Agreement Beyond Phi

To appear, *Linguistic Inquiry* Monograph, MIT Press

Pre-copyedited version, April 2016

CHAPTER 3

Pro-drop, E-type Pronouns, and Agreement

1. Introduction

Over the past thirty years or so, one of the most extensively studied topics in generative grammar is the phenomenon of *pro*-drop. In some languages the *pro*-drop occurs only in the subject position, while in other languages, *pro*-drop may occur in other argument positions (e.g., Chinese, Japanese, Portuguese). The latter type is sometimes called radical *pro*-drop languages, although it has been argued that the subject and non-subject empty elements may vary in nature, the subject being a "pro" while the object may be a silent variable (Huang 1984, Raposo 1989). In this chapter I will look at this phenomenon from the perspective of Strong Uniformity in order to address a particular property identified in the literature, the possibility of sloppy interpretation of pronouns, especially null pronouns in the subject position. Using the term "null argument" in place of "null pronoun" to stay neutral to the debate about the nature of this position, I will show that the position of the ϕ-feature and the δ-feature in a particular language affects the possibility of sloppy interpretation for a null argument. In doing so, I will argue that a null argument associated with a sloppy interpretation is a pronoun, and not the result of argument ellipsis as widely assumed in the literature on this topic.

The following Japanese example demonstrates radical *pro*-drop.

(1) __ __ katta.

'(She/he/they/etc.) bought (it/them).'

Both the subject and the object positions are null, and their interpretation is understood from the conversational context. It is also possible for the indirect object to be null, but not an adjunct.

(2) a. Hanako-wa   Taroo-ni   tegami-o   okutta   no?

Hanako-TOP   Taroo-DAT   letter-ACC sent   Q

'Did Hanako send a letter to Taro?'

   b. Iie, __ __ __ okur-anakat-ta.

no   send-NEG-PST

'No, (she) didn't send (it) (to him).'

(3) a. Taroo-wa   zitensya-de   kuru   no?

Taro-TOP   bicycle-by   come   Q

'Is Taro coming by bicycle?'

   b. #Iie, ko-nai yo.

no come-NEG EXPL

'No, (he) won't come (*by bicycle).'

(3b) can only mean that Taro won't come, not that he won't come by bicycle, since the instrumental is an adjunct and not capable of being a null argument.

There are three proposals for the nature of the null argument.

(4) Three proposals for the nature of the null argument:

    a.   pronominal (Kuroda 1965)

    b.   VP ellipsis, for the null object argument (Otani and Whitman 1991)

    c.   argument ellipsis (Oku 1998)

Kuroda in his 1965 MIT dissertation suggested that the empty element is a null version of the overt pronoun, citing similarities between the two. Kuroda's observation foreshadowed the study of *pro*-drop in the GB era by linguists such as Taraldsen (1978) and Rizzi (1986), who argued that the empty subject element in Romance languages such as Italian and Spanish is a null pronoun licensed by rich agreement (see also Barbosa 1995, 2009, etc.). In the second approach, focusing on the fact that the null object argument allows the indefinite interpretation of sloppy reading, Otani and Whitman (1991), following a similar observation in Chinese by Huang (1987, 1991), argue that the null argument in Japanese results from VP ellipsis.

(5) a.   Taroo-wa   zibun-no   gakusei-o   hometa.

          Taro-TOP   self-GEN   student-ACC   praised

          'Taro praised his own student.'

    b.   Ziroo-wa   ___   home-nakat-ta.

Jiro-TOP   praise-NEG-PST

'Jiro didn't praise ___'

strict (Taro's student = him/her)/sloppy (Jiro's student)

The null argument may be interpreted as Taro's student, which would correspond to a pronominal interpretation (him/her/them), or it can be interpreted as Jiro's student. The latter is an indefinite interpretation, a sloppy reading of the null argument. Otani and Whitman, following Huang, argue that the latter reading cannot be due to a pronoun, but instead, it results from ellipsis. Following the study of VP ellipsis in English, which allows sloppy as well as strict interpretation, they associate the sloppy interpretation in Japanese with VP ellipsis. Following the general argument given earlier by Huang, they note that the reason why the verb is pronounced in Japanese under VP ellipsis, unlike in English, is due to V-to-T movement, which leaves all of the VP content except the verb as the target of ellipsis.

Oku (1998), in responding to Otani and Whitman (1991), accepts the idea that the null argument that allows sloppy interpretation is not a *pro* but some sort of an ellipsis. But he argues that the null argument responsible for this interpretation cannot be due to VP ellipsis. Rather, he argues that it is due to a process of argument ellipsis. Oku's idea of argument ellipsis has become the dominant approach for null arguments associated with a sloppy interpretation. I will summarize Oku's study below.

Oku (1998), building on Otani and Whitman's (1991) observation that the null object argument in Japanese allows sloppy interpretation, argues that the null argument that allows this interpretation results from argument ellipsis, and not from VP ellipsis.

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One argument Oku gives has to do with VP adverbs. In VP ellipsis, a VP adverb can elide along with the other material in the VP.

(6) Mary cleaned the car carefully; John did, too.

The portion with ellipsis easily allows the interpretation that John also cleaned his car carefully. However, as Oku observes, the same is not true for Japanese.

(7) Taroo-wa kuruma-o   teinei-ni   aratta. Hanako-wa   araw-anakat-ta.

    Taro-TOP car-ACC   carefully   washed Hanako-TOP   wash-NEG-PST

    'Taro washed the car carefully. Hanako didn't wash.'

The second sentence can only mean that Hanako didn't wash her car, and not that she didn't wash the car carefully. The impossibility of the adverb being contained in the ellipsis site excludes the possibility of VP ellipsis.[1]

   The second argument by Oku for argument ellipsis constitutes the basis for much of the discussion in the present chapter. He observes that what he terms argument ellipsis is possible in the subject position as well as the object position.

(8) a. Mariko-wa [zibun-no   kodomo-ga   furansugo-o benkyoosuru to]   omotteiru.

     Mariko-TOP self-GEN   child-NOM   French-ACC study   that   think

     'lit. Mariko thinks that self's child will study French.'

b. Haruna-wa [*e*   surobeniago-o   benkyoosuru   to]   omotteiru.

   Haruna-TOP   Slovenian-ACC   study   that   think

   'lit. Haruna thinks that *e* will study Slovenian.'

   Strict/Sloppy

The fact that the null subject argument allows the sloppy interpretation demonstrates unequivocally that this interpretation is not dependent on VP ellipsis.

Oku further notes that this subject null argument in Japanese is fundamentally different from a typical *pro*-drop language such as Spanish. Unlike Japanese, Spanish and other Romance languages do not allow the sloppy interpretation.

Spanish

(9) 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   will.be   accepted

      'lit. Juan also believes that *e* will be accepted.' (Oku (1998))

      Strict/*Sloppy

What is the difference between Japanese and Spanish? According to Oku, it is the presence/absence of subject agreement that dictates whether the sloppy interpretation is possible. I will call this Oku's Generalization.

(10) Oku's Generalization (1998)

    Agreement blocks argument ellipsis.

This is consistent with the study of Romance languages, in which it is shown that rich agreement licenses *pro*-drop (Taraldsen 1978, Rizzi 1986). If there is agreement, and there is a gap that is the target of this agreement, it would be an empty *pro*. According to Oku, this *pro* is referential and does not allow the sloppy interpretation. In Japanese, the absence of subject agreement opens the possibility that the empty element is something other than *pro*; Oku argues that the null argument is in fact a fully specified argument noun phrase that happens to be covert. Thus, in the example with subject null argument allowing the sloppy reading in (8b) above, this null argument is the fully specified noun phrase *zibun-no kodomo* 'self's child'; the reflexive may be bound by the local matrix subject, *Haruna*, leading to the sloppy interpretation. Oku's argument ellipsis proposal has become the standard analysis for null arguments associated with sloppy interpretation, and we find further development of it in important works such as Saito (2007) and Takahashi (2008a/b).

    Further evidence for Oku's Generalization comes from Portuguese, which allows null argument in both the subject and object positions. Unlike Japanese, Portuguese has subject agreement (thanks to João Costa for the following examples).[2]

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Subject:

(11) O Pedro disse que a   mãe   é bonita   e o Paulo disse que ____ é feia.

The P. said   that the mother is beautiful and the P. said that ___   is ugly

✓strict, *sloppy

Object:

(12) O   Pedro adora a mãe,   mas o Paulo odeia ___.

The Pedro adores the mother, but the P.   hates ___

✓strict, ✓sloppy

As shown, while the subject null argument does not allow a sloppy interpretation, the

object full argument allows it easily. Below, I will give additional evidence for Oku's

Generalization. Then, in the remainder of the chapter, we will look at evidence that the

sloppy interpretation cannot be due to argument ellipsis as Oku suggested.[3] Nevertheless,

I will show that Oku's Generalization survives, albeit in a different form related to

topicalization. The proposal I will put forth differs from Oku in that the sloppy

interpretation of the subject *pro* is not directly tied to a lack of agreement. But the

proposal differs from Simpson et al. (2013), who argue that the possibility of sloppy

interpretation is unrelated to agreement. Instead, I will argue that agreement is relevant,

but only in triggering movement that leads to topicalization of the *pro*, and it is

topicalization that ultimately makes the sloppy interpretation difficulty, although, as we

will see, not impossible.[4]

2. Agreement in Chinese[5]

We just observed that in Portuguese, there is a subject/object asymmetry, in which the subject is blocked from being associated with a sloppy interpretation because of the subject agreement, while object is free to be interpreted with this reading because it is not associated with agreement. Takahashi (2008a, 2010 with Şener, 2013) notes a similar pattern of subject/object asymmetry for sloppy interpretation in Chinese, Malayalam, and Turkish. While Turkish has subject agreement, Chinese and Malayalam do not, and thus are apparent counterexamples to Oku's Generalization that agreement blocks sloppy interpretation. Below, I will take up Chinese, then, in the next section, I will turn to Malayalam.

Chinese has no ϕ-feature agreement, yet Takahashi (2008a) notes that the subject null argument does not allow a sloppy reading.

Object:

(28) Zhangsan hen xihuan ziji de mama, Lisi bu xihuan *e*.

Zhangsan very like   self de mother Lisi not like

'Zhangsan likes self's mother, Lisi does not like *e*.'

✓strict, ✓sloppy

Subject:

(29) Zhangsan yiwei [ziji de haizi xihuan Yingwen];   Lisi yiwei [*e* xihuan fawen]

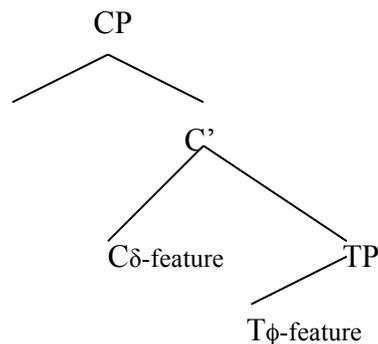Zhangsan think   self de child like   English   Lisi think   like   French

'Zhangsan thought that self's child liked English; Lisi thought e liked French.'

✓strict, *sloppy

As shown, while the object null argument easily allows a sloppy reading, the subject null argument does not. Later in the chapter, we will see a slightly different judgment for the subject null argument relative to sloppy interpretation, but for the time being we will accept Takahashi's observation. Based on this observation, Takahashi (2008a, 2013) suggests that Chinese has φ-feature subject agreement (see also Miyagawa 2010), a point I will uphold; this point will be maintained even when we consider data that appears to allow sloppy interpretation for the subject null argument in certain cases for Chinese.

What I will argue is that Chinese is a Category II language, thus its δ-feature stays at C while the φ-feature occurs at T.

(30) Category II Language

```
            CP
           /  \
              C'
             /  \
        Cδ-feature  TP
                  /
             Tφ-feature
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I will demonstrate that the subject *pro* in Chinese takes full advantage of the Strong

Uniformity notion that δ-feature and ϕ-feature are computationally equivalent. The

subject *pro* has the option of taking on ϕ-feature agreement from its local T/AGR or,

when it does not, it takes on the δ-feature of topic by moving to the C region. Our

analysis is based on the observation in Liu (2014) that the subject *pro* in Chinese is

defective for both ϕ-feature agreement and referential index. It must receive these

features from some other source in the course of the derivation. Liu assumes that the

subject *pro* has one source for both features, a topic operator in the C region local to the

subject *pro* that passes on its referential index as well as its ϕ-feature. In contrast, Yang

(2014) argues that the subject *pro* can occur either in the topic position or Spec,TP, and

the behavior of the *pro* varies depending on which position it occupies. If the *pro* occurs

in Spec,TP, it can only refer to an antecedent within the sentence — the closest subject

(Huang 1984). If the *pro* moves to the topic position in the CP region, it is able to refer to

an entity outside the sentence. Yang does not deal with ϕ-feature agreement. I will

combine Liu and Yang's analyses as follows. If the *pro* receives ϕ-feature agreement

from its local T/AGR, it stays in the Spec,TP position, and it can only take the closest

subject as its antecedent. If the *pro* does not take on the ϕ-feature of the local T/AGR, it

moves to the Spec,CP that has the topic feature, and it becomes a topic that can refer to

an entity outside the sentence.[6]

    There is an irony in our approach and Oku's Generalization. Takahashi (2008a)

argued that Chinese must have ϕ-feature agreement for its subject due to the inability of

the subject *pro* to receive a sloppy interpretation. The ϕ-feature agreement obviously is

covert since we do not find any manifestation of it morphologically. Our approach

upholds Takahashi's conclusion that Chinese has covert ϕ-feature agreement. However, the construction that is pertinent to testing for sloppy interpretation — where the subject *pro* refers to an entity outside its sentence — is, in our analysis, a *pro* that lacks ϕ-feature agreement. So, the lack of sloppy interpretation in Chinese is caused by something other than the presence of ϕ-feature agreement. Sato (2015a) argues that the lack of a sloppy interpretation for the subject null argument in Chinese is due to the fact that it is topicalized, presumably because topicalization assumes a definite/specific reference instead of the indefinite interpretation needed for sloppy interpretation.[7] He assumes that the gap is an elided argument instead of a *pro*. I will adopt Sato's general idea, but instead of assuming argument ellipsis, I will instead assume with Liu and Yang that the subject gap is a *pro*, so that when it does not take on the sloppy interpretation, it is a topicalized *pro*. In fact, I will suggest that Oku's Generalization also derives from this idea of topicalization. Oku's Generalization states that when agreement occurs that targets a subject gap, this gap must be *pro,* and this *pro* does not allow sloppy interpretation. What I will argue instead is that the *pro* is a topic when it is the target of "rich" agreement. Hence, such a *pro* does not easily allow sloppy interpretation just as the topicalized subject *pro* in Chinese resists this interpretation. Our analysis, which is based on arguments provided by Oikonomou (to appear), does not assume argument ellipsis. Instead, I assume that all subject gaps are *pro*. When it is interpreted with the sloppy reading, it is being interpreted as an E-type pronoun. Thus, the degree of difficulty for the sloppy interpretation observed in the literature is a reflection of how difficult it is to interpret the *pro* as an E-type pronoun. Finally, our analysis predicts that under the right circumstance, even a *pro* with agreement should allow a sloppy interpretation. We will

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see this for a variety of languages such as Chinese, Modern Greek, and even Spanish.

We begin our discussion from a different starting point, on the binding possibilities of the anaphor *ziji* 'self' in Chinese. The system for regulating the binding of this anaphor will be used for the interpretation of the subject *pro*.

2.1. Anaphor binding and blocking

One piece of evidence that I gave in Miyagawa (2010) for the presence of ϕ-feature subject agreement in Chinese is the presence of blocking for anaphor binding (Y. H. Huang 1984; Tang 1985, 1989, Pan 2001, etc.).

(31) Lisi$_i$ juede [Zhansan$_j$ dui ziji$_{i/j}$ mei xinxin]

Lisi think   Zhangsan have self no confidence

'Lisi thnk that Zhangsan has no confidence in self.'

(32) Lisi$_i$ juede [wo/ni$_j$ dui   ziji$_{*i/j}$ mei xinxin]

Lisi think   I/you   have self no confidence

'Lisi think that I/you have no confidence in self.'

(33) Wo$_i$ juede [ni$_j$ dui ziji$_{*i/j}$ mei xinxin].

I   think   you have self no confidence

'I think that you have no confidence in self=you/*I.'

(34) Wo$_i$ juede [Zhangsan$_j$ dui ziji$_{(*)i/j}$ mei xinxin]

I   think   Zhangsan have self no confidence

'I think that Zhangsan has no confidence in self.' self = Zhangsan/(*)I

(35)   Nashi   wo$_i$ juede Zhangsan$_j$ dui ziji$_{i/j}$ mei   xinxin

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at that time I   think   Zhangsan   to   self   have no confidence,

jiu   fangqi   le

then give up LE

'At that time, I think that Zhangsang had no confidence in self, so (I/he) gave up.'

As shown in (31), the anaphor may be bound locally, or it can take on long-distance binding relation with the subject of higher clauses. As we can see in (32), the long-distance construal is blocked if the local subject is a pronoun with a participant feature of $1^{st}/2^{nd}$ person. (33) shows that the blocking by the local $1^{st}/2^{nd}$ person subject holds even if the higher subject itself is $1^{st}/2^{nd}$ person. (34) shows that while $1^{st}/2^{nd}$ person local subject triggers blocking, as we observed in (32/33), a 3^{rd} person local subject does not for many speakers (e.g., Pan 2001). (35) is another example where a 3^{rd} person local subject does not trigger agreement; I found that with this example, there is more agreement among speakers that the 3^{rd} person local subject does not invoke blocking.

If we assume that the blocking effect applies within some sort of a person-agreement system, the absence of blocking by a 3^{rd} person local subject amounts to the dichotomy one finds in many languages between participant and non-participant agreements.[8] While the participant agreement has all the features of a full agreement, the non-participant agreement does not, hence it is, in effect, an underspecified agreement (Holmberg 2005, Gutman 2004, etc.). For example, in Finnish and Hebrew, the participant agreements license pro-drop, but the non-participant agreement of 3^{rd} person does not.

Standard Finnish (see also Holmberg 2005)

(36) a. **pro** reputin   historian kokeessa.

     failed-1-SG   history's in-test

     '(I) failed the history test.'

   b.   **pro** reputit   historian kokeessa.

     failed-2-SG   history's in-test

     '(You) failed the history test.'

   c. *****pro** reputti   historian kokeessa.

      failed-3RD-SG history's in-test

     '(He)/(She) failed the history test.'

Hebrew

(37) a. **pro** nixshalti ba-mivxan be-historia.

     failed-I-SG in-the-test in-history

      '(I) failed the history test.'

   b. **pro** nixshalta   ba-mivxan be-historia.

     failed-2-SG-M   in-the-test   in-history

      '(You) failed the history test.'

   c. *****pro** nixshal/nixshela   ba-mivxan be-historia.

     failed-3-M-SG/F-SG   in-the-test   in-history

   '(He)/(She) failed the history test.

The summary of Chinese anaphor and blocking is as follows.

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(38) Generalization on Blocking (Pan 2001, Giblin 2015, etc.)

    a.   3, 3

    b. *3, 1/2

    c. *1, 2; *2, 1

    d. 1/2, 3

       One approach to the blocking effect is based on the idea that LD binding of anaphors is implemented by covert movement of the anaphor to the head whose specifier contains the subject of the clause, a potential antecedent. This is based on the assumption that the anaphor is underspecified for some relevant feature — the person ϕ-feature — and it moves to a head whose specifier can furnish the necessary feature to make it possible for the anaphor to find the appropriate antecedent. To capture the pattern of blocking we saw above, the anaphor *ziji* moves to the local I(nfl), as shown in the first movement in (39) below. If this I has a participant feature by virtue of the subject being $1^{st}/2^{nd}$ person, the anaphor receives the participant-agreement feature, and the derivation stops with the anaphor taking the local $1^{st}/2^{nd}$ person subject as its antecedent. However, if the local I has the non-participant agreement of 3^{rd} person, *ziji* could stop there and take the 3^{rd} person local subject as its antecedent, or it can move up the structure and take a higher subject as its antecedent.

(39) LF raising of the anaphor (Cole, et al., 1990, Pica, 1987; Batistella, 1989; Huang and Tang, 1991; Huang and Liu, 2001)

(Cole et al. 2006)
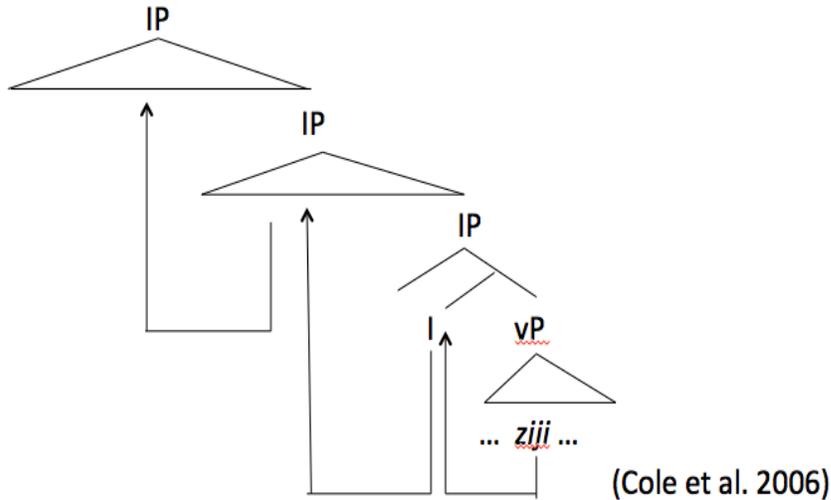
While the LF-raising analysis works for the examples we have seen, there is a problem with this approach. As noted in the literature, LD construal of *ziji* is possible from within islands.

(40) Zhangsan$_i$ shuo [$_{CP}$ ruguo Lisi piping ziji$_i$], ta   jiu   bu   qu.

Zhangsan   say   if   Lisi criticize self   he   then   not   go

'*Lit*. Zhangsan$_i$ said that if Lisi criticized self$_i$, then he won't go'

(Huang and Tang 1991:271)

(41) Zhangsan$_i$ bu xihuan [$_{NP}$ [$_{CP}$ neixie piping   ziji$_i$ de]   ren].

Zhangsan   not like   those criticize self MOD   person

'*Lit*. Zhangsan$_i$ does not like those people who criticized self$_i$.

(Huang and Tang 1991:271)

Giblin (2015) proposes an approach that does not involve movement of the anaphor, hence overcomes the problem posed by the island data. He revives an analysis of LD anaphor construal proposed by Progovac (1992, 1993), who makes the key

observation that anaphors that allow LD binding tend to be heads, and not a full DP/NP

(Yang 1983, Pica 1987; see also Cole, Hermon, and Sung 1990). There should be a parity

of antecedent-anaphor, where both are either X^o or XP, the former being LD anaphors

such as *ziji* and the latter the complex *-self* anaphor found in many languages. Provogac

suggests that the antecedent of *ziji*, a head, is AGR (or Infl in other works on blocking

that we saw), and it is the only SUBJECT (Chomsky 1981) relevant to its binding.

Furthermore, Progovac argues that the AGR in Chinese, which is morphologically empty,

depends on AGRs higher in the structure for its content, in the sense of Borer (1983).

Thus, an AGR "chain" is established, and *ziji* can be bound to any AGR in the chain. She

further notes that this approach can capture the blocking effect.

　　Let us make precise the nature of the anaphoric AGR in Chinese. Suppose that an

AGR, which I presume to be T in the more recent approach, has the anaphoric feature α.

Suppose further that this α is checked off by a participant feature.

(42) a. $[_{TP}$ Wo 'I' $T_{1stP}\, \alpha$ …]

　　b. $[_{TP}$ Lisi $T_{3rdP}\, \alpha$ …]

Once checked off, the AGR/T cannot be anaphoric to a higher T/AGR. The system here

is what Béjar and Rezac (2009) call cyclic agreement. In Georgian and Basque, a probe at

v first looks to the complement of V to see if there is an entity with a participant ϕ-

feature. If there is, the probe enters into agreement, and nothing else happens to the

probe. However, if the complement is not an entity with a participant ϕ-feature, the probe

looks to its specifier (the external argument) and see if it has a participant ϕ-feature. If it

does, that is what the probe agrees with. If not, the probe takes on a default non-agreement morphology. In the case of Chinese, α is checked off by a participant ϕ-feature only. If the T/AGR does not contain such a ϕ-feature, α is not checked off, and the anaphoric nature of T/AGR is maintained and forms a link with the higher T/AGR.[9]

The upshot of the discussion above is that Chinese has ϕ-feature agreement, and it is at T, and it agrees with the subject, whether the subject has participant or non-participant ϕ-feature. This upholds Takahashi's (2008a) conjecture that Chinese must have ϕ-feature for the subject because of the lack of sloppy interpretation for the subject empty pro. We turn to the discussion of subject *pro* in Chinese below, and will show that the system we just discussed for anaphor binding applies directly to the construal of the subject pro.

2.2. Subject *pro* in Chinese

Contrary to what has standardly been assumed, the subject *pro* in Chinese is highly restricted in its reference (Liu 2014; see also Huang 1984, Aoun and Li 2008). In virtually all cases, it needs a linguistic antecedent, unlike the null argument in Japanese and subject *pro* in Romance. For example, the subject *pro* in Chinese may be used in monologues, but it is prohibited in a conversation where one speaker is referring to something mentioned by the other speaker.

Needs a linguistic antecedent:

(43) Yuehan   hen   congming,   suoyi   *pro*   yiding   keyi   jin

John   very   smart,   so   definitely   can   enter

hen   hao-de   daxue.

very   good-de   university

'John is very smart, so he can definitely enter a good university.'

(44) Speaker A: John_i not only always comes to class on time, but also gets an A in

every subject. Most importantly, he is very humble.

Speaker B: *Suoyi   e_i   chang   dang   ban-zhang.

so   often   serve-as   class-president

'So, [he] often serves as the class president.'

The Chinese subject *pro* further differs from the counterparts in Italian and
Japanese in that it can only refer to the subject of the preceding sentence, while no such
restriction is imposed in Italian and Japanese. In the latter languages the *pro* can refer to
either the subject or the object (Liu 2014).[10]

Subject orientation:

(45) a. John_i   zuotian   yujian-le   Bill_j,   suoyi   *pro*_{i/*j}   hen   kaixin.   Chinese

yesterday   meet-asp   so   very   happy

'John_i ran into Bill_j yesterday, so [he]_{i/*j} was very happy.'

b. John$_i$ ha   incontrato   per caso   Bill$_j$ ieri,   così   *pro*$_{i/j}$ Italian

     has   meet-past   by   chance   yesterday   so

     è   stato   molto   contento.

     has   been   very   happy.3sg.masc.

     'John$_i$ ran into Bill$_j$ yesterday, so he$_{i/j}$ was very happy.'

c. John$_i$-wa   kinoo   Bill$_j$-ni   dekuwasita;   dakara   *pro*$_{i/j}$ Japanese

     John-top   yesterday   Bill-into   ran   therefore

     sugoku   yorokondeita   yo.

     very   was-pleased   sfp

     'John$_i$ ran into Bill$_j$ yesterday, so [he]$_{i/j}$ was very happy.'

     There is also a locality restriction (Huang 1984), something we don't see either in Italian or Japanese. When the null subject in Chinese and its potential antecedent are separated by an additional subject, the sentence containing these constituents is less acceptable in Mandarin Chinese, while the same sentence is felicitous in Italian and Japanese.

Locality

(46) a. ^{??/*}John$_i$ hen congming, suoyi laoshi renwei *pro$_i$* keyi CHINESE

     very smart   so teacher think   can

    kao-jin hen-hao-de   daxue

    test-enter very-good-de university

   'John$_i$ is very smart, so the teacher thinks that [he]$_i$ can pass the exam to

   enter a good university.'

  b. John$_i$ è intelligente, e il suo professore pensa che ITALIAN

    John is intelligent so the his professor thinks that

    pro$_i$ possa entrare facilmente in una buona università.

       can   enter easily   to one good university

   'John is smart, so his teacher thinks that he can enter a good university.'

  c. John$_i$-wa atama-ga ii   node, kare-no sensei-wa [*pro$_i$* ii JAPANESE

    John-top head-nom good because, he-gen teacher-top   good

    daigaku-ni hair-e-ru   to]   omotteiru.

    university-to enter-can-Pres comp. think

   'John$_i$ is very smart, so his teacher thinks that [he]$_i$ can enter a good

   university.'

   To deal with these special properties of the subject *pro* in Chinese, Liu (2014)

proposes that this *pro* is defective in its feature content and also, though not explicitly

stated, in its referential index. The *pro* must get its feature from somewhere, and if it refers to an entity outside of the sentence, also its referential capability as a pronoun. Liu's analysis is based on the idea that Chinese has a topic position in the CP region. Chou (2004) provides clear argument that Chinese has a topic position that must be filled.
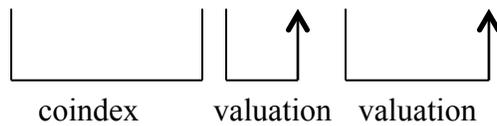
(47) a. *Yi-ge/*yixie/*ji-ge   ren   zai yuenzi-li   zuozhe.

  one-CL/some/several-CL   person   at   yard-LOC   sit.CONT

  'A man/some men/several men is/are sitting in the yard.'

  b. You yi-ge/yixie/ji-ge   ren   zai yuenzi-li   zuozhe.

   exist one-CL /some/several-CL person at   yard-LOC   sit.CONT

   'There is/are a man/some men/several men sitting in the yard.'

(Chou 2004: 194)

The example in (47a) indicates that an indefinite expression such as "a man/some/several-CL person" cannot occur at the head of a sentence because this is a topic position. Such an indefinite expression must occur in a construction of existence where the verb of existence *you* is the first item in the sentence ((47b)).

 Taking advantage of the topic-prominence nature of Chinese, Liu (2014) proposes that there is a covert topic element in the immediate CP that contains the *pro*. Furthermore, he proposes that this topic has ϕ-feature that gets its valuation by being coindexed with the higher subject. The *pro* in Chinese also has ϕ-feature that is unvalued. Once the ϕ-feature on TOPIC is given valuation, it then passes on its valuation to the unvalued ϕ-feature on *pro*.

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(48) [SUBJECT … [$_{CP}$ TOP$_{[u\ \varphi\text{-feature}]}$ [$_{TP}$ *pro*$_{[u\ \varphi\text{-feature}]I}$ …]]] (Liu 2014)

coindex   valuation valuation

This way of viewing the subject *pro* in Chinese makes the *pro* similar to an anaphor in

that it does not have fully independent referential index. Rather, it receives its feature,

particularly person feature, through a chain of valuation from a linguistic antecedent. This

is why the Chinese subject *pro* requires a linguistic antecedent.

     I will revise Liu's analysis by taking up two issues that he does not deal with. First,

the following example, in which an object has been topicalized, allows the subject *pro* to

be coreferential with the higher subject (the example is taken from Yang 2014 for

demonstrating another point, which we will return to shortly).

(49) Zhangsan$_i$ shuo [$_{CP}$ yuyanxue$_k$, [$_{IP}$ *pro*$_i$ du-guo   t$_k$]]

    Zhangsan say   linguistics   study-EXP

    'Zhangsan$_i$ said [[he$_i$] studied linguistics before.'   (Yang 2014)

In this example, the object 'linguistics' of the complement clause has been topicalized and

occurs at the left edge of the complement clause. Note that the subject *pro* is coreferential

with the subject 'Zhangsan', which is predicted by Liu's analysis to be not possible since

the topic position is taken up by something other than the covert topic that can pass on

the ϕ-feature from the matrix subject to *pro*.[11]

Second, as Liu noted, it is possible under limited circumstance for the subject *pro* to refer to a previously mentioned entity in discourse.

(50) Q: Did Lisi_j study linguistics before?

    A: Zhangsan_i shuo [CP *e*_{i/j} mei du-guo yuyanxue].

       Zhangsan say not study-EXP linguistics

       'Zhangsan_i said [he_{i/j}] hadn't studied linguistics before.'

Why is it that in this case, the covert topic can pick out an entity outside the sentence instead of just the higher subject?

There is evidence that instances in which the subject *pro* refers to the higher subject and the instances in which it refers to an entity outside the sentence are in complementary distribution. First note that in the following sentence, which is a slightly modified example from Yang (2014), the subject *pro* may refer either to the matrix subject or to an entity outside the sentence so long as there is sufficient context.

(51) Zhangsan_i shuo [CP [IP *pro*_{i/j} du-guo yuyanxue]]

    Zhangsan say study-EXP linguistics

    'Zhangsan_i said [[he_{i/j}] studied linguistics before.'

Now returning to the full example from Yang (2014), we see that topicalization of the object 'linguistics' blocks the subject *pro* from referring to an entity outside the sentence.

(52)   Zhangsan$_i$ shuo [$_{CP}$ yuyanxue$_k$, [$_{IP}$ *pro*$_{i/*j}$ du-guo   t$_k$]]

   Zhangsan say   linguistics   study-EXP

   'Zhangsan$_i$ said [[he$_{i/*j}$] studied linguistics before.'   (Yang 2014)

That is, topicalization of an overt item does not block the subject *pro* from being coindexed with the matrix subject, as Liu's system would predict, but rather, such topicalization blocks the *pro* from referring to an entity outside of the sentence. Below, I will present an analysis of subject *pro* using the framework we saw for anaphor binding, and also adopting some aspects of the proposals in Liu (2014) and Yang (2014).

Let us begin by adopting Liu's (2014) idea that the subject *pro* in Chinese is defective in its feature designation — both person feature and referential index. It must get these from some other source. How does it get these features? I will assume that Chinese is a Category II language. This means that, like English, the δ-feature, particularly topic, stays at C, while the ϕ-feature occurs at T. We saw the latter already with anaphor binding.

Recall Progovac's proposal that the AGR in Chinese is anaphoric to the higher AGR. It is from the higher AGR that the lower AGR gets its features. Imposing this system on the subject *pro,* it predicts that this *pro* will be coreferential with the higher subject.

(53) [$_{TP}$ Zhangsan AGR$_{3P\,...}$ [$_{TP}$ pro AGRα ...]]

The anaphoric AGR gets its person feature designation (3P) from the higher AGR. Note that the anaphoric AGR itself does not get any valuation from its subject, *pro*, because the *pro* is defective in its feature content and incapable of valuation. The anaphoric AGR passes on its person feature to the *pro*, thus making the higher subject the antecedent of *pro*. This predicts that nothing other than the immediate higher subject can function as the antecedent; a non-subject cannot function in this way because an object, for example, does not give valuation to the AGR.

Suppose that valuation of the *pro* by its local AGR does not take place. We presume that such an operation is purely optional since there is nothing that drives the AGR to share its feature with the *pro*. If nothing else happens, the *pro* gets no reference of any kind, and the derivation crashes. However, there is one other option, an option that Yang (2014) suggests. He argues that the *pro* may move to the topic position in the C region.

(54)   [$_{TP}$ ... [$_{CP}$ *pro* [$_{TP}$ ___ ...]]]

Although Yang (2014) does not have anything to say about ɸ-feature of *pro*, I presume that he assumes that *pro* already comes with such feature, contrary to Liu and what we are assuming. On our account, *pro* moves to the topic position only if it does not get person valuation from the local AGR. As such it functions like a topic operator, which lacks inherent ɸ-features.

Recall that when the subject *pro* refers to a linguistic entity within the sentence, it must always refer to the subject. This is because the intra-sentential coreference is made

possible by feature sharing of AGRs and AGRs get their valuation only from subjects. However, if we are right that *pro* moves to the topic position only when it does not get feature valuation from its AGR, we predict that this *pro*, which would refer to an entity outside the sentence, should be able to refer to non-subjects. This prediction is borne out, as shown below (thanks to Barry Yang for creating the example).

(55) a.   Mali, Zhangsan hen   xihuan ta.

        Mary Zhangsan very   like   her

        'Mary, Zhangsan likes her very much.'

   b.   Danshi, Lisi shuo [pro yijing   jiehun le.]

        but   Lisi say   already marry PERF

        'But, Lisi said that [pro=Mary] is already married to someone.'

As shown, 'Mali', a non-subject, may be the antecedent for the subject *pro* in the second sentence. Given that the *pro* is in a topic position, it is also looking for a topic as its antecedent, hence it is most natural for 'Mali' to also be in the topic position as shown. Later in the chapter, I will introduce a large-scale survey in which we tested the possibility of sloppy interpretation of the subject *pro* in Chinese in these inter-sentential contexts.

2.3. Chinese subject *pro* as a weak pronoun

In the literature on pronouns we find a distinction between strong and weak forms of pronouns (e.g., Cardinaletti and Starke 1999). The two forms are commonly

distinguished in the stress pattern, where the strong form receives greater stress, and the weak form lesser stress, making the weak pronoun similar to clitics, although some linguists distinguish between weak pronouns and clitics as well. Along with the difference in stress, a number of linguists have argued that the strong and weak pronouns differ in structure, with the strong form having a more complex structure (e.g., Wiltschko 1998, Patel-Grosz and Grosz, in press). I will suggest that the subject *pro* in Chinese is the covert version of a weak pronoun, while the *pro* we find in Japanese and Romance are the covert form of a strong pronoun. I will further show that this distinction together with Strong Uniformity can account for an important proposal by Huang (1984, 1989) about the Chinese *pro*.

Wiltschko (1998: 163-164) notes a difference in demonstrative and personal pronouns in German with regard to gender concord.

(56) a. **Ein Mädchen** kam zur Tür herein.

a.N girl(N) came to.the door in

b. {**Das Mädchen** /*Die Mädchen**} war schön.

the.N girl(N) the.F girl(N) was beautiful

c. {**Das** /*Die**} war schön.

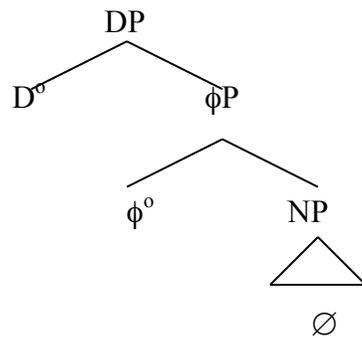DEM.N/DEM.F was beautiful

d. {**Es** /**Sie**} war schön.

PER.N/PER.F was beautiful

'**A girl** came through the door. {**The girl** / **She**} was beautiful.'

In (c), the demonstrative pronoun *das* agrees with the referent in gender, while *die*, a

feminine person pronoun does not, and it is judged as ungrammatical.[12] In (d), we see that

with a personal pronoun, gender mismatch is tolerated, allowing either the matching *es* or

the mismatched *sie*. To capture the difference between the strong and weak forms,

Wiltschko proposes the following two structures.

(57) a. demonstrative pronoun   b. personal pronoun
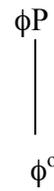
The demonstrative pronoun contains an NP that may have the full host of features

including the gender feature. In contrast, the personal pronoun lacks the NP structure, so

that it is not associated with any inherent features of its own.[13] This is precisely the

difference we found between Japanese/Romance *pro* and the Chinese subject *pro*.

Furthermore, note that while the demonstrative pronoun has the DP structure, the

personal pronoun does not. We can interpret this difference as leading to the

demonstrative pronoun having an independent referential index, so that it is able to make

reference, while personal pronoun does not. We saw this difference as well between the

Japanese/Romance *pro* and its Chinese counterpart. Thus, what we find in the covert

pronominal system across languages mirrors the overt system we find in a variety of

languages. One puzzle that remains has to do with acquisition. How do the Chinese

children figure out that the subject *pro* in the language they are acquiring is the weak

form of the pronoun? In the languages with overt strong and weak forms, there is at least a phonological difference as we noted. But in the covert system, there is nothing obvious that signals that the Chinese *pro* is the weak form while the *pro* in Japanese/Romance is the strong form. I leave this as a puzzle.

2.4. On Huang's (1984) Generalized Control Rule

Huang (1984) proposed the influential Generalized Control Rule (Huang 1984). He notes that a pro/PRO takes the closest potential antecedent. In Huang (1989: 193), he provides a formal formulation.

(58) Generalized Control Rule (GCR)

An empty pronominal is controlled in its control domain (if it has one).

α is the control domain for β iff it is the minimal category that satisfied both (a) and (b):

(a) α is the lowest S or NP that contains (i) β, or (ii) the minimal maximal category containing β.

(b) α contains a SUBJECT accessible to β.

The GCR has the effect of forcing the subject *pro* in Chinese to take the closest subject as its antecedent. We saw this in examples such as the following.

(59) $^{??/*}$John$_i$ hen congming, suoyi laoshi renwei *pro*$_i$ keyi

　　　　　very smart　　so　teacher think　　　can

　　　kao-jin　　hen-hao-de　　daxue

　　　test-enter　very-good-de　　university

　　　'John$_i$ is very smart, so the teacher thinks that [he]$_i$ can pass the exam to enter a

　　　good university.'

There are two questions that come up about the GCR. First, as we saw earlier, while the subject *pro* in Chinese must obey this strict locality requirement, *pro* in Japanese/Romance does not. Why should that be the case? Second, I argued that the valuation of the subject *pro* in Chinese takes place within the same system as the agreement system that makes anaphor binding possible. As is well-known, the Chinese anaphor allows LD binding so long as there is no blocking.

(60) Lisi$_i$ juede [Zhangsan$_j$ dui ziji$_{i/j}$ mei xinxin]

　　　Lisi think   Zhangsan have self no confidence

　　　'Lisi think that Zhangsan has no confidence in self.'

Why doesn't something like the GCR apply to anaphor binding if both *pro* and the anaphor are operating within the same system of agreement?

I suggest that the GCR effect of locality on the Chinese subject *pro* follows from its property as a weak pronoun. As a weak pronoun — maybe "weakest" pronoun might be more suitable — it lacks inherent ϕ-features. To be coreferential with a linguistic

antecedent within the sentence, it must take on the φ-feature of its antecedent through the system of anaphoric T/AGR. Up to this point, there is nothing that would force the *pro* to pick the closest subject. What forces the locality has to do with the other part of the Chinese *pro* being a weak pronoun, that of lacking referential index. If the *pro* is not given valuation by its local T/AGR, the next immediate possibility for the *pro* to find an antecedent is to be topicalized, and this is what it does. This excludes the *pro* from taking on a subject further than the closest subject, since the closest subject and its φ-feature was not transmitted to the *pro*. If this line of analysis is on the right track, the characterization of the Chinese subject *pro* as a weak pronoun together with the assumption of Strong Uniformity account for the GCR and the observed differences between this *pro* and *pro* in Japanese/Romance.[14]

For the second point, about the strict locality of Chinese subject *pro* and the possibility of LD construal for the anaphor, we have just seen the reason why the *pro* is strictly local. The locality comes from the idea that the *pro* lacks φ-feature and referential index, and if it fails to get the φ-feature of the local T/AGR, it raises to Spec,CP to become a topic and gain the ability to refer out of the sentence. In contrast, the anaphor *ziji* receives φ-feature from its local T/AGR, since the Spec,TP is occupied by a XP that has φ-features. Therefore, there is no need for *ziji* to undergo topicalization (it's not even clear if it could). It therefore always becomes antecedent of the AGR, and if the AGR is able to be anaphoric to a higher AGR, then LD construal ensues.

3. Malayalam

Like Chinese, Malayalam does not have subject agreement, yet Takahashi (2013) reports that the subject *pro* does not allow a sloppy interpretation, suggesting that there is covert agreement just like in Chinese.[15]

(61) a. John   tan-te   amma-ye   sneehik'k'unnu.

     John   self-GEN mother-ACC love

     'John loves his mother.'

  b. Bill-um   *e* sneehik'k'unnu

     Bill-also   love

     'lit. Bill loves *e*, too.'

     ✓strict, ✓sloppy

(62) a. John paRaññu [tan-te   kuTTi English   samsaarik'k'um ennə].

     John said   self-GEN child English   will.speak   COMP

     'John said that his child would speak English.'

  b. Mary paRaññu [*e* French   samsaarik'k'um   ennə].

     Mary   said   French   will.speak   COMP

     'lit. Mary said that *e* would speak French.'

     ✓strict, *sloppy

I will simply note below that Malayalam has the kind of blocking we saw in Chinese. We saw that blocking implicates the existence of person agreement that applies to subjects.

3.1. Binding of *taan* 'self/you'

One striking property of the Malayalam anaphor *taan* is its anti-local nature. *Taan* in the object position cannot be bound by its local subject. It can take the local subject if *taan* is inside a larger noun phrase, or else, it must seek its antecedent in the higher clause.

(63) Anti-local nature of *taan*

    a. *raaman$_i$ tan$_i$-ne   sneehikkunnu.

       Raman self-ACC   loves

       'Raman loves himself.'   (Jayaseelan, 1997, p. 191: 10a)

    b. raaman$_i$ [tan$_i$-te   bhaarya-ye]   sneehikkunnu.

       Raman   self-GEN wife- ACC   loves

       'Raman$_i$ loves his$_i$ wife.'   (Jayaseelan, 1997, p. 191: 10b)

    c. vinu$_i$ [tan$_i$-te   mukalil] oru vimanam   kaNDu.

       Vinu self- GEN above   a   plane   saw

       'Vinu$_i$ saw a plane above him$_i$.'

This anti-local nature makes it look as if *taan* is a pronoun and not an anaphor. However, if it is a pronoun, one would expect it to have independent reference. As noted by Swenson and Marty (2014), the antecent of *taan* must be found within the sentence in which *taan* occurs. The pronoun and *taan* are shown below.

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(64) a. Vinu avan-te   kutti-ye   nulli

     Vinu him-GEN child-ACC   pinched

     'Vinu$_i$ pinched his$_{i/j}$ child'

  b. Vinu tan-te   kutti-ye   nulli.

     Vinu self- GEN child- ACC pinched

     'Vinu$_i$ pinched self's$_{i/*j}$ child.'

The pronoun *avan* in (a) may refer to the subject *Vinu* or to some entity outside of the sentence, but *taan* in (b) may only take the sentential subject *Vinu* as its antecedent.

    The second property of *taan* is that its antecedent is a subject, something typical of anaphors that allow long-distance construal.

(65) raajaawu$_i$ manRi$_j$-kku   tan$_{i/*j}$-te   pustakam koDuttu

    king   minister-DAT self-GEN   book   gave

    'The king$_i$ gave the minister his$_{i/*j}$ book.'

(66) [mantRi$_k$ tan$_{i/k/*j}$-te   bhaarya-ye nuLLi   ennu]   raajaawu$_i$

    minister   self-GEN   wife-ACC pinched   COMP   king

    seenaa-naayakan$_j$-ooDu   parannju.

    army-chief-SOC   said

    'The king$_i$ said to the army-chief$_j$ that the minister$_k$ pinched his$_{i/k/*j}$ wife.'

(Jayaseelan 1997, p. 188:3).

3.2. Blocking

It is not the case that *taan* can take any non-local c-commanding subject as its antecedent. The standard generalization is that when a 1^{st}-person or 2^{nd}-person subject pronoun intervenes between *taan* and a 3^{rd}-person non-local subject, *taan* cannot take the 3^{rd}-person non-local subject as its antecedent. This is the same blocking effect we saw in Chinese.

(67) Blocking

    a. 3^{rd}-person$_i$ … [3^{rd}-person … *taan*$_i$ …]

    b. *3^{rd}-person$_i$ … [$1^{st}/2^{nd}$ -person … *taan*$_i$ …]

What we see here is the same pattern that we saw in Chinese: a split between participant and non-participant, where 1^{st}- and 2^{nd}-person represent the conversational participants of the speaker and the hearer, while 3^{rd}-person represents a non-participant. The generalization above states that if a participant pronoun intervenes, a non-participant pronoun in the higher clause is blocked from funtioning as the antecent of *taan*. Following are examples from Jayaseelan (1997, 1998) of blocking taken from Swenson and Marty (2014). One point about *taan* is that along with being an anaphor, it can serve as an independent second-person; in the (b) example, there is no possible antecedent for *taan* due to blocking and the anti-local nature of *taan*, leaving only the second person 'you' interpretation for *taan*.

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(68) Examples of blocking

a. [vinu$_k$ tan$_{i/ADR/*j}$–ne nuLLi   ennu]   meera$_i$ suman$_j$ –inoDu parannju.

   Vinu self-ACC   pinced   COMP   Meera Suman-SOC   said

   'Meera said to Suman that Vinu pinched {her, you, *him, *himself}.'

b. [naan$_k$ tan$_{ADR/*j/*j/*k}$ –ne nuLLi   ennu] meera$_i$ suman$_j$ –inoDu parannju.

   I   self- ACC   pinced COMP Meera Suman-SOC   said

   'Meera said to Suman that I pinched {you, *her, *him, *myself}.'

c. *[nii$_k$ tan$_{i/j/k}$ –ne nuLLi ennu]   meera$_i$ suman$_j$ –inoDu parannju.

   you self- ACC pinced COMP   Meera   Suman-SOC   said

   'Meera said to Suman that you pinched {*her, *him, *yourself}.'

In (c), we see a restriction on the interpretation of *taan* as 'you': if there is a second person subject *taan* cannot take on the 'you' interpretation, making (c) completely ungrammatical because there are no possible antecedents for *taan* in the sentence.

Jayaseelan (1997, 1998) adopts an LF anaphor raising analysis (e.g., Chomsky 1986, Cole, et. al 1990, etc.) to deal with blocking: *taan* lacks certain features, and it raises at LF to obtain these features (see also Battistella 1989; Cole, Hermon, and Sung 1990; Huang and Tang 1991 for a similar analysis in other languages). Once it gets the features from the local subject, it can continue to raise and be associated with an antecedent in the higher clause but only if the features match. Thus, if the local subject is 3rd person, then it can continue to the next clause and take the higher 3rd person as its antecedent. But if the local subject is a participant pronoun, *taan* is imbued with this feature, and if it raises to the higher clause that has a 3rd –person pronoun, there is a clash

in agreement, resulting in the blocking effect. See Anand (2006) for a different approach

to blocking. Whatever the system we adopt for dealing with blocking, it is clear that we

must postulate an agreement system that applies to the subject. This supports Takahashi's

(2013) contention that there must be covert agreement in Malayalam.

In the remainder of the chapter, I will shift the perspective and argue that while

agreement does affect the possibility of sloppy interpretation of the subject *pro*, it is not

hard and fast, and there are clear cases of subject *pro* under agreement that allow a sloppy

reading. I will argue that there is no argument ellipsis, but the empty element is always a

pro, thus supporting the original idea by Kuroda (1965) that the gaps are pronominal in

nature.

4. Toward a unified analysis

Oku (1998) observed that the *pro* in Spanish does not allow a sloppy interpretation,

leading to what we are calling Oku's Generalization: agreement blocks argument ellipsis.

His example is repeated below.

(69) 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   will.be accepted

       'lit. Juan also believes that *e* will be accepted.' (Oku (1998))

        Strict/*Sloppy

Contrary to Oku's Generalization, Duguine (2014) points out that even in Spanish the subject *pro* may yield a sloppy interpretation in special contexts.[16]

(70) A: María cree   [que su trabajo **le**   exigirá   mucho tiempo].

         Maria believes that her work **cl.3SG.DAT** require.fut.3SG much time

         'Maria believes that her work will require her a lot of time.'

   B: Y Ana espera [que [e] **le**   dejará   los fines de semana libre].

       and Ana hopes that   **cl. 3SG.DAT** leave.fut. 3SG   the ends of week   free

       Lit. And Ana hopes [e] will leave her the week-ends available!

       √ Sloppy reading: 'Ana hopes that Ana's work will leave her the week-end

                    available.' [Duguine 2014: 520]

According to Duguine, the difference between this sentence, which allows sloppy interpretation, and Oku's earlier example, is the presence of the clitic; Duguine states that the clitic is necessary for sloppy interpretation. We will see below that the sloppy

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interpretation is possible even without the clitic so long as there is sufficiently rich context to induce the reading.

Accepting that sloppy interpretation is made possible by argument ellipsis, and based on the observation that even in Spanish, the subject null argument allows sloppy interpretation, Duguine proposes a unified account of null arguments.

(71) Unified account of null arguments (Duguine 2014)

All null arguments are the result of argument ellipsis.

Importantly, in her approach there is no *pro*; null arguments that in earlier literature were described as *pro* are the result of argument ellipsis. In the remainder of this chapter, I will follow Duguine's line of investigation in postulating a unified account of null arguments. Unlike Duguine, I will argue, following Oikonomou (to appear), that all instances of null arguments, including those that yield sloppy interpretation, are *pro*, thus taking us back to Kuroda's (1965) original conception that the gap is pronominal in nature.

4.1. Unified account based on *pro*

Duguine's observation that the Spanish *pro* may take on a sloppy interpretation may be replicated in Modern Greek (Oikonomo, to appear).

(72) A: i   Maria pistevi   oti   i   dulja tis   **tis**   troi poli   hrono.

      the Maria believes that the job her.POSS **CL.3SG.DAT**   eats much time

      'Maria believes that her job requires her a lot of time.'

  B: i   Ana elpizi oti tha **tis**   afini ligo elefthero hrono.

     the Ana hopes that Fut **CL.3SG.DAT** leave little free   time

     'Ana hopes that [e] will leave her some time.'

      √ Sloppy reading: 'Ana hopes that Ana's work will leave her some time.'

As in the case of Spanish, there is a clitic that somehow induces the sloppy interpretation. Having made this observation, Oikonomou notes that there is a problem with Duguine's unified account of argument ellipsis. She points out that Runić (2014) observes that a clitic can get a sloppy interpretation in certain contexts; Runić uses Serbo-Croatian. Below is a Modern Greek example from Oikonomou (to appear) designed after Runić's example.

(73) A: i   Maria pistevi   oti   tha **tis**   epistrepsun to vivlio tis

      the Maria believes that will **CL.3SG.DAT** return   the book her.POSS

     'Maria believes that they will give her back her book.'

  B: i   Ana elpizi oti tha **tis**   **to**   ekdosun

    the Ana hopes that Fut **CL.3SG.DAT it.CL** publish

   'Ana hopes that [e] they will publish it.'

    √ Sloppy reading: 'Ana hopes that they will publish Ana's book.'

This example cannot be due to argument ellipsis given that the object clitic appears, and it is this clitic that is somehow making the sloppy interpretation possible. What is it about the clitic that allows this interpretation? As Oikonomou points out, it is well-known that object clitics allow E-type pronoun interpretation. She argues that it is this E-type pronoun phenomenon that makes the sloppy interpretation possible. In fact, going back to Duguine's example, Oikonomou points out that the inclusion of the clitic induces a context that is germane for E-type pronoun interpretation.

Following are some main properties of E-type pronouns.

(74) E-type pronoun (Evans 1977, 1985, etc.)

- unbound anaphoric pronoun

- replace the pronoun with a full NP whose semantics is taken to be well-known

- hence, the pronoun is not interpreted directly, but is first replaced by a full NP whose content is retrieved from the discourse context. (See Heim 1990, Moltman 2006, Patel-Grosz and Grosz 2010, Nowen 2014, Patel-Grosz and Grosz, in press)

A classic example of an E-type pronoun is the donkey-sentence.

(75) a. If a farmer owns a donkey, he usually beats **it**.

 b. If a farmer owns a donkey, he usually beats [the donkey owned by x].

As shown, the E-type pronoun has the interpretation of a full NP that contains a variable (*the donkey owned by* x) where the variable would covary with *farmer*. This is precisely

the interpretation that would underlie a sloppy interpretation. We get an E-type pronoun interpretation even with overt pronouns, in what is called the "paycheck" example (Karttunen 1969). I have changed the example slightly to make it less provocative.

(76) The man who gave his paycheck to his wife was wiser than the man who gave it to his child.

The pronoun *it* does not refer to the paycheck of the first man, but to that of the second man, thus this is a sloppy interpretation since there is no clear reference for the second man's paycheck. Based on these kinds of interpretation of pronouns, Oikonomou proposes a revised unified account of null arguments.

(77) Revised unified approach (Oikonomou, to appear)

All instances of "*pro*-drop," including those that allow sloppy interpretation, are "*pro*." The sloppy interpretation is an instance of E-type pronoun.

The idea that sloppy interpretation is related to E-type pronoun is similar to Tomioka's (2003) proposal that the element that gets this interpretation is type <e, t> (so a predicate); it must have Existential Closure; and it is type shifted from predicate to individual. It is also related to the "indefinite pronoun" idea of Hoji (1998), which I will discuss later.

4.2. Evidence that the sloppy interpretation cannot be due to argument ellipsis

    Oikonomou (to appear) notes examples such as the following.

(78) a. o babas tis Marias   den tin   afini   na   pai   se parti

         the dad   the Maria.GEN not **CL.3SG.ACC** allowed SUBJ go.3SG to parties

         giati   ine poli afstiros.

         because is very strict

         'Mary's dad didn't let her go to parties because he is very strict.'

      b. Tin Ana   antitheta   tin   afini   na   kani   oti   theli

          the Ana.ACC on the contrary **CL.3SG.ACC** allowed SUBJ do.3SG whatever wants

         giati   ine poli modernos.

         because is very modern

         'Ana, on the contrary, he lets her do whatever she wants because he is very modern.'

         √ Sloppy reading: 'Ana, on the contrary, Ana's dad allows her to do whatever she wants.'

What is striking about this example is that the "antecedent" noun phrase in the subject

position is 'Nick's parents' and, despite the presence of the proper name 'Nick', the null

argument in the subject position of the second sentence allows sloppy interpretation of

'Peter's parents'. Clearly, argument ellipsis cannot possibly be the source of this sloppy

interpretation since the argument, if it were elided, would be 'Nick's parents', which

contains the proper name 'Nick' that would conflict with the null argument being

interpreted as 'Peter's parents'. According to Oikonomou, she consulted sixteen speakers

and all sixteen found the sloppy interpretation acceptable.

Similar examples in Japanese are given below. (Thanks to the graduate student group at Kyushu University for the examples.)

(79) Tanaka-san-wa, Tanaka-san-no nensyuu-ga   20% hetta to itte iru no ni taisi,

Tanaka-san-TOP Tanaka-san-GEN salary-NOM 20% declined said   in contrast

Nakamura-san-wa, 20% fueta   to itteiru.

Nakamura-san-TOP 20% increased   C said

'Ms. Tanaka said that Ms. Tanaka's salary declined by 20%, but Mr. Nakamura said

that ___ increased by 20%.'

✓sloppy: "…but Mr. Namakura said that Mr. Namakura's salary increased by 20%.'

(80) Keisityoo-wa, sakunen-no Tookyooto-no hannzairitu-ga   agatta to happyoosita.

Tokyo Police-TOP last.year-GENTokyo-GEN crime.rate-NOM increased C announced

Fukuoka kenkei-wa   ___ sagatta to happyoosita.

Fukuoka Prefectural.Police-TOP   declined C announced

'The Tokyo Police announced that Tokyo's crime rate increased last year.

Fukuoka Prefectural Police announced that ___ declined.'

✓sloppy: 'Fukuoka Prefectural Police announced that Fukuoka's crime rate declined.'

Just as with the Modern Greek example, the "antecedent" noun phrase in the subject position of the first clause or sentence contains a proper name (Mr. Tanaka/Tokyo), yet the null subject in the subject position of the second clause/sentence easily allows the

noted sloppy interpretation. The source cannot be argument ellipsis, and it also cannot be a simple *pro* that refers to something directly in the prior discourse.

The examples above give straightforward evidence that the sloppy interpretation cannot be due to argument ellipsis. At the same time, the null argument cannot be a simple *pro* due to the fact that it is getting its meaning indirectly from the context. This makes it an E-type pronoun. We can in fact find independent evidence that that E-type pronoun must exist in Japanese. Following is a Bach-Peters sentence (Bach 1967) that demonstrates that *it* in English has an E-type pronoun interpretation.

(81) Every pilot who shot at it hit the MIG that chased him.

There are two pronouns, *it* and *him*. Each is inside the antecedent of the other, so that if one were to interpret these pronouns as regular pronouns, we get infinite regress: every pilot who shot at [the MIG that chased [every pilot who shot at [the MIG that chased [every pilot who shot at the MIG…]]]...] hit the MIG that chased [every pilot who shot at [the MIG that chased [every pilot…]]]…]. The fact that the sentence is perfectly interpretable means that the two pronouns have an interpretation other than the standard pronominal one, and this would be E-type pronoun reading.

Following is a Japanese example with the same property of infinite regress if the null arguments are interpreted as a normal *pro*; thanks to Masako Maeda for coming up with the example.

(82) Sizen-bunben-de ___ unda   subete-no hahayoa-ga,

    natural-birth-by   gave.birth   all-GEN   mothers- NOM

    ___ egao-o   misete-kureta akatyan-o   gyutto dakisimeta.

        smile- ACC showed   baby- ACC tightly hugged

  'Every mother who gave birth to _(it)_ by natural birth tightly hugged the baby that

   smiled at _(her)__.'

On a standard *pro* interpretation, the sentence would be uninterpretable due to infinite

regress: every mother who gave birth to [the baby that smiled at [every mother that gave

birth to [the baby that that smiled at…]]…] hugged the baby that smiled at [every mother

who gave birth to [the baby that smiled at [every mother that gave birth to [the baby that

smiled at …]]…]. This is independent evidence that the null argument in Japanese may

be an E-type pronoun.

4.3. On Hoji (1998)

    The E-type pronoun approach to sloppy interpretation of null arguments is similar in

many ways to Hoji's (1998) proposal. According to Hoji, the sloppy interpretation is due

to a covert indefinite noun phrase.

(83) a.   Taroo-wa   zibun-no kuruma-o aratta.

Taroo-TOP self-GEN   car-ACC   wash.Past

'Taroo washed his car.

b.   Hanako-mo [e] aratta.

Hanako-also   washed

'Hanako also washed ___.'

In the gap is an indefinite noun, something like *kuruma* 'car', and we get the sloppy

reading from imposing Hanako as the possessor of this car. However, Saito (2003, 2007)

points out a problem with Hoji's approach. Following is taken from Saito's work.

(84) a.   Taroo-wa   zibun-no kuruma-o aratta.

Taroo-TOP self-GEN   car-ACC   wash.Past

'Taroo washed his car.

b.   Demo Hanako-wa [e] arawanakatta.

but   Hanako-TOP   wash.not.Past

'But Hanako didn't wash it/her car.'

Allows either strict or sloppy interpretation while negating the other.

The gap in (84b) may be interpreted as strict or sloppy. Saito notes that the negation

negates one interpretation while allowing the other reading to survive. For example, the

sentence may mean that Hanako didn't wash her own car (sloppy), but it does not

necessarily mean that Hanako did not wash Taro's car (strict). As Saito notes, Hoji's analysis incorrectly predicts that the meaning for (84b) is the following:

(85)   Demo Hanako-wa   kuruma-o arawanakatta.

        but   Hanako-TOP   car-ACC wash.not.Past

        'Hanako didn't wash a car.'

This sentence negates all possible readings where Hanako washed a car. However, if we convert Hoji's indefinite *kuruma* 'car' into an E-type pronoun, whose interpretation would contain a variable, [x *kuruma* 'car'], we get the right result. The negation can be on either the strict or the sloppy interpretation but not necessarily on both, allowing the other interpretation to survive, as Saito observes.

5. E-type pronoun and agreement

Oku's Generalization states that if agreement targets a null argument, it must be *pro*, but if there is no agreement, the null argument may be the result of argument ellipsis. The point here is that the null argument is *either pro* or argument ellipsis. And it is argument ellipsis that makes sloppy interpretation possible. But what we saw above are cases of sloppy interpretation that cannot be due to argument ellipsis. Because the only empirical argument for argument ellipsis is the existence of sloppy interpretation, if sloppy interpretation can result from something other than argument ellipsis, the argument for argument ellipsis is considerably weakened. Moreover, we have cases of overt pronouns in English that allow a sloppy interpretation under certain contexts that

license an E-type pronoun reading. For these reasons, I argued, following Oikonomou (to appear), that the sloppy interpretation is due to E-type pronoun. We saw evidence that argument ellipsis is not responsible for sloppy interpretation, instead, what we have uniformly is *pro* in null argument positions, and sloppy is made possible by E-type pronoun reading. Bu then, the question arises, if the null argument is uniformly a *pro,* what is the role of agreement? That is, what is the status of Oku's Generalization in this unified *pro* approach to null arguments?

There does appear to be a fundamental difference between null arguments with and without agreement. Unlike Oku's original observation, what appears to be the case is that agreement makes the E-type pronoun reading less readily available (not that agreement makes sloppy reading impossible as is assumed in much of the literature on the topic). Later in the chapter, I will report on a study of Chinese and Japanese with a large number of speakers to see how easy or difficult it is to interpret the subject null argument with a sloppy interpretation. For now, let me give the gist of the study and present an analysis of the role of agreement relative to subject *pro*. Following is a Japanese example from the study.

(86) a. Shirota-san-wa, zibun-no haizokusaki-ga   Ootaku-da   to omotteiru.

Shirota-TOP   self-GEN assigned location-NOM Ota Ward-COP that think

'Mr. Shirota thinks that the self's assigned location is Ota Ward.'

  b. Takahara-san-wa, _____ Suginamiku-da   to   omotteiru.

Takahara-TOP   Suginami Ward- COP that thinks

'Mr. Takahara thinks _____ is Suginami Ward.'

a. Mr. Shirota's assigned location   86/100 86%

b. Mr. Takahara's assigned location 92/100 92%

When asked what the gap means — Mr. Shirota's assigned location (strict), Mr. Takahara's assigned location (sloppy) — 92 out of 100 (92%) said that the sloppy interpretation is possible. 86 out of 100 said that strict is also possible. This response was without any context given for the sentences. Compare this to its Chinese counterpart.

(87)   Li xiansheng shuo ziji bei   fenpeidao de didian shi Haidianqu   fengongsi,

       Mr. Li   say self (PASSIVE) allocated (DE) location is Haidian District branch

       Wang xiansheng shuo shi Dongchengqu   fengongsi.

       Mr. Wang   say is Dongcheng District branch.

       'Mr. Li said that the self's assigned location is Haidian District branch, Mr. Wang

       said _____ is Dongcheng District branch.')

       Question: Whom is assigned to Dongcheng District branch, according to Mr.

       Wang?'

       A. Mr. Li 79/103   76.7%

       B. Mr. Wang 19/103 18.4%

Of the 103 subjects, 19, or 18.4%, gave the sloppy interpretation as a possibility (76.7% gave the strict as a possibility). In the second part of the test, the following context was presented, followed by the same example.

(88) Context: Mr. Li and Mr. Wang are new employers of a company. The company has

just released the document showing the assigned branches of all the new employers.

 With this context given, the percentage of those who perceived the sloppy interpretation

rose to 64% (66/103) from the presentation of the example without this context (18.4%).

The percentage of those who gave the sentence the strict interpretation understandably

went down, to 27.2% from 76.7% since the context favored the sloppy interpretation. The

point I underline is that while the sloppy interpretation is difficult, it is not impossible,

and it becomes readily possible for many speakers with an appropriate context. This

militates against an approach that differentiates the nature of the null argument, as in *pro*

versus argument ellipsis (e.g., Oku 1998; Saito 2007; Takahashi 2008a, 2010 with Şener,

2013).

    We see a similar pattern in Modern Greek. Although we did not run a study as we

did with Japanese and Chinese, Vassilis Spyropoulos asked 15 speakers of Modern Greek

about a number of sentences, including the following.

(89) Context: Kostas listens to Maria and Eleni talking about their sons.

Someone asks him about what they said about their sons future plans and

He responds:

i   maria   ipe   oti o jios   tis tha   spudhasi aglika

the Maria-NOM say- PST. 3SG that the son- NOM her will study-3SG English

ke

and

i   eleni   oti tha spudhasi   ispanika

the Eleni- NOM that will study-3SG study Spanish

Lit. 'Maria said that her son will study English and Eleni said that (he)

(either Maria's or Eleni's son) will study Spanish)

According to Vassilis Spyropoulos, just as with Chinese, the sloppy interpretation is possible, but only if the kind of context above is given. Without such a context, a sentence such as the above would be associated overwhelmingly with the strict interpretation. Note that Greek has subject agreement.

We saw earlier that Spanish, which has subject agreement, only allows strict interpretation for the null subject, but when an appropriate context is given — which is induced in part by a clitic, as Duguine (2014) noted — the sloppy interpretation becomes possible. Also, recall that Şener and Takahashi (2013) observed that the null subject position in Turkish only allows a strict reading. However, Simpson et al. (2013), who consulted six Turkish speakers, "found that there was considerable variation in judgment of the data, and no clear and consistent correspondence between the presence/absence of

agreement and the availability of ...sloppy interpretation" (p. 118). When I consulted

Turkish speakers at a conference in Istanbul, I also found that at least some speakers

found it possible to get a sloppy interpretation of the subject *pro* even with agreement.

What we have is the following, which is a new version of Oku's Generalization.

(90) The Agreement Condition

The presence of agreement on *pro* necessitates a rich context/construction for E-type

pronoun interpretation.

What could be the source of this generalization? A hint is found in the recent work

of Sato (2015a) on Chinese. Sato assumes that the null subject position in Chinese only

allows a strict interpretation. He argues that this is due to the fact that the subject in

Chinese is a topic. As noted earlier in the chapter, the Chinese subject usually cannot be

an indefinite phrase.

(91) a. *Yi-ge/*yixie/*ji-ge   ren   zai yuenzi-li zuozhe.

       one-CL/some/several-CL   person   at   yard-LOC sit.CONT

       'A man/some men/several men is/are sitting in the yard.'

   b. You yi-ge/yixie/ji-ge   ren   zai yuenzi-li   zuozhe.

       exist one-CL/some/several-CL person at   yard-LOC sit.CONT

       'There is/are a man/some men/several men sitting in the yard.'

                                                    (Chou 2004: 194)

For an indefinite to occur in the subject position, it must occur after the existential *you* as we see in (64b). This is similar to the *there* construction in English.[17] Sato (2015a/b) argues that the null subject is a topicalized fully-specified noun phrase that has been elided. As we argued earlier, contrary to Sato, I assume that for Chinese the subject null argument is a *pro.* For the test for sloppy interpretation, it is a *pro* that has been topicalized because it did not receive ϕ-features from its local T/AGR.

Let us use the idea that if the subject is a topic, including the *pro* that occurs in this position, it makes the sloppy interpretation difficult, requiring a rich context to induce this reading. How can we account for the Agreement Condition given above? Let us suppose that when there is agreement, the subject must move to Spec,TP from within the vP. Under Diesing's (1992) mapping hypothesis, specific elements occur higher in the structure than nonspecific elements, the former being a topic, or something akin to a topic, and being in a position higher than vP. The latter is a nontopic and presumably staying within the vP. A nice demonstration of the effect of agreement and topichood is found in agreement asymmetry in northern Italian dialects of Fiorentino and Trentino. In these dialects, verbs do not agree with postverbal subjects; the verb instead has the unmarked neutral form (third-person masculine singular) (Brandi and Cordin 1989:121–122; for Fiorentino, see also Saccon 1993).

(92) a.　Gli　è　venuto　delle　ragazze.　(F)

b.　E'　vegnú　qualche　putela.　(T)

is　come　some　girls

'Some girls have come.'

In contrast, full agreement must occur if the subject moves to the preverbal position

(presumably Spec,TP) (Brandi and Cordin 1989:113).

(93) a.　La Maria la　parla. (F)

b.　La Maria　la　parla. (T)

the Mary　she　speaks

'Mary speaks.'

Like in Chinese, the subject position in Italian is a topic position (e.g., Alexiadou and

Anagnostopoulo 1998). One way to view the agreement asymmetry is that the presence

of agreement is forcing the external argument to move to a topic position, which in this

case is Spec,TP (Miyagawa 2010). On this account, a *pro* that has agreement, too, must

move, and move to a topic position. Once so moved, it has a specific reading, and the

most natural interpretation is for it to be a standard, referential pronoun that seeks direct

antecedent in the sentence or in the discourse. It does not seek to be interpreted in an

indirect way, which would be required of an E-type pronoun. However, a rich context

may induce the E-type pronoun interpretation by encouraging an indirect interpretation

from the information in the context.

If there is no agreement, the *pro* stays in situ in Spec,vP. This is a position that commonly has a nonspecific element. As such, the *pro* need not be interpreted as a standard, referential pronoun, so that an E-type pronoun interpretation becomes readily available even without rich context. This is what we saw for Japanese.

A question that comes up for Japanese is, what about Subject Honorification? The subject honorification morphology, which appears with the verb, is an agreement with the subject (Harada 1976, Shibatani 1977, Kishimoto 2012, etc.).

(94) Tanaka-sensei/*Taroo-ga   hon-o   o-kaki-ni-nar-u.

 Tanaka-Prof./Taro-NOM   book-ACC   SH-write-SH-PRS

 'Prof. Tanaka/Taro will write a book.'

As shown, the occurrence of SH is sensitive to the kind of noun phrase in the subject position. This may suggest that the sloppy interpretation becomes difficult under SH. However, this is not the case.

(95) a. Taroo-wa [zibun-no sensei-ga   eigo-o   zyoozu-ni o-hanasi-ni naru   to] itta.

 Taro-TOP   self-GEN teacher-NOM   English-ACC well SH-speak-SH-PRS C said

 'Taro said that self's teacher speaks English well.'

 b. Ziroo-wa [____   Girisyago-o   zyoozu-ni o-hanasi-ni naru   to] itta.

 Jiro-TOP   Greek-ACC   well   SH-speak-SH-PRS C said

 'Jiro said that ___ speaks Greek well.'

The sloppy interpretation is perfectly possible. Is this a counterexample to the Agreement Condition? On the contrary, Kishimoto (2006) notices that the subject honorification may occur in the *kata* 'way' nominals.

(96) Suzuki-sensei-no   o-hanasi-ni-nari-kata

 Prof. Suzuki-GEN   SH-speak-SH-way

 'the way that Professor Suzuki speaks'

Kishimoto argues that the *kata* nominaliztion applies to vP because while an external argument can appear, tense can never occur in this construction. The verbal form is a nominalized infinitive-like inflection. From this, we can conclude that SH applies at the vP level, not the TP level as assumed in the earlier literature (see also Miyagawa 2012b). Hence, SH is not an exception to the Agreement Condition.

6. Large-scale survey of Chinese and Japanese speakers for sloppy interpretation

Oku (1998) first noted that the sloppy reading is possible for null subject argument in Japanese. Accepting the idea from Otani and Whitman (1991) (see Huang 1987, 1991 for a relevant earlier study in Chinese) that this "indefinite" meaning of the null argument excludes the gap as a *pro*, Oku suggested that the null subject argument in Japanese results from argument ellipsis when the null argument has the sloppy reading. This has become the dominant assumption in Japanese and has led to a number of important studies (e.g., Saito 2007; Takahashi 2008a, 2010 with Şener, 2013). Takahashi (2008a) has carried this study over to other languages and, in particular, suggested that the null subject argument in Chinese behaves differently from Japanese in not allowing the sloppy

reading, leading him to conclude that the subject position in Chinese has agreement despite overt manifestation of any agreement morphology. I argued for a similar analysis for Chinese based on blocking effects (Miyagawa 2010). However, over the years, I have informally consulted with a large number of Chinese speakers, and, surprisingly, a small portion of the speakers reported that they could get the sloppy interpretation. I got similar results from Turkish speakers; Şener and Takahashi (2010) report that Turkish null subject position does not allow the sloppy interpretation. Unlike Chinese, Turkish has overt agreement, so, by Oku's Generalization, this is not surprising. Yet, a portion of the speakers reported that they could get the sloppy interpretation.

In order to ascertain the conditions under which the sloppy interpretation for the null subject argument is possible, we carried out a large-scale survey of Chinese and Japanese speakers. I will first discuss the Japanese study.

6.1. Japanese study

A large number of sentences were created with assistance from the students taking advanced syntax at the International Christian University (Tokyo) in the spring of 2015. After informal testing, we chose the following test sentences for the survey, which was conducted among undergraduate students in introductory linguistics classes at Akita University, Tohoku University, and Osaka University. Thanks to Yukiko Ueda, Masa Koizumi, and Masao Ochi for doing the surveys. A total of 100 subjects were asked to participate in the survey. After brief practice, the subjects were asked to choose the meaning of the null subject argument from (a) or (b), including the possibility of both. Everything was presented in the native orthography. Answer (a) corresponds to the strict

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reading while answer (b) reflects the sloppy reading. Along with these sentences, a number of fillers were created that only had the possibility of strict reading. An example of such a filler sentence is given after the test sentences.

Test sentences ("JT" stands for Japanese Test)

JT-1. Oziisan-wa,   zibun-no   asagohan-ga   pan-da   to   ii   to   itteiru.

Grandpa-TOP self-GEN   breakfast-NOM   bread-COP COMP good that said

'Grandpa said that it would be good if his breakfast is bread.'

Obaasan-wa, _____ okayu-da   to   ii   to   itteiru.

Grandma-TOP   porridge- COP COMP good that said

'Grandma said that it would be good if _____ is porridge.'

a. Grandpa's breakfast   68/100 68%

b. Grandma's breakfast   86/100 86%

JT-2. Taroo-wa, zibun-no   tesuto-no   kekka-ga   taihen yokatta to   omotteiru.

Taro-TOP   self-GEN   test- GEN   score-NOM very   good   that   thinks

'Taro thinks that self's test score was very good.'

Yuko-wa, _____ maamaa-datta   to   omotteiru.

Yuko-TOP   so-so-COP.PAST   that   thinks

'Yuko thinks that _____ was so-so.

a. Taro's test score   65/100 65%

b. Yuko's test score   91/100 91%

JT-3. Suzuki-san-wa,   zibun-no   te-ga   ookii to   omotteiru.

  Suzuki-TOP   self-GEN   hand-NOM big   that   thinks

  'Ms. Suzuki thinks self's hand is big.'

  Tanaka-san-wa,   _____ tiisai to   omotteiru.

  Tanaka-TOP   small that   thinks

  'Ms. Tanaka thinks ____ is small.'

  a. Ms. Suzuki's hand   71/100 71%

  b. Ms. Tanaka's hand   81/100 81%

JT-4. Shirota-san-wa,   zibun-no haizokusaki-ga   Ootaku-da   to omotteiru.

  Shirota-TOP   self-GEN   assigned location-NOM Ota Ward-COP that think

  'Mr. Shirota thinks that the self's assigned location is Ota Ward.'

  Takahara-san-wa, _____ Suginamiku-da to   omotteiru.

  Takahara-TOP   Suginami Ward-COP that thinks

  'Mr. Takahara thinks _____ is Suginami Ward.'

  c. Mr. Shirota's assigned location   86/100 86%

  d. Mr. Takahara's assigned location 92/100 92%

JT-5. Masao-wa, zibun-ga   myuzisyan-to-site katuyaku-dekiru to   omotteiru.

Masao-TOP self-NOM   musician-as   successful at   that   thinks

'Masao thinks that self can be successful as a musician.'

Kenta-wa _____ kentikuka-to-site katuyaku-dekiru to   omotteiru.

Kenta-TOP   architect-as   be   successful   that   thinks

'Kenta thinks that _____can be successful as an architect.'

a. Masao   86/100 86%

b. Kento   80/100 80%

Example of a filler:

JT-6 Titioya-wa siriai-no   katta   koukyuusya-ga kakko-ii   to omotteiru.

father-TOP friend-GEN bought luxury car-NOM   cool-looking that thinks

'The father thinks that the luxury car that a friend bought is cool-looking'

Musuko-wa, kakko-warui to   omotteiru.

Son-TOP   unattractive   that   thinks

'The son thinks that ____ is unattractive.'

a. the car that a friend bought 95/100 95%

b. the car that the son bought   8/100 8%

These sentences were presented without any context, a point that becomes important when we look at the Chinese study. For the sloppy interpretation, the percentage of subjects who found the sloppy interpretation possible ranged from 80% to 92%. This shows that Japanese speakers found it relatively easy to interpret the null subject

argument with the sloppy interpretation without any special context given. As we see in the example of the filler, for which the sloppy interpretation is extremely difficult, only 8% thought that they could interpret it with this reading. It is not clear whether these subjects perceived that the sloppy interpretation was actually possible or they simply failed to understand the nature of the task. For the strict reading, the percentage of those who marked it as possible ranged from 65% to 86%, indicating a slight favoring of the sloppy over the strict interpretation. For the filler, 95% indicated that they got the strict reading. In sum, without context Japanese speakers were able to interpret the null subject argument with the sloppy interpretation.

This means that in Japanese, the subject *pro* is not the target of agreement, and being a strong pronoun, it need not move to acquire referential index. We can reasonably assume, then, that the *pro* stays in situ in *v*P, where it can easily take on an indefinite reading, much like the post-verbal subject in Italian.

6.2. Chinese study

The sentences in the Japanese examples were translated into Chinese, and adjustments made to make them as natural as possible. The fifth sentence was deemed inappropriate for the test and a new sentence was created in its place. The Chinese test, which was created by Lulu Zhang and administered online had two practice sentences followed by two test parts: in Part 1, the five examples were presented without any context, and as in the Japanese test, the subjects were asked to check the answers corresponding to strict and sloppy readings. Along with the five test sentences, five fillers were included. In Part 2, the same sentences were presented, but with a context that

encouraged sloppy interpretation; the Japanese test did not have this second part. Again there were five fillers. All examples were presented in the Chinese orthography. 141 subjects participated in the survey. Following are the two parts.

Part 1. Sentences without context

CT-1. Yeye   shuo ziji-de zaocan   shi mianbao,

  Grandpa say   self's breakfast is   bread

  'Grandpa said that self's breakfast is bread,'

  Nainai   shuo shi zhou.

  Grandma say   is   porridge

 'Grandma said ____ is porridge'

  Question: Whose breakfast is porridge that grandma said?'

  A Grandpa's breakfast   80/141 56.7%

  B. Grandma's breakfast   37/141 26.2%

CT-2. Xiao Ming renwei ziji-de kaoshi chengji feichang hao,

  Xiao Ming think   self's test   score   very   good

  'Xiao Ming thinks that self's test score was very good.'

  Xiao Wei renwei yibanban.

  Xiao Wei think so-so

  'Xiao Wei thinks that _____ was so-so.'

  'Xiao Ming thinks that self's test score was very good. Xiao Wei thinks that _____

  was so-so.)

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Question: Whose test score that Xiao Wei thinks is just so-so?

A. Xiao Ming's test score 98/141 69.5%

B. Xiao Wei's test score   25/141 17.7%

CT-3. Xiao Hong juede ziji-de shou hen da

Xiao Hong think self's   hand very big

'Xiao Hong thinks self's hand is big,'

Xiao Li juede hen xiao.

Xiao Li think very small

'Xiao Li thinks ____ is small.'

'Xiao Hong thinks self's hand is big. Xiao Li thinks ____ is small.'

Question: Whose hand that Xiao Li thinks is small?

A. Xiao Hong's hand 109/141 77.3%

B. Xiao Li's hand   23/141 16.3%

CT-4. Li xiansheng shuo ziji bei   fenpeidao de didian   shi Haidianqu   fengongsi,

Mr. Li   say self (passive) allocated (de) location is Haidian District branch

'Mr. Li said that the self's assigned location is Haidian District branch.'

Wang xiansheng shuo shi Dongchengqu   fengongsi.

Mr. Wang   say is   Dongcheng District branch.

'Mr. Wang said _____ is Dongcheng District branch.'

'Mr. Li said that the self's assigned location is Haidian District branch, Mr. Wang

said _____ is Dongcheng District branch.')

Question: Whom is assigned to Dongcheng District branch, according to Mr.

Wang?'

A. Mr. Li   107/141 72.3%

B. Mr. Wang   23/141 16.3%

CT-5. Zhang laoshi juede ziji-de xuesheng hen   youlimao,

Zhang teacher think self's   student   very polite

'Teacher Zhang thinks that self's student is polite.'

Li laoshi juede hen mei limao.

Li teacher think very not polite

'Teacher Li thinks ____ is very impolite.'

'Teacher Zhang thinks that self's student are polite. Teacher Li thinks that ____ are

impolite.'

Question: Whose students that Teacher Li thinks are impolite?

A. Teacher Zhang's student   123/141 87.2%

B. Teacher Li's student   11/141 7.8%

Part 2. Sentences with context

CT-6. Context: grandpa and grandma are saying what breakfast they think will be.

Yeye   shuo ziji-de zaocan   shi mianbao,

Grandpa say   self's breakfast is   bread

'Grandpa said that self's breakfast is bread,'

Nainai   shuo shi zhou.

Grandma say   is   porridge

'Grandma said _____ is porridge'

Question: Whose breakfast is porridge that grandma said?

A. Grandpa's breakfast   46/141 32%

B. Grandma's breakfast   67/141 47.5%

CT-7. Context: Xiao Ming and Xiao Wei just knew their test scores. They expressed
their opinions on their scores.

Xiao Ming renwei ziji-de kaoshi chengji feichang hao,

Xiao Ming think   self's test   score   very   good

'Xiao Ming thinks that self's test score was very good.'

Xiao Wei renwei yibanban.

Xiao Wei think so-so

'Xiao Wei thinks that _____ was so-so.'

Question: Whose test score that Xiao Wei thinks is just so-so?

A. Xiao Ming's test score   30/141 21.3%

B. Xiao Wei's test score   95/141 67.3%

CT-8. Context: Xiao Hong and Xiao Li are expressing their opinions about their hands.

Xiao Hong juede ziji-de shou hen da

Xiao Hong think self's hand very big

'Xiao Hong thinks self's hand is big,'

Xiao Li juede hen xiao.

Xiao Li think very small

'Xiao Li thinks ____ is small.'

Question: Whose hand that Xiao Li thinks is small?

A. Xiao Hong's hand   31/141 22%

B. Xiao Li's hand   93/141 66%

CT-9. Context: Mr. Li and Mr. Wang are new employers of a company. The company
        has just released the document showing the assigned branches of all the new
        employers.

Li xiansheng shuo ziji bei   fenpeidao de didian   shi Haidianqu   fengongsi,

Mr. Li   say   self (passive) allocated (de) location is Haidian District branch

'Mr. Li said that the self's assigned location is Haidian District branch.'

Wang xiansheng shuo shi Dongchengqu   fengongsi.

Mr. Wang   say is Dongcheng District branch.

'Mr. Wang said _____ is Dongcheng District branch.'

A. Mr. Li   36/141 25.5%

B. Mr. Wang   91/141 64.5%

CT-10.   Context: Teacher Zhang and Teacher Li are talking about their options on
          whether their students are polite or not.

Zhang laoshi juede ziji-de xuesheng hen   youlimao,

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Zhang teacher think self's   student   very polite

'Teacher Zhang thinks that self's student is polite.'

Li laoshi juede hen   mei limao.

Li teacher think very not polite

'Teacher Li thinks ____ is very impolite.'

 Question: Whose students that Teacher Li thinks are impolite?

A. Teacher Zhang's student 37/141 26.2%

B. Teacher Li's student   78/141 55.3%

Without context, the percentage of those who were able to perceive the sloppy interpretation ranged from 7.87% to 26.23%. Compare this to the Japanese counterparts, whose percentages ranged from 80% to 92%. Once a context was given to encourage a sloppy interpretation, the percentage increased in the range from 47.5% to 67.3%. This is still lower than the percentage for Japanese examples, indicating that even with a context that favors the sloppy interpretation, the null subject argument in Chinese is not readily associated with this reading. This is consistent with our argument that the subject *pro* in Chinese that refers to an entity outside of its sentence is a topic. As such it looks for a specific reference in the sentence or the discourse, which renders the sloppy interpretation difficult without context to induce it.

7. Anaphoric binding in Japanese and POV

        In this final section of the chapter, let us return to Japanese, which has agreement at C, but the agreement is directed to the "addressee" in the higher structure as allocutive

agreement. Because the subject is not the target of agreement, we predict that there should be no blocking effect triggered by agreement, and this is what we see (Miyagawa 2010).

(97) Taroo/watakusi/anata-wa [Taroo/watakusi/anata-ga   zibun-no

    Taro/I/you-TOP   Taro/I/you-NOM   self-GEN

    syasin-o   totta to]   itta.

    picture-ACC   take C   said

    'Taro/I/you said that Taro/I/you took self's picture.'

Setting aside certain pragmatic awkwardness with some of the interpretations, it is possible in principle for the anaphor to refer to the subordinate or matrix subject in any combination.

    Does this mean that there are no restrictions on the *zibun* anaphor in Japanese other than the well-known subject orientation? There is one well-known restriction imposed on *zibun* construal, which we see in a number of LD anaphors across languages. In long-distance construal, *zibun* has been shown to be coreferent with the SUBJECT OF CONSCIOUSNESS (Koster and Reuland 1991, Pollard and Sag 1992, Kuroda 1973, Kuno 1972, Kuno and Kaburaki 1977, Iida 1996). Kuno (1973: 322) gives the following description.

(98)   *Zibun* in a constituent clause (A) [= a subordinate clause] is coreferential with a noun phrase (B) of the matrix sentence only if A represents an action or state that

the referent of B is aware of at the time it takes place or has come to be aware of at some later point.

The following pair of examples illustrates Kuno's point (the examples are quoted from Nishigauchi 2014).

(99) Iinkai-ga   zibun$_i$-o   erab-i soo ni nat-ta   toki, Takasi$_i$-wa

committee-NOM self-ACC   elect likely become-PST   when Takasi-TOP

huan-ni nat-ta.

worried become-PST

'When it came to be likely that the committee might elect self, Takashi became anxious.'

(100) *Iinkai-ga   zibun$_i$-o   erab-i soo ni nat-ta   toki, Takasi$_i$-wa

committee-NOM self-ACC elect likely become PST   when Takasi-TOP

gussuri nemut-te i-ta.

fast   asleep-be-PST

'When it came to be likely that the committee might elect self, Takashi was fast asleep.'

The idea of consciousness is a pragmatic one (Speas 2004), hence it is part of the discourse context of the utterance. Speas (2004) and Tenny (2006) among others propose that this type of pragmatic effect is encoded in what they call Point of View (POV), which, despite its pragmatic function, finds representation in the syntactic structure.

Speas (2004) proposes that there is a *pro* in the Spec position of POV. In the study of *zibun* binding, Nishigauchi (2014) adopts Speas's idea; on this approach, we can represent (99/100) schematically as follows (Nishigauchi's work does not specifically include the POV CONSCIOUSNESS so I am adding it to his analysis).

(101) [[pro$_i$ [… zibun$_i$ …] CONSCIOUSNESS] [Takasi$_i$ …]]

Nishigauchi argues that the antecedent of *zibun* is mediated by the *pro*; in this case, *zibun* ultimately takes *Takasi* as its antecedent, but *Takasi* must be coindexed with *pro* for this to happen. Because *pro* is the subject of CONSCIOUSNESS, *Takasi* must be interpretable as being conscious of the event represented in the clause containing *zibun*. (99) is fine, but in (100) Takashi is asleep and fails to qualify as the "conscious" antecedent of *pro.*

Japanese is a language with a rich set of POV markers. In certain instances, one POV marker can over-ride another. In contrast to the unacceptable (100) above, Nishigauchi (2014) notes the following.

(102)   Iinkai-ga   zibun$_i$-o eran-de kure-ta   toki,

    committee-NOM self-ACC elected   do favor-PST when

    Takasi$_i$-wa gussuri nemut-te i-ta.

    Takasi-TOP fast   asleep-be-NOM

    'When the committee did the favor of electing self, Takashi was fast asleep.'

The auxiliary verb *kure-ru* 'do favor' has the meaning of benefactive, and this POV is directed at the local domain in which *zibun* occurs. As a result, this benefactive POV on the local domain over-rides the CONSCIOUSNESS requirement otherwise imposed on the LD antecedent, and *zibun* is free to have *Takasi* as the antecedent through *pro* even though *Takasi* was sleep at the time of the event of electing self. The structure would be along the lines of the following.

(103) [[pro$_i$ [… zibun$_i$ …] BENEFACTIVE] [Takasi$_i$ …]]

Where do these POV elements occur? Nishigauchi (2014) apparently thinks that they are at the TP level. For example, he notes the following structure.

(104) [$_{POVP}$ α$_i$ [$_{VP}$ ...zibun$_i$ ...V] POV]

The α element is in the Spec of POV, and it is the antecedent of *zibun*; Nishigauchi notes that this α is the subject of the sentence if the subject is the antecedent of *zibun* (p. 159), which indicates that the POV and its Spec are at the TP level. Is this the right analysis? Speas (2004), whose work Nishigauchi bases his analysis, builds on Cinque (1999). Cinque suggests that there are projections above the sentence (=TP).

(105) Cinque (1999)'s four highest projections

Speech Act Mood: indicates the type of speech act (declarative, interrogative, etc.)

Evaluative Mood: indicates speaker's evaluation of the reported event or state as good,

                  lucky, bad, surprising, etc.)

Evidential Mood: indicates the nature of speaker's evidence for truth of proposition

Epistemological Mode: indicates speaker's degree of certainty about the proposition

Following Cinque, Speas suggests that these POV projections occur above the TP (she calls it "IP"; p. 264). The evaluative POV, which would cover the two POV elements we have discussed, CONSCIOUSNESS and BENEFACTIVE, has the following structure.

(106) [$_{CP}$ pro [$_{TP}$ …] C$_{POV}$]

This makes POV equivalent to the grammatical features of ϕ and δ grammatical features.

      On this account it is not surprising that POV sometimes resembles agreement. For example, as described by Speas (269-270), Akha has person agreement that depends on whether the sentence is a statement or a question (Thurgood 1986). The morpheme –è on the verb goes with a first person subject in a statement and with a second person subject in a question.

(107) a. ŋa nc-áŋ   dì-è

       I   you-OBJ hit-è

       'I hit you.'

   b. ŋc   nà-á ŋ   dì-è-ló

       you   me-OBJ hit-è-Q

       'Will you beat me?'

Speas notes the comment by Dick Hudson (Maxwell 1999) that "these morphemes could be described as agreement with the source of information or authority which is the speaker in a statement and the hearer in a question." Thus, the POV marking of Epistemological Mode functions like person agreement.

    The structure in (106) works for LD construal of *zibun*, but what about the case of local binding? The structure in (106) would not be appropriate since it would cause a Condition C violation with *pro* being coreferential with the subject that it c-commands. Saito (2006 J/K) argues that the subjecthood relevant to *zibun* binding is Spec,*v*P, not Spec,TP. On this account, the requirement imposed by the POV relevant to *zibun* must occur at the *v*P level.

(108) [$_{vP}$ SUB [$_{VP}$ …] v_{POV}]

We can test this using –*kata* nominalization, which Kishimoto (2006) argues is a nominalization of *v*P. First, we can see that *zibun* may occur in this nominalization.

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(109) Taroo-no   zibun-no   home-kata

   Taro-GEN   self-GEN   praise-way

   'the way Taro praises himself'

Second, we can see that the POV of CONSCIOUSNESS applies even in this nominalization.

(110) *nete-iru gakusei-no, zibun-no   sensei-ni-yotte-no   hihans-are-kata

   sleeping student–GEN self-GEN   teacher-by-GEN   criticize-PASS-PST

   'the way that the sleeping student was criticized by self's teacher'

This nominal is fine if the subject is awake and conscious of the event, as shown below.

(111) gakusei-no,   zibun-no   sensei-ni-yotte-no   hihans-are-kata

   student–GEN   self-GEN   teacher-by-GEN   criticize-PASS-PST

   'the way that the student was criticized by self's teacher'

8. Conclusion

In this chapter we looked at a phenomenon commonly referred to as pro-drop. It was Huang (1987, 1991) and Otani and Whitman (1991) who showed that not all instances of pro-drop are the same. They noted that the possibility of a sloppy interpretation suggests some sort of ellipsis. Oku (1998), picking up on this theme, argued that the sloppy interpretation results from argument ellipsis, which is possible for arguments that are not the target of agreement. Duguine (2014) gave counterexamples to

Oku's observation, showing that a *pro* that is the target of agreement can have the sloppy interpretation. Duguine concludes that all null arguments that have been identified as pro are the result of argument ellipsis. There is no *pro*. I argued, based in part on Oikonomou (2014), that Duguine's unified analysis is correct, but instead of saying that all instances of null argument are the result of argument ellipsis, I argued that all instances of pro-drop are just that: the gap is a *pro*. The possibility of the sloppy interpretation is due to E-type pronoun reading. Why is this reading sometimes not available? I showed that a *pro* that is topic is difficult to interpret with the sloppy interpretation simply because a topic *pro* is seeking a specific/definite reference. To induce the sloppy interpretation, an appropriate context must be provided. What is the relation between *pro* and agreement, and the inability to interpret it with the sloppy interpretation? I suggested that agreement leads to the *pro* being topicalized, something we see in Romance. What about Chinese, which Takahashi (2008) argued has overt agreement so that the subject *pro* does not get associated with the sloppy interpretation? In support of Takahashi, I gave evidence that Chinese indeed has φ-feature agreement. Ironically, the Chinese subject *pro* is difficult to interpret with the sloppy interpretation when it is not associated with the φ-feature. Rather, the Chinese *pro*, when it can refer out of the sentence, which is the environment for the sloppy interpretation, has been topicalized because it was not able to get the φ-feature from its local T/AGR. Hence, the most fundamental issue for whether the sloppy interpretation is possible or not is topicalization as far as *pro* is concerned. This, in turn, is due to the fact that the sloppy interpretation is an instance of E-type pronoun interpretation, which is not so easy to implement under topicalization. To sum up, across languages, the topicalization of pro discourages its interpretation as an E-type pronoun,

which in turn makes the sloppy interpretation difficult. In Chinese, the topicalization of

the subject pro occurs when the pro does not get ϕ-feature from its local T/AGR, but in

Romance and other agreement languages, pro is topicalized as part of the

agreement/movement property of the language.

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[1]I have found that speakers in the Osaka region unexpectedly allow the VP-ellipsis reading in which the manner adverb is contained in the elided portion. No other speakers allow it as far as I know, and I will follow Oku's observation as the general property, leaving the question of why Osaka-area speakers allow the VP-ellipsis interpretation.

[2]See Raposo (1989) for related discussion.

[3]See Abe (2014), Park (2014) among many others for other approaches that do not assume argument ellipsis.

[4] A very different approach to the availability of sloppy interpreation is found in Otaki (2012), where he links it to differences in the morphological types of nominal phrases, the analysis of which is based on Neeleman and Szendői (2007). I will not take up this alternative approach.

[5]This sections owes a great deal to Jim Huang, who went through it and gave me detailed comments that helped with the analysis and helped me to avoided some embarrassing mistakes. I regret that I could not respond satisfactorily to all his points.

[6]In this chapter I am primarily concerned with the subject empty element; for discussion of the object empty element, see, for example, Huang (1984), Li (2014) and references therein.

[7]In a related article, Sato (2015b) develops his analysis in detail using Javanese.

[8]Huang (2001) notes that in certain cases number apparently also shows the effect of blocking.

(i) a. Tamen$_i$ shuo Zhangsan$_j$ piping-le ziji$_{*i/j}$
    They say Zhangsan criticize-PERF self
    They said that Zhangsan criticized *them/himself.

  b. Tamen$_i$ **dou** shuo Zhangsan$_j$ piping-le   ziji$_{i/j}$
    They   all say Zhangsan criticize-PERF self
    They **each** said that Zhangsan criticized them$_i$/himself$_j$.

In (a) the matrix subject is plural while the lower subject is singular, and *ziji* cannot have LD construal with the matrix subject. In (b), *dou* 'all' has been added to the matrix subject, which adds a distributive reading. While the subject is still plural, *dou* makes it semantically singular. From this, Huang concludes that blocking is not due to agreement, but due to the LD *ziji* being logophoric and that logophoric antecedents must be semantically singular. I note this as a challenge to the agreement-based approach to the blocking effect of *ziji*.

Another challenge to the agreement-based approach to blocking is found in Huang and Li (2001) (see also Li 2014 and references therein). They note that in certain cases, a non-subject may trigger blocking.

(ii) a. Zhangsan$_i$ gaosu wo$_j$ Lisi$_k$ hen ziji$_{*i/*j/k}$.
       Zhangsan tell   me Lisi hate self
       'Zhangsan$_i$ told me$_j$ that Lisi$_k$ hated self$_{*i/*j/k}$.'
    b. Zhangsan$_i$ dui wo$_j$ shuo Lisi$_k$ chang piping   ziji$_{*i/*j/k}$.
       Zhangsan to me say Lisi often criticize self
       'Zhangsan$_i$ said to me$_j$ that Lisi$_k$ often criticized self$_{*i/*j/k}$.

These examples show that an object first person can block LD construal of *ziji* despite the fact that the local subject is third person, and the matrix subject is also third person. Huang and Li (2001) conclude that examples such as these point to the blocking effect as arising from the logophoric nature of LD *ziji*. However, Giblin (2015) proposes an agreement-based approach to blocking that takes into account these types of examples as well. Although it is different from the kind of agreement approach in this chapter, I assume that with revision, such as that suggested by Giblin (2015), this type of blocking can also fall under an agreement-based approached. In addition, we will see in the last section of this paper that even in Japanese, which has no agreement within the TP region, we see a kind of blocking of *zibun* 'self' in certain Point-of-View contexts. There is a question as to whether in Chinese, while the subject-triggered blocking is governed by agreement, the triggerer of non-subject blocking may be due to some sort of POV. As we will see later in the chapter, Japanese, which does not evidence the kind of blocking we see in languages such as Chinese and Malayalam, in which the blocking is primarily invoked by a participant subject, nevertheless shows some form of blocking triggered by POV considerations. Cole et al. (2005) has already noted the possiblity that in Chinese, the source of blocking may not be uniform, with participant-person subjects triggering a grammatical-based blocking while non-subject triggering POV blocking, the latter felt to be weaker in effect. This is true in Japanese, where the blocking effect is solely by POV, and it is weaker, as far as I can tell, compared to those found in languages such as Chinese. In this regard, it is interesting that when I asked a number of native speakers of Chinese about the following, the reaction was often, though not always, different for the two examples.

(iii) a. Lisi juede [wo dui ziji mei xinxin]

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      Lisi think   I   have self no confidence
      'Lisi think that I/you have no confidence in self.

   b. Lisi dui wo shuo Zhangsan chang piping   ziji.
      Lisi to   me say   Zhangsan often criticize self
      'Lisi said to me that Zhangsan often criticized self.

(a) is an example of a typical blocking effect invoked by a "participant" subject, in this case "I". (b) is an example of blocking due to a non-subject participant entity. All agreed that (a) is ungrammatical, but many noted that while (b) is degraded, it isn't as severe in its unacceptability as (a) with the intended meaning of Lisi being the antecedent of *ziji* . One speaker gave (a) "*" while giving "??" to (b), another said that on a scale of 10, (a) is 1 (worst) while (b) is 3, and third said that while the intended construal in (a) is impossible, it is "easier" in (b). This may suggest that the two types of blocking are due to different properties, something that requires further careful study. Lisa Cheng asked the eight native Chinese speakers from the mainland in her University of Leiden class about these examples, the reaction was the following. While all rejected (a) with *ziji* interpreted as *Lisi*, four of the eight accepted this interpretation for (b) while the other four rejected it. According to Lisa Cheng, the four who accepted (b) with the intended reading are from the south of Yangzi River while those rejected it are from the north. This implies a regional difference.

[9]An anonymous reviewer raises the question of how Progovac's anaphoric AGR relates to feature inheritance, which assumes that all grammatical features originate at C. I presume that the ϕ-feature on the matrix AGR starts out at C, as is standardly assumed, but the anaphoric AGR's ϕ-feature is inherited directly from the higher AGR.

[10]Jim Huang (personal communication) points out that there are instances in which the subject *pro* may refer to a non-subject.

(i) Zhangsan daying   Lisi shuo [pro mingtian keyi zai jia xiuxi]
    Zhangsan promise Lisi that [pro tomorrow can at home rest
    'Zhangsan promised Lisi that pro$_{(i/j)}$ can take a rest at home tomorrow.'

Given that the literature on the Chinese subject *pro* typically states that the antecedent is the subject, I leave this as an exception to be dealt with in a future study.

[11]Jim Huang (personal communication) notes that (49) could have an alternative structure in which 'linguistics' is vP adjoined instead of in the CP topic region. Such an alternative structure would not cause a problem for Liu's analysis. However, I presume that prosody marks 'linguistics' as topicalized, hence in the CP region, but I will leave this for later study.

[12]According to Patel-Grosz and Grosz (in press), this judgment of ungrammaticality is not shared among all native speakers of German.

[13]See Patel-Grosz and Grosz (in press) for a different proposal in which both forms of the pronoun contain an NP. In their work the strong/weak difference arises from the strong/weak articles proposed by Schwartz (2009). See also Cardinaletti and Starke (1999) for related discussion.

[14]The idea that the subject *pro* in Chinese is featureally defective recalls Li's (2014) True Empty Category for Chinese pronouns, where she postulates a position that simply lacks any relevant features. She identifies the object empty slot with the TEC.

[15]According to Amanda Swenson (p.c.), the native speakers she consulted split between whether the sloppy interpretation is possible for the subject *pro* (see Simpson et al. (2013) for a different outcome). We will see a similar result from a large-scale survey conducted for Chinese.

[16]See Duguine (2008) for related discussion on Basque.

[17]Yip (1995) and Jiang (2012) argue that the subject undergoes vacuous movement to Spec,Top to get the topic interpretation. This may be the case, or it may simply be that the Spec,TP may be a topic position, similar to Romance.