Argument Ellipsis in Javanese and Voice Agreement*

Abstract: Argument ellipsis in Javanese exhibits a subject-object asymmetry with respect to sloppy/quantificational interpretations. Adopting the LF-Copy theory of null arguments developed in Japanese and Turkish (Oku 1998; Takahashi 2008a, b; Şener and Takahashi 2010), I argue that this asymmetry falls out from the dyadic voice agreement system in Javanese where a single DP is specifically picked up by voice prefixes on *v* to mark the Actor-Topic or Theme-Topic alignments. I show that this agreement blocks the LF-Copy process from targeting empty subject positions. This result suggests that voice agreement is to be included in the general theory of agreement, together with φ-agreement.

1. Introduction

This paper investigates the phenomenon of argument ellipsis in Javanese, a Western Malayo-Polynesian language spoken in Indonesia, where grammatical arguments such as subjects and objects are deleted under identity with overt linguistic antecedents in preceding sentences. Researchers working on East Asian languages such as Japanese, Korean and Chinese (Huang 1987, 1991; Otani and Whitman 1991; Oku 1998; Kim 1999; Saito 2007; Takahashi 2008a, b; Cheng 2012) have argued that there are certain null arguments in these

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languages which involve deletion rather than empty pronouns. One recent line of research on argument ellipsis in Japanese, pursued by Saito (2007) and Şener and Takahashi (2010), has put forth a hypothesis that null subjects and objects in this language can arise through LF-Copy, which copies an overt linguistic element from a full-fledged clause onto a corresponding empty slot in an elliptical clause, but this process is blocked by φ-agreement. Şener and Takahashi show that this Anti-Agreement theory of argument ellipsis provides an illuminating comparative account for the typological discrepancy between Japanese and Turkish. Using sloppy/quantificational readings as crucial diagnostics for LF-Copied arguments, they demonstrate that both null subjects and null objects can be the target of this process in Japanese, but only null objects can in Turkish. They propose that this asymmetry falls out from the fact that Turkish exhibits φ-agreement in subject, but not object positions, whereas Japanese lacks φ-agreement altogether.

Javanese presents an important typological issue within this comparative context of argument ellipsis because it lacks φ-agreement like Japanese, but nonetheless exhibits the same subject-object asymmetry like Turkish. I propose that the key factor controlling the LF-Copy process of empty arguments in Javanese is its well-known dyadic voice agreement system (Uhlenbeck 1978; Poedjosoedarmo 1986; Keeler 1984; Robson 1992; Conners 2008; Sato 2010, 2012; see also Aldridge 2008 and Cole et al. 2008). In this system, a single DP is specifically picked up by voice-related prefixes to the verb stem – the homorganic nasal prefix N- for the active voice and the prefix *di*- for the passive voice – to mark the Actor-Topic and Theme-Topic. I argue that these topic markers require that the DP they select be interpreted as topics. This discourse-related constraint imposed by the voice suffixes, in turn, blocks the LF-Copy process from yielding sloppy/quantificational interpretations in empty subject positions. The results of this paper,

therefore, suggest that a general theory of agreement must take into account not only the traditional φ-agreement but also voice agreement in its relation with argument ellipsis.

The present paper is organized as follows. In section 2, I first review the LF-Copy theory of argument ellipsis originally developed in Japanese (Oku 1998, Saito 2007; Takahashi 2008a, 2008b). I then examine the subject-object asymmetry in Turkish with respect to sloppy/quantificational readings, which led Şener and Takahashi (2010) to hypothesize that the LF-Copy process is blocked by the presence of overt φ-agreement (the Anti-Agreement Hypothesis). In section 3, I provide new data showing that Javanese exhibits the same subject-object asymmetry like Turkish despite the fact that it lacks φ-agreement in both subject and object positions like Japanese. This result suggests that φ-agreement is not the sole cross-linguistic factor determining the presence/absence of argument ellipsis. In the course of this discussion, I also provide empirical arguments against an alternative analytic possibility for null arguments in Javanese – the V-Stranding VP-Ellipsis analysis (Huang 1987, 1991; Otani and Whitman 1991; Goldberg 2005; Rouveret 2012). In section 4, I propose that the subject-object asymmetry in Javanese falls out from its well-known dyadic voice agreement system and explore various empirical and theoretical consequences of this analysis. Section 5 is the conclusion.

2. Argument Ellipsis, LF-Copy and the Anti-Agreement Hypothesis

Oku (1998), Saito (2007) and Takahashi (2008a, b) propose that certain null arguments in Japanese are best analyzed as the result of argument ellipsis rather than *pro*'s (Kuroda 1965;

Ohso 1976; Hoji 1985). Two arguments have been presented in favor of this analysis. One argument concerns sloppy readings available for null arguments, as shown in (1a, b).[1]

(1) a. Taroo-wa zibun-no tegami-o suteta.
Taro-TOP self-GEN letter-ACC discarded
'*Lit.* Taro discarded self's letter.'

b. Hanako-mo *e* suteta. (^{OK} strict; ^{OK} sloppy)
Hanako-also discarded
'*Lit*. Hanako also discarded *e*.'

c. Hanako-mo sore-o suteta. (^{OK} strict; * sloppy)
Hanako-also it-ACC discarded
'Hanako also discarded it.'

The missing direct object in (1b) can be interpreted as Taro's letter (the strict reading) or Hanako's letter (the sloppy reading). Though the first interpretation can be accomodated by the null pronoun in the direct object position, the second interpretation is mysterious under this traditional analysis because pronouns only accept the strict reading. Thus, when the null object in (1b) is replaced with an overt pronoun, as shown in (1c), only the strict reading is available. Oku (1998) proposes that the sloppy reading here arises through the process he dubs LF-Copy. According to this analysis, the LF representation for (1b) under this reading is as in (2).

[1] The following abbreviations are used in data sections of this paper: ACC, accusative; AOR, aorist; APPL, applicative; AV, active voice; CL, classifier; COMP, complementizer; DAT, dative; DEM, demonstrative; FUT, future tense; GEN, genitive; NEG, negation; NOM, nominative; PAST, past tense; PL, PERF, perfective; plural; POSS, possessive; PRES, present tense; PROG, progressive; PV, passive voice; RED, reduplication; SG, singular; TOP, topic; 1/2/3, first/second/third persons.

(2) LF: Hanako-mo [$_{NP}$ **zibun-no tegami-o**] suteta.
Hanako-also self-GEN letter-ACC discarded
'*Lit.* Hanako also discarded self's letter.'

In (2), the overt NP *zibun-no tegami* 'self's letter' is copied from the object position in (1a) onto the empty object position in (1b) at LF. The sloppy reading obtains when *zibun* 'self' is bound to the subject *Hanako* after LF-Copy. The strict reading, on the other hand, is obtained when an empty pronoun is inserted in the empty object position.

Oku (1998) observes that subjects in Japanese can also be targeted for LF-Copy. Thus, the null subject in (3b) allows both strict and sloppy interpretations.

(3) a. Taroo-wa [$_{CP}$ zibun-no kodomo-ga eigo-o sitteiru-to] itta.
Taro-TOP self-GEN child-NOM English-ACC know-COMP said
'*Lit.* Taro said that self's child knew English.'

b. Hanako-wa [$_{CP}$ *e* furansugo-o sitteiru-to] itta. (^{OK} strict; ^{OK} sloppy)
Hanako-TOP French-ACC know-COMP said
'*Lit.* Hanako said that *e* knew French.'

The second argument for argument ellipsis/LF-Copy in Japanese comes from what Takahashi (2008a, b) terms the *quantificational reading* of null arguments, observed in (4b).

(4) a. Taroo-wa san-nin-no sensei-o sonkeisiteiru.
Taro-TOP three-CL-GEN teacher-ACC respect
'Taroo respects three teachers.'

b. Hanako-mo *e* sonkeisiteiru. (^{OK} E-type; ^{OK} quantificational)
Hanako-also respect
'*Lit*. Hanako also respects *e*.'

c. Hanako-mo karera-o sonkeisiteiru. (^{OK} E-type; * quantificational)
Hanako-also 3PL-ACC respect
'Hanako also respects them.'

((4a, b) adopted from Şener and Takahashi (2010: 81, 82))

(4b) allows two interpretations. One interpretation (the E-type reading; see Evans 1980) is that Hanako respects the same three teachers that Taro respects. The other interpretation, which Takahashi calls the quantificational interpretation, is that the set of three teachers Hanako respects can be different from the set of three teachers Taro respects. The quantificational interpretation would be unexpected under the null pronoun analysis because the overt pronoun in (4c), *karera*-o 'them', only allows the E-type interpretation. Takahashi suggests that the LF-Copy analysis of argument ellipsis correctly predicts the quantificational interpretation. (4b) has the LF representation shown in (5) under the quantificational reading.

(5) LF: Hanako-mo [$_{QP}$ **san-nin-no sensei-o**] sonkeisiteiru.
Hanako-also three-CL-GEN teacher-ACC respect
'Hanako respects three teachers.'

Here, the quantified expression *san-nin-no sensei* 'three teachers' is copied at LF from the overt object position in (4a) onto the empty object position in (4b). The quantificational

reading obtains when this phrase is interpreted independently of its antecedent in (4a). Example (6b) further shows that the empty subject also exhibits this reading in Japanese.

(6) a. San-nin-no onnnanoko-ga Taroo-ni ai-ni kita.
three-CL-GEN girl-NOM Taro-DAT see-to came
'Three girls came to see Taro.'

b. *e* Ken-ni-mo ai-ni kita. (^{OK} E-type; ^{OK} quantificational)
Ken-DAT-also see-to came
'*Lit*. *e* came to see Ken, too.'

((6a, b) adopted from Şener and Takahashi (2010: 84))

Şener and Takahashi (2010) conduct a comparative study on argument ellipsis in Japanese and Turkish. Their central observation is that in Turkish, both subjects and objects can be deleted, as in Japanese, but only null objects exhibit sloppy/quantificational readings. Examples (7-10) illustrate this subject-object asymmetry.

(7) a. Can [pro anne-si]-ni ekeştir-dı.
John his mother-3SG-ACC criticize-PAST
'John criticized his mother.'

b. Mete-yse *e* öv-dü. (^{OK} strict; ^{OK} sloppy)
Mete-however praize-PAST
'*Lit*. Mete, however, praized *e*.'

(Şener and Takahashi (2010: 87))

(8) a. Can üç hursız yakala-dı.

John three burglar catch-PAST

'John caught three burglars.'

b. Filiz-se *e* sorgula- dı. (^{OK} E-type; ^{OK} quantificational)

Phylis-however interrogate-PAST

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

(Şener and Takahashi (2010: 88))

(9) a. Can [$_{CP}$ [pro oğl-u] İnilizce öğren-iyor diye] bil-iyor.

John his son-3SG English learn-PRES COMP know-PRES

'John knows that his son learns English.'

b. Filiz-se [$_{CP}$ *e* Fransızca öğren-iyor diye] bil-iyor. (^{OK} strict; * sloppy)

Phylis-however France learn-PRES COMP know-PRES

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

(Şener and Takahashi (2010: 91))

(10) a. Üç öğretmen Can-ı eleştir-dı.

Three teacher John-ACC criticize-PAST

'Three teachers criticized John.'

b. *e* Filiz-i-yse öv-dü. (^{OK} E-type; * quantificational)

Phylis-ACC-however praise-PAST

'*Lit*. *e* praised Phylis.'

(Şener and Takahashi (2010: 91))

Şener and Takahashi (2010) propose that the difference above between Japanese and Turkish with respect to sloppy/quantificational interpretations of null arguments is derived from the presence/absence of φ-agreement. Chomsky (2000) maintains that the uninterpretable φ-features of a functional head (T or *v*) agree with the matching interpretable φ-features of the closest DP. Chomsky further suggests that this operation is implemented by the uninterpretable Case feature of the DP. This step is shown in (11a).

(11) a. … $F_{1\{\sout{\varphi}\}}$ … $DP_{1\ \{\varphi, \sout{Case}\}}$ …

b. … $F_{2\{\varphi\}}$ … ___ …

c. * … $F_{2\{\varphi\}}$ … $DP_{1\ \{\varphi, \sout{Case}\}}$ …

Suppose now that after this agreement operation, DP_1 in (11a) is copied at LF onto the elliptic subject position shown in (11b). Notice, however, that the Case feature of DP_1 has already been checked and erased in (11a) before LF Copy. As a result, the uninterpretable φ-features of F_2 remain unchecked, causing the derivation to crash. This last step is illustrated in (11c). Şener and Takahashi (2010) claim that the LF-Copy process for a null subject is blocked in Turkish by φ-agreement in the subject position, as exhibited in examples (12a, b).

(12) a. (Ben) bu makele-yi yavaşyavaş oku-yacağ-**um**.
I this article-ACC slowly read-FUT-1SG
'I will read this article slowly.'

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

(Şener and Takahashi (2010: 86))

On the other hand, it is traditionally assumed that Japanese lacks φ-agreement altogether (Kuroda 1988; Fukui 1986) and hence allows LF-Copy of subjects. Şener and Takahashi provide further support for this theory from certain adjunct clauses and exceptional Case-marking constructions in Turkish, showing that φ-agreement is indeed the relevant factor that blocks the application of LF-Copy; see section 4.3 for relevant discussions on this point.

3. Argument Ellipsis in Javanese and the Irrelevance of φ-Agreement

Javanese is a Western Malayo-Polynesian language spoken by more than 75 million people in the central and eastern parts of the island of Java in Indonesia. It boasts a complex register system consisting of *krama* (formal), *madya* (semi-formal) and *ngoko* (informal) registers. Javanese is a head-initial SVO language with an elaborate voice system (active, theme, and various applicative voices) but lacks overt tense markers, φ-agreement and case morphology. The data reported in this paper were collected in the *ngoko* register, and checked by three bilingual Indonesian-Javanese consultants from Kendal, which is a *kabupaten* (regency) about 34 kilometers west of Semarang, the capital of the province of Central Java. This fieldwork was conducted in Kendal and Singapore from December 2011 through April 2013.

The most important grammatical property of Javanese relevant for our present purposes is that it makes an extensive use of discourse pro-drop (Huang 1984), just like Japanese, Chinese, Turkish and other Asian languages with massive topic-drop. Javanese

sheds a new light on the nature of possible parameters which block argument ellipsis across languages. In what follows, I provide data showing that in Javanese, objects can be targeted for LF-Copy, but subjects cannot. This observation is paradoxical under Şener and Takahashi's Anti-Agreement hypothesis reviewed in section 2 because Javanese is an agreement-less language like Japanese, but nonetheless exhibits the subject-object asymmetry with respect to sloppy/quantificational interpretations like Turkish. This result, therefore, suggests that the anti-agreement approach to argument ellipsis is not a universal hypothesis of the licensing of argument ellipsis and raises an important cross-linguistic question what an alternative key factor is which serves to block the LF-copying operation in Javanese as opposed to Japanese and Turkish. This question is addressed in section 4.

3.1. *Subject-Object Asymmetry in Javanese Argument Ellipsis*

Javanese exhibits an interesting asymmetry between null subject and null objects with respect to sloppy/quantificational interpretations. On one hand, examples (13b) and (14b) show that null objects allow sloppy/quantificational readings. Examples (15b) and (16b), on the other hand, show that null subjects do *not* allow these readings.

(13) a. Esti seneng guru-ne.
Esti like teacher-3SG
'Esti likes her teacher.'

b. Budi ya seneng *e*. (^{OK} strict; ^{OK} sloppy)
Budi also like
'*Lit.* Budi also likes *e*.'

(14) a. Esti ketemu mahasiswa telu.
Esti meet student three
'Esti met three students.'

b. Budi ya ketemu *e*. (^{OK} E-type; ^{OK} quantificational)
Budi also meet
'*Lit*. Budi also met *e*.'

(15) a. Esti ngomong [$_{CP}$ guru-ne isa basa Prancis].
Esti say teacher-3SG can language French
'Esti said that her teacher can speak French.'

b. Budi ngomong [$_{CP}$ *e* isa basa Jepang]. (^{OK} strict; * sloppy)
Budi say can language Japan
'*Lit*. Budi said that *e* can speak Japanese.'

(16) a. Esti ngomong [$_{CP}$ mahasiswa telu teka arep ketemu dewe'e].
Esti say student three come to meet 3SG
'Esti said that three students came to meet her.'

b. Budi ngomong [$_{CP}$ *e* teka arep ketemudewe'e]. (^{OK} E-type; * quantificational)
Budi say come to meet 3SG
'*Lit*. Budi said that *e* came to see him.'

3.2. *Arguments against the Verb-Stranding Ellipsis Analysis*

One might suspect that the subject-object asymmetry in Javanese reviewed in section 3.1 could be analyzed differently without necessarily invoking the process of argument

ellipsis/LF-Copy. For example, the cases which seem to involve ellipsis of direct objects in Javanese might be amenable to the analysis commonly referred to as *Verb-Stranding VP-Ellipsis* in the literature on ellipsis (Otani and Whitman 1991; Goldberg 2005; Rouveret 2012; see also Huang 1987, 1991). According to this analysis, the main verb is left as a remnant due to V-to-T raising followed by VP-ellipsis, thereby giving the appearance of elliptic objects. It is well known that in languages such as English, sloppy interpretation with direct objects arise as the result of VP-ellipsis, as shown in (17a, b) (Williams 1977).

(17) a. John will invite his wife to the party.

b. Tom will [$_{VP}$ *e*], too. (^{OK} strict; ^{OK} sloppy)

Consequently, the subject vs. object asymmetry in Javanese could be explained away by V-stranding VP-ellipsis because objects, but not subjects, are included within the ellipsis site.

Two pieces of evidence suggest, however, that this analysis is untenable for Javanese. Consider (18-19).[2]

(18) a. Esti seneng guru-ne. (=13a)
Esti like teacher-3SG
'Esti likes her teacher.'

b. Tapi Budi sengit *e*. (^{OK} strict; ^{OK} sloppy)
but Budi hate
'*Lit* … but Budi hates *e*.'

[2] The second argument against the V-Stranding VP-Ellipsis analysis is modeled on Oku's (1998) argument for the same analysis on the basis of Japanese data.

(19) a. Esti njawab soal kuwi cepet-cepet.

Esti solve problem DEM quick-RED

'Esti solved that problem quickly.'

b. Tapi Budi ora njawab *e*.

but Budi NEG solve

'*Lit*. … but Budi didn't solve *e*.'

= Budi did not solve that problem.

≠ Budi did not solve that problem quickly.

Firstly, it has been argued at length (Goldberg 2005; Rouveret 2012) that VP-ellipsis occurs in V-stranding languages such as Irish and Hebrew only when the verb in the antecedent clause is identical to the verb in the elliptic clause. As shown in (18a, b), however, in Javanese, the verbs in the two otherwise parallel sentences can be different (i.e., *seneng* 'like' vs. *sengit* 'hate'), but nonetheless the null object construction in (18b) can still exhibit the sloppy interpretation. Secondly, if the null object sentence in (19b) were derived though V-stranding VP-ellipsis, we would wrongly predict that it should have the reading that Budi did not solve the problem quickly. The fact is, however, that this sentence only allows the reading that Budi did not solve that problem in the first place. The process of argument ellipsis/LF-Copy, on the other hand, provides a straightforward account for the interpretive properties observed in (18b) and (19b). (18b) shows the sloppy interpretation for the elided object because it is recovered by copying the overt object in (18a) onto the empty object slot in (18b) at LF. Similarly, the example in (19b) does not allow the VP-level adverb *cepet-cepet* 'quickly' to be included in the interpretation of the ellipsis site because deletion of adverbs is not an instance of argument ellipsis/LF-Copy.

3.3. *Arguments against Oku's (1998) Scrambling Hypothesis*

There are two prominent, competing hypotheses in the literature on argument ellipsis in languages such as Japanese regarding what factor leads to a language allowing this process. One is the Anti-Agreement hypothesis, reviewed in the previous sections and shown to be inapplicable to Javanese. The other hypothesis, developed by Oku (1998: ch5), is one which relates the availability of argument ellipsis to the availability of scrambling. Oku's hypothesis is developed on the basis of Bošković and Takahashi's (1998) theory of Japanese-style scrambling. Assuming that θ-roles are among formal features which can drive syntactic computation (see also Hornstein 1999), Bošković and Takahashi propose that so-called "scrambled" phrases in Japanese are base-generated at their surface position and undergo obligatory LF-lowering to a θ-position to check a θ-feature of the predicate. To illustrate this theory, *sono-hon* 'that book' in (20a) is directly merged at its surface position in overt syntax and later lowers to the θ-position of the embedded verb *watasita* 'handed' to check its undischarged internal θ-feature at LF, as shown in (20b).

(20) a. Sono hon-o Bill-ga [$_{CP}$ Mary-ga John-ni watasita-to] omotteiru.
DEM book-ACC Bill-NOM Mary-NOM John-DAT handed-COMP think
'That book, Bill thinks that Mary handed to John.'

b. Bill-ga [$_{CP}$ Mary-ga John-ni **sono hon-o** watasita-to] omotteiru.
Bill-NOM Mary-NOM John-DAT DEM book-ACC handed-COMP think
Obligatory LF-Lowering for θ-Checking

Bošković and Takahashi argue that this base-generation approach to scrambling is possible in Japanese because θ-features in this language are weak in the sense of Chomsky (1995).

According to Chomsky (1995), weak features must be checked before the syntactic derivation reaches LF and hence can be tolerated in overt syntax whereas strong features must be checked in overt syntax before they reach PF. A derivation like (20b) is legitimate in Japanese as long as the "scrambled" phrase checks the θ-feature of the embedded predicate by means of LF lowering before the derivation reaches LF. Bošković and Takahashi suggest that such a derivation is illegitimate in English, on the other hand, because θ-features are strong in this language. Oku (1998) proposes that this weakness of θ-features in Japanese also makes it possible for LF Copy of an overt argument in the antecedent clause onto the corresponding elliptic site in the antecedent clause. This scrambling hypothesis therefore makes a typological claim that the availability of argument ellipsis in a language correlates with the availability of Japanese-style scrambling and vice versa, as shown in (21a, b).

(21) Oku's (1998) Scrambling Hypothesis

a. If a language *L* has Japanese-style scrambling, *L* has argument ellipsis.

b. If a language *L* has argument ellipsis, then *L* has Japanese-style scrambling.

It is now important to see whether Oku's scrambling hypothesis correctly predicts the behavior of Javanese with respect to scrambling and argument ellipsis. Specifically, Oku's hypothesis predicts that Javanese, being an argument ellipsis language, should have Japanese-style scrambling. A large body of work on Japanese scrambling (Fukui 1993; Saito 1989, 1992; Saito and Fukui 1998) takes the defining characteristic of Japanese-style scrambling to be its undoing property (or *radical reconstruction* in Saito's (1989) terms). This property manifests itself in the obligatory narrow scope of the scrambled phrase, as illustrated in (22).

(22) Daremo-ni dareka-ga [Mary-ga *e* atta-to] omotteiru. ∃ > ∀, *∀>∃
Everyone-DAT someone-NOM Mary-NOM met-COMP think
'*Lit*. Everyone, someone thinks that Mary met.'

(Bošković and Takahashi (1998:354))

The reason that the scrambled universal quantifier *daremo*-ni 'everyone-DAT' cannot take scope over the existential quantifier *dareka-ga* 'someone-NOM' in its surface position is that the former must undergo LF reconstruction (or LF lowering in Bošković and Takahashi's terms) to the complement position of the embedded verb. Turning to the corresponding case in Javanese, example (23) shows that the dislocation of *saben murid* 'every student' to the sentence-initial position yields the wide scope reading.

(23) Saben murid, ana wong kira Esti ketemu *e*. ∃ > ∀, ∀>∃
every student exist person think Esti meet
'Every student, someone thinks that Esti met '

Note that this reading is unavailable in its base-generated position, as shown in (24). In this regard, then, the long-distance "scrambling" in Javanese illustrated in (23) behaves on a par with topicalization in English, shown in (25a), in which the topicalized NP *everyone* can have wide scope in its derived position.

(24) Ana wong ngira Esti ketemu saben murid. ∃ > ∀, *∀>∃
exist person think Esti meet every student
'Someone thinks that Esti met every student.'

(25)a. Everyone, someone thinks that Mary met. ∃ > ∀, ∀>∃

b. Someone thinks that Mary met everyone. ∃ > ∀, * ∀>∃

((25a) adopted from Bošković (2004: 618))

The above discussion, thus, disproves the second prediction of Oku's hypothesis in (21b) because Javanese exhibits argument ellipsis but lacks Japanese-style scrambling. See also Li (2007), Aoun and Li (2008), and Cheng (2012) for arguments that Mandarin is another argument ellipsis language which does not possess Japanese-style scrambling; see Stjepanović (1999), Bošković (2009) and Otaki (2012), who show that the other prediction of Oku's theory in (21a) is disproved by Serbo-Croatian, which has Japanese-style scrambling but lacks argument ellipsis entirely.

3.4. *Section Summary*

Below is a table which summarizes the type of null arguments available in Japanese, Turkish and Javanese with respect to the availability of sloppy/quantificational interpretations.

	Japanese		Turkish		**Javanese**	
	Subj	Obj	Subj	Obj	**Subj**	**Obj**
Sloppy reading?	√	√	*	√	*****	√
Quantificational reading?	√	√	*	√	*****	√
φ-agreement?	NO	NO	YES	NO	**NO**	**NO**

Table 1: Cross-Linguistic Distribution of Null Arguments in Japanese/Turkish/Javanese

As is clear from Table 1, null arguments in Javanese behave typologically like null arguments in Turkish. This result is not expected under the Anti-Agreement hypothesis because Javanese possesses neither subject φ-agreement nor object φ-agreement. Given the compelling evidence presented in Şener and Takahashi (2010), the key role of φ-agreement as controlling factor of the LF-Copy process in the comparative syntax of argument ellipsis in Japanese vs. Turkish seems undeniable. However, the interpretive discrepancy between null subjects and null objects in Javanese clearly shows that the attempt to link argument ellipsis with the absence of agreement is not universally applicable. Instead, we need to seek a new alternative parameter internal to Javanese which blocks the copying operation in the subject position, but not in the direct object position. In the next section, I propose that this contrast can receive a simple explanation from the well-known morphosyntactic property of Javanese: the dyadic voice agreement.

4. Argument Ellipsis and the Dyadic Voice Agreement System in Javanese

Traditional descriptive studies on verbal morphology in Javanese have pointed out that this language exhibits a dyadic opposition which has received various terminologies such as active-passive, topic-comment and theme-rheme (Uhlenbeck 1978; Poedjosoedarmo 1986; Keeler 1984; Robson 1992) in conformity with results from Austronesian linguistics. Javanese has the obligatory nasal prefix N- which assimilates in place of articulation to the initial consonant of the root. Robson (1992: 53) states that this prefix "is found with nearly all transitive verbs as well as with a number of intransitive ones". The general rules for the place assimilation in (standard varieties of) Javanese is reproduced below from Conners (2008).

(26) Rules for Nasalization in Javanese Verbal Prefix N-

a. If the root begins with a voiceless obstruent, it is lost after affecting assimilation.

(e.g., *takon* → *nakon* 'to question')

b. Roots beginning with vowels and liquids take a velar nasal.

(e.g., *isi* → *ngisi* 'to fill'; *langi* → *nglangi* 'to swim')

c. Roots beginning with nasals are not prefixed.

(e.g., *nyanyi* → *nyanyi* 'to sing')

(Conners 2008: 134-135)

Some examples which contain the nasal prefix N- are given in (27a, b).

(27)a. Mary {**maca/*waca**} buku kuwi.

Mary AV.read/read book DEM

'Mary read that book.'

b. Kowe **{nukokke/*tuku}** ibu-mu kembang.

2SG AV.buy.APPL/buy mother-2SG flower

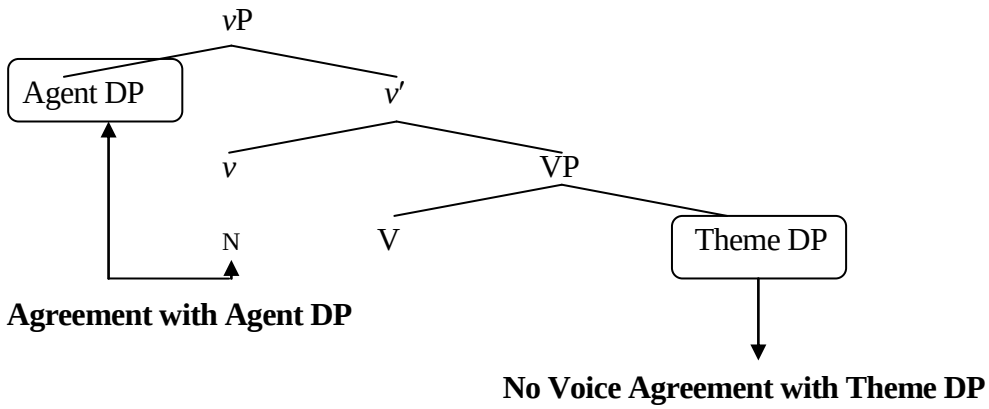
'You bought your mother a flower.'

4.1. *The Nasal Prefix N- in Javanese as Actor-Topic Marker*

Several recent works on varieties of Indonesian/Javanese (Aldridge 2008; Cole et al. 2008; Sato 2010, 2012) within the framework of the Minimalist Program (Chomsky 1995) have put forth a structural account for the voice system in these languages. Thus, Cole et al. (2008) adopt Rackowski and Richards' (2005) analysis of the voice system of Tagalog and argue that the active voice marker MEN- in Indonesian is essentially identical to the analogous

active voice marker in Philippine-type languages. Let us assume that Cole et al.'s analysis holds for Javanese as well. Under this analysis, the relevant part of the syntactic derivation for the active transitive construction in Javanese should be as shown in (28).

(28) Syntactic Derivation for the Active Construction in Javanese



According to Cole et al., the presence of the nasal prefix N- indicates two things: 1) the Agent argument is in the highest specifier of *v* and 2) no object shift has taken place. A non-Agent DP argument such as the Theme DP in (28) does not enter into any agreement relation with the *v* head. This analysis of the nasal prefix is also in conformity with Conners' (2008: 189) proposal that it marks the presence of an agent/actor argument. This analysis correctly predicts that a non-Agent argument cannot be extracted over the active verb in examples like (29).

(29) Uwong$_i$ [$_{CP}$ sing t_i **{maca/*waca}** buku kuwi] adik-ku.
man COMP AV.read/read book DEM brother-1SG
'The man who read that book is my brother.'

In this derivation, the nasal prefix verb *maca* 'AV.read' indicates that the Agent DP *uwong* 'man' is the highest specifier of the *v* head and that no object shift has applied to the direct object DP *buku kuwi* 'that book'. In other words, the direct object stays in its base-generated position. Accordingly, A′-movement of the direct object for relativization is blocked by the Phase Impenetrability Condition defined in (30) (where the edge of the phase head H includes any specifiers of H). This is so because the object is not at the edge/specifier of the phase head *v* to be moved to the head position of the relative clause.

(30) Phase Impenetrability Condition

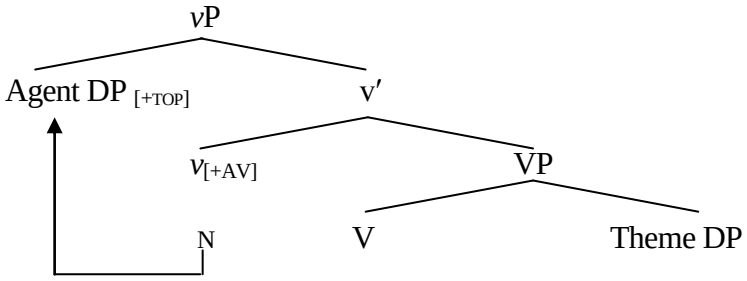
In Phase α with head H, only H and its edge are accessible to operations outside α.

(Chomsky 2000: 108)

This line of agreement-based approach has also been pursued in a slightly different form by Guilfoyle et al. (1992: 385-387) within the Government-Binding framework (Chomsky 1981, 1986). They propose that the active voice marker *meN-* in Indonesian is the Actor-Topic marker and attributes the inability of a non-Agent DP to move across the active voice verb to the general morphosyntactic prohibition in Austronesian languages such as Tagalog and Malagasy such that only the DP which agrees with the verb with appropriate voice morphology is accessible for further syntactic movement. In this paper, I adopt Guilfoyle et al.'s analysis of the active voice marker in Indonesian to the nasal prefix N- in Javanese and assume that it represents the Actor-Topic alignment in the syntactic derivation where the Agent DP is licensed in the specifier of the *v* head. Under this analysis, sentences with the Actor-Topic alignment take the following syntactic derivation. In this derivation, the *v*

headed by the nasal prefix selects an Agent DP in its specifier. The DP in question is also marked with the [+Top] feature, which signifies the Actor-Topic alignment.

(31) Actor-Topic Alignment in Javanese



The present analysis of the nasal prefix as the Actor-Topic marker in Javanese receives strong empirical support from the so-called definite subject restriction. It is widely acknowledged in the literature on Malay/Indonesian that the grammatical position of subject strictly corresponds to the discourse notion of topic; see Soemarmo 1970 for Indonesian, Alsagoff 1992 and Mashudi 1976 for Malay and Soemarmo 1970, Poedjosoedarmo 1977 for Javanese and Davies 1999 for Madurese. In Javanese, only proper names and NPs marked with a demonstrative particle or the definite suffix can appear in subject positions. Cole et al. (2002) have recently proposed that the correlation between the two notions in Javanese– subject and topic – is an inviolable constraint on Javanese grammar such that the syntactic notion of subject must be topical. Since topics, by definition, refer to an entity previously introduced into the discourse, they are always definite and hence cannot introduce a new discourse referent (Gundel and Fretheim 2004). Here, I briefly review two empirical arguments for Cole et al.'s observation. First, an indefinite NP cannot appear in subject positions. This point is illustrated in (32a).

(32)a. * **[$_{NP}$ Wong lanang]** [$_{VP}$ gek turu]. (indefinite NP in subject position)

person male PROG sleep

'A boy is sleeping.'

b. **[$_{NP}$ Wong lanang kuwi]** [$_{VP}$ gek turu]. (definite NP in subject position)

person male DEM PROG sleep

'That boy is sleeping.'

c. [$_{TP}$ *pro* [$_{VP}$ ono wong lanag gek turu]]. (indefinite NP in post-verbal posiiton)

exist person male PROG sleep

'A boy is sleeping.'

(Cole et al. 2002: 103)

The example in (32b) shows that the same NP may appear in subject position when marked by the demonstrative *kuwi* 'that'. For an indefinite NP to be introduced in the discourse, Javanese employs a complex existential-like construction like the one shown in (32c).

Second, Javanese allows *wh*-in-situ like other Asian languages such as Japanese and Chinese. Thus, *wh*-phrases can appear in a wide variety of syntactic positions such as direct object (33a, b), possessor (33c), indirect object (33d) and object of prepositions (33e).

(33)a. Siti meh mangan **apa**? (direct object position)

Siti fut AV.eat what

'What will Siti eat?'

b. Tono wis ngambung **sapa**? (direct object position)

Tono past AV.kiss who

'Who did Tono kiss?'

c. Siti ngepruk kanca-ne **sapa**? (possessor position)

Siti AV.hit friend-POSS who

'Whose friend did Tono hit?'

d. Tono ngei **sapa** apel kuwi? (indirect object position)

Tono AV.give who apple DEM

'Who did Tono give that apple?'

e. Tono nulis surat kuwi nggo **sapa**? (object of preposition)

Tono AV.write letter DEM for who

'For whom did Tono write that letter?'

(Cole et al. 2002: 93)

Strikingly, however, Cole et al. point out that the *wh*-in-situ strategy is unavailable for some reason for *wh*-phrases in subject positions. This point is illustrated in (34a, b). In such a case, the cleft construction headed by the complementizer *sing* 'that', as illustrated in (35a, b), is used instead of *wh*-in-situ.

(34)a. * **Sapa** meh mangan apel? (subject position)

who FUT AV.eat apple

'Who will eat that apple?'

b. * **Apa** nggawe kowe seneng? (subject position)

what AV.make 2SG like

'What makes you happy?'

(Cole et al. 2002: 93)

(35)a. **Sapa** **sing** meh mangan apel?

who COMP FUT AV.eat apple

'Who is it that will eat the apple?'

b. **Apa** **sing** nggawe kowe seneng?

what COMP AV.make 2SG like

'What is it that makes you happy?'

(Cole et al. 2002: 94)

Cole et al. suggest that the constraint against wh-in-situ for subject *wh*-phrases arises because of the requirement that subjects in Javanese must be a topic. More specifically, since *wh*-phrases have inherent informational focus (Chomsky 1971, 1976; Jackendoff 1972), they are banned from appearing in subject positions, which are strictly reserved for topics in Javanese. A definite *pro* is possible in this position, on the other hand, because pronouns can serve as topics/old information.

With Cole et al.'s observation in Javanese in place, we are now ready to tackle the central issue this paper started with, namely, why sloppy/quantificational interpretations of null arguments are acceptable in object position, but not in subject position in this language.

4.2. *Deriving the Lack of Sloppy/Quantificational Readings for Subjects in Javanese*

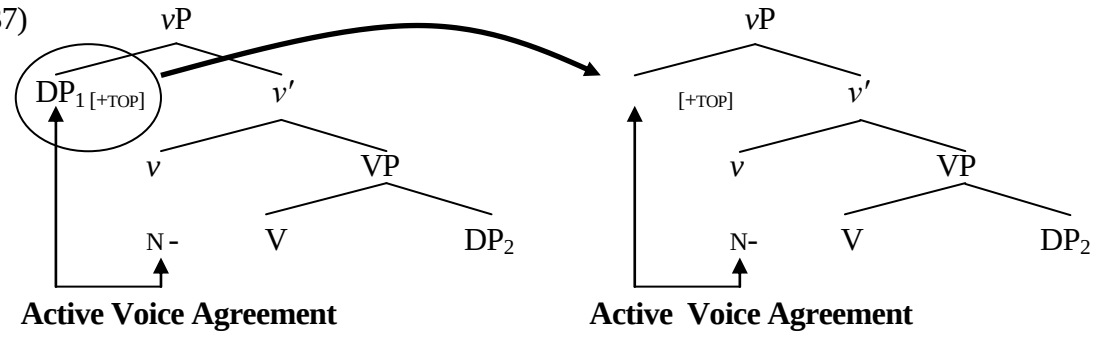
I propose here that the impossibility of the sloppy/quantificational interpretations for null subjects in Javanese naturally follows from the definiteness restriction imposed by the topic requirement created by the active voice prefix N- in the Actor-Topic alignment. To see how this analysis works, consider the hypothetical derivation of a null subject construction shown

in (36b). The relevant part of the derivation for the null subject construction is shown in (37) under the LF-Copy Theory.

(36)a. Esti ngomong [$_{CP}$ guru-ne ngesun Budi].
Esti say teacher-3SG AV.kiss Budi
'Esti said that her teacher kissed Budi.'

b. Yuli ngomong [$_{CP}$ *e* ngesun Ali]. (^{OK} strict; * sloppy)
Yuli say AV.kiss Ali
'*Lit*. Yuli said that *e* kissed Ali.'

(37)



In this derivation, DP_1 (*guru-ne* 'teacher-3SG') is merged in the specifier of the *v* headed by the nasal prefix N-. The prefix marks DP_1 as the Actor-Topic in this derivation (signified as the [+TOP]). This DP, then, is copied at LF onto the empty subject position in the null subject sentence in (36b) in the manner shown in (37). Note that the *v* head in the derivation of the elliptical clause also marks DP_1 as the Actor-Topic. As a topic is, by definition, a definite DP and hence cannot introduce a new discourse referent, the referential identity of DP_1 must be recoverable from the context at the time this DP undergoes LF-Copy into the empty subject position. Restricting our discussion to the contexts where the null subject in (36b) is

anaphoric to the corresponding overt subject in (36a), this means that the referential index of DP_1 must be recovered by the preceding context. It follows then that the empty subject in (36b) must refer to whomever the DP_1 *guru-ne* 'teacher-3SG' refers to in (36a). Consequently, the sloppy reading is blocked for subject positions in Javanese.

A similar analysis can be extended to derive the impossibility of the quantificational interpretation for null subjects, as illustrated in (38b).

(38)a. Esti ngomong [$_{CP}$ mahasiswa telu ngesun Budi].
Esti say student three AV.kiss Budi
'Esti said that three students kissed Budi.'

b. Yuli ngomong [$_{CP}$ *e* ngesun Ali]. (^{OK} E-type; * quantificational)
Yuli say AV.kiss Ali
'*Lit.* Yuli said that *e* kissed Ali.'

More specifically, the nasal prefix N- in the derivation of the elliptical clause requires that the referent of DP_1 be definite when it undergoes LF-Copy into the empty subject position. Consequently, there is no way for DP_1 to denote a set of three teachers who kissed Ali which is different from the set of three students who kissed Budi. As a result, the only interpretation available for the null subject in (38b) ends up being the E-type interpretation.

Note that the derivation sketched in (37) won't be involved in the derivation of null object constructions since direct objects have no need to enter into any voice agreement with the *v* head. Our current analysis also predicts that ellipsis of non-subject arguments in Javanese, such as indirect objects of ditransitive verbs, should also be able to exhibit

sloppy/quantificational readings because there is no voice agreement relation between the *v* head and these objects. Examples (39-40) show that this prediction is indeed borne out.

(39)a. Esti ngefaxke dokumen kuwi nggo wong tua-ne.
Esti AV.fax document DEM for person old-3SG
'Esti faxed the document to her parents.'

b. Tapi Budi ngeposke dokumen kuwi e. (^{OK} strict; ^{OK} sloppy)
but Budi AV.post document DEM
'*Lit*. … but Budi posted the document *e*.'

(40)a. Esti ngefaxke documen kuwi nggo wong telu.
Esti AV.fax document DEM for person three
'Esti faxed the document to three people.'

b. Tapi Budi ngeposke dokument *e*. (^{OK} E-type; ^{OK} quantificational)
but Budi AV.post document
'Lit. … but Budi posted the document.'

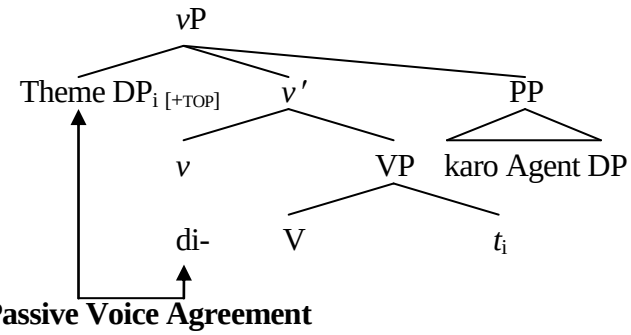
The examples in (39b) and (40b) both involve the ellipsis of the Goal argument of the ditransitive verb *ngeposke* 'post'. Crucially, this elliptic argument permits sloppy/quantificational interpretations as well as strict/E-type interpretations. In this way, the core subject/non-subject asymmetry in Javanese is derived from the independently motivated assumption that the grammatical subject is specifically selected by the nasal voice prefix as Actor-Topic in dyadic opposition to non-subject DPs.

Notice that our current analysis predicts that the embedded null Agent DP in (36a, b) and (38a, b) should be able to exhibit sloppy/quantificational interpretations when it does not participate in an agreement relation with the *v* head marked with the active voice prefix. A case in point is the passive construction headed by the *di*-prefix. In this construction, the Theme argument of the stem verb appears in the sentence-initial position whereas the Agent argument appears in a post-verbal oblique position, introduced by the preposition *karo* 'by', as shown in (41), in a way reminiscent of English passive constructions.

(41) Surat kuwi **{*maca/*waca/di-waca}** karo kanca-ku.
letter DEM AV.read/read/PV-read by friend-1SG
'That letter was read by my friend.'

Let us hypothesize that in this *di*-marked passive construction, the passive *v* head selects the Theme argument in its specifier and marks it as the Theme-Topic, as shown in (42).[3]

(42)



In this derivation, the underlying Theme argument (i.e., *surat kuwi* 'that letter' in (41)) undergoes movement into the specifier of the *v* headed by the passive prefix *di*-. The head

[3] I abstract away from the exact position of the Agent DP in (42) and assume that it is adjoined to the *v*P.

marks this DP as the Theme-Topic. The Agent argument (i.e., *kanca-ku* 'my friend') is in the adjunct PP position headed by the oblique preposition *karo* 'by' and does not enter into any voice agreement relation with the *v* head, unlike in the case of the active voice construction. Given this derivation, our proposed analysis makes two predictions. One prediction is that the null subject in a *di*-passive construction should disallow sloppy/quantificational interpretations because it agrees with the *v* head as the Theme-Topic. The other prediction is that the null oblique Agent DP in this construction should allow such interpretations because of the lack of any voice agreement between the DP and the passive *v* head. Examples (43-46) show that both predictions are indeed borne out.

(43)a. Esti ngomong [$_{CP}$ guru-ne di-sun karo Budi].
Esti say teacher-3SG PV-kiss by Budi
'Esti said that her teach was kissed by Budi.'

b. Yuli ngomong [$_{CP}$ *e* di-sun karo Ali]. (^{OK} strict; * sloppy)
Yuli say PV-kiss by Ali
'*Lit.* Yuli said that *e* was kissed by Ali.'

(44)a. Esti ngomong [$_{CP}$ mahasiswa telu di-sun karo Budi].
Esti say student three PV.kiss by Budi
'Esti said that three students were kissed by Budi.'

b. Yuli ngomong [$_{CP}$ *e* di-sun karo Ali]. (^{OK} E-type; * quantificational)
Yuli say PV.kiss by Ali
'*Lit.* Yuli said that *e* was kissed by Ali.'

(45)a. Esti ngomong [$_{CP}$ Budi di-sun karo guru-ne].
Esti say Budi PV-kiss by teacher-3SG
'Esti said that Budi was kissed by her teacher.'

b. Yuli ngomong [$_{CP}$ Ali di-sun *e*]. (^{OK} strict; ^{OK} sloppy)
Yuli say Ali PV-kiss
'*Lit*. Yuli said that Ali was kissed.'

(46)a. Esti ngomong [$_{CP}$ Budi di-sun karo mahasiswa telu].
Esti say Budi PV-kiss by student three
'Esti said that Budi was kissed by three students.'

b. Yuli ngomong [$_{CP}$ Ali di-sun *e*]. (^{OK} E-type; ^{OK} quantificational)
Yuli say Ali PV-kiss
'*Lit*. Yuli said that Ali was kissed.'

The examples in (43b, 44b) involve the ellipsis of the Theme-Topic DP in the embedded subject position. The elided DP disallows sloppy/quantificational interpretations. The examples in (45b, 46b), on the other hand, involve the ellipsis of the oblique Agent DP in the embedded clause. The DP allows sloppy/quantificational interpretations. The interpretive patterns observed here, therefore, provide further independent support for our view that voice agreement is indeed the crucial factor in licensing/blocking the LF-Copy operation.

4.3. *Abstract Dyadic Voice Agreement in Javanese and Its Theoretical Implications*

There are two important questions which arise regarding our proposed analysis of the subject/non-subject asymmetry in Javanese.[4] One question concerns the exact nature of voice agreement relevant to the asymmetry under investigation. The examples in (15, 16) show that the null subject blocks sloppy/quantificational readings even though the verbs (i.e., *isa* 'can' and *teka* 'come') are not morphologically marked with the active voice prefix N-. This observation shows that the morphological manifestation of the prefix is irrelevant in blocking the relevant readings. This observation is further supported by the fact that these readings are blocked in subject position even with active verbs which are independently known not to be able to take any kind of voice marking, including unergative verbs such as *adus* 'to take a bath' and *budhal* 'to leave' and unaccusative verbs such as *lunga* 'to go' and *rutu* 'to fall' (Conners 2008: 68). Examples (47-50) illustrate this point.

(47)a. Esti ngomong [$_{CP}$ anak-e **adus** ning hotel iki].
Esti say child-3SG take a bath in hotel DEM
'Esti said that her child took a bath in this hotel.'

b. Budi ngomong [$_{CP}$ *e* **adus** ning hotel kuwi]. (^{OK} strict; * sloppy)
Budi say take a bath in hotel DEM
'*Lit*. Budi said that *e* took a bath in that hotel.'

(48)a. Esti ngomong [$_{CP}$ anak telu **adus** ning hotel iki].
Esti say child three take a bath in hotel DEM
'Esti said that three children took a bath in this hotel.'

[4] I thank two anonymous reviewers for asking these questions.

b. Budi ngomong [$_{CP}$ *e* **adus** ning hotel kuwi]. (^{OK} E-type; * quantificational)
Budi say take a bath in hotel DEM
'*Lit*. Budi said that *e* took a bath in that hotel.'

(49)a. Esti ngomong [$_{CP}$ anak-e **lunga** ning pasar].
Esti say child-3SG go to market
'Esti said that her child went to the market.'

b. Budi ngomong [$_{CP}$ *e* **lunga** ning rumah sakit]. (^{OK} strict; * sloppy)
Budi say go to hospital
'*Lit*. Budi said that *e* went to the hospital.'

(50)a. Esti ngomong [$_{CP}$ anak **lunga** ning pasar].
Esti say child-3SG go to market
'Esti said that three children went to the market.'

b. Budi ngomong [$_{CP}$ *e* **lunga** ning rumah sakit]. (^{OK} E-type; * quantificational)
Budi say go to hospital
'*Lit*. Budi said that *e* went to the hospital.'

The systematic lack of sloppy/quantificational readings for null subjects with verbs without voice marking in (47-50) suggests that whether the Actor-Topic alignment is realized as an overt nasal prefix or not is irrelevant in licensing/blocking the relevant readings. Following Conners's (2008: 134) observation (see also Robson 1992: 53 for a similar observation) that this prefix "is added to almost any root" to mark an active voice construction, I assume that all active verbs participate in an agreement relation with the Agent DP in its specifier,

whether it has any visible morpho-phonetic reflex or not. This conclusion is in contrast to the one reached by Şener and Takahashi (2010) based on their investigation of argument ellipsis in Turkish. As we noted in section 2, they observe that empty subjects can exhibit sloppy readings precisely in syntactic contexts where subjects do not show φ-agreement. They mention two such contexts - adjunct clauses and Exceptional Case-Marking constructions – and observe that the null subject do allow this reading, as shown in (51b) and (51b).

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

b. Filiz-se [*e* Fransızca **öğren-ince**] sevin-di. (^{OK} strict; ^{OK} sloppy)
Phylis-however French learn-because be.pleased-PRES.PERF
'*Lit*. Phylis, however, is pleased because *e* has learned French.'

(Şener and Takahashi 2010: 95)

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

b. Suzan-se [*e* ilkokul-a **başla-yacak**] san-ıyor.
Suzan-however grade school-DAT start-FUR think-PRES
'*Lit*. Suzan, however, thinks that *e* will start grade school.'

(Şener and Takahashi 2010: 96)

The examples in (51-52) confirm the correlation between the surface presence/absence of φ-agreement and the possibility of argument ellipsis in Turkish whereas the examples in (36, 38, 47-50) indicate that argument ellipsis in Javanese is not so constrained. The possibility entertained here that abstract agreement serves to block the LF-Copy process has also been pursued by Takahashi (2010, 2013) in his analysis of argument ellipsis in Chinese and Malayalam. Takahashi points out that these languages exhibit the same subject-object asymmetry as Javanese and suggests that the LF-Copy process is prevented for an empty subject positions in these languages by syntactically active, albeit invisible, φ-agreement, drawing on evidence from the blocking effect on long-distance anaphors (Miyagawa 2010). At the current stage of my research, I have nothing profound to offer regarding the parametric difference in the role of syntactic agreement exhibited by Turkish and Javanese, and I leave this as an important issue to address in future investigations of the cross-linguistic typology of argument ellipsis.

Another question which is raised by our proposed analysis of Javanese argument ellipsis is the role of Case evaluation/checking in connection with Şener and Takahashi's Anti-Agreement Hypothesis. Recall from section 2 that Şener and Takahashi suggest that the computational reason why LF-Copy is blocked for a null subject position is that the uninterpretable φ-features of the T in the elliptical clause remain unchecked. This is, in turn, attributed to the fact that the uninterpretable Case feature of the copied DP subject has already been checked and erased in the derivation of the antecedent full-fledged clause. The underlying assumption in this analysis is the *Activation Condition* from Chomsky (2000), which states for our current purposes that the uninterpretable Case feature of the DP subject makes it possible for it to enter into an agreement relation with T. If we follow Chomsky's (2000) theory of agreement, one might wonder how non-subject DPs, such as direct objects,

can have their uninterpretable Case feature checked and erased in Javanese because our theory states that there is no agreement relation between the *v* head and these DPs in light of the absence of such voice morphology on the predicate. I maintain that Javanese lacks a Case system developed on the basis of Indo-European languages like English altogether and suggest that voice agreement and Case play more or less similar grammatical role. It is a well-known fact that some languages like Japanese rely on overt case marking to indicate meanings and grammatical relations whereas other languages like Chinese code no case morphology but instead are more reliant on word order. I suspect that grammatical relations such as subjects/Agents and objects/Themes are determined on the basis of surface word order in Javanese coupled with various morphological affixes attached to predicates. Under this view, there is no technical issue of Case checking/assignment with regards to DPs in Javanese. Furthermore, the underlying assumption behind Chomsky's mechanism of agreement that Case checking is invariably tied with φ-agreement has been disputed for a while by several linguists in Japanese linguistics, who attempt to dissociate the link between the two phenomena. Thus, Kuroda (1988) and Fukui (1986) argue that Japanese lacks φ-agreement (see Miyagawa (2010, 2012, 2013), though, for the opposing view), but this language does have overt case morphology, as shown in many examples discussed in section 2. This observation indicates that φ-agreement and Case are two independent phenomena in Japanese. Indeed, Fukui and Takano (1998) propose that accusative case is an inherent case linked to the argument structure of verbs involved whereas Saito (1985) claims that nominative case is assigned to any element immediately dominated by TPs. These analyses indicate that the case/Case system may have nothing to do with φ-agreement system, contrary to Chomsky's (2000) recent theory.

5. Conclusions

This paper has observed that Javanese argument ellipsis exhibits a curious subject-object asymmetry with respect to sloppy/quantificational interpretations of null arguments. I have shown that Şener and Takahashi's (2010) Anti-Agreement Hypothesis on argument ellipsis, developed on the comparative survey of Japanese and Turkish, cannot account for this asymmetry because Javanese lacks the φ-agreement system altogether. I have proposed instead that the key factor for licensing/blocking argument ellipsis in this language is the voice agreement system. To the extent that our proposed analysis is on the right track, it suggests that not only φ-agreement, but also voice agreement, needs to be included as part of the general theory of agreement within syntactic theory, in relation with argument ellipsis.

References

ALDRIDGE, E. 2008. Phase-based account of extraction in Indonesian. *Lingua* 118, 1440-1469.

ALSAGOFF, L. 1992. Topic in Malay: The other subject. Stanford University. PhD Diss.

AOUN, J. & Y.-H. AUDREY LI. 2008. Ellipsis and missing objects. *Foundational issues in linguistic theory*, eds. R. Freidin, C. Otero and M.-L. Zubizarreta, 251-274. Cambridge, MA: MIT Press.

BOŠKOVIĆ, Ž. 2004. Topicalization, focalization, lexical insertion, and scrambling. *Linguistic Inquiry* 35, 613-638.

BOŠKOVIĆ, Ž. 2009. Scrambling. *The Slavic languages*, eds. T. Berger, K. Gutschmidt, S. Kempgen & P. Kosta, 714-724. Berlin: Mouton de Gruyter.

BOŠKOVIĆ, Ž. & TAKAHASHI, D. 1998. Scrambling and last resort. *Linguistic Inquiry* 29, 347-366.

CHENG, HSU-TE JOHNNY. 2012. On the non-elidability of phases. *Proceedings of GLOW in Asia Workshop for Young Scholars* 2011, eds. K. Otaki, H. Takeyasu & S.-I. Tanigawa, 44-58. Mie, Japan: Mie University.

CHOMSKY, N. 1971. Deep structure, surface structure and semantic interpretation. *Semantics: An interdisciplinary reader in philosophy, linguistics and psychology*, eds. D. Steinberg and L. Jakobovits, 183-216. Cambridge: Cambridge University Press.

CHOMSKY, N. 1976. Conditions on rules of grammar. *Linguistic Analysis* 2, 303-351.

CHOMSKY, N. 1981. *Lectures on government and binding*. Dordrecht: Foris.

CHOMSKY, N. 1986. *Knowledge of language: Its nature, origin, and use*. New York: Praeger.

CHOMSKY, N. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

CHOMSKY, N. 2000. Minimalist inquiries: The framework. *Step by step: Essays on minimalist syntax in honor of Howard Lasnik,* eds. R. Martin, D. Michaels & J. Uriagereka, 89-155. Cambridge, MA: MIT Press.

COLE, P., HERMON G., INOHA, K. & TJUNG, Y. 2002. A constraint on *wh* in situ in Javanese. *Proceedings of AFLA 8: The Eighth Meeting of the Austronesian Formal Linguistics Association*, eds. Andrea Rackowski and Norvin Richards, 91-106. MITWPL: Department of Linguistics and Philosophy, MIT.

COLE, P., HERMON G., & YANTI. 2008. Voice in Malay/Indonesian. *Lingua* 118, 1500-1553.

CONNERS, T. 2008. Tengger Javanese. Yale University. PhD Diss.

DAVIES, W. 1999. Madurese and Javanese as strict word-order languages. *Oceanic Linguistics* 38, 152-167.

EVANS, G. 1980. Pronouns. *Linguistic Inquiry* 11, 337-362.

FUKUI, N. 1986. A theory of category projection and its application. MIT. PhD Diss.

FUKUI, N. 1993. Parameters and optionality. *Linguistic Inquiry* 24, 399-420.

GOLDBERG, L. 2005. Verb-stranding VP ellipsis: A cross-linguistic study. McGill University. PhD Diss.

GUILFOYLE, E., HUNG. H., & TRAVIS, L. 1992. Spec of IP and Spec of VP: Two subjects in Austronesian languages. *Natural Language & Linguistic Theory* 10, 375-414.

GUNDEL, J. K. & T. FRETHEIM. 2004. Topic and focus. *The handbook of pragmatics*, eds. L. R. Horn & G. Ward, 175-196. Oxford: Blackwell.

HOJI, H. 1985. Logical form constraints and configurational structures in Japanese. University of Washington. PhD Diss.

HORNSTEIN, N. 1999. Movement and control. *Linguistic Inquiry* 30, 69-96.

HUANG, C.-T. J. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15, 531-574.

HUANG, C.-T. J. 1987. Remarks on empty categories in Chinese. *Linguistic Inquiry* 18, 321-337.

HUANG, C.-T. J. 1991. Remarks on the status of the null object. *Principles and parameters in comparative grammar*, ed. R. Freidin, 56-76. Cambridge, MA: MIT Press.

JACKENDOFF, R. 1972. *Semantic interpretation in generative grammar*. Cambridge: MIT Press.

KEELER, W. 1984. *Javanese: A cultural approach*. Athens, OH: Ohio University Center for International Studies.

KIM, S.-W. 1999. Sloppy/strict identity, empty objects, and NP ellipsis. *Journal of East Asian Linguistics* 8, 255-284.

KURODA, S.-Y. 1965. Generative grammatical studies in the Japanese language. MIT. PhD Diss.

KURODA, S.-Y. 1988. Whether we agree or not: A comparative syntax of English and Japanese. *Papers from the second international workshop on Japanese syntax*, ed. W. Poser. 103-143. Stanford, CA: CSLI Publications.

LI, Y.-H. A. 2007. Beyond empty categories. *Bulletin of the Chinese Linguistic Society of Japan* 254, 74-106.

MASHUDI, KADER. 1976. The syntax of Malay interrogatives. Simon Fraser University. PhD Diss.

MIYAGAWA, S. 2010. *Why agree? Why move? Unifying agreement-based and discourse-configurational languages*. Cambridge, MA: MIT Press.

MIYAGAWA, S. 2012. Agreements that occur mainly in main clauses. *Main clause phenomena: New horizons*, eds. L. Aelbrecht, L. Haegeman & R. Nye, 79-112. Amsterdam: John Benjamins.

MIYAGAWA, S. 2013. Surprising agreements at T and C. Ms., MIT.

OHSO, M. 1976. A study of zero pronominalization in Japanese. Ohio State University. PhD Diss.

OKU, S. 1998. A theory of selection and reconstruction in the minimalist perspective. University of Connecticut. PhD Diss.

OTAKI, KOICHI. 2012. Argument ellipsis arising from non-fusional Case morphology. *Online Proceedings of GLOW in Asia Workshop for Young Scholars* 2011, eds. K. Otaki, H. Takeyasu & S.-I. Tanigawa, 247-261. Mie, Japan: Mie University.

OTANI, K. & WHITMAN, J. 1991. V-raising and VP-ellipsis. *Linguistic Inquiry* 22, 345-358.

POEDJOSOEDARMO, G. 1977. Thematization and information structure in Javanese. *NUSA vol. 3, Miscellaneous studies in Indonesia and languages in Indonesia: Part II*, ed. A. Halim, 34-43. Jakarta: Lembaga Bahasa Universitas Atma Jaya.

POEDJOSOEDARMO, G. 1986. *Role structure in Javanese*. Jakarta: Atma Jaya Press.

RACKOWSKI, A. & RICHARDS, N. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36, 565-599.

ROBSON, S. 1992. *Javanese grammar for students*. Melbourne: Monash Asia Institute.

ROUVERET, A. 2012. VP-ellipsis, phases and the syntax of morphology. *Natural Language & Linguistic Theory* 30, 897-963.

SAITO, M. 1985. Some asymmetries in Javanese and their theoretical implications. MIT. PhD Diss.

SAITO, M. 1989. Scrambling as semantically vacuous A′-movement. *Alternative conceptions of phrase structure*, eds. M. Baltin and A Kroch, 182-200. Chicago: University of Chicago Press.

SAITO, M. 1992. Long distance scrambling in Japanese. *Journal of East Asian Linguistics* 1, 69-118.

SAITO, M. 2007. Notes on East Asian argument ellipsis. *Language Research* 43, 203-227.

SAITO, M. & FUKUI, N. 1998. Order in phrase structure and movement. *Linguistic Inquiry* 29, 439-474.

SATO, Y. 2010. *Minimalist interfaces: Evidence from Indonesian and Javanese*. Amsterdam: John Benjamins.

SATO, Y. 2012. Successive cyclicity at the syntax-morphology interface: Evidence from Standard Indonesian and Kendal Javanese. *Studia Linguistica* 66, 32-57.

ŞENER, S. & TAKAHASHI, D. 2010. Ellipsis of arguments in Japanese and Turkish. *Nanzan Linguistics* 6, 79-99.

SOEMARMO, M. 1970. Subject-predicate, focus-presupposition, and topic-comment in Bahasa Indonesia and Javanese. University of California, Los Angeles. PhD Diss.

STJEPANOVIĆ, S. 1999. Scrambling: Overt movement or base generation and LF movement. *Journal of Slavic Linguistics* 7, 305-324.

TAKAHASHI, D. 2008a. Noun phrase ellipsis. *The Oxford handbook of Japanese linguistics*, eds. S. Miyagawa and M. Saito, 394-422. Oxford: Oxford University Press.

TAKAHASHI, D. 2008b. Quantificational null objects and argument ellipsis. *Linguistic Inquiry* 39, 307-326.

TAKAHASHI, D. 2010. Argument ellipsis, anti-agreement, and scrambling. To appear in *Japanese syntax in comparative perspective*, ed. M. Saito. Oxford: Oxford University Press.

TAKAHASHI, D. 2013. Argument ellipsis in Japanese and Malayalam. *Nanzan Linguistics* 9, 173-192.

UHLENBECK, E.M. 1978. *Studies in Javanese morphology*. The Hague: Martinus Nijhoff.

WILLIAMS, E. 1977. Discourse and logical form. *Linguistic Inquiry* 8, 101-139.