An Applicative Approach to Major Object Constructions in East Asian Languages

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1. Introduction

This paper provides a comparative study of Major Object Constructions in Korean and Japanese [1]:

(1) *Mary-ka John-ul tali-lul chaessta.* (KR)
-NOM –ACC leg-ACC kicked
'Mary kicked John's leg.' Lee & Cho (2003: 633)

(2) (?) *Mary-ga John-o, asi-o ketta.* (JP)
-NOM -ACC leg-ACC kicked
'Mary kicked John on the leg.'

In (1, 2), a monotransitive verb *kick* appears to take two objects that hold a possessive relation. Sentences like the above are called Major Object Constructions (MOC). I call the possessor, *John* in (1, 2), the Major Object (MO), and the possessee, *leg* in (1, 2), the Lower Object (LO). There have been huge debates in Korean literature in terms of the relations between two objects and the verb (e.g., Tomioka & Sim 2005). On the other hand, little attention has been paid to MOC in Japanese. This state of affairs stems from an over-application of the Double-*o* Constraint (DoC), according to which two accusatives cannot co-occur in a certain domain. Although the sentence in (2) is fairly acceptable for many speakers (with a short pause between the two accusatives), Japanese MOC have not been of particular interest in the literature.[2]

The descriptive goal of this paper is to reveal properties of MOC in Japanese in comparison with MOC in Korean. I show that although (1) and (2) are similar with respect to the surface configurations, properties of MOC in these languages differ in many aspects. The theoretical goal is to provide a structural account for MOC in Korean and Japanese and the differences between them. To do so, I put forward two proposals. First, a High Applicative (ApplH) head constitutes MOC in Korean as in (3) while a Low Applicative (ApplL) head is required to introduce two objects in Japanese as in (4).

(3) $[_{\text{VoiceP}}$ Subj $[[_{\text{ApplHP}}$ MO $[[_{\text{VP}}$ LO V] ApplH]] v]] (Korean: ApplH)
(4) $[_{\text{VoiceP}}$ Subj $[[_{\text{VP}}\,[_{\text{ApplLP}}$ MO [LO ApplL]] V] v]] (Japanese: ApplL)

I demonstrate that the properties and differences between Korean and Japanese are well accounted for with the applicative approach. Among consequences for the applicative approach, I further discuss phasehood of the Appl heads. As predicted based on analyses in McGinnis (2008) and Kim (2015), behaviors of LO correctly show that ApplH in Korean is a phase head while ApplL in Japanese is not.

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[1] Abbreviations. ACC: accusative, Appl: applicative, ASP: aspect, DAT: dative, DCL: declarative, GEN: genitive, HON: honorification, LO: Lower Object, MO: Major Object, NOM: nominative, PASS: passive.

[2] The nature of DoC is beyond the focus of this paper. See Hiraiwa (2010) for an extensive overview.

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Second, I propose that a Major Argument (e.g., MO, Major Subjects) that is introduced by various Appl heads, causes an intervention effect. This analysis explains a seemingly contradictory example on a restriction on movement of LO in Korean as in (5) (LO cannot be passivized beyond MO), for which either the applicative approach or a phase-based account cannot fully account.

(5) **Phal$_k$-i John-eyuyhayse Bob-eykey* t_k pro *noh-aci-ess-ta.* (KR)
arm-$_{NOM}$ -by $-_{DAT}$ (pro$_{-ACC}$) give-$_{PASS}$-$_{PAST}$-$_{DCL}$
(Intended) 'Bob's arm was given (a shot) by John.' # context: pro = *cwusa* 'shot'

Japanese shows a similar restriction even if the structure of MOC in Japanese is different from the one in Korean. Extending the analysis into other syntactic movements and other constructions that I argue involve various Appl heads, I propose that the movement restriction of LO in MOC is an instance of a more general phenomenon, which I call Major Argument Intervention; certain types of applied arguments introduced by various Appls blocks movement of the lower arguments.

This paper is organized as follows. In Section 2, I provide the structures involving applicative heads that I use to analyze MOC in this paper. Section 3 catalogues the properties of MOC in these languages. I show that these properties are captured well with the applicative approach. Section 4 discusses the phasehood of the Appl heads. In Section 5, I investigate the movement restriction of LO, and propose a more general movement restriction. Section 6 concludes the paper.

2. Structures of MOC

2.1. MO introducers

It has been widely assumed that Korean MO is introduced by a head above VP. For instance, Tomioka & Sim (2005) argue for a two-layer VP and convincingly provide a semantics of (inalienable) possession relation, claiming that the relation is held between two events (the covert higher VP, i.e., V_{affect}P, and the main VP) instead of between two arguments.

Bosse (2015) recognizes several types of affectee arguments based on four criteria: semantics, possession relation, at-issue/not-at-issue meaning distinction, and sentience of the applied NP. He classifies affectee arguments into four types: affected experiencers, external possessor, benefactives, and attitude holder. Based on past studies (e.g., Tomioka & Sim 2007), he argues that Korean MOC is an external possessor introduced by a functional head (*Aff* in his term) between VP and VoiceP.

I follow these past studies, and apply them to an applicative analysis. Namely, I consider the higher V (i.e., V_{affect}) in Tomioka & Sim (2005) or *Aff* in Bosse (2015) to be ApplH in this paper.

2.2. High Applicative (ApplH)

ApplH is a functional head proposed by Pylkkänen (2008); it introduces an applied argument, which is related to an event as schematized in (3) above. For instance, MO is introduced as an applied argument and also as a possessor of LO, a theme argument in the event (see Miyagawa & Tsujioka 2003 for a similar claim in ditransitives in Japanese). Following Kim (2015) and McGinnis (2008), I extend Pylkkänen's applicative analyses into a phase theory. I maintain that ApplH in MOC in Korean is a phase head, but ApplL in Japanese is not. I discuss MOC and phases in depth in Section 4.

2.3. Low Applicative (ApplL)

On the other hand, Tomioka & Sim's analysis does not explain Japanese MOC. The example in (6) challenges their two-layer VP analysis since two objects in Japanese MOC may not hold a possessive relation.

(6) *Mary-ga John-ni, geimu-ni katta.* (JP)
$-_{NOM}$ $-_{DAT}$ game-$_{DAT}$ won
'Mary won a game against John.'

Moreover, Japanese MOC does not belong to any of four types of affectee arguments in Bosse (2015): e.g., as in (6), possession relation is not obligatory; mental affectedness or bene/malefactive interpretation is contextual; and MO can be inanimate. I instead propose that Japanese MO is introduced by ApplL.

ApplL is a functional head that merges below VP, directly relating two individuals, i.e., LO and MO in (4). While I employ the structure of ApplL in Pylkkänen (2008), I deviate from the original analysis of ApplL by Pylkkänen's in two ways. First, applying Cuervo's (2003) possessor applicative, I consider two objects in Japanese MOC to hold a static relation such as possession and participation. I claim that this type of ApplL relates two individuals, each of which is individually related to the event. Second, while I propose that an ApplL head constitutes MOC in Japanese, I assume applying Kishimoto (2008) that ditransitives in Japanese (and also in Korean; Kim 2015) are projected with an ApplH head.

3. Properties of two objects and the applicative approach

In this section, I catalogue the syntactic and semantic properties associated with MOC in Korean (1) and Japanese (2). In spite of the similarities in terms of the surface configurations, e.g., case patterns, Korean MOC show contrasts with those in Japanese with respect to properties of objects. I demonstrate that these properties (and their differences) can be well accounted for by the proposed applicative analysis as in (3) and (4), repeated here as (7) and (8).

(7) $[_{\text{VoiceP}}$ Subj $[[_{\text{ApplHP}}$ MO $[[_{\text{VP}}$ LO V] ApplH]] v]] (Korean: ApplH)
(8) $[_{\text{VoiceP}}$ Subj $[[_{\text{VP}}\,[_{\text{ApplLP}}$ MO [LO ApplL]] V] v]] (Japanese: ApplL)

3.1. Constituency

The structure in (7) predicts that MO and LO in Korean do not form a constituent, although two objects have to hold an inalienable possessive relation. Well-known constituency tests show that the prediction is borne out: Question & Answer/Stand Alone (9) or Movement test (10).

(9) *mwuel-lul manciessta-ko?* **Mary-lul meli-lul.* (KR)
what-ACC touch-PAST-DCL-QUOT -ACC head-ACC
'What did (Chelswu) touch?' (Intended) 'Mary's head.'

(10) **Chelswu-ka manci-n kes-un Mary-lul meli-i-ta.* (KR)
-NOM touch-REL thing-TOP −ACC head-COP-DCL
(Intended) 'What Chelswu touched is Mary's head.' 9-10 Park (2013: 43)

In Japanese, on the other hand, since ApplL is a phonologically null functional element, a sequence of MO and LO is a constituent, as predicted from the structure in (8); the Japanese equivalent of (9) and (10) are both grammatical.

3.2. Themehood

MO constructions in Korean and Japanese differ in terms of themehood of the objects. In Korean, the LO shows properties of a theme object that is selected by a verb (Maling & Kim 1992), while both MO and LO equally behave like a direct object in Japanese.

Since MO in Korean is not selected by a verb, its semantic role is not limited to a theme, but can be a goal or a source as in (11) of an action. (Note that Japanese corresponding to (11) is not grammatical.)

(11) *kangto-ka Chelsoo-lul ton cikap-ul ppayasassta.* (KR)
burglar-NOM −ACC money wallet-ACC stole
'The burglar stole Chelsoo's wallet.' Maling & Kim (1992: 64)

Second, the availability of idiomatic interpretations indicates the themehood of LO. Consider (12):

(12) *Chelswu-ka Sunhee{-lul /*-uy} son-lul poassta.* (* for an idiomatic expression) (KR)
-NOM -ACC /–GEN hand-ACC saw
Literal: 'Chelswu saw Sunhee's hand.'
Idiomatic: 'Chelswu dealt with (punished) Sunhee.' Tomioka & Sim (2005: 281)

When the possessor is marked with a genitive marker, the idiomatic interpretation vanishes and only the literal meaning is possible. I argue that in (12) the direct object *hand* and the verb form an idiom chunk *son-lul poa-* 'punish,' and the chunk requires another argument to indicate who is punished (i.e., the possessor of the hand). By definition, this is what ApplH works for; MO is introduced as an applied argument by ApplH in addition to the direct object, and ApplH denotes a relation between MO and the event.

In contrast, both MO and LO are equally directly selected by a verb in Japanese. MOC are possible only when each of the two objects can be selected by a verb. Example (13a) is acceptable since a verb *touch* can select either a person or a body part in the same way, while (13b) is not since a verb *cut* does not take a person as its complement in the same sense as it takes a body part. Namely, cutting someone's hair does not imply cutting the person (i.e., chopping the person). (Note that the Korean equivalents of (13) are both grammatical.)

(13) *John-ga Mary-o, kami-o* {a. *sawatta /* b. **kitta* }. (JP)
-NOM –ACC hair-ACC touched / cut
'John {a. touched / b. *cut } Mary's hair.'

Example (14) illustrates that both objects should be directly affected by an action in Japanese. Although either *prove* or *refute* takes a theorem as its complement, only the latter can take two objects.

(14) *John-ga Fermat-no teiri-o, kakusin bubun-o* { *? *syoomeisita / ronbakusita.}* (JP)
-NOM Fermat-GEN theorem-ACC central part-ACC proved refuted
'John {*? proved / refuted} the central part of Fermat's theorem.'

Thus, the meaning of the verb or a selectional requirement of a verb does not predict the grammaticality correctly. Rather, the contrast in (14) is better accounted for by the condition that MO should be also directly affected by a verb as well as LO; refuting part of a theorem necessarily implies more or less refuting the theorem itself, while proving part of it does not always affect the felicity of the theorem itself. The proposed structure in (8) properly predicts this condition; two arguments are both selected by a verb, being accommodated by ApplLP.

4. Phasehood of Appls

McGinnis (2008) proposes that ApplH (ApplE in her term) is a phase head and ApplL (ApplI in her term) is not. In this section, I show that ApplH in Korean MOC show phasehood, while ApplL in Japanese MOC do not. McGinnis argues that since ApplL does not have an EPP feature, only indirect object (i.e., the higher argument in ditransitives) can agree with a predicate. Due to the locality effect, direct object (i.e., the lower argument in ditransitives) is not accessible from a predicate. This pattern can be observed in object honorification in Japanese, in which a predicate is marked with a honorification marker *o-* when the object is an honorified person. I assume following Saito (2015) that object honorification is a realization of an agreement between an object and v. As correctly predicted by McGinnis's phase theory of applicatives, MO undergoes the honorification agreement with a predicate (15a), while LO does not (15b).

(15) a. *Mary-ga Jones-sensei-o, baka-musuko-o o-home-si-ta.* (JP)
-NOM –professor-ACC idiot-son-ACC HON-praise-do-PAST
'Mary praised Prof. Jones about his son of idiot.' (Prof. Jones = an honorified person)

b. *?Mary-ga John-o, okaasan-o o-home-si-ta.
-NOM –ACC mother-ACC HON-praise-do-PAST
'Mary praised John about his mother.' (mother = an honorified person)

Note that the honorification in (15a) is not so-called a take-over of honorification, in which the possessee agrees with a predicate when the possessor is an honorified person. Niinuma (2003) argues that the take-over of honorification is blocked when the possessee is a person, which is not observed in (15a). Thus, MO directly agrees with a predicate in (15a). Also note that the ungrammaticality of (15b) does not stem from that the honorified person is a possessee. The genitive counterpart as in *Mary praised John's mother* (mother is an honorified person) is grammatical with an honorification marker on the verb.

Kim (2015) further argues for the phasehood of ApplH in ditransitives in Korean and Japanese (and English). Assuming that formation of idiomatic expressions is delimited by a phase, she argues for phasehood of ApplH based on the fact that indirect objects, which are introduced at the specifier of ApplHP, are excluded from idiomatic expressions. The examples in (16) and (17) show that idiomatic expressions in MOC pattern with Kim's observation; Korean MO (residing at the specifier of ApplHP) is excluded from an idiomatic expression, while Japanese MO (accommodated in ApplLP as well as LO) may be (it is marginal, though).

(16) *Chelswu-ka Sunhee-lul son-lul poassta.* (KR)
-NOM -ACC hand-ACC saw
Literal: 'Chelswu saw Sunhee's hand.'
Idiomatic: 'Chelswu dealt with (punished) Sunhee.'

(17) *John-ga katte kabuto{??-o/-no}, o-o simeta.* (JP)
-NOM winning armor-ACC/-GEN string-ACC tightened
Literal: 'John tightened strings of an armor after winning.'
Idiomatic: 'Even after a win, John braced himself.'

Thus, agreement and idiomatic expressions support the claim that ApplH in Korean MOC is a phase head whereas ApplL in Japanese MOC is not. Next, examine the following, however:

(18) a. *$Kami_k$-ga John-niyotte Mary-o t_k sawar-are-ta. (JP)
hair-NOM John-by Mary-ACC touch-PASS-PAST
(Intended) 'Mary's hair was touched by John.'
b. *$Phal_k$-i John-eyuyhayse Bob-eykey t_k pro noh-aci-ess-ta. (KR)
arm-NOM -by –DAT (*pro*-ACC) give-PASS-PAST-DCL
(Intended) 'Bob's arm was given (a shot) by John.' # context: pro = *cwusa* 'shot'

In either Japanese or Korean, the lower object (the lower indirect object in (18b)) cannot be passivized beyond MO (a Major indirect object in (18b)). The restriction in (18a) is compatible with McGinnis's phase theory, according to which the lower argument in an ApplL construction is not available for movement or agreement. However, the restriction in Korean (18b) is problematic here. According to McGinnis, ApplH has an EPP feature, with which the lower object may adjoin to ApplHP above the higher object or applied argument, resulting in that two arguments are equi-distant from a probe above. This predicts that LO in Korean MOC can be *ci*-passivized beyond MO, contrary to the fact in (18)[3]. Although this sentence seems to be a counterexample to the phasehood of ApplH, I propose in the next section that this movement restriction can be attributed to a more general intervention effect. Hence, I maintain the phase theory of applicatives in MOC discussed in this section.

[3] In the current paper, I exclusively discuss *ci*-passives, which is the Korean equivalent of *by*-passives in English. I abstract away from *hi*-passives since it is not certain whether or not *hi*-passives involve a movement from the object positions (Kim 2011).

5. Movement restrictions & Intervention effects

In this section, I discuss another property of LO, that is, LO cannot be passivized beyond MO either in Korean or in Japanese although LOs in these languages are theme objects, and although the phase theory predicts that LO in Korean can be passivized. I show that this movement restriction of LO is observed in various movements, and hence that the movement restriction of LO cannot be fully attributed to the locality effect based on the structural hierarchy or the accessibility based on a phase. I further extend the analysis into other applicative constructions, showing that the lower argument cannot be moved beyond the higher argument in either movement in either construction. I then propose that a Major Argument, an applied argument introduced by certain types of applicative heads, causes an intervention effect for movement of the lower argument.

5.1. Movement restrictions

In addition to passivization in (18), LO both in Korean and in Japanese cannot be moved in various types of movement such as scrambling, relativization, and topicalization[4]. The examples in (19) exemplify scrambling in Japanese.

(19) a. *Mary$_j$-o, egao$_k$-o John-ga* t_j t_k *hometa.* (JP: Scrambling)
−ACC smile-ACC -NOM praise-PAST
'John praised Mary about the smile.'
b. **Egao$_j$-o, John-ga Mary-o* t_j *hometa.*
smile-ACC −NOM −ACC praise-PAST
(Intended) 'John praised Mary about the smile.'

Notice that LO does move as in (19a). Note also that scrambling in Japanese and in Korean can be an instance of A-movement, can be long-distance, and can extract an element from an island in some cases (Kim 2000 for Korean). Thus, what is regulated is not a movement of LO itself, nor a type of movement, but how far it can go. Therefore, the fact that the movement of LO beyond MO is uniformly banned in various types of movement suggests that the movement restriction of LO is derived by structural or configurational relations between LO and MO.

5.2. Major Argument Intervention

I argue that the movement restriction of LO in Korean and Japanese discussed in the previous section stems from a more general movement restriction that I call Major Argument Intervention (20).

(20) Major Argument Intervention
[ApplP Argument1 [[XP Argument2] Appl]] (Argument 1: Major Argument)
<----------X----------

A Major argument, which is introduced as an applied argument by various types of Appl heads, functions as an intervener for movement of an argument that is generated in lower positions. For instance, in MOC in Korean, MO at the Argument 1 position in (20) blocks movements of LO that is at the Argument 2 position, and XP is a VP. Unless Argument 1 moves out, Argument 2 cannot move out of the Appl phrase. I demonstrate that the intervention effect is broadly found in various movements (passivization, relativization, topicalization, scrambling) in various Major Argument constructions in Korean and Japanese, including Major Subject Constructions, and Raising-to-object constructions.

First, Major Subject Constructions show the same restriction, as exemplified in (21). The lower subject *height* cannot be relativized over the higher subject (i.e., Major subject).

[4] Some Korean speakers accept scrambling of LO with a strong stress on it.

(21) a. *Chelswu-ka ki-ka khuta.* (KR: Major Subject)
Chelswu-$_{NOM}$ height-$_{NOM}$ tall
'It is Chelswu who is tall.'
b. *ki-ka khu-n Chelswu*
height-$_{NOM}$ tall-$_{ADN}$ Chelswu
'Chelswu, who is tall'
c. **Chelswu-ka khu-n ki*
-$_{NOM}$ tall-$_{ADN}$ height
(Lit.) 'height that Chelswu is tall' Lee (2007: 258)

Based on similarities between Major Subject and affectee arguments in indirect passives in Korean and Japanese, I assume that Major Subject is introduced by an Appl head that merges above VoiceP. Bosse (2015) and Kim (2011) argue that affectee arguments reside the specifier of an Appl head above VoiceP (Peripheral Appl in Kim, and *Aff* with high attachment in Bosse). If this applicative analysis to Major Subjects is on the right track, (21) is another instance of Major Argument Intervention, in which a Major argument (Major Subject) blocks a movement of the lower argument. The same movement restriction is observed in passivization, scrambling, and topicalization both in Japanese and in Korean.

Raising-to-object constructions as in (22) also support my proposal. In (22b), for instance, the object in the embedded clause *ball* cannot be moved beyond the raised objects *Mary*. Example (22c) shows that Raising-to-Object constructions in Japanese impose the same restriction.

(22) a. *Mary$_j$-ul kong$_k$-ul John-ka* [t_j t_k *cal chanta*] *ko sayngkakahanta.* (KR)
-$_{ACC}$ ball-$_{ACC}$ –$_{NOM}$ well kick $_{COMP}$ think
'John thinks Mary kicks a ball well.'
b. **Kong$_k$-ul Mary$_j$-ul John-ka* [t_j t_k *cal chanta*] *ko sayngkakahanta.* (KR)
ball-$_{ACC}$ -$_{ACC}$ –$_{NOM}$ well kick $_{COMP}$ think
(intended) 'John thinks Mary kicks a ball well.' Yoo (2015)
c. **John-ga eigo$_j$-o Mary$_k$-o* [t_k t_j *hanasu*] *to omot-ta.* (JP)
-$_{NOM}$ English-$_{ACC}$ –$_{ACC}$ speak $_{COMP}$ think-$_{PAST}$
(Intended) 'John thought that Mary speaks English.'

Adopting Chomsky (2015), who claims that raised objects land on VP, and considering argumenthood of the raised argument (e.g., case-dropping, passivizability), I postulate that the raised argument is hosted by an Appl head that merges above or below the matrix VP. This structure leads us to attribute the ungrammaticality of (22b, c) to the intervention effect; a Major argument (raised object) blocks movement of the lower argument (i.e., the object in the embedded clause). Notice that two accusatives in (22) do not hold any direct relation and are assigned case from different assigners. The restriction in this configuration cannot be accounted for by relations between possessors and possesses (Koak 2012).

It might sound odd to claim that an ApplH head that makes the lower argument accessible to a probe introduces an argument (i.e., Major Argument) that intervenes with this accessibility. However, as shown in (18) and (22a), the lower argument does move, i.e., it is accessible from a probe. The locus of intervention is irrelevant to the Appl head or a phase, but a Major argument itself blocks the movement of the lower argument wherever it is.

Conversely, the higher argument that is not a Major argument does not cause the intervention effect. In ditransitives as exemplified in (23), direct object can be passivized, topicalized, or scrambled beyond indirect objects (Kang 1986).

(23) *Ku chayk$_k$ John-i Mary-lul* t_k *cwu-ess-ta.* (KR: scrambling)
that book-$_{ACC}$ –$_{NOM}$ –$_{ACC}$ give-ess-ta
'That book, John gave Mary.' Kang (1986: 132)

I assume as mentioned in Section 2 that the indirect object is introduced by ApplH, but it is not an applied argument (and hence a Major argument). I leave open the questions to the exact definition of Major arguments.

6. Conclusions

I conclude that the properties and behaviors of the objects in MOC in Japanese and Korean are well accounted for within the applicative approach: MO in Korean is introduced in the specifier of ApplHP, which merges above VP, to relate an individual (MO) and an event; and ApplLP hosts MO and LO in Japanese, being a complement of the main verb. A consequence of the proposed applicative approach is a (non-)phasehood of the Appl heads based on McGinnis (2008) and Kim (2015). The behaviors of LO in terms of agreement (in Japanese) and idiomatic interpretations (in Korean) correctly points to the conclusion that ApplH is a phase head and ApplL is not. I also observed the movement restriction of LO, where LO cannot be moved beyond MO in various movements, e.g., passivization, topicalization, relativization, and scrambling. I illustrated that this restriction is not duly regulated by the applicative analysis, a phase-based account, or locality based account. I instead proposed that the movement restriction of LO is derived from the Major Argument Intervention, an intervention effect that is instantiated by an applied argument that is introduced by various Appl heads, and that is observed in various movements in several constructions in Korean and Japanese, e.g., Major Subject Constructions as well as Raising-to-Object Constructions.

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