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Null Arguments in Turkish

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Abstract. This study revisits null arguments in Turkish in the light of some interpretive diagnostics such as strict/sloppy interpretation and E-type/Quantificational interpretation in addition to adjunct inclusion in the ellipsis sites. Drawing on novel data, we argue that certain null arguments in Turkish are best analyzed as instances of Verb Stranding Ellipsis (VSE), wherein the verb raises out of the verbal complex prior to the ellipsis of the vP. Support for this analysis comes from cases involving adjunct inclusion, where an adjunct present in the antecedent clause is interpreted in the ellipsis site. We also provide a novel account of the mutual exclusivity between agreement and ellipsis.

Keywords. argument ellipsis; verb-stranding ellipsis; null arguments; *pro*; Turkish

1. Introduction. Turkish allows both null subjects and null objects, i.e., omitted elements that are nonetheless semantically recoverable. Sentence (1a) is missing an overt subject whereas in sentence (1b), the object is null.

(1) a. ___ Ayşe-yi gör-dü-m.
Ayşe-ACC see-PAST-1SG
'I saw Ayşe.'

b. Sen Ayşe-yi gör-dü-n ama ben ___ gör-me-di-m.
you Ayşe-ACC see-PAST-2SG but I see-NEG-PAST-1SG
'You saw Ayşe but I didn't.'

Null arguments have been variably analyzed as null pronominals (*pro*) (Kornfilt 1987, 1997; Özsoy 1988; Turan 1995; Öztürk 2006; Şener & Takahashi 2010) or instances of Argument Ellipsis (AE) (Şener & Takahashi 2010). While there is broad consensus that null subjects in Turkish are (or can be) pronominal (Özsoy 1988; Öztürk 2006; Şener & Takahashi 2010) , the status of null objects remains disputed. Öztürk (2006) considered null objects as instances of *pro*, whereas Şener & Takahashi (2010) argued for an Argument Ellipsis account. In this paper, we revisit the distribution and interpretation of null arguments in Turkish, employing a range of interpretive diagnostics. We argue that a subset of null arguments—specifically, null objects—are best analyzed as instances of Verb-Stranding Ellipsis (VSE), a strategy considered but ultimately dismissed by Şener & Takahashi (2010) based on limited empirical evidence. We also extend the VSE analysis to some null subjects as well arguing that Turkish has both a *pro* and a VSE strategy.

The paper is organized as follows. Section 2 presents an overview of the previous accounts of null arguments in Turkish from the literature. Section 3 introduces the core data along with a range of interpretive diagnostics to probe the nature of null arguments in Turkish, specifically

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whether they are instances of *pro* or ellipsis. Section 4 presents empirical evidence aimed at identifying the type of ellipsis responsible for non-pronominal null argument constructions. Section 5 provides a derivational account of null arguments in Turkish and discusses its predictions

2. Previous Accounts. Null arguments in Turkish have been extensively studied over the years (Taylan 1984; Kornfilt 1987, 1997; Özsoy 1988; Turan 1995; Aygen 2001; Öztürk 2006). Early work focused on null subjects and considered them to be instances of *pro* licensed by rich agreement morphology like in Italian and Spanish (Taraldsen 1980; Jaeggli & Safir 1989; Barbosa 1995; Alexiadou & Anagnostopoulou 1998, among many others). Öztürk (2006) extended the *pro* account to null objects as well. In contrast, Şener & Takahashi (2010) distinguished null subjects from null objects based on a range of interpretive diagnostics arguing for a null pronominal account for null subjects of finite clauses and an argument ellipsis account for null objects.

Since Hankamer & Sag (1976), linguists have noted interpretive differences between deep anaphora (usually associated with pronouns) and surface anaphora (associated with ellipsis). Two commonly used interpretive diagnostics are 1) strict/sloppy identity and 2) E-type/quantificational interpretations. Strict and sloppy interpretations are two different ways of interpreting pronouns in various contexts (such as ellipsis). In (2), the ellipsis site leads to an ambiguity between a strict interpretation of the unpronounced argument and a sloppy interpretation.

(2) Alex saw his mother and Bill did too.
(strict = Bill saw Alex's mother.)
(sloppy = Bill saw Bill's mother.)

Although pronouns can yield sloppy interpretations in limited contexts (such as the *paycheck* examples of Karttunen (1969)), they usually lead to strict interpretations. Thus, strict/sloppy interpretation has been widely used as a diagnostic for *pro* versus ellipsis status of a null element. The logic of the diagnostics rests on a parallelism assumption between overt and null pronouns. If null pronominals are merely silent counterparts of overt pronouns, it follows that their interpretive properties are expected to be identical. Thus, a divergence between the interpretation of overt pronominal arguments and null arguments points to a non-pronominal account, usually indicating ellipsis. Consider the examples in (3).

(3) a. Nazlı dün anne-si-ni gör-dü ama Mete **onu** gör-me-di.
Nazlı yesterday mother-POSS-ACC see-PAST but Mete her see-NEG-PAST
'Nazlı saw her mother yesterday but Mete didn't see her.' Strict only

b. Nazlı dün anne-si-ni gör-dü ama Mete *e* gör-me-di.
Nazlı yesterday mother-POSS-ACC see-PAST but Mete see-NEG-PAST
'Lit: Nazlı saw her mother yesterday but Mete didn't see .' Strict & Sloppy

In (3a), the overt pronoun *onu* 'her' yields a strict interpretation, denoting only 'Nazlı's mother' whereas the null argument in (3b) allows both strict and sloppy interpretation (i.e., Mete's mother). Given that the overt pronoun in (3a) does not allow sloppy interpretation in this context, the sloppy interpretation in (3b) is hard to account for on a *pro* account. In contrast, ellipsis can handle the strict and sloppy interpretations making it the favorable account for null arguments like in (3b).

The second key diagnostic in determining the pronominal versus ellipsis status of null arguments is the E-type versus quantificational interpretations of null arguments. Since Evans (1980) pronouns are known to disguise definite descriptions referred to as E-type readings.

(4) Alex saw three girls and Sam saw **them** too.

In (4), *them* refers back to the quantifier 'three girls'. Pronouns are known to not have any quantificational properties and yet, they seem to replace quantifiers as in (4). Evans (1980) noted that such pronouns disguise a definite description. Thus *them* stands for the definite description *the three girls Alex saw*. The E-type reading of *them* forces the set of three girls seen by Alex and Sam to be identical. Takahashi (2008) showed that in addition to E-type readings, null arguments can yield quantificational readings, where the two sets do not need to be identical. Consider (5).

(5) Alex saw three girls and Sam did too.

In (5), the set of three girls seen by Alex can, but does not have to be the same as the set of three girls seen by Sam. This second reading is the quantificational reading. Quantificational readings cannot be produced by pronouns. In contrast, ellipsis can easily account for such readings as the elided element simply contains the quantifier *three girls*.

Applying the sloppy/strict interpretation and E-type/quantificational interpretation diagnostics, Şener & Takahashi (2010) argued that null subjects in finite clauses in Turkish are instances of *pro* whereas other null arguments in Turkish are instances of ellipsis. They further argued that null objects are instances of Argument Ellipsis but not Verb Stranding VP Ellipsis (VSVPE). They key diagnostic they used to distinguish them is adjunct inclusion. Consider (6).

(6) a. Can sorun-u **hızla** çöz-dü.
Can problem-ACC quickly solve-PAST
'Can solved the problem quickly.'

b. Filiz-se *e* çöz-me-di.
Filiz-however solve-NEG-PAST
'*Lit.* Filiz, however, didn't solve *e*.'
= Filiz did not solve the problem.
≠ Filiz did not solve the problem quickly. (Şener & Takahashi 2010:89)

In (6a), *hızla* 'quickly' modifies the verbal phrase. If the null object in (6b) were due to VSVPE, we would expect the adjunct to be included in the ellipsis site leading to a reading where *Filiz didn't solve the problem quickly*. However, such a reading is not possible, indicating that (6b) is an instance of Argument Ellipsis rather than VSVPE. Şener & Takahashi (2010) take this as evidence against a VSVPE analysis of null objects in Turkish.

In the following, we revisit the interpretive properties associated with Turkish null arguments using the same diagnostics in slightly different contexts. Our findings suggest that Turkish permits a form of V-stranding XP ellipsis, whereby the entire vP is elided while the verb is stranded. We propose that the complement of the Celerative Aspect head is elided after the verb has been extracted out of the ellipsis site. This analysis predicts that even subjects should permit sloppy or quantificational interpretations—a prediction we demonstrate to hold under the appropriate configurations.

3. *pro* vs. Ellipsis. Ellipsis diagnostics vary in whether they distinguish ellipsis from *pro* or identify a specific type of ellipsis. Before delving into the type of ellipsis responsible for argumental gaps, it is essential to first establish the evidence supporting an ellipsis-based analysis. This is what we do in the following section.

3.1. STRICT VS. SLOPPY IDENTITY. The availability of sloppy interpretation in contexts where overt pronouns resist such readings suggests that null arguments are best analyzed as elliptical.

(7) a. Nazlı [*pro* anne-si]-ni gör-dü.
Nazlı her mother-POSS-ACC see-PAST
'Nazlı saw her mother.'

b. Mete *e* gör-me-di.
Mete see-NEG-PAST
'*Lit.* Mete didn't see *e*.'
= Mete didn't see Nazlı's mother.
= Mete didn't see his mother.

The null object in (7b) is ambiguous between a strict and a sloppy interpretation: The null object can refer to Nazlı's mother or Mete's mother. Sloppy interpretation disappears when the null object is replaced by an overt pronoun (e.g. *onu 'her'*). By contrast, an ellipsis account easily yields the sloppy interpretation as the object gap would be occupied by [*pro annesini*] '*pro*'s mother'. Thus, the sloppy interpretation in (7b) supports the view that null objects in Turkish can be instances of ellipsis (as suggested by Şener & Takahashi (2010)).

One novel observation we present is that, null subjects can also allow sloppy interpretations in non-finite clauses under the right configurations.[1]

(8) a. Nazlı$_i$ [*pro*$_i$ anne-si]-nin kek-i yap-tığ-ın-ı söyle-di.
Nazlı mother-POSS-GEN cake-ACC make-NOM-GEN-ACC tell-PAST
'Nazlı told that her mother made the cake.'

b. Mete$_j$ *e* yap-ma-dığ-ın-ı söyle-di.
Mete make-NEG-NOM-GEN-ACC tell-PAST
'*Lit.* Mete told that mother of *x* didn't make the cake.' ($x \in \{\text{Nazlı}, \text{Mete}\}$)

In (8b), when followed by (8a), we observe an ambiguity between strict and sloppy readings. On the strict interpretation, (8b) means that Mete said that *Nazlı's mother* didn't make the cake. In this reading, the gap can be filled by a pronominal element that refers back to *Nazlı*. On the sloppy interpretation, however, (8b) is understood to mean that Mete said that his mother didn't make the cake. In this case, replacing the gap with a pronoun fails to yield the sloppy reading. This suggests that the gap is syntactically filled by the full-fledged subject in the embedded clause, which is bound by the matrix subject, *Mete*. Therefore, a pronominal analysis of null subjects is insufficient; an ellipsis-based analysis is required to account for sloppy interpretations.

[1] An anonymous reviewer asks if the nominative subjects of finite embedded clauses can also obtain sloppy interpretation. Our observation is positive. Under the right context, sloppy interpretation is available.

3.2. E-TYPE VS. QUANTIFICATIONAL INTERPRETATIONS. Another piece of evidence in favor of the ellipsis-based analysis of null arguments in Turkish is the availability of quantificational interpretations in addition to E-type readings.

(9) a. Nazlı üç çocuk gör-dü.
Nazlı three kid see-PAST
'Nazlı saw three kids.'

b. Mete *e* gör-me-di.
Mete see-NEG-PAST
'*Lit.* Mete didn't see *e*.'
= Mete didn't see them. (E-type)
= Mete didn't see three kids. (Quantificational)

In (9b), the object gap leads to interpretive ambiguity between an E-type reading and a quantificational reading. That is, the set of children seen by Nazlı and Mete are not necessarily identical. The E-type interpretation can be derived under a pronominal analysis, as the gap may be overtly filled by a pronoun referring back to the antecedent. The quantificational interpretation, however, cannot be captured by a pronominal analysis, since filling the gap with a pronoun fails to yield the intended reading. This suggests that an ellipsis-based analysis is required to account for the quantificational interpretation. Under such an analysis, the gap is syntactically filled by a full-fledged copy of the object from the antecedent clause.

Contrary to prior claims, null subjects, like null objects, allow not only E-type readings but also quantificational interpretations.

(10) a. **Çoğu öğrenci** kek-i ye-di.
many student cake-ACC eat-PAST
'Many students ate the cake.'

b. Ama *e* salata-yı ye-me-di-**ler**.
But salad-ACC eat-NEG-PAST-3.PL
'However, they didn't eat the salad.' (E-type)

c. Ama *e* salata-yı ye-me-di.
But salad-ACC eat-NEG-PAST
'However, many students didn't eat the salad.' (Quantificational)

In (10b), the quantificational reading is not available, as overt morphological agreement between the subject and the verb is observed, and the subject gap can be filled by a pronoun referring to the same set of students who ate the cake. In contrast, when (10c) is preceded by (10a), the quantificational reading becomes available, due to the absence of overt agreement on the verb. The gap can only be filled by the overt realization of the quantificational element available in the antecedent clause. This contrast shows that null subjects can permit quantificational interpretations in addition to E-type readings. Moreover, this observation provides insight into the structural properties of ellipsis and its licensing mechanisms.

4. Argument Ellipsis vs. Verb Stranding Ellipsis. Having established that a pronominal account is insufficient to capture null arguments in subject and object positions under certain interpretive diagnostics, we can draw a clearer distinction. While strict identity and E-type interpretations support the presence of a pronominal analysis, the availability of sloppy identity and quantificational readings indicates the limitations of a purely pronominal analysis. These latter cases point instead to the involvement of ellipsis in such constructions.

In cases where a pronominal analysis fails, it becomes necessary to determine the specific type of ellipsis responsible for the observed interpretations. In what follows, we apply several diagnostics to assess whether Turkish null arguments are better analyzed as Argument Ellipsis or a version of Verb-Stranding Ellipsis.

4.1. ADJUNCT INCLUSION/EXCLUSION. A core prediction of verb-stranding VP Ellipsis (VSVPE) is that adjuncts modifying the VP should be included in the ellipsis site. In contrast, AE does not impose such a requirement, as only arguments are targeted in AE. Based on this distinction, Şener & Takahashi (2010) provide evidence against the existence of VSVPE in Turkish, as illustrated in (6a). However, a closer look at Cinque's (1999) adverbial hierarchy reveals that those which are structurally lower in the hierarchy may, in fact, be included in the ellipsis site.

(11) a. Nazlı kek-i tarif-e göre pişir-di.
Nazlı cake-ACC recipe-DAT according.to bake-PAST
'Nazlı baked the cake according to the recipe.'

b. Yasemin-se *e* pişir-me-di.
Yasemin-however bake-NEG-PAST
'Yasemin, however, didn't bake *e*.'

c. Yasemin-in kek-i kabar-ma-dı.
Yasemin-GEN cake-ACC rise-NEG-PAST
'Yasemin's cake didn't rise.'

Following Landau (2020), we find that Turkish permits adjunct inclusion. As (11c) presupposes a baked cake, the ellipsis site in (11b) must include the adjunct to remain felicitous. The adverb included in the ellipsis site, *tarife göre*, is a manner adverb; therefore, it is closer to VP. The availability of manner adverbs in object gap constructions has also been independently noted by Fincan (2025), who experimentally tested adjunct inclusion with similar sentences.

Further empirical support for adjunct inclusion in the ellipsis site comes from frequentative adverbs such as *sıklıkla* "often". Frequentative adverbs are introduced by $\text{Asp}_{\text{frequentative}}$ and occupy a higher syntactic position than manner adverbs.

(12) Nazlı saç-ı-nı sıklıkla ör-er, Aslı *e* ör-me-z
Nazlı hair-POSS-ACC often braid-AOR Aslı braid-NEG-AOR
'Nazlı often braids her hair, Aslı doesn't braid *e*.'
= Nazlı often braids her hair, Aslı doesn't braid hers.
= Nazlı often braids her hair, Aslı often doesn't braid hers.

As shown in (12), the ellipsis site can correspond to both adjunct-including and adjunct-excluding readings. The availability of the adjunct-including interpretation suggests that the ellipsis site may be larger than previously claimed.

We also observe that another adverb slightly higher in the syntactic hierarchy, *tamamen* "completely", can be included in the ellipsis site.

(13) a. Arcan kitab-ı tamamen oku-du, Nazlı *e* oku-ma-dı.
Arcan book-ACC completely read-PAST Nazlı read-NEG-PAST
'Arcan read the book completely, Nazlı didn't read *e*.'

b. Nazlı-nın on sayfa-sı kal-dı.
Nazlı-GEN ten page-POSS remain-PAST
'Nazlı has ten pages left.'

In Turkish, (13a) can be felicitously followed by (13b), indicating that the argumental gap may correspond to a larger constituent, in particular, one that included the adjunct. The adverb *tamamen* is introduced by $\text{Asp}_{\text{completive}}$, which, according to Cinque (1999)'s hierarchy, is structurally lower than $\text{Asp}_{\text{celerative}}$.

Building on Şener and Takahashi's (2010) arguments regarding restrictions on adjunct inclusion, we conducted a more detailed analysis of the adverbial structure and identified the adverbs that can be included in the ellipsis site. The ability of certain adverbs to be included in the ellipsis site highlights the role of the ellipsis licensor in determining the scope of deletion. The unavailability of $\text{Asp}_{\text{celerative}}$ for ellipsis, along with our empirical observations of adjuncts that can be included, suggests the presence of a structural cutoff point in the hierarchy.

4.2. RESTRICTIONS ON ARGUMENT ELLIPSIS. According to the observations of Landau (2023) on Hebrew and other East Asian languages, Argument Ellipsis is semantically restricted to arguments of type *e*. He presents empirical evidence showing that argument gaps are not allowed in environments where the elided element is of a higher semantic type. Landau (2023) argues that this restriction follows from the absence of higher-type variables in natural languages (Landman 2006; Poole 2017). When Landau's (2023) generalization about the nature of Argument Ellipsis is taken into account, the environments discussed in the following subsections are expected to yield ungrammaticality. Furthermore, if Landau's (2023) generalization is accepted, any attested grammaticality in such environments should be associated with an alternative analysis, namely, a Verb Stranding VP-Ellipsis. Given this definition of Argument Ellipsis, Turkish offers empirical support for Verb Stranding Ellipsis.

4.2.1. ARGUMENTAL ADVERBS. One of the environments involves verbs such as *behave*, *treat*, which obligatorily require an argumental adverb. When the argumental adverb is present in the antecedent clause, its deletion is permitted in the subsequent environment in Turkish.

(14) Nazlı çocuk-lar-a iyi davran-dı, ama Mete *e* davran-ma-dı.
Nazlı kid-PL-DAT well treat-PAST but Mete treat-NEG-PAST
'Nazlı treated the kids well, Mete didn't *e*.'

Turkish permits constructions such as (14), in which an argumental adverb is omitted. The semantic type of the omitted material is *<et, et>*, as argumental adverbs function as predicate modifiers. The generalization proposed by Landau (2023) suggests that Argument Ellipsis fails to capture these constructions. Therefore, the fact that (14) is grammatical indicates the existence of VSVPE in Turkish.

4.2.2. PREDICATE NOMINALS. Further observation in support of VSE comes from predicate nominals. As observed in Hebrew (Landau 2023), in the example provided below, the deletion of the predicate nominal is expected to result in ungrammaticality, since the omitted material is of a higher semantic type and thus falls outside the scope of AE, which is semantically restricted. However, Turkish does permit such omission.

(15) Batı-da Stalin-i despot gör-üyor-lar ama Putin-i *e* gör-m-üyor-lar.
west-LOC Stalin-ACC despot see-IMPF-3.PL but Putin-ACC see-NEG-IMPF-3.PL
'In the West, they see Stalin as despot, but they do not see Putin as despot.'

Contrary to Landau's (2023) claim that in constructions like (15) the semantic type of the omitted element is $\langle e, t \rangle$, it may be argued that it functions as a kind reference, and thus its semantic type is *e* (Sağ 2022). Therefore, the predicate nominals test is not a reliable test for ellipsis.

4.2.3. NAMES IN NAMING VERBS. Another piece of data point supporting VSVPE comes from names in naming verbs. While examples from Hebrew, similar to the one below, are ungrammatical, Turkish permits omission in such configurations.

(16) Mete kız-ı-nın ad-ı-nı Selin koy-du. Baran *e* koy-ma-dı.
Mete daughter-POSS-GEN name-POSS-ACC Selin give-PAST Baran give-NEG-PAST
'Mete named his daughter Selin. Baran didn't name *e*.'

The semantic type of the omitted material is $<e, nt>$ The generalization proposed by Landau (2023) suggests that Argument Ellipsis fails to capture these constructions. Therefore, the fact that (16) is grammatical indicates the existence of VSVPE in Turkish. However, as in predicate nominals, the omitted element in (16) may denote an individual under Sağ's (2022) analysis. Thus, names in the naming verbs test is not reliable.

4.2.4. ARGUMENTAL MEASURE PHRASES. The final piece of argument for the impossibility of AE in certain environments comes from argumental measure phrases. In contrast to Hebrew, the omission of such phrases is grammatical in Turkish.

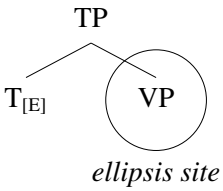
(17) a. Film iki saat sür-dü mü?
movie two hour last-PAST Q
'Did the movie last two hours?'
b. Hayır, *e* sür-me-di.
no last-NEG-PAST
'No, it didn't.'

The semantic type of measure arguments has been analyzed as predicates of intervals along a scale ($<d, t>$) (Schwarzschild 2005), predicates of vectors ($<v, t>$) (Winter 2005), or predicates of individuals ($<e, t>$) (Scontras 2014). According to these analyses, measure phrases do not denote individuals and are not pronominal in nature. This supports the existence of VSVPE, particularly when considered alongside the generalization of AE proposed by Landau (2023).

5. Deriving Ellipsis in Turkish. In Section 4, we identified a range of adjuncts that can be included in the ellipsis site and another set that cannot. We showed that the range of adjuncts that can be included in the ellipsis site corresponds to the adverbials introduced below the head $\text{Asp}_{\text{celerative}}$ (Cinque 1999). The adjunct inclusion tests suggest that the elided phrase is larger than the VP. The fact that the adverbs such as *hızla* 'quickly' which are modifiers of $\text{Asp}_{\text{celerative}}$ cannot be included in the ellipsis site but the ones below can suggests that the ellipsis site in Turkish is designated as the complement of the $\text{Asp}_{\text{celerative}}$ head, which we roughly take to be the vP. In the following, we provide an account of Verb Stranding Ellipsis within the PF-deletion framework of Merchant (2001), Johnson (2004) and Aelbrecht (2010) among others.

5.1. MAIN PROPOSAL: VERB STRANDING ELLIPSIS. The mainstream account of VP ellipsis in the Generative Syntax is the PF-deletion account of Merchant (2001, 2005, 2008, among others) where ellipsis is licensed by the feature [E], which instructs the phonological component not to pronounce the complement of the head that bears the feature [E]. The derivation in (18) illustrates VP ellipsis (e.g., as in English VP ellipsis).

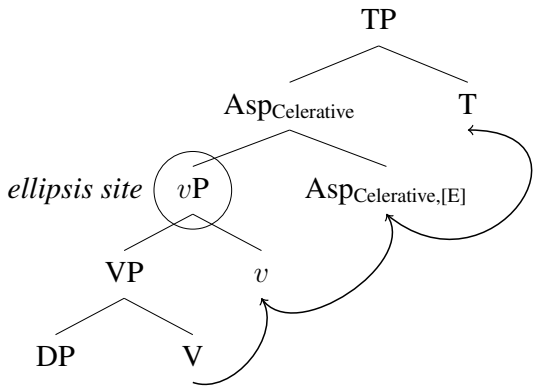
(18)



In PF-deletion accounts, the ellipsis site contains fully articulated syntactic structure. The complement of the head bearing the feature [E] is null because [E] instructs PF not to pronounce it. Consequently, elements extracted from the VP prior to ellipsis should, in principle, be pronounceable. This line of inquiry was introduced by Otani & Whitman (1991) and further developed by Goldberg (2005), Gribanova (2013), Funakoshi (2016), and Manetta (2019) as the Verb Stranding VP Ellipsis, whereby the verb is extracted out of the ellipsis site via head movement before the VP is sent to PF for pronunciation.

Building on the VSVPE accounts and the facts discussed in Section 4, we propose that null objects in Turkish are instances of Verb Stranding Ellipsis, where the verb is extracted out of the VP before the complement of the head $\text{Asp}_{\text{celerative}}$ is elided. The relevant structure of Verb Stranding Ellipsis in Turkish is sketched in (19).

(19)

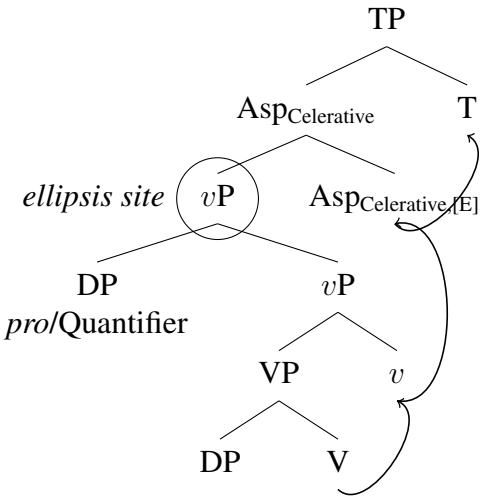


In (19), the verb raises out of the VP successively moving through v and Asp heads.[2] The external argument (not shown on (19)) also raises out of the vP to Spec, TP to satisfy EPP (though see below). After the V and the external argument has evacuated the vP, the complement of $\text{Asp}_{\text{Celerative}}$ is elided, leading to strings with object gaps.

The proposed account has some welcome results. Objects remaining in the ellipsis site can receive sloppy or quantificational interpretation as well as strict and E-type interpretations. Besides, adjunct inclusion is also accounted for. The ellipsis site can host adjuncts that attach at or below the vP level excluding the higher adjuncts such as *hızla* 'quickly' as these are never in the ellipsis site. Finally, Landau's assumption can be maintained as Verb Stranding Ellipsis does not put any restrictions on the semantic type of null arguments whereas Argument Ellipsis does.

5.2. FINE TUNING THE ACCOUNT: SEPARATING [E] FROM THE LICENSER. The Verb Stranding Ellipsis account presented in the previous section predicts that not only objects but also subjects can undergo Verb Stranding Ellipsis, since the ellipsis site encompasses the vP, and external arguments should, in principle, be elided along with the vP. This is indeed a welcome result as we have shown in Section 3, null subjects can also display properties associated with ellipsis such as sloppy interpretation and quantificational interpretation. Thus, the quantificational interpretation in a sentence like (10c), where the null subject can receive both E-type and quantificational interpretation, is analyzed as follows.

(20)



The structure in (20) allows strict or E-type interpretation when the subject is *pro* and sloppy or quantificational when it is a full copy of the antecedent elided along with the rest of the vP.

Although the structure in (20) generates the desired sloppy/quantificational interpretations for null subjects, it overgenerates as it predicts sloppy/quantificational interpretation to be always available with null subjects. However, this is not true. As shown in Section 3, only a subset of null subjects allow sloppy/quantificational interpretation whereas most subjects only allow strict/E-type interpretation. For example, in (10), we showed that the availability the quantificational interpretation correlates with overt agreement between the null subject and the verb.

[2] The final landing site of the verb is orthogonal but see Kural (1993) who argued that the verb in Turkish raises all the way up to C.

When the verb shows plural agreement, only E-type interpretation is possible. In contrast, when agreement is missing, both E-type and quantificational readings are available. This correlation between agreement and ellipsis has long been noted for East Asian languages (Saito 2007; Takahashi 2008; Şener & Takahashi 2010) and recently for Persian (Sato & Karimi 2016). Şener & Takahashi (2010) also observed this correlation for Turkish subjects in a type of adjunct clauses formed with *-IncE* 'when/once'.[3]

(21) Sloppy Interpretation in null subjects (Şener & Takahashi 2010:95)

a. Can [[*pro* oğl-u] İngilizce öğren-ince] sevin-di.
Can his son-POSS English learn-WHEN be.pleased-PAST
'Can was pleased when his son has learned English.'

b. Filiz-se [*e* Fransızca öğren-ince] sevin-di.
Filiz-however French learn-WHEN be.pleased-PAST
'Filiz, however, was pleased when *e* learnt French.' *e*= Filiz's son or *e*= Can's son

In (21b), the null subject allows both strict and sloppy interpretations pointing towards an ellipsis account. Thus, the generalization is this: Null subjects that show agreement with the verb allow only strict and E-type interpretations, suggesting a *pro* analysis whereas null subjects that do not trigger agreement allow sloppy and quantificational interpretations as well, hinting at an ellipsis account. Assuming that sloppy/quantificational interpretations in Turkish null subjects is due to ellipsis, we face the following question: Why does agreement block ellipsis?

To address this problem, Saito (2007) proposed the Anti-agreement Theory of Argument Ellipsis. The Anti-agreement Theory assumes that null subjects and objects in East Asian languages are instances of AE. Unlike other types of ellipsis, (e.g. VP ellipsis) argument ellipsis is usually considered to involve LF-Copying (Oku 1998; Saito 2007; Şener & Takahashi 2010), rather than PF-deletion. Saito (2007) argued that when an argument is LF-copied, its case is also copied. Adopting the Agree system of Chomsky (2001), Saito (2007) argued that LF-copying leads to a crash due to the uninterpretable features on the agreement probes which cannot be valued in the absence of an active goal, where activity is defined as the lack of case features. In other words, when an argument is LF copied, it violates the Activity Condition (Chomsky 2001), leading to a crash in the presence of an agreement probe. This is why, according to Saito (2007), East Asian languages allow Argument ellipsis since they lack agreement altogether. This line of inquiry was further pursued by Şener & Takahashi (2010), Takahashi (2008), and Sato & Karimi (2016) to account for the mutual exclusivity of agreement and the elliptic interpretations of null arguments across Turkish, Mandarin, Persian, among others.

Although the Anti-agreement Theory looks promising, it faces several theoretical and empirical challenges. The first and main challenge is posed by the observations by Preminger (2014) who showed that Agree is a fallible operation and probes that are not satisfied do not lead to a crash at the interfaces.[4] The second issue that we face is our account of null subjects and null objects in Turkish as instances of VSE rather than AE. There is no account of why overt agreement

[3] Şener & Takahashi (2010) also observed a similar fact in ECM constructions where the ECM subject is not agreed with. See Şener & Takahashi (2010:95-96).

[4] See Preminger (2014) for a some empirical arguments against the 'poisonous' status of the uninterpretable features.

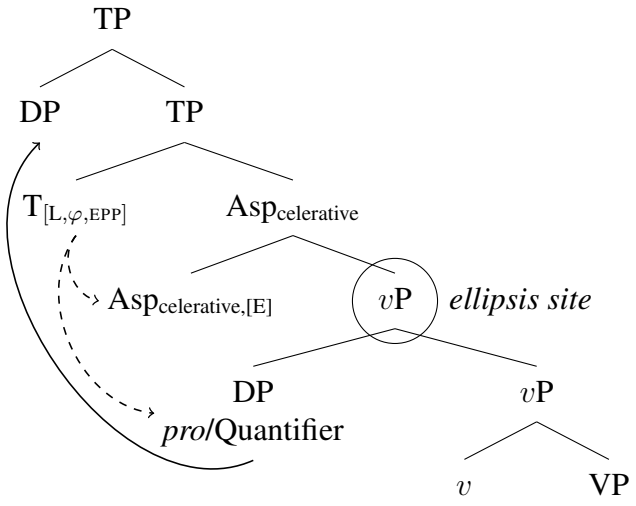
should block VSE. In the following, we reinterpret the correlation between agreement and VSE and propose an account that derives the facts we discussed above.

Our account rests on a standard assumption regarding the relation between agreement and movement. Following Chomsky (2000, 2001), and van Urk (2015), we assume that movement of a syntactic object XP to the specifier of a head Y depends on a prior Agree relation between Y and XP. In more specific terms, movement of the vP internal subject DP to Spec, TP requires agreement between T and the DP. Subject DPs that are not agreed with remain in situ. This accounts for all the major facts discussed in this paper. Null objects are never agreed with and they always allow sloppy/quantificational interpretations. Null subjects show sloppy/quantificational interpretation only when they are not agreed with. Otherwise, they have to move out of the ellipsis site to satisfy the EPP feature of the agreeing head (T). Thus, they lose their elliptic properties.

This account now captures the correlation between agreement and ellipsis along with the other facts such as adjunct inclusion and the ellipsis of higher type arguments (via VSE). However, there is still a technical problem we need to address before the proposal can be executed derivationally. The only remaining problem is the precise timing of the agreement, movement, and ellipsis operations. Consider the representation in (20) again. The ellipsis feature [E] is located on $\text{Asp}_{\text{celerative}}$. Assuming that ellipsis applies as soon as it is licensed, (i.e., [E] is merged), T should never be able to extract the subject. This predicts that sloppy/quantificational interpertation should always be available, contrary to the facts. To avoid this problem, [E] still needs to be merged on $\text{Asp}_{\text{celerative}}$ but ellipsis has to wait until after T is merged and all the relevant agreement and movement operations have been carried out.

Aelbrecht (2010) observed similar problems with Modal Complement Ellipsis in Dutch, where the ellipsis site is the complement of a modal head but the licensor head is some higher functional head which licenses the [E] feature on the modal via Agree. We observe a similar phenomenon in Turkish: although the ellipsis site is the complement of $\text{Asp}_{\text{celerative}}$, the licensing head must be T. If this were not the case, the subject would invariably be contained within the ellipsis domain. The relevant schematic derivation of null subjects is then shown in (22).[5]

(22)



[5] V-to-T movement arrows are not displayed to avoid clutter on page. In addition, heads are displayed to be on the left purely for graphical clarity reasons. Linear order of syntactic trees is irrelevant for the purpose of our discussion.

The representation in (22) leads to various elliptic and non-elliptic expressions depending on the properties of the subject and the featural composition of the T head. Table 1 summarizes the set of logical possibilities and the expected outcome. When the T head does not bear any phi [φ] or ellipsis licensing [L] features, no ellipsis occurs. In this configuration, if *pro* is licensable, we only expect strict/E-type interpretations. When the T head bears the feature [L] without any [φ] features, we get *pro* or ellipsis allowing all types of interpretations (strict/sloppy, quantificational/E-type). Finally, when the T head bears [φ] features, the subject must be extracted leading to either *pro* subjects or overt full DPs (no elliptic properties for the subject).[6]

	pro subject	full DP subject
T	*pro*	overt subject
$T_{[L]}$	*pro*	elliptic subject (subject trapped in the E-site)
$T_{[L,\varphi,EPP]}$	*pro*	overt subject (subject extracted out of the E-site)

Table 1. Typology of Null subjects in Turkish

This concludes our analysis of null arguments in Turkish. We have shown that objects always allow sloppy/quantificational interpretations in addition to strict/E-type interpretations whereas subjects yield sloppy/quantificational interpretations only when they are not agreed with. Combining these observations with the availability of adjunct inclusion readings with null arguments, we concluded that Turkish has Verb Stranding Ellipsis, whereby the complement of the head $Asp_{celerative}$ is elided. We accounted for the variable interpretation associated with null subjects through their syntactic positions when ellipsis applies. Agreed with subjects raise out of the ellipsis site to Spec, TP whereas others remain inside the ellipsis site, which grants them elliptic properties (sloppy/quantificational interpretations).

Since our analysis accounts for the variable interpretive properties of null subjects based on their syntactic positions (modulated by agreement), we expect to observe some word order variation indicating the movement to Spec, TP or its absence. Unfortunately, scrambling in Turkish makes this hard to test. However, there is one piece of independent evidence that suggests our account is on the right track. Turkish is famously a scope-rigid language (Kelepir 2001; Özyıldız 2017; Demirok 2022). With this assumption, we expect a degree of isomorphism between the syntactic structure and the scopal relations. In (23), we have two sentences with a null subject whose antecedent is a quantifier and the sentence also contains negation. In (23a), the null subject is agreed with and in (23b) no agreement ensues.

(23) Scopal interactions in null subjects

a. Herkes yemek ye-di ama *e* bulaşık-lar-ı yıka-ma-dı-lar.
everyone food eat-PAST but dish-PL-ACC wash-NEG-PAST-PL
'Everyone ate but *e* didn't wash the dishes.' $\forall > \neg$

b. Herkes yemek ye-di ama *e* bulaşık-lar-ı yıka-ma-dı.
everyone food eat-PAST but dish-PL-ACC wash-NEG-PAST
'Everyone ate but *e* didn't wash the dishes.' $\neg > \forall$

[6] T can still bear the feature [L] as it licenses VSE and this can lead to object gaps with elliptic properties.

As predicted by our account, in (23a), where the null subject is agreed with, the universal quantifier takes wide scope over negation. In contrast, in (23b), where the null subject is not agreed with, negation takes wide scope over the universal quantifier.

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