

The interpretation of overt subject pronominals in Turkish

Oktay Çınar¹

ORCID: ¹0000-0002-9822-7574

¹*İstanbul Medeniyet Üniversitesi Edebiyat Fakültesi Dilbilimi Bölümü,
Üsküdar, 34700, İstanbul*

¹*oktaycinarr@gmail.com*

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ABSTRACT: This study explores the interpretation of co-indexation between overt subject pronominals, specifically *o* and *kendisi*, with quantified/wh-word antecedents among native Turkish speakers. The research employs a task designed to elicit responses that either force a bound or disjoint interpretation within biased contexts. The findings reveal that *o* and *kendisi* are not interchangeable within the same context. A closer examination unveils that the interpretation of *o* is governed by certain syntactic constraints, although target-deviant interpretations are observed. In contrast, *kendisi* is more likely to be interpreted as a bound pronoun, even though both bound and disjoint interpretations are syntactically accessible. This shows that the constraint governing the binding of overt subject pronominals to quantified/wh-word antecedents, known as the Overt Pronoun Constraint, is operative for *o* but not for *kendisi*. The distinction in the behavior of these pronominals can be attributed to the differences in their syntactic configurations: *o* is costly configured than *kendisi*, hence displaying asymmetry across quantified/wh-word antecedents. Since the binding relations of *kendisi* is similar to *pro*, it is more prone to binding by the matrix subject.

Keywords: overt subject pronominals, *o*, *kendisi*, Overt Pronoun Constraint, Turkish

Türkçede Açık Özne Adılsılların Yorumlanması

ÖZ: Çalışma, açık özne adılsılları (*o* ve *kendisi*) ve niceleyi/ne-sorusu öncülleri arasındaki eş gönderim ilişkilerinin ana dili Türkçe olan konuşucular tarafından nasıl yorumlandığını, bağlı ya da ayırık okumayı hedefleyen bağlamsal tümceler üzerinden incelemektedir. Bulgular, onun sözdizimsel olarak erişilebilen tek seçenek olan tümce dışı bir öncüle bağlı olarak yorumlandığını, *kendisinin* ise her iki yorumlama sözdizimsel olarak erişilebilir olmasına rağmen daha çok ana

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tümce öznesine baęlı olarak yorumlandıęını ortaya koymaktadır. Bu da açık adılısılları niceleyici/ne-sorusu sözcüklere baęlamayı engelleyen sınırlılık olan Açık Adıl Kısıtlama'nın *o* için işlemsel olduęunu *kendisinin* ise bu duruma uymadıęını göstermektedir. Bu durum adılısılların sözdizimsel biçimleri ile açıklanabilir: *o kendisinden* daha maliyetlidir, bu nedenle niceleyici/ne-sorusu öncüllerle bakımsızlık gösterir. *Kendisinin* baęlama ilişkileri *adıla* benzedięi için, daha çok ana tümce öznesi tarafından baęlı olarak tercih edilmektedir.

Anahtar Sözcükler: açık özne adılısılları, o, kendisi, Açık Adıl Kısıtlama, Türkçe

1 Introduction

The co-indexation of overt subject pronominals in null subject languages is governed by a universal principle known as the Overt Pronoun Constraint (Montalbetti, 1984; OPC). This principle constrains the overt embedded subjects to be co-indexed with quantified/wh-word antecedents as displayed in Spanish, a null subject language:

- (1) Muchos estudiantes_i creen que ellos*_{i/j} son inteligentes
 Many-PL student-PL think-3PL that they be-3PL intelligent-PL
 'Many_i students think that they*_{i/j} are intelligent.'
 (Montalbetti, 1984, p. 82)

In (1), the embedded pronoun *ellos* 'they' cannot be bound by the quantified antecedent *muchos estudiantes* 'many students'. Consequently, its reference must be sentence-external, resulting in a disjoint interpretation. However, when the antecedent is a referential subject, as in the case of (2), the embedded pronoun *él* 'he' can be bound by the DP subject *Juan* or it might refer to a salient entity in the discourse as in the following:

- (2) Juan_i cree que él_{i/j} es inteligente
 Juan think-3SG.PRS that he be-3SG.PRS intelligent
 'Juan_i thinks that he_{i/j} is intelligent.'
 (Montalbetti, 1984, p. 85)

This constraint, which governs the co-indexation of overt subject pronominals with quantified/wh-word antecedents, is considered a universal feature of null subject languages (White, 2003). Therefore, recent research on the OPC focuses on how L2 speakers respond to the OPC effects to understand the role of UG in L2 acquisition (e.g., Rothman, 2009). Since the formal principles that govern the co-indexation of pronominal and matrix subjects are not typically

taught in a formal setting, the OPC is claimed to support the poverty of the stimulus argument for L2 acquisition.

However, questions regarding the extent to which the OPC holds in null subject languages have also been raised. One line of research claims that the OPC is not a universal principle, suggesting that its application may vary in different languages (e.g., Sheen, 2000). Some research claimed that the OPC does not hold in Turkish, despite it being a null subject language (e.g., Gürel, 2003).

The following sections will discuss the status of the OPC concerning the co-indexation of overt subject pronominals with quantified/wh-word antecedents in Turkish, drawing on relevant literature and introduces the aims of the study as well as the research questions.

1.1 Overt Subject Pronominals in Turkish

Turkish is a null subject language in which the subject position in finite clauses can be left empty (e.g., Enç, 1986; Özsoy, 1987). Since the OPC is a feature of null subject languages, it is also expected to operate in Turkish. Regarding this, Turkish has two overt subject pronominals: *o* ‘s/he’ and *kendisi* ‘self-3SG’ (Gürel, 2002). *Kendisi* derives from *kendi* ‘self’¹ and can be used as a pronominal in Turkish (Kornfilt, 1997). It can also be used as the subject of a main clause as illustrated below:

- (3) *Kendisi onuni/j akıllı olduğunu düşünüyor.*
 Self-3SG s/he-GEN intelligent be-NOM.3SG.POSS.ACC think-PROG
 ‘S/he_i thinks that s/he_i is intelligent.’

Therefore, in order to assess the functionality of the OPC in Turkish, the co-indexation of *o* and *kendisi* with quantified/wh-word antecedents should follow the OPC. However, the co-indexation of these pronominals exhibits variations

¹ Note that the bare form *kendi* can be inflected for other persons (*kendim* ‘self-1SG’, *kendin* ‘self-2SG’, *kendimiz*, ‘self-1PL’ *kendiniz*, ‘self-2PL’) with emphatic, reflexive and resumptive functions (Göksel & Kerslake, 2005). However, *kendisi* and its plural form *kendileri* are exclusively used as pronominal forms in Turkish, serving the role of third-person pronouns.

Alii kendisini/j hasta olduğunu söyledi.
 Ali self-3SG sick be-NOM.3SG.POSS.ACC say-PAST
 ‘Ali_i said that s/he_i is sick.’

when employed in referential vs. quantified antecedent contexts as demonstrated below.

- (4) a. Herkesi onun*/i/j / kendisini/j / proi/j
 Everybody s/he-GEN self-3SG.GEN
 akıllı olduđunu düşünüyor.
 intelligent be-NOM.3SG.POSS.ACC think-PROG
 ‘Everybody_i thinks that s/he*/i/j / self-3SG_i/j /pro i/j is intelligent’.
- b. Ayşei onun*i*/j / kendisini/j / proi/j
 Ayşe s/he-GEN self-3SG.GEN
 akıllı olduđunu düşünüyor.
 intelligent be-NOM.3SG.POSS.ACC think-PROG
 ‘Ayşei thinks that s/he*i*/j / self-3SG*i*/j /pro i/j is intelligent’.

The binding relations of *o* and *kendisi* differ in (4a): *o* cannot be bound by the quantified antecedent *herkes* ‘everybody’, while *kendisi* can be bound by it. In fact, the binding domain of *kendisi* is unconstrained (Gürel, 2002). As illustrated in (4b), *kendisi* can either be bound by the referential DP *Ayşe* or refer to a third party in the context, resulting in a disjoint reading similar to *pro*. *O* is also unconstrained in its binding domain when the antecedent is a referential subject.²

Considering the binding facts of *o* and *kendisi* in Turkish, it becomes apparent that there exists an asymmetry in their binding behavior across the quantified/wh-word antecedent contexts. This asymmetry challenges the expected application of the OPC in a null subject language. Specifically, *kendisi* does not exhibit the

² Unlike Gürel (2002) who argued that *o* cannot be coreferential with the DP antecedent in Turkish, Çınar and Çakır (2019) claimed that *o* might refer to a DP subject antecedent if the contrast is the topic itself. Consider the binding relations in the following sentence after reading the context:

Context

My classmate, Merve, loves playing volleyball. She is the captain of the volleyball team in our school.

Sentence

Mervei onun*i*/j bu spordaki en yetenekli öğrenci
 Merve s/he-GEN this sport-LOC-in most talented student
 olduđunu düşünüyor.
 be-FN.3SG.ACC think-PROG

‘Merve*i* thinks that she*i*/j is the most talented student in this sport.’

The context does not provide some other person apart from Merve. Therefore, the context forces *o* to be co-referential with the DP subject, *Merve*. Nevertheless, when the sentence is considered in isolation from its context, *o* appears to refer to a third party in the discourse, primarily due to the presence of a contrastive focus environment.

expected OPC effects; it can have a bound reading, unlike *o*, which cannot have a bound-variable interpretation with quantified/wh-word antecedents.

Empirical studies exploring the binding properties of the anaphoras *o* and *kendisi* in native Turkish speakers are relatively scarce. One influential study, conducted by Gürel (2002), focused on L2 Turkish speakers of English. In this study, a control group of native Turkish speakers participated in tasks where they were asked to judge the co-reference relations between the embedded subjects (*o*, *kendisi*, *pro*) and quantified and DP antecedents. In the written interpretation task, participants were presented with decontextualized sentences and asked to interpret the reference of the embedded subjects. They had to decide whether the embedded subject referred to the matrix antecedent or to a third party in the discourse. It was expected that, given *o* cannot have a bound reading (referring to a matrix clause subject) when the antecedent is a quantified pronoun, participants would opt for the disjoint interpretation (referring to a third party in the discourse) for the embedded subject. Conversely, since *kendisi* is unconstrained in its binding domain, participants would choose either interpretation as the antecedent of the embedded subject. The results of this task revealed that the participants selected the correct interpretation for *o* at a rate of 89%, an option that is grammatically possible. Only 2% of the participants accepted the bound reading, 9% accepted both interpretations, options that are not grammatically possible. In contrast, regarding *kendisi*, none of the participants accepted the interpretation that *kendisi* is bound by a third party in the discourse. Instead, 32% of the responses indicated that *kendisi* could only have a bound interpretation, referring to the quantified antecedent. A majority, 68% of the participants accepted both bound and disjoint references.

In the truth-value judgement task, contextualized sentences are employed to force either bound or free interpretation for the embedded subject. Accordingly, participants were asked to judge whether the provided contextualized sentences should be considered true or false. For example, in the following context, the target sentence was designed to be judged true since *kendisi* might refer to a third person in the context:

(5) *Context*

Tom had a math test today. Although he studied hard for the test, he couldn't do many of the questions. When he told his friends that he might fail the test, they were very surprised as they had found the test easy. (Tom'un bugün matematik sınavı vardı. Sınava iyi çalışmasına rağmen, soruların çoğunu yapamadı. Sınavdan başarısız olabileceğini arkadaşlarına söylediğinde, arkadaşları sınavı kolay buldukları için çok şaşırıldı.)

Sentence

Herkesi kendisini/i/j sınavdan kötü not
 Everbody self-3SG.GEN exam-ABL bad grade
 alacađını düşündü.
 get-FUT.3SG.POSS.ACC think-PST
 ‘Everyone_i thought that he_{i/j} would get a bad grade in the exam.’

However, the following context introduces a bias towards an antecedent that is syntactically inaccessible, as *o* cannot be bound by a quantified antecedent. Consequently, participants were expected to judge the sentence false.

(6) *Context*

When Ali went to his office a couple of days ago, he saw that only 2 people had come to work. He was quite surprised at this. The following day, he asked his missing colleagues where they had been. (Ali birkaç gün önce işe gittiđinde, sadece iki kiřinin işe geldiđini gördü. Bu durum onu oldukça řařırttı. Ertesi gün, işe gelmeyen meslektaşlarına nerede olduklarını sordu.)

Sentence

Herkesi onun*/i/j hasta olduđunu söyledi.
 Everyone s/he-GEN sick be-NOM.3SG.POSS.ACC say-PST
 ‘Everyone_i said that s/he*/i/j was sick.’

The results revealed that participants showed a preference for the bound reference of *kendisi* at a rate of 81%³ in quantified antecedent contexts. This indicated that most native speakers opted for the bound interpretation of *kendisi* even in situations where the context forced the disjoint reading. In contrast, the same participants accepted the bound reading of *o* only 3% of the time. This suggests that almost all participants chose an option that was syntactically accessible even though some contexts forced them to bind *o* to the quantified antecedent.

In another study, Gračanin-Yukseket al. (2017) examined the binding relations of *o*, *kendi* and *kendisi* in complex sentences, both in contextualized and decontextualized contexts, among native Turkish speakers.⁴ In the first task, aimed at assessing the interpretations of syntactic constraints, participants were asked to determine whether the anaphoras in the embedded object position (*o* and *kendisi*) referred to intrasentential (matrix subject or embedded clause

³ The percentage indicates the time the participants interpret pronouns with a certain interpretation. Therefore, the given percentage does not indicate the success rates but the choice that each pronoun is interpreted.

⁴ Since the current study does not focus on *kendi*, the results regarding it are not reported here.

subject) or extrasentential (third party in the discourse) antecedents. The results revealed that participants accepted the intrasentential reading for *kendisi* selecting the embedded subject 87% of the time and the matrix subject 96% of the time.⁵ In contrast, the extrasentential reading was chosen merely 8% of the time, indicating a clear preference for the bound interpretation even though the disjoint reading was syntactically possible. For *o*, participants chose the embedded subject – an option that is grammatically impossible – as the antecedent 11% of the time. The matrix subject was chosen 96% of the time, while the disjoint reference was preferred 81% of the time. This clearly showed that participants interpreted *o* as either the matrix subject or a third party in the discourse, both of which are grammatically possible options.

In the second task, the participants were asked to determine the co-reference relations of *o* and *kendisi* in complex sentences based on the provided contexts. These contexts were designed to bias one of the object pronouns as co-referential with a certain type of antecedent. This task also assessed the online processing through reading times in a self-paced reading task. The results displayed that, in the case of *kendisi*, participants accepted the embedded subject 78% of the time in accordance with the biased context. Similarly, they opted for the matrix subject 74% of the time. However, when the context favored an external sentence referent, they only accepted the disjoint reading 59% of the time. These findings suggest a preference for intrasentential antecedents for *kendisi* over extrasentential ones, possibly attributed to pragmatic constraints rather than syntactic ones. Despite the lowest acceptance rate for the disjoint interpretation in responses, it was claimed that the interpretation of *kendisi* remained context-dependent. For *o*, participants were less inclined to choose the embedded subject as the antecedent in a forced context (42% of the time), indicating processing difficulties stemming from syntactic constraints. The embedded object cannot be bound by the embedded subject, causing this challenge. Conversely, participants exhibited a higher acceptance rate of the matrix subject antecedent (74% of the time) and extrasentential antecedent (79% of the time) in other contexts.

The above studies suggest that the binding of embedded subject *o* displays the OPC effects, thus having syntactic constraints that lead speakers to bind it to grammatically possible options. In contrast, the binding patterns of *kendisi* does not follow the OPC; it is unconstrained in its binding domain, having both bound and disjoint interpretations. Therefore, one can claim that these two subject pronominals in Turkish exhibit distinct binding relationships regarding the OPC. However, experimental findings suggest that Turkish speakers

⁵ In this study, the percentage indicates the time the participants chose an option successfully.

predominantly interpret *kendisi* as a sentence-internal anaphora, even though both interpretations are possible.

1.2 Aim and Research Questions

As previously discussed, Turkish has two subject pronominals that exhibit distinct behaviors across quantified and wh-word antecedent subjects: *o* cannot have a bound variable interpretation in contrast to *kendisi* which is unconstrained in its binding domain. In other words, the co-indexation of *o* and *kendisi* with quantified/wh-word subjects differs in relation to the OPC. This possibly hints that the OPC may hold in Turkish when the embedded subject is *o* while it does not seem to operate for *kendisi*. Given the universality of the OPC across null subject languages, there arises a need to explain why grammar does not conform to the OPC for *kendisi*. Drawing on this, the present study aims to understand the role of contextual information on the interpretation of subject pronominals. Very few studies in the literature have focused on the binding *o* and *kendisi* through contextualized sentences concerning the OPC. Therefore, the study is promising since it aims to contribute to our understanding of why the OPC seems to be problematic in Turkish and aims to account for why the two Turkish subjects pronominals show asymmetry in the binding of overt embedded subjects with quantified/wh-word antecedents.

In line with the aims of the study, the following research questions are asked:

- (1) Do native Turkish speakers interpret *o* and *kendisi* interchangeably within the same context?

The first question is addressed to understand whether native Turkish speakers interpret *o* and *kendisi* interchangeably in biased contexts. The answer to this question will reveal how *o* and *kendisi* display asymmetry with quantified/wh-word antecedents.

- (2) How do native Turkish speakers interpret *o* and *kendisi* in biased contexts respectively?

The second research question is formulated to understand how native Turkish speakers interpret the co-indexation of *o* and *kendisi* with quantified/wh-word antecedents when the context biases either the bound or disjoint readings of these pronominals. The OPC holds that overt subject pronominals cannot be bound by quantified/wh-word antecedents. Therefore, violation of this constraint for *o* or *kendisi* will shed light on the functionality of the OPC in Turkish.

2 Methodology

The study conducted a test on adult Turkish native speakers, in which they were asked to determine the binding relationship between embedded clause subjects and matrix clause subjects within contextualized sentences. 40 native speakers of Turkish participated in the study who were undergraduate university students from two different universities in Turkey. The test was conducted within a classroom setting on two different occasions under the supervision of the researcher. A sample question was presented to elucidate the procedure for responding to the test items. Each participant was allocated a time frame of 20 minutes for completing the test. All participants responded to the questions in an identical order to maintain consistency in the testing process.⁶

Ethical permission to carry out this study was obtained from the Istanbul Medeniyet University Social and Humanities Ethics Commission, with a date of approval of March 13, 2023 and volunteer participation form was given to the participants and their informed consent was obtained before the study.

In the test, participants were contextually forced to select the interpretation of the overt subject pronominal (*o* or *kendisi*) in the embedded clause, either as the same person in the matrix clause subject or another person who is not present in the discourse. The aim of creating biased contexts was to provide participants with contextual information that would allow them to disambiguate the interpretation of different references of the embedded subject. This approach aimed to investigate how native Turkish speakers interpret the references of *o* and *kendisi* in specific contexts where the context plays a crucial role in interpretation. Certain contexts were designed to force the embedded subject to co-refer with the matrix subject, resulting in a bound interpretation, while others were structured to force the embedded subject to refer to a third party in the discourse, leading to a disjoint interpretation.

To understand whether participants interpret *o* and *kendisi* interchangeably within the same context, the test was presented in two different forms to two separate groups of participants (n=20 per group). In the first application of the test, the target sentences containing the embedded pronouns *o* and *kendisi* were provided to the first group, while in the second version of the test, these pronouns were switched, with *o* replacing *kendisi*, and *kendisi* replacing *o*, thereby, enabling both groups to interpret the same context with different pronouns. With respect to this, the test has 4 conditions as outlined in Table 1.

⁶ One of the reviewers reminded us that preparing the test items in a randomized order would be beneficial. We acknowledge the value of randomized test items in certain contexts and will consider their potential applicability in future research. In this study, the aim was to offer consistency in the presentation of test items across participants.

Table 1. Contextualized co-reference task

	Group 1 (n=20)			Group 2 (n=20)		
	Subject	Forced Context	Expected Answer	Subject	Forced Context	Expected Answer
Con1	<i>o</i>	Disjoint	Disjoint	<i>kendisi</i>	Disjoint	Disjoint
Con2	<i>kendisi</i>	Disjoint	Disjoint	<i>o</i>	Disjoint	Disjoint
Con3	<i>o</i>	Bound	Disjoint	<i>kendisi</i>	Bound	Bound
Con4	<i>kendisi</i>	Bound	Bound	<i>o</i>	Bound	Disjoint

Con: Condition

The test comprises a total of 32 test items, with each condition consisting of 8 test items. Additionally, 8 filler items containing null subjects in the embedded clause were incorporated to ensure that participants remained unaware of the purpose of the study.

As previously mentioned, each target sentence for the first group corresponds to the same target sentence for the second group, with the only difference being the type of overt subject (*o* vs. *kendisi*). Depending on the context, *kendisi* can have both bound and disjoint readings; however, *o* can only have a disjoint reading. Therefore, if the context forces a disjoint reading, the expected answer will necessarily be disjoint for both *o* and *kendisi*. On the other hand, if the sentence is contextualized to be bound, only *kendisi* can have a bound interpretation in the answer. Given this, Condition 1 (Con1) and Condition 2 (Con2) force a disjoint reading, for which the expected answer is disjoint. For Condition 3 (Con3) and (Con4), the antecedent of embedded subject is contextualized to be bound; hence, the expected answer for *kendisi* is bound. However, due to the syntactic constraints, the expected answer would be disjoint for *o*.

There are four types of antecedents for the target sentences, each with two tokens for each condition: universal quantifier *herkes* ‘everybody’, *quantified determiner* *her* ‘each’, *negative quantified pronominal* *kimse* ‘nobody’, and *wh-word*, *kim* ‘who’. Below, each condition is illustrated with test items.⁷

2.1 Test Items of the Study

2.1.1 Condition 1

Con1 establishes a context in which the overt embedded pronoun is co-referential with a third party in the discourse. This context gives rise to a disjoint reading, as it introduces a third party to be co-referential with the antecedent. In the first form of the test, the embedded clause subject is *o* for the first group. In the second

⁷ See the Appendix for the test given to Group 1. The test items and fillers are presented in the same order as provided to the participants.

application of the test, the embedded pronoun is *kendisi* for the second group. The expected answer for both groups is disjoint. Test item 1 is described below:

(7) *Context*

Öğretmen mezuniyet balosuna katılacak öğrencilerin listesini hazırladı. Ayşe katılamayacağını belirtti. (The teacher prepared the list of students who will attend the graduation ball. Ayşe stated that she could not attend.)

Target sentence for the first group

Herkes **onun** gelemeyeceğini söyledi. (Everybody said that **o** couldn't come.)

Target sentence for the second group

Herkes **kendisinin** gelemeyeceğini söyledi. (Everybody said that **kendisi** couldn't come.)

Question

Yukarıdaki tümceye göre kim gelemecek olabilir? (According to the sentence above, who might not be able to come?)

A) Herkes ile aynı kişi (The same person as *everybody*)

B) Herkes dışında başka biri (Some other person who is not *everybody*)

As the context introduces Ayşe as a third party in the discourse, we understand that *Ayşe* couldn't attend the graduation ball rather than everybody:

Herkesi onun_j / kendisinin_j gelemeyeceğini söyledi. (Everybody_i said she_j / self-3SG_j couldn't come.)

2.1.2 *Condition 2*

Con2 similarly biases the overt embedded subject to yield a disjoint reading. In the first group, the overt pronoun in the embedded clause is *kendisi*. In the second group, the subject within the same embedded clause is *o*. Accordingly, the expected answer for both groups aligns with a disjoint reading. Test item 18 is described below:

(8) *Context*

Yarışmaya katılan çocuklar yarışı bitirdi. Sonuçlar henüz açıklanmadı ama birincilik kupası Mehmet'e verilecek. (The children participating in the competition finished the race. The results have not been announced yet, but the first place trophy will be given to Mehmet.)

Target sentence for the first group

Kimse **kendisinin** yarışı kazandığını bilmiyor. (Nobody knows that **kendisi** won the race.)

Target sentence for the second group

Kimse **onun** yarışı kazandığını bilmiyor. (Nobody knows that **o** won the race.)

Question

Yukarıdaki tümceye göre kim yarışı kazanmış olabilir? (According to the sentence above, who could have won the race?)

- A) Kimse ile aynı kişi (The same person as *nobody*)
 B) Kimse dışında başka biri (Some other person who is not *nobody*)

In this example, *Mehmet* is introduced into the context as a third party. Therefore, we understand that nobody knows *Mehmet* won the race rather than themselves:

Kimse*i* kendisinin*j* /onun*j* yarışı kazandığını bilmiyor. (Nobody*i* knows that self-3SG*j* / he*j* won the race.)

2.1.3 Condition 3

Con3 forces the subject pronominal to be bound by the quantified/wh-word antecedent, resulting in a bound interpretation, as the context introduces a group reading. In the first form of the test, the embedded subject is *o*. For the second group, *kendisi* is employed. However, the expected answer for the two groups differs. While the context favors a bound reading, *o* cannot be bound by a quantified/wh-word antecedent, thus necessarily having a disjoint reading for the first group. In contrast, as *kendisi* can be co-referential with this antecedent, the expected answer for the second group aligns with a bound interpretation. Test item 12 is described below:

(9) Context

Bugün okulda şiir okuma yarışması var. En iyi şiir okuyan öğrenciye ödül verilecek. (There is a poetry reading competition at school today. A prize will be awarded to the student who reads the best poem.)

Target sentence for the first group

Her öğrenci **onun** yarışmayı kazanacağını düşünüyor. (Every student thinks that **o** will win the competition.)

Target sentence for the second group

Her öğrenci **kendisinin** yarışmayı kazanacağını düşünüyor. (Every student thinks **kendisi** will win the competition.)

Question

Yukarıdaki tümceye göre kim yarışmayı kazanacak olabilir? (According to the sentence above, who can win the competition?)

- A) Her öğrenci (The same person as *every student*)
 B) Her öğrenci dışında başka biri (Some other person who is not *every student*)

The context introduces a group reading in which no third party is present. Despite the group reading, syntactic constraints do not permit the embedded pronoun *o* to be co-indexed with the antecedent *her öğrenci* ‘every student’. Therefore, the expected interpretation becomes the disjoint reading, as *o* cannot be bound to *her öğrenci*. However, when *o* is replaced with *kendisi*, we understand that *her öğrenci* thinks that they will win the competition themselves rather than some other person in the discourse:

Her öğrenci *onun**_i / kendisinini yarışmayı kazanacağını düşünüyor.
 (Every student_i thinks that s/he*_i / self-3SG_i will win the competition.)

2.1.4 Condition 4

In Con4, the context forces the overt embedded subject to have a bound reading, similar to Con3. In the first application of the test, the overt subject in the embedded clause is *kendisi*, and the expected interpretation is bound. For the second group, the overt subject is *o*, which does not align with what the context requires. Test item 8 is described below:

(10) Context

Matematik sınavından yalnızca birkaç kişi yüksek not aldı. Öğretmen sınıfa sordu: (Only a few students got high marks on the math test. The teacher asked the class:)

Target sentence for the first group

Kim **kendisinin** sınavda başarılı olduğunu düşünüyor? (Who thinks that **kendisi** is successful in the exam?)

Target sentence for the second group

Kim **onun** sınavda başarılı olduğunu düşünüyor? (Who thinks that **o** is successful in the exam?)

Question

Yukarıdaki tümceye göre kim sınavda başarılı olmuş olabilir? (According to the sentence above, who do you think could have passed the exam?)

- A) Kim ile aynı kişi (The same person as *who*)
 B) Kim dışında başka biri (Some other person who is not *who*)

Similar to the previous test item, context introduces a group reading, which forces the embedded subjects *o* and *kendisi* to refer to the quantified antecedent *kim* ‘nobody’. However, the co-indexation of the embedded pronoun and quantified antecedent is syntactically possible only when the pronominal is *kendisi*; *o* necessarily has a disjoint interpretation in accordance with the OPC:

Kim *i* kendisinin *i* / onun**i* sınavda başarılı olduğunu düşünüyor? (Who/ thinks that self-3SG*i* / s/he**i* is successful in the exam?)

2.2 *Data Analysis*

The results derived from the two participant groups were subjected to both descriptive and statistical analyses. The descriptive analysis is based on the mean scores obtained from the test to better understand the significance of the quantitative data. Each expected answer for each condition was assigned a score of 2 points with a maximum attainable score of 16, corresponding to 100% success rate. As part of the statistical analysis, t-tests were implemented to determine if there is a significant difference between the means of two groups or conditions. In this context, the following type of comparisons were outlined for both descriptive and statistical analyses:

- a. *intergroup comparison of each condition*: It compares the score performances of the two groups with each other across each condition. This analysis aims to find out whether the score performances of each group differ depending on the type of pronominal (*o* and *kendisi*) within the same biased contexts. The assessment of statistical significance when comparing the groups with each other is conducted through the use of independent samples t-tests. Addressing the first research question, this analysis aims to reveal whether Turkish speakers interpret *o* and *kendisi* interchangeably in the same context.
- b. *intragroup comparison of each pronoun*: It compares the score performances of each group across the bound and disjoint readings for *o* and *kendisi* respectively. To compare the different interpretations of

each pronoun within their own groups, paired sample t-tests were employed. Addressing the second research question, this analysis seeks to discern whether the interpretation of the pronominals differs for each group across the disjoint vs. bound interpretations. Regarding the functionality of the OPC in Turkish, this analysis will shed light on how native Turkish speakers interpret the co-indexation of *o* and *kendisi* when the context biases either the bound or disjoint reading.

2.2.1 Intergroup comparison of each condition

In this part, the score performances of Group 1 and Group 2 were compared with each other for each condition.

2.2.1.1 The results for Condition 1

The results for Con1 are presented in Table 2 below.

Table 2. Group comparison for Con1

Participants	Group 1		Group 2	
Types of embedded subject	<i>o</i>		<i>kendisi</i>	
Forced Context	Disjoint		Disjoint	
Expected Answer	Disjoint		Disjoint	
Answers for each Interpretation	Bound	Disjoint	Bound	Disjoint
Mean	1.9	14.1	4.7	11.3
Score %	11.9	88.1	29.4	70.6

In Con1, the forced contexts and expected answers for both groups are disjoint readings. Group 1 participants were presented with sentences containing the pronoun *o* while Group 2 participants encountered sentences with the pronoun *kendisi*. For Group 1, 88.1% of the responses indicated that *o* had a sentence external referent (14.1 out of 16 times). Note that *o* must have a disjoint referent irrespective of the contextual information. In contrast, when considering Group 2, only 70,6 % of the responses indicated that *kendisi* had a disjoint reading over the same target sentences (11.3 out of 16 times). This difference between the groups was found to be statistically significant ($t=2.92, p=0.006$).

2.2.1.2 The results for Condition 2

The results for Con2 can be seen in Table 3 below.

Table 3. Group comparison for Con2

Participants	Group 1		Group 2	
Types of embedded subject	<i>kendisi</i>		<i>o</i>	
Forced Context	Disjoint		Disjoint	
Expected Answer	Disjoint		Disjoint	
Answers for each Interpretation	Bound	Disjoint	Bound	Disjoint
Mean	6.5	9.5	0.8	15.2
Score %	40.63	59.37	5	95

Contrary to Con1, Group 1 participants were presented with sentences including *kendisi* whereas Group 2 participants encountered sentences featuring the pronoun *o* within the same biased contexts. This difference in the type of pronouns enables us to understand whether the responses in Con1 would reveal similar preferences among different participants. Considering the expected answers, 95% of the participants for Group 2 indicated that *o* had a disjoint reading (15.2 out of 16 times). In contrast, only 59.37% of Group 1 participants derived the expected disjoint reading for *kendisi*. The observed distinction between the groups yielded a statistically significant difference ($t=7.52$, $p=0.001$).

This finding aligns with the results in Con1. Turkish native speakers exhibit a preference for *o* over *kendisi* in disjoint contexts, even when both pronouns are contextually appropriate in the target sentences. This suggests that *o* and *kendisi* are not used interchangeably.

2.2.1.3 The results for Condition 3

The results for Con3 are displayed in Table 4 below.

Table 4. Group comparison for Con3

Participants	Group 1	Group 2
Types of embedded subject	<i>o</i>	<i>kendisi</i>
Forced Context	Bound	Bound
Expected	Disjoint	Bound

Answer				
Answers for each Interpretation	Bound	Disjoint	Bound	Disjoint
Mean	4.7	11.3	13.5	2.5
Score %	29.4	70.6	84.37	15.63

In contrast to previous conditions, Con3 biases a bound interpretation of *o* and *kendisi*. However, due to a formal constraint postulated by the OPC, *o* cannot be bound by a quantified or wh-word antecedent unlike *kendisi*, which can be bound. Consequently, it is anticipated that the majority of the speakers would derive a disjoint reading for *o* contrary to the expected answer, while *kendisi* would be more likely to be interpreted with a bound interpretation. Regarding the expected answers, 84.37% of the responses from Group 2 indicated a bound reading for *kendisi* (13.5 out of 16 times). On the other hand, 70.6% of the Group 2 participants preferred *o* to have a disjoint reading, despite the contexts which forced a bound interpretation. The difference in mean choice of pronominal interpretation yielded a statistically significant result ($t=3.02$, $p=0.004$), indicating that *o* and *kendisi* are not used interchangeably.

This difference suggests that participants of Group 1 demonstrated sensitivity to the binding constraints of the embedded pronoun *o*, as the bound interpretation is grammatically inaccessible despite the contextual bias for a bound reading.

2.2.1.4 The results for Condition 4

The results for Con4 are given in Table 5 below.

Table 5. Group comparison for Con4

Participants	Group 1		Group 2	
Types of embedded subject	<i>kendisi</i>		<i>o</i>	
Forced Context	Bound		Bound	
Expected Answer	Bound		Disjoint	
Answers for each Interpretation	Bound	Disjoint	Bound	Disjoint
Mean	12.8	3.2	5.2	10.8
Score %	80	20	32.5	67.5

Con4 is similarly designed to have a bound interpretation, with a difference in the type of pronouns. Regarding the expected answers, 80% the Group 1 favored the bound reading for *kendisi* (12.8 out of 16 times) whereas 67.5% of the Group

2 participants derived the disjoint interpretation for *o* (10.8 out of 16 times). However, despite the majority of participants showing a preference for a bound interpretation of *kendisi* and a disjoint interpretation of *o*, statistical analysis did not reveal a significant difference in the mean interpretation of pronominals ($t=1.66, p=0.105$) unlike what is expected.

In light of this finding, it is worth noting that 32.5% of the participants bound the overt embedded subject *o* to a quantified or wh-word antecedent, resulting in unacceptable interpretations. Therefore, it appears that the role of context may not have been fully recognized, which, in turn, influenced the participants' co-reference interpretations. This is also evident in the mean scores obtained from Con3, where the 29.4% of the participants produced unacceptable interpretations with *o*. Further discussion of this issue will be presented in subsequent sections.

2.2.2 Intragroup comparison of each pronoun

In this section, an analysis of the mean score performances for each group was conducted within the contexts biased towards disjoint and bound interpretations for both *o* and *kendisi* respectively. The aim was to gain insights into how participants interpreted each embedded pronoun in biased contexts. To achieve this, we compared each pronoun to itself. For the comparison of *o*, following pairs were selected: Con1 vs. Con3 for Group 1 and Con2 vs. Con3 for Group 2 (*o* across bound vs. disjoint contexts). Regarding *kendisi*, the chosen pairs were: Con2 vs. Con4 for Group 1 and Con1 vs. Con3 for Group 2 (*kendisi* across bound vs. disjoint contexts).

2.2.2.1 The results for *o*

The results for *o* across bound vs. disjoint contexts are displayed in Table 6 below.

Table 6. Comparison for *o*

Participants	Group 1			
Paired Conditions	Con1		Con3	
Forced Context	Disjoint		Bound	
Expected Answer	Disjoint		Disjoint	
Answers for each Interpretation	Bound	Disjoint	Bound	Disjoint
Mean	1.9	14.1	4.7	11.3
Score %	11.9	88.1	29.4	70.6
Participants	Group 2			
Paired Conditions	Con2		Con4	

Forced Context	Disjoint		Bound	
Answers for each Interpretation	Disjoint		Disjoint	
Answers	Bound	Disjoint	Bound	Disjoint
Mean	0.8	15.2	5.2	10.8
Score %	5	95	32,5	67,5

The pairs involve the disjoint vs. bound interpretations of *o* within Group 1 and Group 2, respectively. In the case of Group 1, 88.1% of the responses indicated a disjoint reading of *o* in a context that biased a disjoint interpretation. When the context favored a bound interpretation, 70.65% of the responses indicated that *o* had a disjoint reference. However, statistical analysis demonstrated that the difference in the mean scores was statistically significant ($t=3.56$, $p=0.002$), suggesting that participants' interpretations deviated from the typical observation in the OPC, where the interpretation of *o* is not typically context dependent. Likewise, within Group 2, similar results were observed when comparing *o* in disjoint vs. bound contexts. Almost all participants exhibited a preference for the disjoint reference in contexts that forced the disjoint interpretation (95% of the time). Conversely, 67,5 of the responses indicated that *o* could be disjoint in contexts favoring the bound interpretation. Similar to results for Group 1, statistical analysis revealed a significant difference in the mean scores ($t=3.56$, $p=0.002$).

These differences, which were also observed in the comparison of Con4, but may potentially be attributed to the influence of contextual information. In cases where the bound context forced participants to bind *o* to an antecedent, contrary to the OPC, this could pose a processing challenge for some participants, potentially leading to incorrect interpretations. Nevertheless, it is notable that the majority of participants consistently derived a disjoint interpretation, even in contexts biasing the bound reading.

2.2.2.2 The results for *kendisi*

The results for *kendisi* across bound vs. disjoint contexts can be given in Table 7 below.

Table 7. Comparison for *kendisi*

Participants	Group 1	
Paired Conditions	Con2	Con4

Forced Context	Disjoint		Bound	
Expected Answer	Disjoint		Bound	
Answers	Bound	Disjoint	Bound	Disjoint
Mean	6.5	9.5	12.8	3.2
Score %	40.63	59.37	80	20
Participants	Group 2			
Paired Conditions	Con1		Con3	
Forced Context	Disjoint		Bound	
Expected Answer	Disjoint		Bound	
Answers	Bound	Disjoint	Bound	Disjoint
Mean	4.7	11.3	13.5	2.5
Score %	29.4	70.6	84.37	15.63

The given pairs compare the bound vs. disjoint readings of the overt pronominal *kendisi* for each group. In the case of Group 1, when considering the expected answers, it was observed that 80% of the participants interpreted *kendisi* as having a bound reference, while 59.37% of the participants interpreted *kendisi* as having a disjoint reference. The mean difference in the choice of *kendisi* interpretation yielded a statistically significant result ($t=3.46$, $p=0.003$). Likewise, for Group 2, similar results can be derived from the analysis. In contexts biased toward a bound interpretation, 84.7% of the results indicated that *kendisi* had a sentence-internal antecedent. In contexts favoring a disjoint interpretation, 70.6% of the results indicated that *kendisi* had a disjoint reading. Once again, the mean difference in the interpretation of *kendisi* was found to be statistically significant for Group 2 ($t=2.57$, $p=0.003$).

These results suggest that *kendisi* is more likely to be interpreted as a bound pronoun by the native Turkish speakers when the antecedent is a quantified/wh-word. Consequently, one can argue that the OPC is not operative for *kendisi*.

3 Discussion

The interpretation of Turkish native speakers reveals a clear distinction between the use of *o* and *kendisi* within the same contextualized sentences. Native speakers consistently indicate that these two pronouns are not interchangeable. The pronominal *o* is predominantly interpreted to have a disjoint reading, aligning with the only syntactic option. In contrast, *kendisi* is more likely to be

interpreted as being bound by the sentence internal antecedent, rather than referring to a third party even though both options are syntactically accessible.

Examining the behavior of these pronouns in the context of the OPC, it becomes evident that *o* displays the OPC effects. This means that *o* cannot be bound by a quantified or wh-word antecedent. On the contrary, the OPC does not appear to be functional for *kendisi* since it can be a bound pronominal, even when the context biases a disjoint interpretation. Overall, the interpretation of *o* and *kendisi* exhibits distinct co-reference relationships when the antecedent is a quantified/wh-word expression: *o* is interpreted as a disjoint pronominal, while *kendisi* is more likely to be interpreted as a bound pronominal.

These findings are consistent with the previous studies that have investigated the interpretation of the Turkish pronominals *o* and *kendisi*. For example, Gürel (2002) demonstrated that the majority of the native speakers favored the bound interpretation for *kendisi*. However, the same interpretation for *o* was derived by almost none of the participants. This observation indicates that *kendisi* is more functional as a pronominal referring to a sentence internal antecedent in contrast to *o*, which could only refer to a third party in the discourse. Likewise, the contextualized task of Gračanin-Yukseş et al. (2017) yielded parallel results. In their study *kendisi* emerged as the preferred choice for a bound pronominal. In contrast, the study revealed that the interpretation of *o* is constrained by syntax; therefore, participants did not prefer an option in which *o* was bound to an embedded subject.

The obtained results clearly indicate a distinction in the co-reference relationships of the two Turkish pronominals, with *kendisi* lacking the OPC effects. However, it is important to provide an account of the grammatical reasons behind the distinct treatment of these pronominals. Regarding this, Bautista (2014a) inquired the co-reference relationships exhibited by pronouns in various languages and their corresponding syntactic configurations. Accordingly, he claimed that some pronouns belong to the category of determiners, the rest belonging to the other syntactic categories such as nouns and adjectives (Postal, 1966; cited in Bautista, 2014b: 51). Drawing from Reinhart's (2006) reference set computations, he proposed that some pronouns are costly configured than others. As a consequence of this approach, determiner pronouns and pronouns falling within the categories of nouns and adjectives exhibit different co-reference relationships in certain languages. In line with this observation, Bautista claimed that determiner pronouns, being computationally more costly, display asymmetry across quantified/wh-word and referential antecedents. However, pronouns with adjective and noun categories, along with null pronouns do not display asymmetry with the same antecedents as they are computationally less costly in comparison to determiner pronouns (e.g., Sorrace & Serratrice, 2009).

The above claim provide an explanation for the differing co-reference relationships exhibited by Turkish subject pronominals, as well as shed light on why *kendisi* does not display the OPC effects. In this conceptual framework, *o* can be categorized as a determiner pronoun, thereby displaying asymmetry with referential vs. quantified antecedent contexts. It similarly displays asymmetry with *pro* in the same contextual settings. On the other hand, *kendisi* belongs to the category of adjectival pronouns and behaves like a *pro* (Gürel, 2002); hence does not display asymmetry across the antecedent types. Consequently, it can be argued that *kendisi* does not display the OPC effects in Turkish unlike *o*. A consequence of this conceptual claim is that *kendisi* is the overt equivalent of the null pronoun, given their shared co-reference relationships (Gürel, 2002). Regarding the binding of the pronominals, (4a-b) are revisited below.

- (4) a. Herkesi onun*/i/j / kendisini/i/j / pro/i/j
 Everybody s/he-GEN self.3SG.GEN
 akıllı olduğunu düşünüyor.
 intelligent be-NOM.3SG.POSS.ACC think-PROG
 ‘Everybody_i thinks that s/he*/i/j / self-3SG_{i/j} /pro i/j is intelligent’.
- b. Ayşei onun/i/j / kendisini/i/j / pro/i/j
 Ayşe s/he-GEN self.3SG.GEN
 akıllı olduğunu düşünüyor.
 intelligent be-NOM.3SG.POSS.ACC think.PROG
 ‘Ayşei thinks that s/he_{i/j} / self-3SG_{i/j} /pro i/j is intelligent’.

In examples (4a-b), *o* displays asymmetry across the antecedent types in line with the OPC’s predictions. Conversely, the binding relations of *kendisi* and *pro* yield the same interpretations regardless of the antecedent type. This behavior of *kendisi* deviates from the expected OPC effects in a null-subject language.

The evidence for the binding facts of *o* and *kendisi* is supported with the empirical data in our study. Our research into the co-reference relationships of overt pronominals within biased sentences has revealed a crucial distinction: *o* and *kendisi* are not interchangeable within the same context. This observation reinforces the argument that they possess different interpretations, as proposed by Bautista (2014a).

Comparisons of the interpretations of each pronoun with each other further reinforce the claims made above. In the case of *kendisi*, statistically significant differences in interpretations between bound and disjoint readings for both groups are an evidence that contextual information does not exclusively determine the correct interpretation. Otherwise, participants would have demonstrated a preference for *kendisi* to have a disjoint reading in the same way as they favored it in bound contexts. Therefore, one can argue that *kendisi*

is more prone to interpretation as being bound by the sentence-internal antecedent.

As discussed earlier, the binding relations of *kendisi* is similar to *pro*. Studies focusing on the interpretation of *pro* suggest that null pronouns are likely to have sentence internal antecedents (e.g. Alonso-Ovalle et al. 2002; Sorace & Serratrice, 2009). Consequently, it can be claimed that *kendisi* and *pro* share similar interpretations across biased contexts. This assertion justifies the claim that *kendisi* is more likely to be interpreted as bound by the matrix subject antecedent.

As stated before, the OPC is a universal constraint that is anticipated to be applicable in null subject languages, including Turkish. However, the findings clearly demonstrate that *kendisi* does not conform to the OPC effects in contrast to *o*. Drawing on the arguments presented, given *kendisi*'s similarity in behavior to *pro*, it can hence be asserted that *kendisi* does not exhibit the OPC effects.

However, the findings of the current study present certain target-deviant results concerning the bound interpretation of *o* in contrast to Gürel (2002). Although this result may appear unexpected, it can be elucidated by contextual constraints, which forces an ungrammatical bound interpretation for *o*, thereby necessitating more cognitive processing effort. Consequently, one can argue that contextual information may hinder deriving the correct interpretation (e.g., Gračanin-Yukse, et al., 2017).

Support for this distinction in the interpretation of *o* comes from Sorace and Serratrice (2009), who argued that overt subjects⁸, especially when bound to antecedents, may demand heightened cognitive processing effort. In our study, given that the context forces a bound interpretation for *o*, it is conceivable that the interpretation of it may have been prone to inaccuracies.

The differing interpretations of *o* in bound-forced contexts among participants in our study necessitate an exploration of potential reasons. One plausible explanation for the variation in *o* interpretations lies in the contextual constraints imposed in our study. Contextual information might have the capacity to significantly influence how participants perceive and interpret *o*. It is possible that these contextual cues prompted some participants to prioritize a bound interpretation over strict adherence to grammatical rules. Another factor to consider pertains to the research objectives of the studies. In Gürel's (2002) study, native speakers served as a control group, while the original tasks were administered to L2 speakers. This distinction is crucial as it suggests that specific words and phrases used in the context of her study may have been selected with

⁸ Indeed, it is worth noting that in Turkish, both *o* and *kendisi* function as overt subjects; however, the findings of the studies concerned specifically pertain to the interpretation of *o* in Turkish.

consideration for the ease of comprehension by L2 speakers. This contrast in participant backgrounds could introduce variability in how *o* is interpreted.

The reason why *o* is configured as more costly than *kendisi* could also be accounted for by the Avoid Pronoun Principle (APP; Chomsky, 1981), which is a universal discursive principle positing that overt subjects can only be used when null subjects are not possible. The APP explains the co-reference relationships governing the distribution of null and overt subjects in null subject languages, a phenomenon observed in Turkish as well (Kornfilt, 1984). In the context of Turkish, the choice between null and overt subjects is not arbitrary but is instead influenced by specific discursive properties. These properties include considerations related to topic shift, the contrastive use of subjects and topic continuity, as extensively explored in the works of Enç (1986) and Erguvanlı-Taylan (1986). These studies shed light on the use of null and overt subjects and the role of information packaging in the discourse. They highlight how the choice of overt subjects is guided by factors such as maintaining topic shift and achieving contrastive uses and emphasize how null subjects are employed in contexts by signaling topic continuity.

Regarding the above studies, it is arguable that the interpretative differences of *o* and *kendisi* are determined by the mapping of information structure and the syntactic constraints within a sentence. Accordingly, overt subject pronominals are expected to signal either topic shift or contrastive focus by referring to extrasentential parties in the discourse. In contrast, null subjects typically serve to denote entities which are already established in the discourse. Therefore, *o* is featured as an overt subject pronominal that is marked to introduce a third party in the discourse as predicted by the APP. Nevertheless, despite being an overt subject pronominal, our study reveals that the interpretation of *kendisi* aligns more closely with that of a *pro*. Even in situations where the disjoint interpretation is biased, it is more likely to refer to an antecedent, thereby signaling topic continuity (Özsoy, 1990). Consequently, it becomes apparent that the APP does not apply in the case of *kendisi* given the notable interpretative distinctions it exhibits in comparison to *o*.

4 Conclusion

The study examined how *o* and *kendisi* are interpreted by native Turkish speakers in biased contexts which target either bound or disjoint interpretations. The findings were found to be compatible with previous research. In the light of the findings, the study highlighted two important points. Firstly, it revealed that *o* and *kendisi* are not interchangeable within the same context, displaying an asymmetry when used with quantified/wh-word antecedents. Secondly, despite some interpretative violations, the study found that *o* is primarily interpreted as being bound by the sentence's external antecedent, which represents the sole

syntactically accessible option. Conversely, *kendisi* is more often interpreted as being bound by the matrix subject, despite both interpretations being syntactically possible. This particular observation suggests that the constraint prohibiting the binding of overt pronominals to quantified/wh-word antecedents, referred to as the OPC, operates in Turkish for *o* but not for *kendisi*. This difference can be explained by examining the syntactic configuration of these pronominals; *o* is more costly configured than *kendisi*, thus exhibiting an asymmetry across quantified/wh-word antecedents. In essence, *kendisi* behaves similar to *pro*. Therefore, taking into consideration the APP *kendisi* can be regarded as the overt equivalent of *pro*, serving to signal topic continuity in discourse.

Nonetheless, there are several important considerations that need examination. In this study, the primary emphasis was placed on the assessment of the interpretation of pronominals, with an explicit focus on interpretation rather than production. Future investigations may encompass both comprehension and production aspects of pronominals.

One noteworthy aspect also pertains to the scope and quantity of the test items employed in this study. While the current study provided valuable insights into the interpretative aspects of pronominals, the potential for enriching the research lies in the expansion of the test item pool. Increasing the number of test items, as well as incorporating a diverse set of filler items, can contribute to a more comprehensive exploration of the pronominals.

This study has contributed to our understanding of how native Turkish speakers interpret overt subject pronominals within contextualized sentences, offering valuable insights into the intricate interplay between contextual information and interpretative patterns of two subject pronominals. Future studies with online tasks could also tell us more about how the overt subject pronominals are processed in real time. It was also observed that some antecedent types had higher acceptance rates in the study. Therefore, the interaction between the type of antecedents and overt subject pronominals in an online task needs to be studied.

Author Contributions: This research and all stages related to the research were conducted by me.

Submission statement and verification: This study has not been previously published elsewhere. It is not under review in another journal. Publication of the study has been approved, either implicitly or explicitly, by all authors and the responsible authorities at the university/research center where the study was conducted. The study will not be published in the same form in another printed or electronic medium in Turkish or any other language without the written permission of the Journal of Linguistic Research.

Conflict of Interest Statement: I declare that there are no financial or academic conflicts of interest with other institutions, organizations or individuals that may affect this study.

Data Use: Data was used in this study. If asked, data supporting this study will be openly available.

Ethical Approval/Participant Consent: Istanbul Medeniyet University Social and Humanities Ethics Committee approval dated March 13, 2023 and numbered E-38510686-600-

2300007274 was obtained from the Ethics Committee. Participants were informed about the research and informed consent was obtained from the participants.

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Appendix A: Test Items

1. Öğretmen mezuniyet balosuna katılacak öğrencilerin listesini hazırladı. Ayşe katılamayacağını belirtti.

Tümce: Herkes onun gelemeyeceğini söyledi.

Yukarıdaki tümceye göre kim gelemeyecek olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

2. Bu ay Efes Antik Kenti'ne okul gezisi düzenlenecek. Öğretmenler velileri de çağırdı.

Tümce: Her anne kendisinin geziye katılacağını belirtti.

Yukarıdaki tümceye göre kim geziye katılacak olabilir?

- A) Her anne
- B) Her anne dışında başka biri

3. Çünkü Matematik sınavı oldukça zordu. Tüm sınıf oldukça zorlandı.

Tümce: Kimse onun sınavı geçeceğine inanmıyor.

Yukarıdaki tümceye göre kim sınavı geçecek olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

4. Ahmet bana Ufuk'un İstanbul'a taşınacağını söyleyince çok şaşırırım ve ona sordum:

Tümce: Kim kendisinin İstanbul'a taşınacağını söyledi?

Yukarıdaki tümceye göre kim İstanbul'a taşınacak olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

6. Tüm sınıf Fransızca sınavından başarıyla geçtiği için öğretmen sınıftaki herkesi tebrik etti.

Tümce: Herkes kendisinin akıllı olduğunu düşünüyor.

Yukarıdaki tümceye göre kim akıllı olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

7. *Dün akşam eve geldiğimizde salondaki vazunun kırık olduğunu fark ettik. Evdeki herkese sormamıza rağmen vazoyu kimin kırıldığını tespit edemedik.*

Tümce: Kimse onun suçlu olduğunu düşünmüyor.

Yukarıdaki tümceye göre kim suçlu olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

8. *Matematik sınavından yalnızca birkaç kişi yüksek not aldı. Öğretmen sınıfa sordu:*

Tümce: Kim kendisinin sınavda başarılı olduğunu düşünüyor?

Yukarıdaki tümceye göre kim sınavda başarılı olmuş olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

9. *Öğrenciler bu sene üniversite sınavına çok çalıştı. Kemal ise çok çalışmasına rağmen başarılı olacağından emin değil.*

Tümce: Her öğrenci onun başarılı olacağını düşünüyor.

Yukarıdaki tümceye göre kim başarılı olacak olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

10. *Dün Mert ve Ahmet yan sınıftan Ali'yi gördü ve ona saçının çok yakıştığını söyledi.*

Tümce: Herkes kendisinin çok yakışıklı olduğunu düşünüyor.

Yukarıdaki tümceye göre kim çok yakışıklı olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

12. *Buğün okulda şiir okuma yarışması var. En iyi şiir okuyan öğrenciye ödül verilecek.*

Tümce: Her öğrenci onun yarışmayı kazanacağını düşünüyor.
Yukarıdaki tümceye göre kim yarışmayı kazanacak olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

14. *Salgından dolayı anneler çocuğunu bugün okula göndermeme kararı aldı.*

Tümce: Her anne kendisinin okula gelmeyeceğini müdüre söyledi.

Yukarıdaki tümceye göre kim okula gelmeyecek olabilir?

- A) Her anne
- B) Her anne dışında başka biri

15. *Bu hafta Can okula gelmediği için arkadaşları onu çok merak etti. Ailesini aradıklarında hasta olduğunu öğrendiler.*

Tümce: Kimse onun hasta olduğunu söylemedi.
Yukarıdaki tümceye göre kim hasta olmuş olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

16. *Sınıftaki herkes dilbilgisi konusunda çok iyi. Dün anlamadığım birkaç yeri arkadaşlarıma sordum.*

Tümce: Herkes kendisinin yardımcı olacağını söyledi.

Yukarıdaki tümceye göre kim yardımcı olacak olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

17. *Öğrenciler tüm haftayı sınava çalışarak geçirdi. Snavdan önce birbirlerine sordular:*

Tümce: Kim onun başarılı olacağını düşünüyor?
Yukarıdaki tümceye göre kim başarılı olacak olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

18. Yarışmaya katılan çocuklar yarışı bitirdi. Sonuçlar henüz açıklanmadı ama birincilik kupası Mehmet'e verilecek.

Tümce: Kimse kendisinin yarışı kazandığını bilmiyor.

Yukarıdaki tümceye göre kim yarışı kazanmış olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

20. Dün iş arkadaşlarımın ek bir işte çalıştığını öğrendim. Bu haber çok garibime gitti.

Tümce: Kimse kendisinin paraya ihtiyacı olduğunu söylemedi.

Yukarıdaki tümceye göre kim paraya ihtiyaç duyabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

21. Dün üniversitede yapılan öğrenci temsilcisi seçimlerinde en çok oyu Özge aldı. Öğretmen sınıfa sordu:

Tümce: Kim onun seçimi kazandığını biliyor?

Yukarıdaki tümceye göre kim seçimi kazanmış olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

22. Öğrencilerin rol aldığı tiyatro gösterisini aileler ve öğrenciler birlikte izledi. Mert'in performansı herkesi büyüledi.

Tümce: Her öğrenci kendisinin çok yetenekli olduğunu düşünüyor.

Yukarıdaki tümceye göre kim çok yetenekli olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

23. Hava çok sıcak olduğu için tüm sınıf parkta piknik yapmaya karar verdi.

Tümce: Herkes onun çok eğleneceğini düşünüyor.

Yukarıdaki tümceye göre kim çok eğlenecek olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

24. *Hafta sonu sinemaya gitmek isteyen sınıf arkadaşları, yan sınıftan Ali 'yi de çağırđı. Konuyla ilgili Mert sınıfa sordu:*

Tümce: Kim onun sinemaya geleceğini söyledi?

Yukarıdaki tümceye göre kim sinemaya gelecek olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

26. *Öğretmen seneye 18 yaşına girecek öğrencilere sordu:*

Tümce: Kim kendisinin oy kullanma hakkına sahip olacağını biliyor?

Yukarıdaki tümceye göre kim oy kullanma hakkına sahip olacak olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

27. *Tarih bölümdeki akademisyenler oldukça birikimli insanlar. Özellikle Osmanlı Tarihi konusunda önemli çalışmalarını var.*

Tümce: Her akademisyen onun bu konuda oldukça bilgili olduğunu düşünüyor.

Yukarıdaki tümceye göre kim bu konuda oldukça birikimli olabilir?

- A) Her akademisyen
- B) Her akademisyen dışında başka biri

28. *Ayşe dün en yakın arkadaşlarını eve yemeğe davet etti. Arkadaşları Ayşe 'nin yaptığı pizzaya bayıldı.*

Tümce: Kimse kendisinin bu kadar güzel yemek yapabildiğini söylemedi.

Yukarıdaki tümceye göre kim bu kadar güzel yemek yapabiliyor olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

29. *Yönetim, çalışanlarla yıl sonu toplantısı yaptı. Toplantıda Emre'nin terfi aldığı açıklandı.*

Tümce: Herkes onun mutlu olduğunu düşünüyor.
Yukarıdaki tümceye göre kim mutlu olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

31. *Polis şüphelileri bir araya getirdi ve işlenen suç hakkında bilgi verdi. Daha sonra şüphelilere şu soruyu sordu:*

Tümce: Kim onun masum olduğunu düşünüyor?
Yukarıdaki tümceye göre kim masum olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

33. *Öğretmen sınıfa 'ödevini yapmayan var mı?' diye sordu.*

Tümce: Kimse kendisinin ödevi yapamadığını söylemedi.

Yukarıdaki tümceye göre kim ödevi yapamamış olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

34. *Aileler ile yapılan toplantı müdür tarafından iptal edildi. Bu durum öğretmenleri sıkıntıya soktu.*

Tümce: Her öğretmen onun haksız olduğunu düşünüyor.
Yukarıdaki tümceye göre kim haksız olabilir?

- A) Her öğretmen
- B) Her öğretmen dışında başka biri

36. Sınıf arkadaşlarım voleybol oynamayı çok seviyor ve bu alanda oldukça başarılı.

Tümce: Her öğrenci kendisinin bu alanda yetenekli öğrenci olduğunu belirtti.

Yukarıdaki tümceye göre kim bu alanda yetenekli öğrenci olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

37. Ebru bu yıl İspanyolca Dil Kursu'na gidecek. Ailesi de Ebru'nun İspanyolca öğrenmesini çok istiyor.

Tümce: Herkes kendisinin çok iyi İspanyolca konuşabileceğini düşünüyor.

Yukarıdaki tümceye göre kim çok iyi İspanyolca konuşacak olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

38. İş çıkışı arkadaşlar restorana gitti. Sipariş almak için garson yanlarına geldiği sırada telefonu çalan Ali dışarı çıktı.

Tümce: Kimse onun ne yiyeceğini bilmiyor.

Yukarıdaki tümceye göre kim ne yiyecek olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

39. Ayşe sınava yeterince hazırlanmadığı için oldukça gergin. Bunu duyan en yakın arkadaşı Ali sınıfa sordu:

Tümce: Kim kendisinin çalışmadığını söyledi?

Yukarıdaki tümceye göre kim çalışmayan olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

40. Dün öğretmen sınıfa geldiğinde öğrencilere Tarih sınavından kaç aldıklarını sordu.

Tümce: Herkes onun düşük not aldığını söyledi.

Yukarıdaki tümceye göre kim düşük not almış olabilir?

- A) Herkes ile aynı kişi
- B) Herkes dışında başka biri

Appendix B: Filler Items

5. *Tiyatro gösterisi için prova yapan öğrenciler ezberlerini yapmadıkları için provayı tamamlayamadı.*

Tümce: Her öğrenci hata yaptığını kabul etti.

Yukarıdaki tümceye göre kim hata yapmış olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

11. *Emre geç saate kadar ders çalıştığı için bu sabah uyanamadı. Emre'yi bu sabah okulda göremeyen arkadaşları ise onu merak etti.*

Tümce: Kimse yorgun olduğunu söylemedi.

Yukarıdaki tümceye göre kim yorgun olabilir?

- A) Kimse ile aynı kişi
- B) Kimse dışında başka biri

13. *Öğretmen bugün iklim değişikliği ile ilgili okulun düzenlediği yeni bir projeden bahsetti. Öğrencilere sordu:*

Tümce: Kim projeye katılacağını düşünüyor?

Yukarıdaki tümceye göre kim projeye katılacak olabilir?

- A) Kim ile aynı kişi
- B) Kim dışında başka biri

19. *Lise son sınıf öğrencileri arasında Matematik bilgi yarışması yapılacak. Bizim sınıftaki herkes Gökhan'ın birinci olacağına inanıyor.*

Tümce: Her öğrenci yarışmayı kazanacağını düşünüyor.

Yukarıdaki tümceye göre kim yarışmayı kazanacak olabilir?

- A) Her öğrenci
- B) Her öğrenci dışında başka biri

25. İstanbul'da yaşayan arkadaşım Ayşe, ara tatilde bizi yanına çağırđı. Onu arayıp yazın gelebileceğimizi söyledik.

Tümce: Herkes řu an gelemeyeceğini söyledi.

Yukarıdaki tümceye göre kim řu an gelemeyecek olabilir?

- A) Herkes ile aynı kiři
- B) Herkes dışında başka biri

30. Bu yaz iş arkadaşlarım Can ve Elif ile birlikte Antalya'ya gitmek istiyordum. Ancak iş gezisi nedeniyle İtalya'ya gideceklerini öğrendim.

Tümce: Kimse yurtdışına gideceğini bana söylemedi.

Yukarıdaki tümceye göre kim yurtdışına gidecek olabilir?

- A) Kimse ile aynı kiři
- B) Kimse dışında başka biri

32. Bu hafta okulun basketbol takımının maçı vardı. Takım kaptanı Mert maçta en çok sayıyı attı. Okuldaki tüm öğretmenler Mert'in çok yetenekli olduğunu söyledi.

Tümce: Herkes en iyi oyuncu olduğunu belirtti.

Yukarıdaki tümceye göre kim en iyi oyuncu olabilir?

- A) Herkes ile aynı kiři
- B) Herkes dışında başka biri

35. Bugün okul temsilcisi seçimleri yapılacak. Bizim sınıfın temsilcisi Bora en güçlü adaylardan biri. Konuyla ilgili öğretmen sınıfa sordu:

Tümce: Kim seçileceğini düşünüyor?

Yukarıdaki tümceye göre kim seçilecek olabilir?

- A) Kim ile aynı kiři
- B) Kim dışında başka biri