ELLIPSIS OF ARGUMENTS IN JAPANESE AND TURKISH[*]

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1. Introduction

In this paper we consider the phenomenon of argument ellipsis, where arguments such as subjects and objects are elided under identity with antecedents nearby. Several researchers including Kim (1999), Oku (1998), Otani and Whitman (1991) have argued in one way or another that some null argument constructions are best analyzed as involving ellipsis rather than empty pronouns. For instance, suppose that the null object construction in (1b) is preceded by (1a), and that the null object in (1b) is somehow anaphoric to the object in (1a). In this context, (1b) is ambiguous between the two readings in (2): (1b) means either that Hanako hates Taro's mother, which is called the strict reading, or that Hanako hates her own mother, which is called the sloppy reading.

(1) a.   Taro-wa   zibun-no   hahaoya-o   aisiteiru.
          Taro-NOM   self-GEN   mother-ACC   loves

          '*Lit.* Taro loves self's mother.'

    b.   Hanako-wa   *e*   nikundeiru.
          Hanako-TOP   hates

          '*Lit.* Hanako hates *e*.'

(2) a.   Hanako hates his (= Taro's) mother. (strict)

    b.   Hanako hates her own mother. (sloppy)

When (1b) has the strict reading, it may contain a pronoun in the object position. In this regard, let us consider the data from English in (3). (3a) is taken to antecede (3b), where the object is a pronoun anaphoric to the object in (3a). When we use a personal pronoun as in (3b), the sentence is not ambiguous and only has the strict reading.

(3)   a.   John loves his mother.

    b.   Bill hates her.
       = Bill hates John's mother. / ≠ Bill hates his own mother.

If the null object in (1b) were unanimously an empty pronoun, we would expect the sentence to be like (3b), being restricted to the strict interpretation. Since (1b) can have the sloppy reading in addition to the strict reading, we need something other than an empty pronoun for the null object. And argument ellipsis just provides us with what is needed. According to the argument ellipsis analysis of null arguments, (1b) is analyzed as in (4b), where the object position is occupied by the full-fledged noun phrase *self's mother* in the syntactic and semantic component, and it is elided in the PF component to yield a null object construction.

(4)   a.   Taro-wa   zibun-no   hahaoya-o   aisiteiru.
        Taro-NOM   self-GEN   mother-ACC   loves

       '*Lit.* Taro loves self's mother.'

    b.   Hanako-wa   ~~zibun-no   hahaoya-o~~   nikundeiru.
        Hanako-TOP   self-GEN   mother-ACC   hates

       '*Lit.* Hanako hates ~~self's mother~~.'

While null arguments in languages like Japanese can be elliptic, not every null argument attested in natural languages can be analyzed similarly. Oku (1998) observes that null subjects in Spanish cannot be derived by ellipsis; rather, they are empty pronouns as has been standardly assumed. Consider the data in (5), cited from Oku (1998). (5a) serves as the antecedent sentence for (5b), where the embedded subject is empty. If it were able to be elliptic, we would expect (5b) to permit the sloppy interpretation as well as the strict reading just like (1b). The fact is, however, that the null subject only means Maria's proposal, but not Juan's proposal. This puts the null subject in Spanish in the same category as the pronoun in (3b).

(5)   a.   María   cree   que   su   propuesta   será   aceptada.
        Maria   believes   that   her   proposal   will.be   accepted

       'Maria believes that her proposal will be accepted.'

b. Juan   también   cree   que   *e*   será   aceptada.
    Juan   also   believes that   it   will.be accepted

'Juan also believes that it will be accepted.'
= Juan believes that Maria's proposal will be accepted.
≠ Juan believes that Juan's proposal will be accepted.

Given that some null arguments in natural languages can be elliptic while others are unambiguously pronominal, we are led to ask what is responsible for the variation. Since null arguments themselves do not have a visible indication, it is natural to assume that it is somehow related to some other visible evidence. In this respect, Oku (1998) proposes the hypothesis that argument ellipsis correlates with scrambling: the basic idea is that whereas Japanese allows argument ellipsis because it has scrambling, Spanish does not allow argument ellipsis because it does not permit scrambling. The purpose of this paper is to examine Oku's hypothesis with data from Turkish, which is just like Japanese in allowing null arguments and scrambling.

2. Argument Ellipsis in Japanese

Before looking at Turkish data, let us consider some basic observations that have been made in the literature for Japanese. The data in (1), repeated as (6) below, illustrates object ellipsis in Japanese.

(6) a.   Taro-wa   zibun-no   hahaoya-o   aisiteiru.
           Taro-NOM   self-GEN   mother-ACC   loves

     '*Lit.* Taro loves self's mother.'

     b.   Hanako-wa   *e*   nikundeiru.
           Hanako-TOP   hates

     '*Lit.* Hanako hates *e*.'

Taking (6a) as the antecedent, (6b) permits the sloppy interpretation, which has been taken in the literature to be an indication of ellipsis.

Another argument that null objects in Japanese can be elliptic is obtained from cases like the following:

(7) a.   Taro-wa   sannin-no   sensei-o   sonkeisiteiru.
           Taro-TOP   three-GEN   teacher-ACC   respects

     'Taro respects three teachers.'

b.   Hanako-mo   *e*   sonkeisiteiru.
Hanako-also   respects

'lit. Hanako respects *e*, too.'

Takahashi (2008a, 2008b) observes that when anteceded by (7a), (7b) allows the reading that Hanako respects three teachers in addition to the interpretation that Hanako respects the three teachers that Taro respects. Comparison of (7) with the following data in English may be useful here:

(8)   a.   John respects three teachers.

b.   Mary respects them, too.

c.   Mary does, too.

The examples in (8b-c) are intended to be anteceded by (8a); (8b) contains a pronoun that is somehow associated with the quantificational object in (8a), while (8c) involves VP-ellipsis. The fact is that whereas (8b) only means that Mary respects the three teachers that John respects, (8c) permits the reading that Mary respects three teachers. The two readings can be distinguished as follows: the first reading, called the E-type reading here, necessarily implies that Mary respects the same set of teachers as John does, while the second reading, called the quantificational reading, allows the set of teachers Mary respects to be different from the set of teachers John respects. That (8c) permits the quantificational reading is natural given that it can be analyzed as follows:

(9)   Mary does [$_{VP}$ ~~respect three teachers~~], too.

Here the VP contains the quantifier *three teachers* and is elided under identity with the VP in (8a). Since (8c) contains a quantifier in the syntactic and semantic component, it comes as no surprise that the sentence has the quantificational reading.

Bearing this in mind, let us return to (7b). If the null object were always pronominal, the sentence should only have the E-type reading, just like (8b). On the other hand, the ellipsis analysis of null objects correctly predicts the possibility of the quantificational reading, because it analyzes (7b) as in (10b):

(10) a.   Taro-wa   sannin-no   sensei-o   sonkeisiteiru.
Taro-TOP   three-GEN   teacher-ACC   respects

'Taro respects three teachers.'

b.   Hanako-mo   ~~sannin-no   sensei-o~~   sonkeisiteiru.
Hanako-also   three-GEN   teacher-ACC   respects

'*Lit.* Hanako respects ~~three teachers~~, too.'

Here (10b) contains a quantifier in the object position, which is elided under identity with the object in the antecedent sentence in (10a). Since (10b) (or (7b)) has a full-fledged quantifier, it is natural that it has the quantificational reading.

We have assumed above that elliptic null objects arise from elision of objects. We should note here that there is an alternative approach to the phenomenon in question. Following Huang (1991), Otani and Whitman (1991) argue that elliptic null object constructions are derived by VP-ellipsis with concomitant V-raising (or what is now called V-stranding VP-ellipsis (Goldberg (2005)). In that case, (7) is analyzed as in (11), where the examples are shown with English words for convenience.

(11) a.　　[$_{TP}$ Taro [$_{T'}$ respects-T [$_{VP}$ t_V three teachers]]]

　　　b.　　[$_{TP}$ Hanako [$_{T'}$ respects-T [~~$_{VP}$ t_V three teachers~~]]], too

According to the proponents of the V-stranding VP-ellipsis analysis, Japanese should allow raising of main verbs to T in overt syntax, as indicated in (11). The VP in (11b) is identical to the VP in the antecedent sentence in (11a) and is elided by VP-ellipsis. Since the verb evacuates from VP prior to VP-ellipsis, it remains as a remnant, unlike main verbs in English, which are elided by VP-ellipsis because they do not undergo V-to-T raising.

Though V-stranding VP-ellipsis may be available in some languages such as Hebrew (Goldberg (2005)), that it is not an option for Japanese is shown by Oku (1998) (see also Kim (1999)). The data below, cited from Oku (1998), shows that adjuncts cannot be elliptic:

(12) a.　　Bill-wa　　kuruma-o　　teineini　　aratta.
　　　　　　Bill-TOP　car-ACC　　carefully　washed

　　　　　　'Bill washed a car carefully.'

　　　b.　　John-wa　　*e*　　arawanakatta.
　　　　　　John-TOP　　　　not.washed

　　　　　　'*Lit.* John didn't wash *e*.'
　　　　　　= John did not wash a car. / ≠ John did not wash a car carefully.

Taking (12a) as the antecedent sentence, (12b) is a null object construction. Notice that (12a) has the adverb corresponding to *carefully*, but it is not understood in the interpretation of (12b), which means that John didn't wash a car, but not that John didn't wash a car carefully. This fact is important because it indicates that the elliptic null object construction is not derived by V-stranding VP-ellipsis. Let us consider how (12b) would be analyzed under the V-stranding VP-ellipsis analysis. (12a-b) would be analyzed as in (13a-b), respectively.

(13) a.　　[$_{TP}$ Bill [$_{T'}$ wash-T [$_{VP}$ t_V a car carefully]]]

b. [$_{TP}$ John [$_{T'}$ wash-NEG-T ~~[$_{VP}$ t_V a car carefully]~~]]]

Here the main verbs undergo V-to-T raising (in (13b), V may move to T via NEG). Since the manner adverb *carefully* is arguably contained in VP, VP-ellipsis should be able to elide the adverb and the object as well as the verbal trace. This should predict (12b) to have the interpretation that John did not wash a car carefully, which is in fact impossible.[1] On the other hand, the argument ellipsis analysis restricts targets of deletion to arguments, so that the absence of adjunct ellipsis can be an automatic consequence (readers are referred to Oku (1998) for a way to derive the desired consequence).

Arguments are not limited to objects. Subjects are arguments as well, and Oku (1998) observes that they can equally be elliptic. Consider the data in (14). (14a) antecedes (14b), where the embedded subject is empty. Just like the null object in (1b) and unlike the null subject in Spanish in (5b), the null subject in (14b) is ambiguous between the strict and the sloppy interpretation. In particular, that (14b) can have the sloppy reading that Hanako said that her child knew French indicates that the null subject can be elliptic.

(14) a. Taro-wa   [zibun-no kodomo-ga eigo-o   sitteiru to]   itta.
          Taro-TOP   self-GEN   child-NOM   English-ACC knows   that said

          '*Lit.* Taro said that self's child knew English.'

    b.   Hanako-wa   [*e* furansugo-o sitteiru to]   itta.
         Hanako-TOP   French-ACC   knows   that said

         '*Lit.* Hanako said that *e* knew French.'

Further, the null subject in (15b) can yield a quantificational interpretation, another indication of ellipsis.

(15) a. Sannin-no   onnanoko-ga   Taro-ni   ai-ni   kita.
          three-GEN   girl-NOM   Taro-DAT   see-to   came

          'Three girls came to see Taro.'

    b. *e* Ken-ni-mo   ai-ni   kita.
             Ken-DAT-also   see-to   came

         '*Lit. e* came to see Ken, too.'

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[1] That the adverb in question is contained in VP is indicated by the fact that it is part of the constituent dislocated by what is called VP-preposing, as shown below:

(i) [$_{VP}$ Kuruma-o   teineini   arai]-sae   Bill-ga t_{VP} sita.
          car-ACC   carefully wash-even   Bill-NOM   did.

     '*Lit.* Even wash a car carefully, Bill did.'

Anteceded by (15a), (15b) can mean that three girls came to see Ken, too, and hence can be true even if the group of the girls who came to see Ken was different from the group of the girls who came to see Taro.

At this point, let us attend to the formal analysis of argument ellipsis proposed by Oku (1998), who, as we noted above, tries to relate it to scrambling. As for scrambling, Oku assumes with Bošković and Takahashi (1998) that the weakness of θ-features (namely, θ-roles taken as features) is responsible for it. The weak/strong dichotomy of features is a notion proposed by Chomsky (1995). Informally speaking, strong features are those features that must be checked as soon as possible (in most cases, in overt syntax) once they are introduced in a derivation with lexical items containing them; on the other hand, weak features do not have to be checked in overt syntax and can wait to be checked until LF. Assuming that θ-roles are weak features in Japanese, Bošković and Takahashi (1998) analyze scrambling as base-generation of "scrambled" elements in adjoined positions followed by their LF movement to θ-positions. This is schematically indicated in (16a-c).

(16) a.   Object Subject V_{TR}

   b. $[_{TP}$ Object $[_{TP}$ Subject $[_{T'}$ $[_{VP}$ $V_{TR}]]]]$ \<overt syntax\>

   c. $[_{TP}$ __ $[_{TP}$ Subject $[_{TP'}$ $[_{VP}$ Object $V_{TR}]]]]$ \<LF\>
         └────────────────────────↑

Suppose we have a sentence where the object is "scrambled" over the subject as in (16a). According to Bošković and Takahashi (1998), the object in fact is base-generated in the surface position (namely, in TP-adjoined position or in an extra specifier of TP) as in (16b). Notice that at this point, the verb, which is transitive and has an internal θ-role to assign, is object-less. This is allowed by assumption because the θ-role is a weak feature. But it must be checked at LF, and the required checking is established by moving the object into the complement position of VP as shown in (16c).

Oku (1998) adopts this idea and applies it to the analysis of argument ellipsis, as shown in (17).

(17) a.   Taro loves self's mother.

   b.   Hanako hates *e*.

   a'. $[_{TP}$ Taro $[_{VP}$ loves self's mother]]   \<overt syntax\>

   b'. $[_{TP}$ Hanako $[_{VP}$ hates]]   \<overt syntax\>

   a". $[_{TP}$ Taro $[_{VP}$ loves self's mother]]   \<LF\>

   b". $[_{TP}$ Hanako $[_{VP}$ hates ***self's mother***]]   \<LF\>

(17a-b) correspond to (1a-b), respectively, which are shown in English wording just for convenience. Oku assumes that they are represented as in (17a'-b') in overt syntax: what is noteworthy here is that (17b') literally lacks an object though the verb is transitive. This should be allowed in Japanese, however, since θ-roles do not have to be checked (or assigned) in overt syntax in Japanese. (17a"-b") are the LF representations, where the object in the antecedent sentence in (17a") is copied in the object position in (17b") and checks (or is assigned) the θ-role of the verb.

Note that this sort of derivation is made possible by the weakness of θ-role features and hence that in non-scrambling languages, where θ-roles are strong, argument ellipsis should be disallowed. Thus, languages like English and Spanish do not allow scrambling, so that they should not permit argument ellipsis, either. Bearing this background in mind, let us turn our attention to Turkish to examine whether the alleged correlation between argument ellipsis and scrambling holds.

3. Argument Ellipsis in Turkish

Let us start with a very cursory look at Turkish. It is a head-final, SOV language just like Japanese, but crucially it exhibits subject-predicate agreement unlike Japanese. (18a-b) show that the form of the agreement suffix varies according to the type of subject in person and number.

(18) a.　(Ben)　bu　　makale-yi　yavaşyavaş　oku-yacağ-**ım**.
　　　　(I)　　this　article-ACC　slowly　　　read-FUT-1SG

　　　'I will read this article slowly.'

　　b.　(Biz)　her　hafta　sinema-ya　gid-er-**iz**.
　　　　(we)　every　week　movies-DAT　go-AOR-1PL

　　　'We go to the movies every week.'

Also, Turkish is similar to Japanese in allowing null subjects and null objects (Aygen (2001), Erguvanlı-Taylan (1984), Kornfilt (1987, 1997), Özsoy (1988), Öztürk (2004), Turan (1995), among others). In (19), both the subject and the object are empty: the agreement on the verb indicates that the subject is first-person, singular, while the reference of the object is determined by the context.

(19)　　*e　e*　at-tı-m.
　　　　　　throw-PAST-1SG

　　　'*Lit.* I threw *e*.'

Another important property of the Turkish grammar relevant to us is the presence of scrambling (Aygen (2001), Erguvanlı-Taylan (1984), Kural (1993, 1997), Kornfilt (2003),

Şener (to appear), Öztürk (2004), among others). In (20) and (21), the internal arguments (the dative phrase in (20) and the accusative phrase in (21)) are relocated by scrambling, exhibiting a free word order alternation.

(20) a.　Can　　her　hafta　　sinema-ya　　gid-er.
　　　　　John　every　week　　movies-DAT　go-AOR

　　　　'John goes to the movies every week.'

　　　b.　Can　　sinema-ya　　her　hafta　　gid-er.
　　　　　John　movies-DAT　every　week　　go-AOR

　　　　'John goes to the movies every week.'

(21) a.　Mete　dün　　　sabah　　ders-i　　　ek-miş.
　　　　　Mete　yesterday　morning　class-ACC　skip-EVID.PAST

　　　　'Mete skipped the class yesterday morning.'

　　　b.　Mete　ders-i　　　dün　　　　sabah　　ek-miş.
　　　　　Mete　class-ACC　yesterday　morning　skip-EVID.PAST

　　　　'Mete skipped the class yesterday morning.'

We are now ready to examine the correlation between argument ellipsis and scrambling proposed by Oku (1998). It would be predicted that Turkish should behave like Japanese and permit argument ellipsis. First of all, (22) and (23) show that Turkish can have elliptic null objects.

(22) a.　Can　　[*pro* anne-si]-ni　　　　eleştir-di.
　　　　　John　　his　mother-3SG-ACC　criticize-PAST

　　　　'John criticized his mother.'

　　　b.　Mete-yse　　　*e*　öv-dü.
　　　　　Mete-however　　praise-PAST

　　　　'*Lit.* Mete, however, praised *e*.'
　　　　= Mete praised John's mother. / = **Mete praised Mete's mother.**

(23) a.　Kim　　kendi-ni　　eleştir-di?
　　　　　who　　self-ACC　　criticize-PAST

　　　　'Who criticized himself?'

b.　Can　　　*e*　　eleştir-di.
　　　John　　　　　criticize-PAST

'*Lit.* John criticized *e*.'
= **John criticized himself.**

Anteceded by (22a), (22b) can have the sloppy reading that Mete praised his own mother, in addition to the strict reading that Mete praised John's mother. The sloppy reading is an indication of ellipsis. Also, preceded by (23a), (23b) can mean that John criticized himself. Notice that this fact could not be accounted for if null objects were always pronominal: as shown in (24a), to get the relevant reading in (23b), the object must be coindexed with the subject, and hence if the object were an empty pronoun, the sentence would be ruled out as a violation of Condition (B) of the Binding Theory. On the other hand, the argument ellipsis analysis can handle the case easily: as shown in (24b), it postulates a reflexive in the object position, and it is elided under identity with the preceding object.

(24)　a.　　*John$_1$ criticized *pro*$_1$.

　　　b.　　John$_1$ criticized ~~self~~$_1$.

In the same vein, (22) is analyzed as in (25) when (22b) has the sloppy reading.

(25)　(for (22) when (22b) has the sloppy interpretation)
　　　a.　　John$_1$ criticized his$_1$ mother.

　　　b.　　Mete$_2$ praised ~~his$_2$ mother~~.

The empty position in (22b) is in fact occupied by the full-fledged noun phrase corresponding to *his mother*, which is elided under identity with the object in the antecedent sentence.

　　　Additional evidence that provides support for an ellipsis analysis of null objects in Turkish concerns the availability of quantificational interpretations. Consider the following example:

(26)　a.　　Can　　　üç　　hırsız　　yakala-dı.
　　　　　　John　　three　burglar　catch-PAST

　　　　　'John caught three burglars.'

　　　b.　　Filiz-se　　　　　　*e*　　sorgula-dı.
　　　　　　Phylis-however　　　　　interrogate-PAST

　　　　　'*Lit.* Phylis, however, interrogated *e*.'

The null object in (26b) has the quantificational object in (26a) as its antecedent. While (26b) can mean that Phylis interrogated the same three burglars that John caught, it may alternatively mean that Phylis interrogated three burglars. Under the second interpretation, the

sentence can be true even if the set of the three burglars Phylis interrogated was different from the set of the three burglars John caught.

To ensure that the null object constructions in (22), (23), and (26) involve argument (or object) ellipsis rather than V-stranding VP-ellipsis, it is necessary to consider whether VP-adverbs can be included in ellipsis sites. In this regard, let us consider the following data:

(27) a.   Can   sorun-u   hızla   çöz-dü.
          John   problem-ACC   quickly   solve-PAST

          'John solved the problem quickly.'

    b.   Filiz-se   *e*   çöz-me-di.
          Phylis-however   solve-NEG-PAST

          '*Lit.* Phylis, however, did not solve *e*.'
          = Phylis did not solve the problem.
          ≠ **Phylis did not solve the problem quickly.**

The antecedent sentence in (27a) contains the adverb corresponding to *quickly* as well as the object. The sentence in (27b) is a null object construction, and crucially it does not mean that Phylis did not solve the problem quickly; it only means that Phylis did not solve the problem. If the elliptic null object construction in Turkish were derived by V-stranding VP-ellipsis, the impossible reading should be available. Since it is impossible, it is safe to conclude that the elliptic null object construction in Turkish involves object ellipsis instead of VP-ellipsis.

Another argument against the V-stranding VP-ellipsis analysis of null objects in Turkish can be constructed on the model of an argument developed by Oku (1998) for Japanese. Consider the following examples in Turkish, each of which contains two internal arguments:

(28) a.   Can   [*pro* öğrenciler-i-ni]   [birbirleri-yle]   tanıştır-dı.
          John   his students-3SG-ACC   each.other-INST   introduce-PAST

          'John introduced his students to each other.'

    b.   *Can   [birbirleri-yle]   [*pro* öğrenciler-i-ni]   tanıştır-dı.
          John   each.other-INST   his students-3SG-ACC   introduce-PAST

          'John introduced his students to each other.'

(29) a.   Can   [*pro* öğrenciler-i-ni]   [birbirleri-yle]   yarış-tır-dı.
          John   his students-3SG-ACC   each.other-INST   race-CAUS-PAST

          'John raced his students with each other.'

b. *Can   [birbirleri-yle]   [*pro* öğrenciler-i-ni]   yarış-tır-dı.
    John   each.other-INST   his students-3SG-ACC   race-CAUS-PAST

    'John raced his students with each other.'

In (28a) and (29a), the accusative objects precede and bind the reciprocal anaphors realized as the instrumental arguments. (28b) and (29b) show that the instrumental phrases cannot precede the accusative objects in these contexts.[2] Bearing this in mind, let us consider (30).

(30) a.   Can   [*pro* öğrenciler-i-ni]   [birbirleri-yle]   tanıştır-dı.
           John   his students-3SG-ACC   each.other-INST   introduce-PAST

           'John introduced his students to each other.'

     b.   Mete-yse   *e*   [birbirleri-yle]   yarış-tır-dı.
           Mete-however   each.other-INST   race-CAUS-PAST

           '*Lit.* Mete, however, raced *e* with each other.'

(30a) is intended as the antecedent sentence for (30b), where the accusative object is empty. An important observation about (30b) is that it allows the sloppy reading that Mete raced Mete's own students with each other, which shows that it somehow involves ellipsis. Now let us consider how it would be derived by VP-ellipsis. The reciprocal anaphor is a remnant and hence it must be dislocated out of VP prior to the point where VP is elided. In that case, (30b) should be analyzed as follows:

(31)   [$_{TP}$ Mete-yse [birbirleri-yle]$_1$ [$_{VP}$ ~~[*pro* öğrenciler-i-ni] t_1-t_v~~] [$_T$ yarış$_V$-tır-dı]]

Here the instrumental phrase is in the outside of VP, probably in the specifier position of some functional head such as v or Agr$_O$, and VP undergoes ellipsis so that the accusative object is elided. Notice that we know from (28b) and (29b) that the representation in (31) should be ill-formed, and hence that the analysis in terms of VP-ellipsis would predict (30b) to be impossible, contrary to the fact. In contrast, argument ellipsis can handle it without difficulty. It analyzes (30b) in the following way (it is immaterial to the argument ellipsis analysis whether the verb undergoes raising or not):

(32)   [$_{TP}$ Mete-yse [$_{VP}$ ~~[*pro* öğrenciler-i-ni]~~ [birbirleri-yle] yarış-tır-dı]]

In (32), the instrumental phrase is in VP and follows the accusative phrase. The accusative object is elided by argument ellipsis, so that the surface form is derived. There is nothing wrong with this analysis; in particular, the alignment of the internal arguments is licit.

   Let us now turn our attention to subject ellipsis. Consider (33) first.

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[2] This is probably due to Condition (C) of the Binding Theory: if the instrumental phrases are in A-positions in (28b) and (29b), they bind their antecedents (namely, *his students*) in violation of Condition (C).

(33) a. Can   [[*pro* oğl-u]   İngilizce   öğren-iyor   diye]   bil-iyor.
        John   his son-3SG   English   learn-PRES   COMP   know-PRES

        'John knows that his son learns English.'

   b. Filiz-se   [*e* Fransızca   öğren-iyor   diye]   bil-iyor.
        Phylis-however   French   learn-PRES   COMP   know-PRES

        '*Lit.* Phylis, however, knows that *e* learns French.'

(33a-b) have finite embedded clauses, and the embedded subject in (33b) is empty. Anteceded by (33a), (33b) can have the strict reading that Phylis knows that John's son learns French, but significantly it does not have the sloppy reading that Phylis knows that Phylis' son learns French. This observation is confirmed by (34).

(34) a. Can   [[*pro* öneri-si]-nin   kabul ed-il-eceğ-i]-ni   düşün-üyor.
        John   his   proposal-3SG-GEN   accept do-PASS-NM-3SG-ACC   think-PRES

        'John thinks that his proposal will be accepted.'

   b. Aylin-se   [*e* redded-il-eceğ-i]-ni   düşün-üyor.
        Eileen-however   reject-PASS-NM-3SG-ACC   think-PRES

        '*Lit.* Eileen, however, thinks that *e* will be rejected.'

The embedded clauses in (34a-b) are nominalized but they are like finite clauses in exhibiting subject agreement. The null embedded subject in (34b) yields the strict reading, but not the sloppy reading. The fact here indicates that unlike objects, subjects cannot be elliptic in Turkish: then, the null subject in (34b) may be an empty pronoun, just like null subjects in Spanish.

     This conclusion is reinforced by the fact that null subjects in Turkish do not allow quantificational interpretations, either.

(35) a. Üç   öğretmen   Can-ı   eleştir-di.
        three   teacher   John-ACC   criticize-PAST

        'Three teachers criticized John.'

   b. *e* Filiz-i-yse   öv-dü.
          Phylis-ACC-however   praise-PAST

        '*Lit. e* praised Phylis.'

Anteceded by (35a), (35b) contains a null subject. While the subject can be understood as the three teachers that criticized John, it cannot be taken as the quantificational phrase *three teachers*. This observation again shows that null subjects in Turkish can be pronominal but cannot be elliptic.

The considerations above show that while Turkish is similar to Japanese in allowing object ellipsis, it differs from Japanese in not allowing subject ellipsis. Given the alleged correlation between argument ellipsis and scrambling, Turkish would be expected to behave exactly like Japanese. That Turkish behaves differently from Japanese appears to pose a problem to Oku's hypothesis, but in the next section, we will show that it does not undermine it because the lack of subject ellipsis in Turkish can be independently accounted for by the theory of agreement put forth by Chomsky (1995, 2000). Basically we try to capitalize on the presence of subject agreement in Turkish and its absence in Japanese in approaching the discrepancy in subject ellipsis.

4. Copying and Agreement

In fact, Saito (2007) considers the relevance of agreement to argument ellipsis and argues that the copying analysis of argument ellipsis plus Chomsky's (1995, 2000) theory of agreement restricts ellipsis to arguments that do not participate in agreement. We illustrate Saito's reasoning below:

(36) a.　　... $F_{1\{\phi\}}$ ... $DP_{1\{\phi, Case\}}$ ...　　The ϕ-features of F_1 need to be checked; DP_1 with ϕ-features is activated by virtue of possessing an unchecked Case feature.

　　a'.　　... $F_{1\{\phi\}}$ ... $DP_{1\{\phi, \text{Case}\}}$ ...　　Checking erases F_1's ϕ-features and DP_1's Case-feature: DP_1 becomes inert.

　　b.　　... $F_{2\{\phi\}}$ ... __ ...　　F_2's checking mate is elliptic.

　　b'. *... $F_{2\{\phi\}}$ ... $DP_{1\{\phi, \text{Case}\}}$ ...　　DP_1 is copied from (36a'): since it is already inert, it cannot check F_2's ϕ-features.

In (36a), there is a functional head F_1 with uninterpretable ϕ-features, which must be checked and erased. There is a DP (DP_1) in the neighborhood, and its ϕ-features can check the ϕ-features of F_1. Here, the Case feature of DP_1 plays an important role: it activates DP_1 so that it can enter into checking relation with F_1. After the checking, the ϕ-features of F_1 are erased, and by assumption the Case feature of DP_1 is also erased, as shown in (36a'). Suppose that the structure in (36a') serves as the antecedent of argument ellipsis in (36b), where there is a functional head F_2 with ϕ-features. The underlined part in (36b) marks the elliptic site. DP_1 is copied onto the elliptic site from (36a'), deriving (36b'). Now we have a problem. The Case feature of the copied DP has already been checked off in the antecedent sentence, so that the copied DP cannot be activated for the purpose of checking with F_2. The result is that the uninterpretable ϕ-features of F_2 are not checked or erased, causing a crash.

We claim that this kind of failed checking takes place in ungrammatical subject ellipsis in Turkish. We assume that the presence of subject-predicate agreement in Turkish means that Tense (or T) in the language possesses ϕ-features, which must be erased by checking:

hence, subject ellipsis is ruled out in Turkish.[3] To see how it works, let us consider (33), which is repeated as (37) with English wording for convenience. The antecedent sentence in (37a) goes through the derivation in (38), where we only show the embedded clause.

(37) a.   John knows that his son learns English.

    b.   Phylis, however, knows that *e* learns French.

(38) a.   ... [$_{TP}$ T$_{\{\phi\}}$ [$_{vP}$ his son$_{\{\phi, Case\}}$ [$_{v'}$ v [$_{VP}$ learns English]]]]

    b.   ... [$_{TP}$ T$_{\{\not\phi\}}$ [$_{vP}$ his son$_{\{\phi, \text{Case}\}}$ [$_{v'}$ v [$_{VP}$ learns English]]]]

    c.   ... [$_{TP}$ his son$_{\{\phi, \text{Case}\}}$ [$_{T'}$ T$_{\{\not\phi\}}$ [$_{vP}$ t_{DP} [$_{v'}$ v [$_{VP}$ learns English]]]]]

In (38a), the embedded T is to enter into checking relation with the subject *his son* to have its φ-features checked; in (38b), the checking results in erasure of the φ-features of T and the Case feature of the subject; and irrelevantly, in (38c), the subject moves to the specifier position of T to satisfy the EPP. Turning to the elliptic sentence in (37b), its embedded clause should be derived as below:

(39) a.   ... [$_{TP}$ T$_{\{\phi\}}$ [$_{vP}$ __ [$_{v'}$ v [$_{VP}$ learns French]]]]

    b.   *... [$_{TP}$ T$_{\{\phi\}}$ [$_{vP}$ ***his son***$_{\{\phi, \text{Case}\}}$ [$_{v'}$ v [$_{VP}$ learns French]]]]

Initially, the subject position is just vacant as in (39a), and it is filled by the preceding subject *his son* copied from the antecedent clause, as shown in (39b). But the Case feature of the copied subject has already been erased in the antecedent clause, so that it cannot enter into checking relation with T. This way, we can rule out subject ellipsis in Turkish.

The fact that argument ellipsis can apply to subjects as well as objects in Japanese is consistent with the idea made by Fukui (1986) and Kuroda (1988) that the language lacks agreement, which we understand to mean that functional heads such as T and v lack φ-features. For example, the case of object ellipsis in (1) is repeated in (40) with English wording.

(40) a.   Taro loves self's mother.

    b.   Hanako hates *e*.

(41) a.   [$_{TP}$ ... [$_{vP}$ Taro [$_{v'}$ v [$_{VP}$ love [$_{DP}$ self's mother$_{\{\phi, ACC\}}$]]]]]

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[3] Öztürk (2006) makes an important assumption concerning Agree in Turkish, which is that Turkish lacks case-driven Agree entirely. This is different from what we assume in the text, because we assume that Agree is relevant at least for the licensing of subject predicate agreement in Turkish. We will provide support for our position below.

b.   [$_{TP}$ ... [$_{vP}$ Hanako [$_{v'}$ v [$_{VP}$ hate __]]]]

b'.   [$_{TP}$ ... [$_{vP}$ Hanako [$_{v'}$ v [$_{VP}$ hate ***self's mother**$_{\{φ, ACC\}}$*]]]]

The antecedent sentence in (40a) is analyzed as in (41a), where the functional head v lacks φ-features by assumption. Since there is no agreement between v and the object, (41a) itself becomes the source of copying. The elliptic sentence in (40b) is analyzed as in (41b-b'): the object position is vacant in (41b) and has the preceding object copied in (41b'). Since v does not have uninterpretable φ-features, (41b') has no problem, whether or not the Case feature of *self's mother* is checked in the antecedent prior to the copying. Though we do not go into the status of accusative case in Japanese, there is a proposal in the literature that it is an inherent case (see Fukui and Takano (1998) and Takahashi (1996)). In that case, accusative case has nothing to do with agreement in Japanese.

We assume that basically the same thing holds for subject ellipsis in Japanese. The relevant case in (14) is repeated in (42) with English words.

(42) a.   Taro said that self's child knew English.

b.   Hanako said that *e* knew French.

(43) a.   ... [$_{TP}$ T [$_{vP}$ self's child$_{\{φ, NOM\}}$ [$_{v'}$ v [$_{VP}$ knew English]]]] ...

b.   ... [$_{TP}$ self's child$_{\{φ, NOM\}}$ [$_{T'}$ T [$_{vP}$ t_{DP} [$_{v'}$ v [$_{VP}$ knew English]]]]] ...

(44) a.   ... [$_{TP}$ T [$_{vP}$ __ [$_{v'}$ v [$_{VP}$ knew French]]]] ...

b.   ... [$_{TP}$ T [$_{vP}$ self's child$_{\{φ, NOM\}}$ [$_{v'}$ v [$_{VP}$ knew French]]]] ...

The embedded clause in the antecedent in (42a) is analyzed as in (43). The subject *self's child* is in the specifier position of vP in (43a). It does not enter into checking relation with T, which by assumption lacks φ-features. Irrelevantly, the subject may move to the specifier position of TP due to the EPP as in (43b). The elliptic sentence in (42b) is analyzed as in (44). The base position of the subject is vacant as shown in (44a); the antecedent subject is copied to derive (44b). Here again, since T lacks uninterpretable φ-features, (44b) causes no problem, whether or not the copied subject has the Case feature checked prior to the copying. Though we do not go into the analysis of nominative case in Japanese, we mention that our analysis is compatible with Saito's (1985) idea that nominative case in Japanese is contextually determined in such a way that it is assigned to elements that are immediately dominated by projections of Tense, which accounts for the presence of the multiple nominative construction in Japanese as indicated below:[4]

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[4] In this regard, it is interesting to note that Kornfilt (1991) shows that Turkish, unlike Japanese, lacks multiple nominative constructions.

(45)   [TP DP-NOM [T' DP-NOM [T' DP-NOM ... [T' VP T]]]]

As for object ellipsis in Turkish, we are naturally led to assume that *v* lacks uninterpretable φ-features in the language just as in Japanese. Though this initially seems to be natural since Turkish does not exhibit object-verb agreement, we have to leave it to future research to provide evidence for that.

We now turn our attention to consequences of the line of analysis we are pursuing here. One is that even in Turkish, subjects that do not participate in agreement are predicted to be able to be elliptic. We begin by the fact noted by Öztürk (2006) that subject drop does not require predicate agreement in Turkish in a certain type of adjunct clause (see also Aygen (2001) and Kornfilt (2002)). This is illustrated by the examples below cited from Öztürk (2006):

(46) A: John₁   [Bill₂   gel-ince]   mi   gid-ecek?
          John   Bill   come-when   Q   go-FUT

          'Will John go when Bill comes?'

     B: Evet,   [*pro*₂   gel-ince]   *pro*₁   gid-ecek.
          Yes   he   come-when   he   go-FUT

          'Yes, he will go when he comes.'

In (46B), which is intended as a reply to the question in (46A), the subject of the adjunct clause is empty though the predicate shows no agreement. Given this, we can test whether null subjects of such clauses can be elliptic. The judgment for the example below points in that direction:

(47) a.   Can   [[*pro*   oğl-u]   İngilizce   öğren-ince]   sevin-di.
          John   his   son-3SG.POSS   English   learn-because   be.pleased-PRES.PERF

          'John is pleased because his son has learned English.'

     b.   Filiz-se   [*e*   Fransızca   öğren-ince]   sevin-di.
          Phylis-however   French   learn-because   be.pleased-PRES.PERF

          '*Lit.* Phylis, however, is pleased because *e* has learned French.'

(47b) can have the sloppy reading that Phylis is pleased because Phylis' son has learned French, indicating that the null subject is elliptic.

Another piece of evidence that bears out the prediction that subjects that do not participate in agreement can be elliptic can be found in ECM constructions, exemplified below:

(48)   Pelin   [ben-i/sen-i/on-u   lise-ye   **başla-yacak**]   san-ıyor.
        Pelin   I/you/he/she-ACC   high-school-DAT   start-FUT   think-PRES

        'Pelin thinks I/you/he/she will start high school.'

In (48), the matrix verb corresponding to *think* takes a complement clause where the subject is accusative and the form of the predicate remains the same irrespective of the type of the subject. It is safe to say that there is no subject-predicate agreement in the complement clause in (48). Now let us consider (49) to observe how subjects of ECM clauses behave with respect to the diagnostic tests for ellipsis.

(49) a.   Pelin   [[*pro* yeğen-i]-ni   lise-ye   başla-yacak]   san-ıyor.
           Pelin   her   niece-3SG-ACC   high-school-DAT   start-FUT   think-PRES

           'Pelin thinks her niece will start high school.'

   b.   Suzan-se   [e   ilkokul-a   başla-yacak]   san-ıyor.
         Susan-however   grade-school-DAT   start-FUT   think-PRES

         'Susan, however, thinks that *e* will start grade school.'

(49a) serves as the antecedent for (49b), where the embedded subject is empty. Compared with (33b) and (34b), which have subject agreement, (49b) allows the sloppy interpretation more easily. Thus we have further confirmation of the correlation between the absence of agreement and the possibility of argument ellipsis.

        Finally, let us attend to the phenomenon of subject honorification in Japanese, which some researchers like Toribio (1990) and Ura (1996) regard as an instance of subject agreement. The phenomenon is illustrated in (50), where the predicate is in the honorific form and it is compatible with the honorable subject *Prof. Suzuki* but not with the humble subject *Taro*.

(50)   {Suzuki   sensei-ga   / #Taro-ga}   ronbun-o   o-kaki-ninatta.
         Suzuki   prof.-NOM /   Taro-NOM   paper-ACC   HON-write-HON

        'Prof. Suzuki / Taro wrote a paper.'

If this is really an instance of agreement, we expect that subjects of honorific predicates should not be able to be elliptic. The following is a case in point:

(51) a.   Taro-wa   [zibun-no   sensei-ga   eigo-o   o-hanasi-ninaru   to]
           Taro-TOP   self-GEN   teacher-NOM   English-ACC   HON-speak-HON   that
           omotteiru.
           think

           '*Lit.* Taro thinks that self's teacher speaks English.'

    b.   Hanako-wa   [*e* furansugo-o o-hanasi-ninaru   to]   omotteiru.
            Hanako-TOP   French-ACC HON-speak-HON that   think

       '*Lit.* Hanako thinks that *e* speaks French.'

In (51a-b), the embedded verbs are accompanied by the honorific marker. If (51b) allows the sloppy interpretation that Hanako thinks that her own teacher speaks French, the null embedded subject can be elliptic. If, on the other hand, the sentence is limited to the strict reading that Hanako thinks that Taro's teacher speaks French, it shows that the null subject cannot be elliptic and is arguably pronominal. We consulted six native speakers of Japanese about the interpretation of (51b) and the result was that they split into two groups: three of them said that it was very difficult or almost impossible to get the sloppy reading in (51b); and the other three reported that they had no problem getting the sloppy interpretation. In the former case, honorification may function as an instance of formal agreement, whereas in the latter case, it may not be taken as such. We leave it for future research to have a clearer picture of the issue.

5. Conclusion

To sum up, we have considered Turkish data to examine the alleged correlation between argument ellipsis and scrambling. The correlation is partially confirmed: Turkish is like Japanese in allowing object ellipsis, but it disallows subject ellipsis unlike Japanese. The immediate question to ask is why the two languages differ this way though they are similar in allowing scrambling. Our solution has been to take advantage of the presence of subject agreement in Turkish and its absence in Japanese. Here we have basically followed Saito's (2007) idea that argument ellipsis is not allowed in the environment where we have agreement, and we have provided some arguments for our position. We have had to leave a number of tasks for the future study. Among them is to determine exactly what correlates with argument ellipsis. According to Oku (1998), the presence of scrambling is a key factor in permitting argument ellipsis. Saito (2007) argues that agreement also plays a role in (dis)allowing argument ellipsis. It is necessary to examine exactly to what extent scrambling and/or agreement are/is involved in the phenomenon in question. This requires us to broaden our range of investigation to other related languages, but it is beyond the scope of the present work. Despite that, we believe that our study here can be an important contribution to the comparative research of Turkish and Japanese, which look similar in large parts but differ in some minute details.

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