these blanks with the wh-words given at the top as a list. The list contained all six target reason or purpose denoting wh-expressions (*niçin, niye, ne için, ne diye, hangi amaçla, hangi sebeple*) and some other wh-words (*kime 'who-DAT', neyi 'what-ACC', nereye 'where-DAT', ne zaman 'when'..etc.*). The participants were also informed that they could use the given wh-expressions more than once and they can use any other wh-word which does not exist in the list. The reason for providing a list of wh-expressions was to make the task easier for the participants. In a pilot study which did not contain a list, the participants had had difficulty in completing the task. The item below exemplifies this task:

Test Item 2: Kemal'in eşine özür dilemek için yazdığı mektup oldukça uzun.
Kemal-Gen wife-Poss-Dat apologize-Anom for write-ObjP-3.sg. letter rather long
(The letter that Kemal wrote to his wife to apologize is rather long.)
Kemal'in eşine _____ yazdığı mektup oldukça uzun?
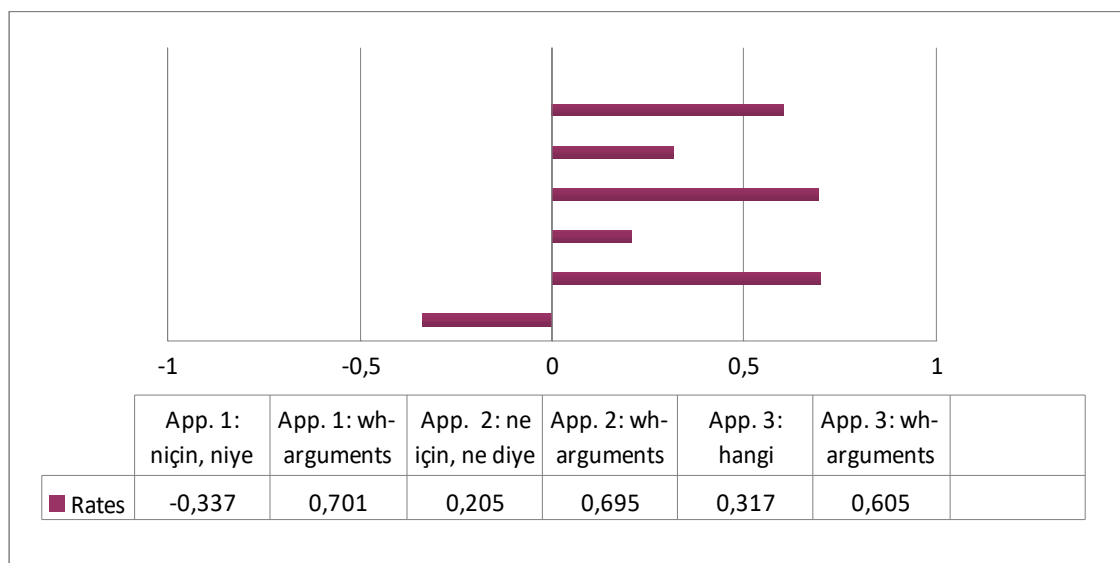Kemal-Gen- wife-Poss _____ write ObjP-3.sg. rather long?

3. Results

The findings of the study were statistically analyzed and presented below.

3.1. The Results for the Grammaticality Judgment Test

The results for the three applications of the Grammaticality Judgment Test (GJT hereafter) are demonstrated and analyzed altogether in order to be able to compare them with one another. The figure below presents the assessments of the participants on the 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 1: The findings for the three applications of the Grammaticality Judgment Test

	App. 1: niçin, niye	App. 1: wh-arguments	App. 2: ne için, ne diye	App. 2: wh-arguments	App. 3: hangi	App. 3: wh-arguments
■ Rates	-0,337	0,701	0,205	0,695	0,317	0,605

As it is seen in the figure, only the test items that contain wh-adverbials *niçin* and *niye 'why'* were assessed to be grammatically unacceptable by more than half of the rates. Only the rates for these test items are closer to -1 in this correlation with the total score of -0,337. The other test items were rated to be rather grammatically acceptable compared to the ones in this group. Though their acceptability differs from one another significantly as well, they are all on the +1 side of the correlation. The ANOVA and post-hoc test results for different sets of test items are presented below. The alpha level was determined to be >0.05.

According to the one way ANOVA results, there was not a statistically significant difference among the test items that contained wh-arguments in the three applications of the test: [$F_{(2, 1937)} = 0.127$, p=0.881]. They were all assessed to be rather grammatically acceptable by the participants.

When the results for the test items that contained three different sets of wh-adjuncts (namely, the wh-adverbials: *niçin, niye 'why'*, the wh-pronominals within PPs: *ne için* and *ne diye 'for what'*, and which-NP constructions: *hangi amaçla 'for what reason'* and *hangi sebeple 'with what purpose'*) are compared with one another, the ANOVA results indicate that there are statistically significant differences in the acceptability of these sets of test items: [$F_{(2, 1937)} = 152.76$, p = 0.001]. When they are compared as pairs, post hoc comparisons using the Tukey HSD test indicated that there was a statistically significant difference among them as well. The mean score for the test items that contain the wh-adverbials *niçin, niye 'why'* was significantly worse than the ones that contain *ne için, ne diye 'for what'* (M=1.06, S=0.06, p=0.001); *hangi amaçla 'for what reason', hangi sebeple 'with what purpose'*: (M=1.30, S=0.07, p=0.001); and the wh-arguments (M= 2.06, S=0.05, p=0.001). In short, these adverbials are significantly less acceptable than wh-arguments and the other types of adjuncts.

As for the wh-adjuncts *ne için* and *ne diye 'for what'*; although they are significantly more acceptable than wh-adverbials, they are statistically less acceptable than the which-NP constructions *hangi amaçla* and *hangi sebeple*: (M= 0.23, S=0.06, p=0.003) and the wh-arguments: (M= 0.99, S=0.05, p=0.001).

The which-NP constructions are significantly the most acceptable type of wh-adjuncts. However, compared to wh-arguments, they are still significantly less acceptable: (M= 0.75, S=0.05, p=0.001). That is, although they are significantly more acceptable than other types of wh-adjuncts, they are still less acceptable than wh-arguments.

3.2. The Results for the Missing Word Completion Task

The figure below demonstrates the distribution of the 384 responses that the participants produced in the Missing Word Completion Task:

Figure 2: The findings for the Missing Word Completion Task
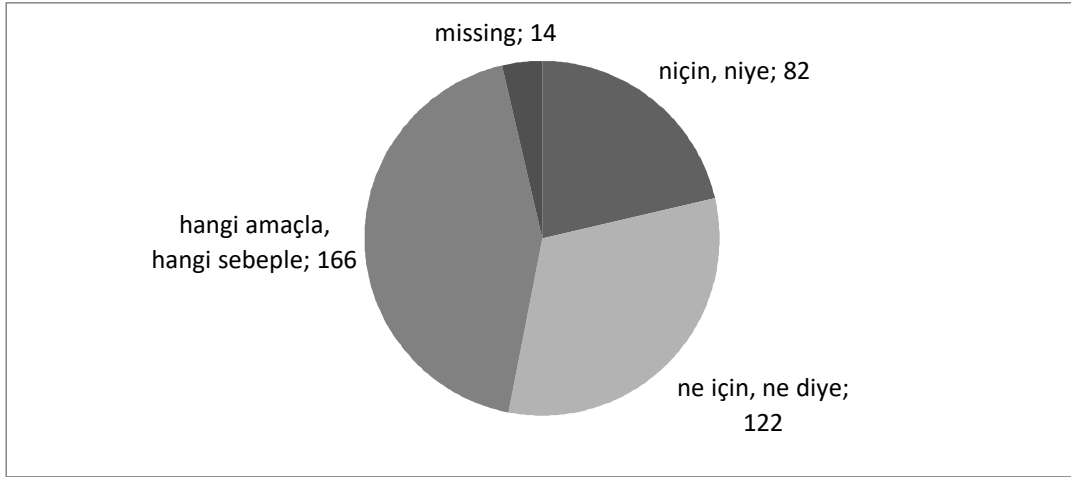
The findings for this task are consistent with the ones obtained in the Grammaticality Judgment Test. In 384 responses of the participants, the wh-adverbials *niye* and *niçin* 'why' were preferred by the participants the least. They filled the missing parts of the sentences with these wh-expressions 82 times. Just like in the GJT, the wh-pronominals in post positional phrases, namely, *ne için* and *ne diye* 'for what' were preferred more than wh-adverbials: 122 times. The which –NP phrases, *hangi amaçla* 'with what purpose' and *hangi sebeple* 'for what reason', emerged to be the most frequently preferred reason and purpose denoting wh-adjuncts: 166 times. Along with these responses, 14 missing responses were observed in the test.

4. Discussion

The findings of the study indicate that all wh-adjuncts do not behave similarly: the acceptability of wh-adverbials, wh-pronominals in postpositional phrases and which-NP constructions differ from one another. The ones that contain a nominal element in their structure are more acceptable than one word wh-adverbials. The reason for this situation might be that we look for lexical information when we ask for a question. Hence, having a nominal element in its structure makes the wh-question more acceptable. More specifically, when the wh-adverbials *niçin* and *niye* 'why' are replaced with the wh-adjuncts *ne için* and *ne diye* 'for what' or with the which-NP constructions *hangi amaçla* 'for what reason' and *hangi sebeple* 'with what purpose' in the same sentence structure, the grammatical acceptability of the sentence increases. The syntactic explanation for this variation is explained later in this part.

However, there exist a statistically significant difference between the wh-pronominals in PPs (*ne için, ne diye* 'for what'*) and wh-arguments as well. The reason for this result might be that these wh-pronominals exist within a further phrase, which seems to act as a further barrier for the language processing. In other words, since the wh-element *ne* 'what' exists within post-positional phrases headed by '*için*' or '*diye*' postpositions, the processing of these wh-adjuncts becomes more difficult, and compared to wh-arguments they become significantly less acceptable. It is true that this case is valid for the which-NP constructions as well. They also originate within a PP which seems to act as a barrier for further movement. However, it can be suggested that the operators of the which-NP constructions do not just stand for the wh-word *which* but the whole wh-phrase (unlike wh-pronominals in PPs). In fact, such structures function similarly in overt wh-movement languages like English. For instance, in a question like "Which car did you buy _t__ yesterday?" the wh-word *which* does not move to spec CP position on its own, but together with its NP complement. This syntactic application is called "pied piping". In a similar vein, the operators of which-NP constructions in Turkish do not represent just the wh-word "which", but the whole which-NP construction. Therefore, the movement of such wh-operators from the base position to the first spec position in Turkish does not contain any violation, and they become significantly more acceptable than wh-pronominals within PPs.

Although the which-NP constructions *hangi amaçla* 'for what reason' and *hangi sebeple* 'with what purpose' appear to be the most grammatically acceptable type of wh-adjuncts, they are still significantly less acceptable than wh-arguments, which further proves the existence of adjunct & argument asymmetry in Turkish. That is to say, whatever wh-adjunct we use, they become significantly less acceptable than the wh-questions that contain the use of a wh-argument. This result support the previous works that claim that there exists an argument & adjunct asymmetry in Turkish. However, as the findings of the present study suggest, this asymmetry is not straightforward which is equally valid for all types of wh-adjuncts.

In GJT, all wh-arguments were considered to be rather grammatically acceptable by the participants, and there was not any statistical difference in different applications of it. This finding is valuable to show the reliability of the test. In its all applications, these wh-words were regarded to be equally acceptable while the assessments for different types of wh-adjuncts varied from one another significantly. This shows that the participants behaved in a consistent manner while assessing the test items in different applications of the same test.

The findings of the study support the following claims made on the syntactic characteristics of Turkish with regard to target wh-phrases and island phenomena:

4.1. Wh-Arguments

The wh-arguments in-situ do not need a local antecedent in the minimal clause in which they occur. They can be directly bound by the wh-operators that originate in the matrix CPs (Aoun and Li, 1993). Therefore, the sentences that contain wh-arguments are grammatically acceptable no matter there are island structures in the structure or not. The following test item from GJT and its tree derivation exemplify this case:

Test Item 12: Meral kimi ziyaret ettikten sonra eve gitti?
  Meral who-Acc visit-Abl after home go-Past
  (*Who did Meral go home after she visited _t_?)
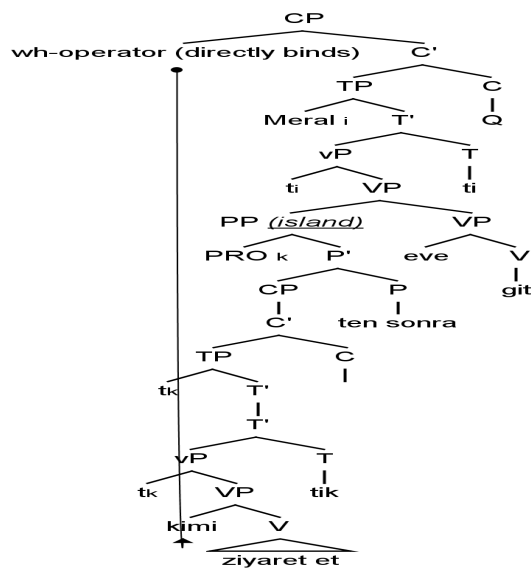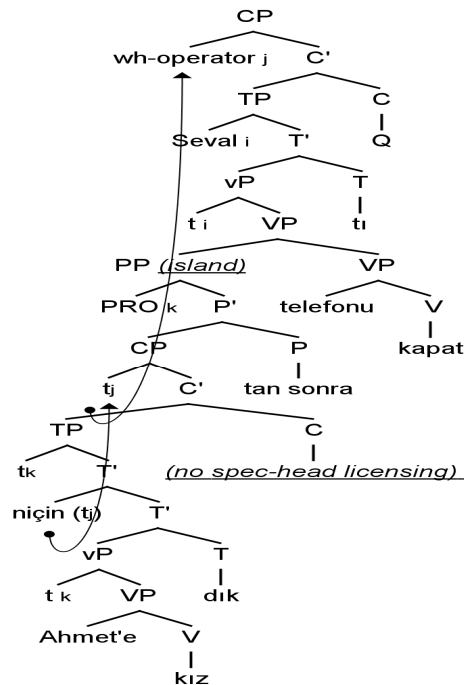

4.2. Wh- Adjuncts

All wh-adjuncts must be antecedent-governed (Aoun and Li, 1993). Therefore, the wh-operators originate in the lower CPs in the same node with their wh-phrases in-situ. After binding the wh-elements, they first move to lower spec CP and then to the matrix spec CP position for checking purposes. The problem here is how their traces can be bound after their movement from lower CP to matrix CP when there are island structures between them. As Arslan (1999) proposes following Cheng (1997), it might be claimed that the presence of the Qu operator in Spec of C0 position triggers Spec-Head agreement by which the C0 acquires the [+wh] feature. By having the [+wh] feature, the C0 can in turn license the constituent in the spec position. Before the movement of the Qu operator to the matrix spec position, the embedded C0 (the head of CP1) receives the [+wh] feature of Qu via spec-head agreement. After the movement of the Qu operator to the matrix spec position to take scope over the entire clause, the trace in the embedded spec position gets licensed by the [+wh] marked C0, and hence obeys the ECP. However, it can be argued that this process is only valid for the wh-operators whose wh-phrases include nominal elements in their structures. In other words, it seems that the embedded C0 can only receive the [+wh] feature from the wh-operator of a wh-NP, not a wh-adverbial. Therefore;

4.2.1. The Wh-Adjuncts: Niçin, Niye 'Why'

The operators of wh-adverbials *niçin* and *niye* 'why', cannot license the C0 with the [+wh] feature, and the structure violates ECP. The movement of the wh-operator to matrix CP further contains weak or strong subjacency violations, as well. When the upper nodes are subject to an island constraint like Complex NP, Sentential Subject or Adjunct Island Constraint, it causes strong subjacency violation. When there are not any island structures in the upper nodes, the movement still causes a weak subjacency violation, since the embedded CPs are claimed to be dominated with a DP in Turkish (Kornfilt, 2001: 191; Gürel, 2003: 134).

All in all, the movement of these operators is grammatically unacceptable in Turkish since ECP as well as subjacency (weakly or strongly) are violated. The following tree derivation of test item 6 in its first application of the GJT exemplifies this case:

Test Item 6 (1. Application): ***Seval Ahmet'e niçin kızdıktan sonra telefonu kapattı?***
Seval Ahmet-Dat why get angry-Abl after phone-Acc hang up-Past
(#Why did Seval hang up the phone after she got angry with Ahmet_t__?)

4.2.2. The Wh-Adjuncts: Ne için, Ne diye 'For what'

The operators of wh-pronominals *ne 'what'* and *kim 'who'* functioning as wh-adjuncts can license the C0 with the [+wh] feature, and ECP is not violated. The movement of the wh-operator to matrix CP contains weak or strong subjacency violations. So, although they are not totally ungrammatical, they are less acceptable than wh-arguments. As for the wh-pronominals within postpositional phrases, namely, *ne için* and *ne diye 'for what',* they do not violate the ECP in the same way. Yet, these wh-words and their operators originate within a PP which acts as a further barrier for the movement. Therefore, the first movement of the wh-operator: from base position to lower spec CP contains a further subjacency violation. That is why these wh-words are grammatically less acceptable than single wh-pronominals functioning as wh-adjuncts, but still significantly more acceptable than wh-adverbials. The following tree derivation of test item 6 in its second application in GJT exemplifies this case:

Test Item 6 (2. Application): Seval Ahmet'e ne için kızdıktan sonra telefonu kapattı?

Seval Ahmet-Dat what for get angry-Abl after phone-Acc hang up-Past
(#What for did Seval hang up the phone after she got angry with Ahmet_t__?)
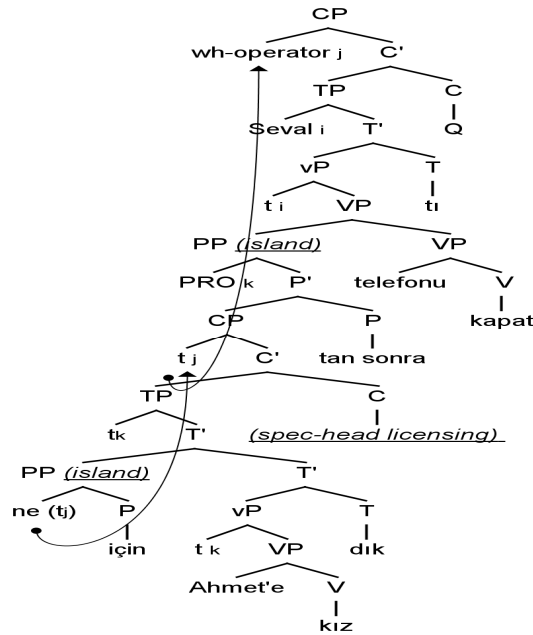

4.2.3. The Wh-Adjuncts: Hangi amaçla 'For what reason' Hangi Sebeple 'With what purpose'

The which-NP constructions *hangi amaçla 'for what reason'* and *hangi sebeple 'with what purpose'* have nominal characteristics as well, so the ECP is not violated. Their movement to matrix CP contains weak or strong subjacency violations and they are less acceptable than wh-arguments. Although they also originate within another node that might act as a barrier for the movement, they are more acceptable than the wh-pronominals that exist within postpositional phrases, because the wh-operators of such phrases do not just stand for the wh-word *which* but the whole wh-phrase (unlike wh-pronominals in PPs). Therefore, the movement of the wh-operators from the base position to the first spec CP position does not contain any violation, and they are significantly more acceptable than wh-pronominals within PPs. As a matter of fact, they are the most acceptable type of wh-adjuncts. The following tree derivation of test item 6 in its third application in GJT exemplifies this case:

*Test Item 6 (3.Application):*Seval Ahmet'e hangi sebeple kızdıktan sonra telefonu kapattı?

Seval Ahmet-Dat which reason-with get angry-Abl after phone-Acc hang up-Past
(#For what reason did Seval hang up the phone after she got angry with Ahmet_t__?)
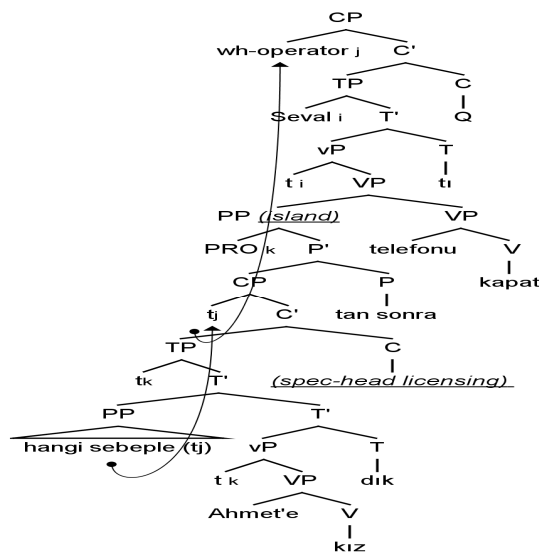
5. Conclusion

In this study, the characteristics of (1) wh-adverbials, (2) which –NP phrases, and (3) wh-pronominals in post positional phrases within island structures in Turkish were analyzed. The findings of the study indicate that all wh-adjuncts do not behave similarly. The acceptability of wh-adverbials, wh-pronominals in postpositional phrases and the which-NP constructions differ from one another. The ones that contain a nominal element in their structure are more acceptable than one word wh-adverbials. The reason for this situation is based upon having or lacking a nominal element in the structure. That is to say, having a nominal element in its structure makes the wh-question more acceptable. Hence, the sentences that contain single-word wh-adverbials are worse than other types of wh-adjuncts. The sentences that contain wh-pronominals within postpositional phrases are less acceptable than wh-arguments as well since they exist in a further maximal projection that acts as a barrier. The syntactic explanations for the variation in the acceptability of different types of wh-adjuncts have been presented in the study as well. In a further study, another wh-adverbial functioning as a wh-adjunct *nasıl* 'how' can be studied. Such a study might provide further evidence for the claim that only the operators of the wh-elements that have a nominal element in their structure can license the C0 with the [+wh] feature, not that of single-word wh-adverbials.

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APPENDICES

Appendix 1: Dilbilgisellik Değerlendirme Testi (Grammaticality Judgment Test)

Verilen düz cümlelerden üretilmiş olan soru cümlelerinin Türkçe için uygun yapılar teşkil edip etmediğini -2 ve 2 arası puanlayarak değerlendiriniz. Bir başka deyişle, **sorulan sorular dilbilgisel olarak uygun mudur? Yoksa bu soru cümleleri dilbilgisel olarak hatalı mıdır?** Değerlendiriniz…

Puanlamanızı lütfen aşağıdaki ölçeğe göre yapınız.

2 puan: Dilbilgisel olarak kesinlikle doğru
1 puan: Dilbilgisel olarak doğru
0 puan: Emin Değilim
-1 puan: Dilbilgisel olarak yanlış
-2 puan: Dilbilgisel olarak kesinlikle yanlış

Örnek:
Ahmet bu sabah İzmir'e gitti.
1. Ahmet bu sabah nereye gitti?   ____**2**_____

Burcu'nun teyzesine gönderdiği hediye bu sabah ulaşmış.
1. Burcu'nun kime gönderdiği hediye bu sabah ulaşmış? ___
Kemal'in eşine özür dilemek için yazdığı mektup oldukça uzun.
2. Kemal'in eşine niçin / ne için / hangi sebeple yazdığı mektup oldukça uzun? ___
Metin'in dün Elif'e sinirlenmesi bizi üzdü.
3. Kimin dün Elif'e sinirlenmesi bizi üzdü? ___
Murat'ın tanınmayayım diye şapka takması herkesi güldürdü.
4. Murat'ın niye / ne diye / hangi amaçla şapka takması herkesi güldürdü? ___
Meltem'in bu sabah evdeki vazoyu kırması annesini kızdırdı.
5. Meltem'in bu sabah neyi kırması annesini kızdırdı? ___
Seval Ahmet'e kendisini rahatsız ettiği için kızdıktan sonra telefonu kapattı
6. Seval Ahmet'e niçin / ne için / hangi sebeple kızdıktan sonra telefonu kapattı? ___

Merve dün akşam eve giderken eski eşini görünce yolunu değiştirdi.
7. Merve dün akşam eve giderken kimi görünce yolunu değiştirdi? ___
Betül kardeşinin yeni bir elbise alırım diye biriktirdiği parayı gizlice aldı.
8. Betül kardeşinin niye / ne diye / hangi sebeple biriktirdiği parayı gizlice aldı? ___
Ahmet bu sabah ablasının gönderdiği mektubu okudu.
9. Ahmet bu sabah kimin gönderdiği mektubu okudu? ___
Dün herkes eve erken gideyim diye acele edince trafikte pek çok kaza oldu.
10. Dün herkes niye /ne diye / hangi amaçla acele edince trafikte pek çok kaza oldu? ___
Ahmet'in kızına okul taksitleri için para göndermesi eski eşini kızdırdı.
11. Ahmet'in kızına niçin / ne için / hangi sebeple para göndermesi eski eşini kızdırdı? ___
Meral amcasını ziyaret ettikten sonra eve gitti.
12. Meral kimi ziyaret ettikten sonra eve gitti? ___

Appendix 2: Cümle Tamamlama Testi (Missing Word Completion Test)

Verilen boşlukları soru ifadeleriyle tamamlayarak üstteki düz cümleye uygun bir soru cümlesi oluşturunuz.
Örnek 1:
Ahmet bu sabah İzmir'e gitti.
1. Ahmet bu sabah ____**nereye**_____ gitti?
Örnek 2:
 Mustafa eve üstü başı yırtık bir şekilde geldi.
2. Mustafa eve _____**ne halde**_____geldi?

ÖNEMLİ NOT: Boşlukları doldururken örnek olarak verilen şu soru ifadelerini kullanabilirsiniz: İsterseniz bunların dışında bir soru ifadesi de kullanabilirsiniz.

ne,	neyi,	kim,	kimi,	kime,	nereye,	ne için,	ne diye,	hangi sebeple,
niye,	hangi amaçla,		niçin,					

Meral amcasını ziyaret ettikten sonra eve gitti.
1. Meral _____ ziyaret ettikten sonra eve gitti?
Metin'in dün Elif'e sinirlenmesi bizi üzdü.
2. _____ dün Elif'e sinirlenmesi bizi üzdü? ___
Seval Ahmet'e kendisini rahatsız ettiği için kızdıktan sonra telefonu kapattı
3. Seval Ahmet'e _____ kızdıktan sonra telefonu kapattı?
Dün herkes eve erken gideyim diye acele edince trafikte pek çok kaza oldu.
4. Dün herkes _____ acele edince trafikte pek çok kaza oldu?
Merve dün akşam eve giderken eski eşini görünce yolunu değiştirdi.
5. Merve dün akşam eve giderken _____ görünce yolunu değiştirdi?
Murat'ın tanınmayayım diye şapka takması herkesi güldürdü.
6. Murat'ın _____ şapka takması herkesi güldürdü?
Meltem'in bu sabah evdeki vazoyu kırması annesini kızdırdı.
7. Meltem'in bu sabah _____ kırması annesini kızdırdı?
Burcu'nun teyzesine gönderdiği hediye bu sabah ulaşmış.
8. Burcu'nun _____ gönderdiği hediye bu sabah ulaşmış?
Kemal'in eşine özür dilemek için yazdığı mektup oldukça uzun.
9. Kemal'in eşine _____ yazdığı mektup oldukça uzun?
Betül kardeşinin yeni bir elbise alırım diye biriktirdiği parayı gizlice aldı.
10. Betül kardeşinin _____ biriktirdiği parayı gizlice aldı?
Ahmet bu sabah ablasının gönderdiği mektubu okudu.
11. Ahmet bu sabah _____ gönderdiği mektubu okudu?
Ahmet'in kızına okul taksitleri için para göndermesi eski eşini kızdırdı.
12. Ahmet'in kızına _____ para göndermesi eski eşini kızdırdı?