

- b. John-i **Mary-ekey** **phal-ey**² cwusa-lul noh-ass-ta. (MDC)
John-NOM **Mary-DAT** **arm-DAT** injection-ACC give-PAST-DEC
'John gave an injection to Mary in the arm.'
- c. **John-i** **emeni-ka**³ uysa-i-ta. (MNC)
John-NOM **mother-NOM** doctor-COP-DEC
'It is John whose mother is a doctor.'

In the literature, this phenomenon is better known as “possessor raising” (or “ascension” or “promotion”) on the assumption that the possessor, which has a semantic or argument-structure dependency on an element within a “lower” constituent, i.e., the possessum, raises to a higher syntactic unit (P&B: 3). Following P&B and prior to them, Vergnaud and Zubizarreta (1992), I dub the phenomenon as External Possession, rather than possessor raising, because the former is more theoretically neutral than the latter.

In this paper, I seek to address and answer the following questions:

- (i) What is the source of the extra Case in each type of EPC?
- (ii) What are the grammatical statuses of the bold-faced elements?
- (iii) What are the constraints, if any, on this construction?

This paper proceeds as follows. Section 1 presents some relevant properties about Korean EPC's, and thereby provides us with a set of facts that needs to be accounted for regarding Korean EPC's. In Section 2, I offer a syntactic account of the phenomenon. I first propose an analysis that treats the extra Cases in each EPC as focus-markers. I then explain the linear order restriction between the PR and the PM in an EPC, as well as some other restrictions imposed on PM's. Furthermore, I present possible syntactic configurations for Korean EPC's. In the next Section, I discuss the semantic aspects of the phenomenon. In this Section, I propose an analysis that appeals to a type-shifting of the predicate in an EPC. I then derive the truth-conditions for some of the simplest cases of Korean EPC's at hand. Next I try to come up with generalizations of the semantic restrictions on the PM and the predicate in an EPC. Here I show that Korean EPC's under discussion cannot be fully explained without considering some pragmatic and cognitive factors. Finally, in Section 4 I briefly review the previous work on this topic in comparison with the current proposal and discuss the merits and demerits of each line of analyses. I conclude the paper with some remaining problems.

² The case particle *-ey* in Korean is also used as locative Case marker. But Maling and Kim (1992:43) analyze it as a DAT Case-marker, based on the fact that *-ekey* and *-ey* are in complimentary distribution depending on the animacy of the nominals they combine with: *-ekey* always marks [+animate] nouns, whereas *-ey* marks [-animate] ones. Following their analysis, I take these two case-particles as “allomorphs” of a single morpheme, i.e., DAT Case-particle.

³ Note that in Korean, there are three morphophonemic variations of the NOM Case particle: *-i*, *-ka*, *-ika*.

1. Problems posed by Korean External Possession Constructions

In this section, I present the problems posed by Korean EPC's which have been discussed in the literature.

1.1. No restriction on the number of PM arguments

As noted by a number of authors (Choe 1987; Kim 1989, 1990; Yoon 1989, 1990; Maling and Kim 1992; Cho, 1998, among many others), there is in principle no limit on the number of PM arguments that can appear in a Korean EPC, as long as two adjacent NPs hold a PR and PM relationship. The following data illustrate this fact.

- (3) a. John-i **Mary-lul** **phal-ul** **oyncok-ul** **kkut-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **arm-ACC** **left-ACC** **end-ACC** hit-PAST-DEC
'John hit Mary on the left end of the arm (Lit. John hit Mary, the arm, the left, the end).'
- b. John-i **Mary-ekey** **phal-ey** **oyncok-ey** **kkut-ey** cwusa-lul
John-NOM **Mary-DAT** **arm-DAT** **left-DAT** **end-DAT** injection-ACC
noh-ass-ta.
give-PAST-DEC
'John gave an injection to Mary in the left end of the arm (Lit. John gave an injection to Mary, to the arm, to the left, to the end)
- c. John-i emeni-ka kohyang-i seoul-i-ta.
John-NOM mother-NOM hometown-NOM Seoul-COP-DEC
'It is John whose mother's hometown is Seoul.'

Note that in each of the above sentences, there is an interesting semantic relation among the highlighted nominals: the first nominal is the PR of the next nominal, which in turn is the PR of the following one and so forth.

1.2. Linear order between PM's and PM's.

There is a rigid restriction on the order in which these multiple nominals can occur: that is, the PR must precede the PM. Consider the following data.

- (4) a. John-i **Mary-lul** **phal-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **arm-ACC** hit-PAST-DEC
'John hit Mary on the arm.'
- b. *John-i **phal-ul** **Mary-lul** ttayli-ess-ta.
John-NOM **arm-ACC** **Mary-ACC** hit-PAST-DEC
- (5) a. John-i **Mary-lul** **phal-ul** **oyncok-ul** **kkut-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **arm-ACC** **left-ACC** **end-ACC** hit-PAST-DEC
'John hit Mary on the left end of the arm.'

- *b. John-i **Mary-lul** **oyncok-ul** **phal-ul** **kkut-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **left-ACC** **arm-ACC** **end-ACC** hit-PAST-DEC
- *c. John-i **Mary-lul** **oyncok-ul** **kkut-ul** **phal-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **left-ACC** **end-ACC** **arm-ACC** hit-PAST-DEC

At first glance, it seems that these bold-faced nominals are glued together in the exact order of PR + PM. Based on this fact, one might suspect whether they form a single constituent like a DP. This conjecture, however, does not seem to be borne out, as these elements can be intervened by other materials like adverbs, as shown in (6-8) below.

(6) w.r.t. manner adverbs:

- a. John-i **Mary-lul** **phal-ul** **sekey** ttayli-ess-ta.
John-NOM **Mary-ACC** **arm-ACC** **hard** hit-PAST-DEC
- b. John-i **Mary-lul** **sekey** **phal-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **hard** **arm-ACC** hit-PAST-DEC
'John hit Mary hard on the arm.'

(7) w.r.t. temporal adverbs:

- a. John-i **ecey** **Mary-lul** **phal-ul** ttayli-ess-ta.
John-NOM **yesterday** **Mary-ACC** **arm-ACC** hit-PAST-DEC
- b. John-i **Mary-lul** **ecey** **phal-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **yesterday** **arm-ACC** hit-PAST-DEC
'Yesterday John hit Mary on the arm'

(8) w.r.t. locative adverbials

- a. John-i **Mary-lul** **phal-ul** **kyoshil-ese** ttayli-ess-ta.
John-NOM **Mary-ACC** **arm-ACC** **classroom-in** hit-PAST-DEC
- b. John-i **Mary-lul** **kyoshil-ese** **phal-ul** ttayli-ess-ta.
John-NOM **Mary-ACC** **classroom-in** **arm-ACC** hit-PAST-DEC
'John hit Mary on the arm in the classroom'

The above paradigms strongly suggest that PR and PM do not form a single DP; if they did, the intervention by adverbials would not be accounted for.

1.3. Case agreement between PR's and PM's

Several authors have claimed that the PR and the PM in an EPC must agree in Case (e.g., Chun 1985, Choe 1987; Kim 1989, 1990; Yoon 1989, 1990; Cho 1998, Nakamura 1999). Maling and Kim (1996), however, point out that this is not necessarily the case. Consider (9). Sentence (9c) shows that even when the Cases of the PR and the PM differ from each other, the sentence is perfectly grammatical.

- (9) a. John-i **Mary-ekey** **phal-ey** cwusa-lul noh-ass-ta. *DAT DAT*
 John-NOM **Mary-DAT** **arm-DAT** injection-ACC give-PAST-DEC
- b. John-i **Mary-lul** **phal-lul** cwusa-lul noh-ass-ta. *ACC ACC*
 John-NOM **Mary-ACC** **arm-ACC** injection-ACC give-PAST-DEC
- c. John-i **Mary-lul** **phal-ey** cwusa-lul noh-ass-ta. *ACC DAT*
 John-NOM **Mary-ACC** **arm-DAT** injection-ACC give-PAST-DEC
- d. ?John-i **Mary-ekey** **phal-ul** cwusa-lul noh-ass-ta. *DAT ACC*
 John-NOM **Mary-DAT** **arm-ACC** injection-ACC give-PAST-DEC
 ‘John gave an injection to Mary in the arm’

Similar facts are also observed in ECM constructions in Korean, where the subject of the embedded sentence is raised to the object position of the matrix clause, and thereby surfaces with an ACC on it. Consider (10).⁴

- (10) John-I **May-lul** **elkwul-I** yepputa-ko sayngkakan-ta.
 John-NOM **Mary-ACC** **face-NOM** pretty-COMP think-DEC
 John thinks Mary to be pretty of face.

In this example, the PR *Mary* ‘Mary’ and the PM *elkwul* ‘face’ surface without agreeing in Case. If Case-agreement is indeed one of the defining characteristics of Korean EPC’s, the data in (9) and (10) cannot be explained. Hence a more accurate description of the Case phenomenon in Korean EPC’s seems that the PR and PM do not necessarily agree in Case.

1.4. What are the grammatical statuses of PR and PM in a Korean EPC?

In the literature, it has been reported that there is an asymmetry between the PR and the PM in an EPC with regards to their grammatical statuses (e.g., Kim 1989, 1990; Yoon, 1989, 1990; Cho 1998; and Yoon 1998). As the definition of EPC’s given at the outset of the paper suggests, the PR in an EPC behaves like an ordinary core grammatical element in the sentence in that it passes all the following diagnostics: scrambling or focus movement, relativization, and passivation. By contrast, the PM seems to act like a non-core grammatical element, since it fails all of those diagnostics.

(11) Scrambling or focus movement:

- a. **Mary_i-lul** **John-un** **t_i** **phal-ul** ttayli-ess-ta.
 Mary-ACC John-TOP **arm-ACC** hit-PAST-DEC
 ‘John hit Mary on the arm.’
- b. ***phal_i-ul** John-un **Mary-lul** **t_i** ttayli-ess-ta.
 arm-ACC John-TOP **Mary-ACC** hit-PAST-DEC

⁴ I am thankful for Ellen Woolford for suggesting that I consider this fact.

(12) Relativization:

- a. [John-i t_i **phal-ul** ttayli]-N **Mary_i**.
John-NOM **arm-ACC** hit]-REL Mary
'Mary who John hit on the arm'
- b. *[John-i **Mary-lul** t_i ttayli]-N **phal_i**.
John-NOM **Mary-ACC** hit]-REL arm

(13) Passivizability:

- a. **Mary-ka** John-hanthe **phal-ul** mac-ass-ta.
Mary-NOM John-by **arm-ACC** bitten-PAST-DEC
'Mary got hit on the arm by John.'
- b. */# **Mary-ka** John-hanthe **phal-i** mac-ass-ta.
Mary-NOM John-by **arm-NOM** bitten-PAST-DEC
(Note that *mass-* 'to be bitten' in (13) is a lexically passive verb.)

When it comes to the passivization facts, however, there are some wrinkles to this generalization. As Maling and Kim note (1992: 50, contra Kim 1989; Yoon 1989, 1990; Yoon 1998), for the reasons we do not as yet know, it is sometimes possible to passivize the PM. This is illustrated by (14), which is adapted from Maling and Kim (p. 50, (26-27)).

- (14) a. **Ai-ka** John-hantey **pal-i/lul** palp-hi-ess-ta.
Child-NOM John-from/by **foot-NOM/ACC** stomp-PASS-PAST-DEC.
'The/a child was stomped on the foot by John.'
- b. **Ku namwu-ka** **kaci-ka/?lul** cal-li-ess-ta.
That tree-NOM **branch-NOM/ACC** cut-PASS-PAST-DEC.
'That tree was trimmed of branches.'

These data crucially attest to the fact that PM's *can* be passivized or sometimes are even preferred to be so, as in (14b). If this is indeed true, it then seems to suggest that a PM in an EPC may not entirely lack an argument status.

Further evidence for the conjecture that PM's may be core grammatical elements comes from the fact that an EPC becomes massively ungrammatical when the PM is omitted. Consider the following data, which are from MNC's, as in (15) and MAC's, as in (16).

- (15) a. **John-i** ***(meli-ka)** coss-ta.
John-NOM **head-NOM** good-DEC
'John is smart'
- b. **Mary-ka** ***(mok-I)** kil-ta
Mary-NOM **neck-NOM** long-DEC
'Mary's neck is long'

- c. **Mary-ka** ***(emeni-ka)** tolaka-si-ess-ta
Mary-NOM **mother-NOM** die-HON-PAST-DEC.
 ‘It is Mary whose mother passed away.’

- (16) a. John-i **Mary-lul** ***(phal-ul)** pulettuli-ess-ta.
 John-NOM **Mary-ACC** **arm-ACC** break-PAST-DEC
 ‘John broke Mary’s arm.’

- b. John-i **Mary-lul** ***(oss-ul)** ccic-ess-ta.
 John-NOM **Mary-ACC** **clothes-ACC** tear-PAST-DEC
 ‘John tore Mary’s clothes’.

The non-optionality of the PM’s in the above examples significantly suggests that they are the arguments of the predicate in the EPC they occur. If this line of analysis is on the right track, what would be the grammatical status of the PR?

There seem to be at least two possibilities to consider. On the one hand, it may be the case that in a Korean EPC, the PR is *not* a true argument of the predicate. On the other hand, it may be the case that it *is* indeed a true argument of the predicate, but the predicate that takes it as an argument differs from the one that takes the PM as an argument. That is, the PM is an argument of the single predicate, which is an adjective or an intransitive verb in an MNC and which is a transitive verb in an MAC. But the PR seems to be an argument of something else, which we are not so clear about at this stage.

1.5. Is the PM a full DP or an X-bar level element?

Numerous authors (particularly Kim 1989; Yoon 1989; Cho 1998; and Yoon 1998) have argued that PM is a non-referential element, hence cannot be modified, nor extracted. On this basis, particularly Yoon (1989) has claimed that PM’s are N-bar-level species. However, I want to challenge this claim by drawing reader’s attention to the following data⁵.

- (17) a. John-i **Mary₁-lul** **[[t₁ t₂ tachi]-N** **phal₂]-ul** ttayli-ess-ta.
 John-NOM **Mary₁-ACC** **[[t₁ t₂ injured]-REL** **arm₂]-ACC** hit-PAST-DEC
 ‘John hit Mary on the arm.’

⁵ Some speakers of Korean might find (17a) a bit marginal, but this sentence becomes perfectly felicitous when Mary is replaced by *na* ‘me’.

- (1) a. John-i **na-lul** **[tachin phal-ul]** ttali-ess-ta.
 John-NOM **I-ACC** **[injured arm-ACC]** hit-PAST-DEC
 ‘John hit me on the injured arm.’

I suspect that some sort of pragmatic factor such as point of view might be responsible for the difference in acceptability between (17a) above and this example in (1), although this hunch needs to be verified against a wider range of data.

b. John-i Mary-lul [ku [t₁ sangchena]-N kos₁]-ul kkocip-ess-ta.
John-NOM Mary-ACC [DET [t₁ scratched]-REL part₁]-ACC pinch-PAST-DEC
'John pinched Mary on the scratched part (of her body).'

c. ku cha-ka [motun pakwy]-ka kocangna-ass-ta.
The/that car-NOM [every wheel]-NOM broken-PAST-DEC.
'It is that car every wheel of which got broken'.

These data help us understand the nature of PM's in various ways. First of all, both (17a) and (17b) exemplify that PM's in Korean EPC's *can* be modified by relative clauses. Second, (17b) shows that PM's can be "closed off" by a determiner. Third, (17c) illustrates that PM's can even be quantificational. These facts are strong enough to eloquently suggest that PM's are full DP's, contra H.-S. Yoon (1989, 1990) and J.-M. Yoon (1998).

I would like to add an additional argument for why PM's should be analyzed as DP's. In the Standard Case theory, only full DP's can surface with a Case-marking on them (Woolford 2000, p.c.). Crucially, as has been illustrated above, PM's in Korean EPC's do surface with a Case-marker on them. If they were indeed N-bar level species, this fact could not be explained.

1.6. Summary

In this section, I outlined several properties of Korean EPC's. They are summarized in (18).

(18) *Characteristic properties of Korean EPC's:*

- i) In Korean EPC's, extra nominals can occur, i.e., more than what the predicate of the sentence can normally take have as its argument, as long as these nominals stand in a PR and PM relation.
- ii) It is not necessary for the PR and the PM in an EPC to always agree in Case.
- iii) There is a strictly fixed word order between the PR and the PM, despite the fact that Korean is a relatively free word order language. But they do not have to be adjacent to each other.
- iv) There seems to be some sort of asymmetry between the PR and the PM in an EPC with respect to their grammatical statuses.
- v) Unlike what has been claimed in the literature, it seems that PM's are full DP's; it is possible to modify them.

Given these facts, I would like to address the following questions as the research questions for this paper.

- (19) Questions to be addressed and answered in this paper:
- Why can PR and PM agree or disagree in Case?
 - What is the source of the extra Cases?
 - Why a fixed linear order between the PR and the PM?
 - Why are there restrictions on extraction and passivizability?
 - What is the syntactic configuration of each type of EPC's?

In the next Section, I try to answer these questions by offering a new syntactic analysis of Korean EPC's.

2. A syntactic account.

This Section has three parts. First, I deal with the problem with Case). Next, I account for why there should be various restrictions on PM's in answer to (19iii-iv). I then offer a possible syntactic structure of each kind of Korean EPC's. I propose that the PM is a true argument of the predicate in an EPC.

2.1. How to account for the multiple Case phenomenon?

Following Schütze (1996) and Sohn (1994), I argue that the Case particles *-ka* and *-lul* that show up in EPC's are focus markers (or emphatic-focus markers, according to Sohn *Ibid.*). I offer three arguments in favor of this line of approach.

First, given the data in (9) and (10) above, we are confirmed that the PR and the PM in an EPC do not have to agree in Case. If one wants to resort to a stipulation that there is a rule which dictates that the PR and the PM have to agree in Case, as suggested in Kim 1989, 1990, for example, these data cannot be accounted for. However, if we analyze that the particles *-ka* and *-lul* are ambiguous, as argued by Schütze (*Ibid.*: 357), between Case makers and focus markers, we can more readily explain this phenomenon. We can account for the instances where these elements differ in Case by treating one of them as a structural Case-marker and the other as a focus-marker.

Second, when it comes to the source of the extra Cases in Korean EPC's, one faces a great difficulty in explaining it. Let us put aside MAC's for the moment, since one can assume that verbs can assign more than one Case via movement inside a shell (e.g., Larson 1988) or in whatever other ways, and hence is relatively less challenging. Let us thus instead focus on the problem in MNC cases.

The Case phenomenon in MNC's indeed seems to pose a challenge for any Case theory. In the Standard Case Theory (Chomsky 1995), NOM Case is licensed by a tensed INFL or I and each INFL can assign only one NOM Case. With this assumption, we can probably account for the source of one Case in the example (20), but not the source of the other Cases. Moreover, it is not even clear which Case is licensed by the tensed I in the sentence.

- (20) **John-i emeni-ka kohyang-i seoul-i-ta.**
John-NOM mother-NOM hometown-NOM Seoul-COP-DEC
'It is John whose mother's hometown is Seoul.'

In the proposed approach, however, this problem can be readily resolved. Let us first decide which among the three nominals is the true argument of the predicate *seoul-I-ta* ('is Seoul'). In my judgment, it is *kohayng* 'hometown'. Given that the predicate has a copular morpheme (presumably including present tense) on it, we are now confirmed that the NOM Case that the tensed I of this sentence is capable of licensing is realized on *kohyang*. But what about the sources of the Cases of the other two nominals? I claim that despite the fact that they are homophonous with the ordinary NOM-particle, they are in fact focus-markers. One might wonder why there should be more than one focused element in the same sentence. Following Schütze, who adopts Choe (1995), I claim that Korean is a multiple focus language. In this system, it thus naturally follows that the first and the second arguments in (20) are focused elements.

Further evidence comes from some Case-stacking facts in Korean. Interestingly, Korean allows different Case particles stack on each other, as shown in (21).

- (21) a. **Yelswey-ka na-ekey-ka** iss-ta.
The/a key I-DAT-FOC exist-DEC.
 'It is me (as opposed to Mary) who has the key'.
 (Lit. It is to me that the key exists.)
- b. Na-nun **Mary-lul han shikan-tongan-ul** manna-ess-ta.
 I-TOP **mary-ACC one hour-DUR-FOC** meet-PAST-DEC
 'I met Mary for one hour (as opposed to two hours)'.
 (Lit. 'It was for one hour that I met Mary.')
- c. John-I **mwulkoki-lul sey-mali-lul** capa-ess-ta.
 John-NOM **fish-ACC three-CL-FOC** catch-PAST-DEC.
 'John caught three fish.'

Crucially, these data show that the elements to which *-ka* or *-lul* is attached are not the core grammatical elements of the sentence; they are either oblique Case-marked elements, as in (21a-b) or a floating quantifier, as in (21c). Note that that it is not possible to switch the order between an oblique Case and a structural Case, as shown in (22).

- (22) a. ***Yelswey-ka na-ka-ekey** iss-ta.
The/a key I-FOC-DAT exist-DEC.
- b. *Na-nun **Mary-lul han shikan-ul-tongan** manna-ess-ta.
 I-TOP **mary-ACC one hour-FOC-DUR** meet-PAST-DEC

On this basis, I argue that the *-ka* or *-lul* that occurs on the second nominal of each sentence in (20) is not a structural Case marker; it is a focus marker, as reflected in the English gloss under each sentence. I further argue that in addition to these two structural Case-markers, the DAT marker *-ey* can also function as a focus-marker. This will explain the source of multiple DAT's in an MDC.

At this point, one might wonder whether it is possible to make a generalization about the environments under which one of the three focus-markers is chosen over the

others. Though it is not fully satisfactory, Schuetze offers the following generalization about *-ka* vs. *-lul* (p.363).

(23) *-ka* vs. *-lul* focus-marking:

i) *-lul* focus-marks an object of a transitive V.

ii) otherwise: *-ka* marks a focused element, being the default focus marker.

Why is it that case-stacking of two *-ka*'s or *-lul*'s do not arise, where one is a structural Case-marker and other is a focus-marker? In answer to this question, I would like to offer the following constraint.

(24) Structural Case-markers such as NOM, ACC are overridden by a focus marker, whereas oblique Case-markers are not.⁶ In the case of DAT, it is less clear, because DAT can be both structural and lexical.

Based on these assumptions, I claim that Korean EPC's with multiple *-ka*'s or *-lul*'s can be ambiguous, as illustrated below in the English glosses.

(25) a. John-I **Mary-lul** **phal-lul** ttayli-ess-ta.
 John-NOM **Mary-FOC** **phal-ACC** hit-PAST-DEC.
 'It is Mary that John hit on the arm.'

b. John-NOM **Mary-ACC** **phal-FOC** hit-PAST-DEC.
 It is on the arm that John hit Mary.'

c. John-NOM **Mary-FOC** **phal-FOC** hit-PAST-DEC.⁷
 'John hit Mary (as opposed to Sue) on the arm (as opposed to on the head).'

Among the three interpretations of the sentence (25), (25c) is the most remarkable in that on this reading, both Mary and her arm are focused. But given that Korean is a multiple focus language, this is not so surprising; it should be in principle possible for any element to be focused if it carries a high pitch-accent. Needless to say, the relation between focus and prosody cannot be dealt with in this paper. Hence, I leave this topic here and turn to answering why PM's are subject to various restrictions but not PR's.

2.2. Accounting for the sources of the various restrictions on PM's.

In Section 1.5, I already claimed that PM's in Korean EPC's are full DP's. There is a challenge for this claim, however; on this view, it is not clear why there should be restrictions imposed on PM's, but not on PR's, with respect to extraction, linear order, not to mention its apparent semi-passivizability.

I claim that all these restrictions except for passabizability come from the same source. I suspect that this is due to the peculiarities of EPC's. Suppose that there is some

⁶ My conjecture is that this might be for phonological reasons but I will not attempt to get into discussing this in the present paper.

⁷ I am aware that in reality this interpretation might be rather rare to find but following Choe (1995) am assuming that it can be theoretically possible.

sort of binding requirement on the PM in an EPC. One can argue that there is a covert or null pronoun inside the PM in an EPC. But regardless of its presence, one can argue that the PM must have its antecedent. That is, the PM has to be coindexed with a grammatical element in the same sentence. What can then be the most likely candidate for its antecedent? The answer is quite straightforward: that is, it is the PR. Thus, I propose the following constraint:

(26) *Binding constraint for the PM in an EPC:*

In an EPC, the PM must be bound. In order for this to happen, it is necessary that the PR c-command the PM.

The presence or absence of the null argument inside the PM requires serious inquiry of its own. In the present paper I am not arguing for or against its presence; in fact, we do not as yet know exactly how these binding or coindexing (if you will) mechanisms would work. Rather, the aim of positing (26) was to provide one way of getting a handle on this phenomenon. Nevertheless, I predict this constraint to be universal. It of course needs to be verified against data. But this is an empirical question, hence I leave it for future research.

Under the proposed analysis, a more accurate gloss for an MAC therefore should be like the one in (27), with the PM coindexed with the PR:

(27) a. John-I **Mary-lul** **phal-lul** ttayli-ess-ta.
John-NOM **Mary₁-FOC** **arm₁-ACC** hit-PAST-DEC.
'John hit Mary (opposed to Sue) on the arm.'

The constraint in (26) enables us to answer the question addressed above: that is, why are there restrictions targeting only PM's with regards to extraction, linear order, relativization, and passivization. First, as illustrated earlier, extraction facts about EPC's show that PM's cannot be extracted. However, there is one environment under which they *can* be: this is where the PR is also extracted, but occurring before the PM, as in (28) (here I treat all the fronted elements to be focused).

(28) **Mary-lul** **phal-ul** John-I ttayli-ess-ta.
Mary-FOC **arm-FOC** John-NOM hit-PAST-DEC.
'It is Mary that John hit and it was her arm that he hit.'

One might argue that (28) was base-generated. If that is correct, the reason why this sentence is grammatical is rather simple. That is, it observes (26), hence there is no reason for it to be ungrammatical. On the other hand, if one analyzes that this sentence was derived via movement, it is a bit more complicated to explain but shouldn't be that hard. The analysis will be like this: both the PR and the PM are base-generated inside the VP, but as a kind of VP-fronting, they in tandem with each other raise to sentence initial position after the V-to-I raising has occurred.

The proposed analysis readily captures the fixed linear order, since the c-commanding requirement explains this. By the same token, the relativization facts are also accounted for. The reason why the PM cannot be relativized in an EPC is precisely

because being the head noun of the RC, it will end up c-commanding the PR, which should be the other way around.

Finally, the passivization facts call for an explanation. These are however problems of different sort, since explaining them involves a question about the grammatical status of the PM rather than the binding constraint proposed in this Section. This is precisely what the next Section is about, to which we now turn.

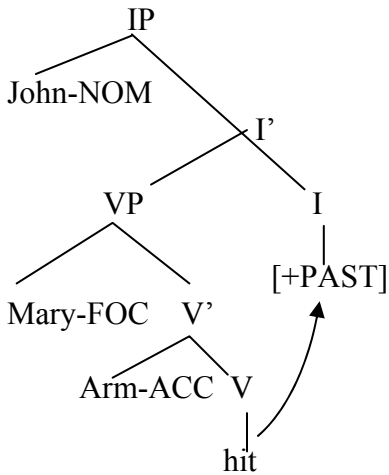
2.3. The grammatical status of PM and the syntactic structure of each type of EPC

As noted above, previous work on Korean EPC's has treated PM's as elements of *chômeur* status, meaning that they have lost their argument status in the process of PR raising, to put loosely in relational grammar terms (e.g., Chun 1985). Contra this line of analysis, I have already alluded to the fact that PM's are core grammatical elements of the sentence. In this Section, I argue that they are indeed true arguments of the predicate. Furthermore, I present possible syntactic configurations of Korean EPC's.

Adopting Williams' (1994) *Function Composition hypothesis*, and along the lines of the *theta-binding hypothesis* by Speas (1990, ch. 2), Yoon (1989, 1990) and Yoon (1998) have argued that the unsaturated argument of the relational NP or PM is inherited by the verb that it combines with. Thus, under this view, the PR is theta-marked by the PM, not by the predicate of the EPC. Building on their insights, and yet from a slightly different angle, which will be explicated in the next Section, I propose that in a Korean EPC, the predicate is capable of taking extra arguments. The proposed analysis converges with these authors in that it basically adopts the same syntactic structure that was suggested by them--Yoon (1989, 1990) in particular. On the other hand, the current proposal diverges from these previous accounts in two crucial respects. First, it treats both the PR and the PM as true arguments of the predicate. To take an MAC for example, it is analyzed that the predicate first takes the PM as its first internal argument (contra Yoon 1989, who treats the PM as the second argument) and then takes the PR as its next argument. Second, unlike those previous approaches, where only MAC's were discussed, the current analysis deals with all those three kinds of EPC's in Korean by giving them a uniform account.

Revising Yoon's (1989, 1990) structural analysis of an MAC, and putting together the arguments outlined above, I thus propose that the syntactic structure of an MAC should be like the one in (29). For expository convenience, I use the English gloss for the Korean lexical input.

(29) *Structure for an MAC: ‘John Mary-FOC arm-ACC hit-PAST’.*

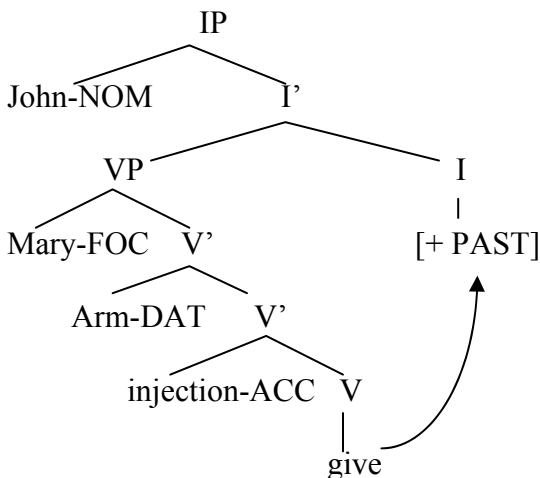


In this structure, I assume that the verb *hit* moves to I to have its tense feature checked.

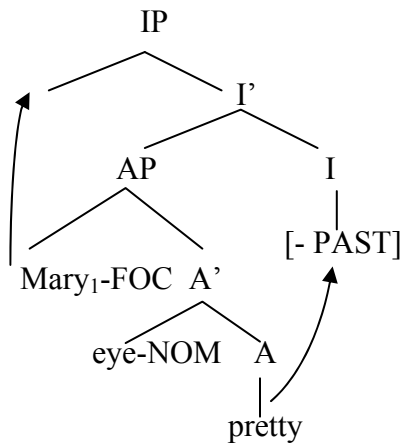
Regarding the structural representation in (29), a few remarks are in order. First, it is a well-known fact that the number of arguments that a verb can take is not necessarily equivalent to that of Cases it can assign; for example, it can theta-mark a nominal as its external argument but cannot assign it a NOM. In the case of the example at hand, the verb *hit* can have two arguments, i.e., *Mary* and *arm*, but it can assign only one ACC. Consequently, one of them, *Mary* in this case, has to surface with a different marking, which is FOC. Second, there arises a question concerning how exactly the feature-checking such as checking of Case and FOC works in this system. I abstract away from the details of these processes for two reasons: i) they are rather orthogonal to the current discussion; and ii) the reader will find some sensible accounts in Schütze (*Ibid.*) and Choe (*Ibid.*), which assume that these features are checked at LF.

In a similar fashion, I propose the following as the syntactic configurations of an MDC and a MNC.

(30) *Structure for an MAC: ‘John Mary-FOC arm-DAT injection-ACC give-PAST.’*



(31) *Structure for an MNC: 'Mary-FOC eye-NOM pretty.'*



Suppose that these syntactic analyses of Korean EPC's are on the right track. The next task for us to perform will be then to provide a semantic account, which is compatible with the syntactic accounts put forward in this Section. This will involve answering i) what the argument-structure of the predicate of an EPC is, and ii) how the truth-condition for an EPC can be derived. In the next Section, I will try to provide sufficient information about these two issues. In addition, I will touch on some other aspects of the Korean EP phenomenon such as the semantic constraints that are at work in licensing good and felicitous Korean EP sentences.

3. Semantic Analysis.

This Section provides a semantic account of the Korean EP phenomenon under discussion. In the previous Section, I have proposed that both the PR and the PM are true arguments of the predicate of an EPC. In addition I have provided the syntactic configurations for the three types of Korean EPC's. But this proposal developed thus far has left a number of issues unsaid. First, what is special about the predicates that appear in an EPC, given that they can take more than the number of arguments than they can take in non-EP environments? Second, how does the thematic-role assignment work? Third, is there any constraint whatsoever on Korean EPC's? In other words, can any nominal show up in an EPC as a PM? Similarly, is there any restriction on the predicate in an EPC? In what follows, I will attempt to answer all these questions.

This Section consists of three subsections. I will first propose a type-shifting of the predicate in an EPC. By doing so, I will show how the proposed system can derive truth-conditions for Korean EPC's: I will actually compute two Korean EP sentences and will show that they match up with native speakers' intuition. Lastly I will present generalizations about the constraints imposed on the PM's and those on the predicates that can appear in Korean EPC's.

3.1. Deriving the truth-conditions for Korean EPC's.

I argue that it is the peculiarity of an EPC that triggers a type-shifting of the predicate. As I have thus far tried to prove on the basis of the multiple pieces of evidence, the predicate

of an EPC takes the PM as its first argument. We know that a relational PM has its own argument-structure, but crucially, by occurring in an EPC, where its PR is external to it, its argument is left unsaturated. I hypothesize that this unsaturated argument is inherited by the predicate when it takes the PM as its argument. From a semantic point of view, this phenomenon can be viewed as reminiscent of raising constructions, which involve a type-shifting of the verb such as **seem** or **expect**, as has been expounded in Partee (1973) and Thomason (1976). Essentially, the idea is that one can base-generate both structures, i.e., the raising structure and the non-raising one, and have a pair of lexically related matrix verbs via a lexical raising rule in the sense of Dowty (1976). In other words, you can derive the other sentence, which is a “syntactic raising” case, via “semantic-lowering” mechanism.⁸ Inspired by this line of approach, I propose that in a Korean EPC, the predicate is type-shifted. Hence, an ordinarily mono-transitive verb like **hit** is shifted into a functor of type $\langle\langle e\langle et \rangle \rangle, \langle e\langle et \rangle \rangle\rangle$. Similarly, an intransitive verb or an adjective such as **pretty** is turned into a functor of type $\langle\langle e\langle et \rangle, \langle et \rangle \rangle$.

With regards to the thematic-role assignment for the PR and the PM, I assume that the predicate assigns a theta-role to the PM, which is in most cases THEME, and the PM assigns the role to the PR, as has been alluded to thus far. This however cannot be done directly, since the PR is base-generated *external* to the PM in an EPC. I suspect that under the proposed analysis, the predicate of the EPC serves as the link between the PM and the PR, as a result of inheriting the unsaturated argument of the former.⁹

Now let us turn to computing the truth-conditions for two example Korean EP sentences. Prior to that, we need to come up with the categories, types and variables of those types that are going to be necessary for this task. I assume the following, taken from Partee (2000:1):

(32) *Categories, types and variables that we need.*

Category	Type	Variable(s) of that type	Notes
Plain VP or AP	$\langle et \rangle$	P	e.g., pretty
Referential DP	e	x, y	John
Transitive verbs	$\langle e\langle et \rangle \rangle$	R'	hit
Relational noun	$\langle e\langle et \rangle \rangle$	R	arm (of)

With these inventories at our disposal, let us now turn to deriving the lexical entry for the shifted verb *ttayli-* ‘hit’ in Korean. For expository purposes, I will keep using English glosses for the Korean inputs.

⁸ The summary of the raising idea presented here is taken from Partee (2000:1).

⁹ I am aware that if we assume the presence of the null argument *pro* inside the PM, the picture will become somewhat different, because the *pro* can saturate the argument of the PM, and if so, there will be no unsaturated argument for the predicate to inherit. Under this view, though, some difficulties might arise in determining the grammatical status of the PR, particularly in MAC’s. As I have demonstrated above, there is little doubt that the PR is also a true argument of the predicate, since it can surface as the subject of a passive sentence. At this stage, I cannot offer any intelligent idea about which is the better way to pursue—i.e., whether to assume a *pro* or not, hence I defer this topic for future research.

(33) *Deriving the denotation of the type-shifted **hit*** (adapted from Partee (2000:3)).¹⁰

- i) \mathbf{hit}_1' : type $\langle e, \langle et \rangle \rangle$. Equivalently: $\lambda y \lambda x. \mathbf{hit}_1'(y)(x)$
- ii) $\mathbf{hit}_2'(\mathbf{arm})(y)(x) \equiv \mathbf{hit}_1'(y's \mathbf{arm})(x)$

more formally and generally,

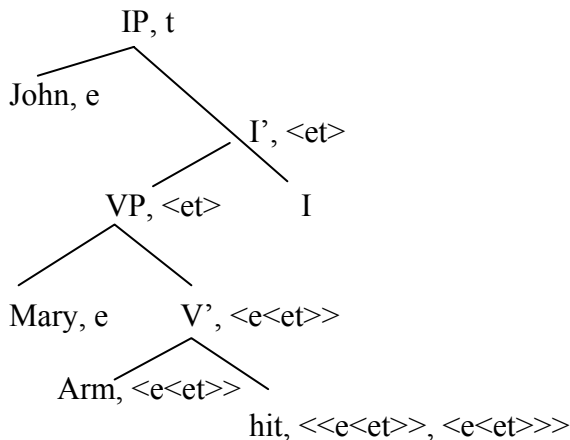
- iii) $\mathbf{hit}_2'(\mathbf{R})(y)(x) \equiv \mathbf{hit}_1'(\mathbf{tz}[\mathbf{R}(y)(z)])(x)$

therefore,

- iv) $\mathbf{hit}_2' \equiv \lambda R \lambda y \lambda x. \mathbf{hit}_1'(\mathbf{tz}[\mathbf{R}(y)(z)])(x)$

(34) *The derivation for 'John Mary-ACC arm-ACC hit-PAST-DEC'*

a. *LF representation of the sentence*¹¹:



b. *Computation of the truth-conditions in the present type theory.*

TR(John Mary-ACC arm-ACC hit)

- i) $(\mathbf{hit}_2(\text{on-the-arm}))(Mary)(John) \equiv$ (by def. of \mathbf{hit}_2')
- ii) $\lambda R \lambda y \lambda x. \mathbf{hit}_1(\mathbf{tz}[\mathbf{R}'(y)(z)])(x)(\mathbf{arm}')(Mary)(John) \equiv$ (by λ -reduction, three times)
- iii) $\mathbf{hit}_1'(\mathbf{tz}[\mathbf{arm}'(Mary)(z)])(John)$

What (34biii) amounts to is that this sentence is true iff. John hit z such that z is Mary's arm. This seems to match up with native speakers' intuition about the meaning of the sentence.

¹⁰ I thank Barbara Partee for her kind help with the formalisms.

¹¹ For the purposes of the present paper, I abstract away from tense and aspect. Hence, they will be henceforth treated as if they were semantically vacuous.

Let us now compute the truth-conditions of an MNC which has the structure of Mary-NOM mother-NOM pretty ('It is Mary whose mother is pretty'). Let us first derive the definition of the shifted adjective.

(35) *The definition of type-shifted pretty*

- i) type of plain **pretty'** or **pretty'₁**: $\langle et \rangle$ Equivalently $\lambda x. \mathbf{pretty}'(x)$
- ii) **pretty'₂**(mother)(x) \equiv **pretty'₁**(x's mother)

more formally and generally,

- iii) **pretty'₂**(R)(x) \equiv **pretty'₁**($\iota z[R'(x)(z)]$) (z is a relational noun, e.g., **mother**)

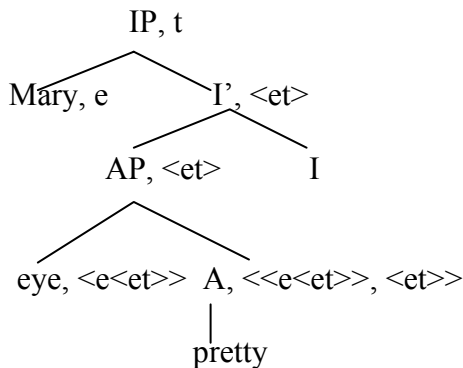
therefore,

- iv) **pretty'₂** \equiv $\lambda R \lambda x. \mathbf{pretty}'_1(\iota z[R'(x)(z)])$

The truth-conditions of the entire sentence are derived as follows:

(36) Derivation for the Korean example in the adopted type theory.

A. *LF representation of the sentence: a sketchy version.*



b. *Computation of the truth-condition in the present type theory.*

TR(Mary-NOM mother-NOM pretty)

- i) (**pretty'₂**(mother))(Mary) \equiv (by def. of **pretty'₂**)
- ii) $\lambda R \lambda x. \mathbf{pretty}'_1(\iota z[R'(x)(z)])(\mathbf{mother})(\mathbf{Mary}) \equiv$ (by λ -reduction, twice)
- iii) **pretty'₁**($\iota z[\mathbf{mother}'(\mathbf{Mary})(z)]$)

Given what we have derived in (36biii), the sentence is true iff. the z such that she is Mary's mother and is pretty. Again this seems to match up with what a Korean native speaker would think of as the meaning of the sentence.

Given the truth-conditions we have derived thus far for the two Korean examples, it seems that the proposed semantic account seems to be on the right track. Assuming so, I proceed to coming up with generalizations about the semantic constraints on Korean EPC's.

3.3. Constrains on Korean EPC's

In this subsection I show that several constrains are responsible for ungrammaticality or unacceptability of a Korean EPC. These constraints are by and large divided into two groups, first of which is imposed on the semantics of PM's and the second of which is on predicates. Let us first look at the constraints on PM's.

3.3.1 Constraints on PM's

Several authors who have investigated MAC's (e.g., Kim 1989; Yoon 1989, 1990; Cho 1998; Yoon 1998; and Nakamura 1999) have come up with the important observation that the PM appearing in an MAC must be a body-part, as illustrated in (37).

- (37) a. John-I **Mary-lul** **son-ul** ttayli-ess-ta.
 John-NOM **Mary-ACC** **hand-ACC** hit-PAST-DEC.
 'John hit Mary on the hand'.
- b. *John-I **Mary-lul** **emeni-lul** ttayli-ess-ta.
 John-NOM **Mary-ACC** **mother-ACC** hit-PAST-DEC.
 'Intended to mean: John hit Mary on her mother'.

On the basis of this fact, some of them (particularly, Yoon 1998) suggested that there might be some sort of cognitive-pragmatic factor such as "affectedness" playing a role in the well/ill-formedness of the sentence. In essence, what this means is that hitting someone's body-part can result in affecting the person, and yet hitting someone's mother does not have such a direct "affect" on the person. These authors did not explore any further about these factors, but there is an interesting set of data worth looking at, which I think will both confirm and disconfirm this previous analysis.

As the following data exemplify, even when the PM is not a body-part noun (henceforth BPN), certain non-relational nouns are legitimate enough to appear in an EPC.

- (38) a. Keyngchal-I **Mary-lul** **kapang-ul** swusaykha-yess-ta.
 Police-NOM **Mary-ACC** **bag-ACC** inspect-PAST-DEC
 'Lit. The police searched Mary in her bag'.
- b. John-I **Mary-lul** **oss-ul** ccic-ess-ta (Yeon (1999: 222))
 John-NOM **Mary-ACC** **clothes-ACC** tear-PAST-DEC
 'Lit. John tore Mary's clothes to the effect of affecting Mary'.
- c. John-I **Mary-lul** **shinpal-ul** phalp-ass-ta
 John-NOM **Mary-ACC** **shoe-ACC** step.on-PAST-DEC
 'Lit. John stepped on Mary on the shoe'.

It is important to note that the sentences in (38) are grammatical only when Mary is actually wearing the PM's. In other words, the acceptability of these sentences will markedly degrade in a situation where the PM is physically detached from the PR *Mary*. For example, as Yeon (*Ibid.*) notes, (38b) will be ungrammatical if John tore Mary's

clothes but they were hanging in the closet at the time of the tearing event. What these data illuminate to us is that what matters is not that the PM is a BPN; rather, it is more crucial that the PM is *physically attached* to the PR.

In this respect, these data disconfirm what the previous approaches have said about the PM condition: namely, only BPN's can be the optimal candidates for MAC-type EPC's in Korean. On the other hand, however, concerning their claims or conjectures about "affectedness" condition, these data seem to support their ideas. The fact that "physical attachment" (or "physical contiguity" in Yeon's terms) plays an important role in MAC's might be viewed as a way of fulfilling the affectedness condition, since if the PM is physically severed from the PR, there then will be no affect on the PR.

Now to put these facts together and to draw a generalization, the following results.

(39) *Generalization on the accessible PMs in MAC-type EPC's in Korean:*

The PM's that can appear in an MAC must be either BPN's or physically attached to the PR.

This generalization seems to be empirically correct; PM's that are physically detached from the PR cannot appear in MAC's. Consider the following data in comparison with (38).

(40) a. *Keyngchal-I **Mary-lul** **cha-ul** swusaykha-yess-ta.
Police-NOM **Mary-ACC** **car-ACC** inspect-PAST-DEC
'Intended to mean: lit. The police searched Mary in her car'.

b. *John-I **Mary-lul** **shinpal-ul** tenci-ess-ta
John-NOM **Mary-ACC** **shoe-ACC** throw.away-PAST-DEC
'Intended to mean: John threw away Mary's shoe'.

The importance of these data is twofold. First, comparing (40a) with (38a), we are confirmed that the source of ungrammaticality of the former is because in that sentence the PM is not physically attached to Mary. Second, comparison of (40b) with (38c) reveals that we also need to consider the consequence of the action expressed by the verb in the sentence as well. That is, in (40b), it is asserted that the shoe has been taken away from Mary, and therefore it is not attached to Mary any longer, even though she might have been wearing it before the action. Therefore it is not possible to express this event using an EPC (meaning it is fine to use an IPC instead).

At this point, there arise two questions. First, one would wonder why nouns such as *car*, *shoe*, or *clothes* can appear in EPC's, in spite of the fact that they are inherently not relational. I do not have a well-developed idea about this, but want to tentatively argue that it is the peculiarity of EPC that *coerces* them into relational Ns in the spirit of Jensen and Vikner (1996) and Partee and Borchev (1998). That is, in an EPC, a non-relational N is coerced from a CN into a TCN. I further claim that the discourse context supports this coercion.¹²

¹² I thank Barbara Partee for helping me more clearly express the functions of the EP construction and the discourse context regarding this coercion phenomenon.

The other question that arises is: How can the descriptive generalization in (38) be expressed in formal terms? Again I do not have much to offer regarding this, but one idea I can think of is to posit that it is tied to the binding condition I have proposed above. That is, for an EPC to be felicitous, the PM and the PR must be coindexed. This could be along the lines of Baker (1999: 299), although it could be a bit of a stretch of his idea, since he is assuming this condition to account for pure noun-incorporation EPC's in Mohawk. But I believe that this sort of binding condition also plays a role in non-incorporation EPC's such as Korean EPC's at hand.

Another way of approaching the problem might be to analyze that affecting the PM can count as affecting the PR. To take (38a) for example, one can assert that inspecting Mary's bag, which she is carrying with her, can count as inspecting her in person. In contrast, to take (40a) for example, it is more difficult to say that inspecting Mary's car counts as inspecting her. To put in semantic terms, it can be said that if affecting the PM is true, then it follows that affecting the PR is also true, but not the other way around. In other words, an upward monotone relation should hold between the impact of the "action upon the PM" and that of the "action upon the PR".

Now let us turn to discussing what kinds of constraints are imposed on the predicate of an EPC. Compared to the condition on PM's, there seem to be more complications involved in making generalizations. However, in what follows, I provide three factors that can be attributed to the degree of grammaticality of a MAC-type EPC in Korean.

3.3.2. Constraints on predicates.

First of all, one can generalize that normally, verbs denoting "action", i.e., which have a physical affect on the PM, such as *hit*, *kick*, *pinch*, *grab*, *step on*, are most frequently used in an MAC. The reader can be readily confirmed about this fact by referring back to the examples presented above in this paper. Hence I will not offer any more data here.

This generalization faces a challenge, however, because some verbs such as *wash*, and *cut* cannot occur in EPC's, despite the fact that they are also action verbs. Consider the following data.

(41) a. *John-I **Mary-lul** **elkwul-ul** ssis-ess-ta
 John-NOM **Mary-ACC** **face-ACC** wash-PAST-DEC
 'Intended to mean: lit. John washed Mary's face.'

 b. *John-I **Mary-lul** **sontop-ul** kkak-ass-ta
 John-NOM **Mary-ACC** **finger nail-ACC** cut-PAST-DEC
 'Intended to mean: lit. John cut Mary's fingernail.'

The ungrammaticality of these sentences is quite puzzling. Why is it the case? My answer is that what is responsible for the ungrammaticality of these sentences is the lexical idiosyncrasies of these verbs. That is, they are intrinsically reflexive verbs in Korean in the sense of Reuland and Reinhart (1993). Note that even when they take reflexive arguments, the sentence is nonetheless bad, since they are in a sense redundant. To illustrate, consider (42).

- (42) a. John-I (***casin-ul**) **elkwul-ul** ssis-ess-ta
 John-NOM (***SELF-ACC**) **face-ACC** wash-PAST-DEC
 ‘Lit. John washed self’s face.’
- b. **John-I** (***casin-lul**) **sontop-ul** kkak-ass-ta
 John-NOM (***SELF-ACC**) **fingernail-ACC** cut-PAST-DEC
 ‘Lit.: John cut self’s fingernails.’

As indicated by using the parentheses, these sentences are grammatical only when the anaphor *casin* is absent.

Now we know why the sentences in (41) are bad. It is precisely due to their lexical entries: i.e., being inherently reflexive, there will be no way of connecting the BPN *face* with *Mary*, for it is supposed to be coindexed with *John*.¹³ On the basis of these facts, another generalization follows. That is, for an MAC-type EPC to be grammatical, the verb must be non-reflexive. Or more generally, the construction should be compatible with the lexical entry of the verb such as reflexivity¹⁴.

Finally, the agentivity of the predicate seems to play an important role in licensing an EPC. Consider (43).

- (43) a. *John-I **Mary-lul** **elkwul-ul** po-ass-ta
 John-NOM **Mary-ACC** **face-ACC** see-PAST-DEC
 ‘Intended to mean: John saw Mary’s face’.
- b. John-I **Mary-lul** **elkwul-ul** cheta-po-ass-ta
 John-NOM **Mary-ACC** **face-ACC** up-look-PAST-DEC
 ‘Lit. John looked up at Mary on the face’.

The difference between (43a) and (43b) with respect to grammaticality seems to be correlated with the different argument structures of the two predicates. That is, in (43a), the thematic role that the subject *John* receives from the verb *po-* ‘see’ is EXPERIENCER. But in (43b), what the verb *cheta-po-* ‘to look up at’ assigns to the subject is the AGENT role. Crucially, this paradigm leads us to see the important fact that: even if there is no affectedness on the PR by the action of the verb, the sentence can still be fine as long as the subject is *active* or *agentive* enough. Hence, I claim that this fact should also be listed as a generalization.

¹³ There is in fact a way of making these sentences grammatical: that is via inserting benefactive morpheme, *cwu-*, which literally means ‘give’, as shown below.

- (1) John-I **Mary-lul** **elkwul-lul** sisse-**cwu**-ess-ta.
 John-NOM **Mary-ACC** **face-ACC** wash-BEN-PAST-DEC.
 ‘John washed Mary’s face (for her)’.

This might be due to the fact that the BEN morpheme creates an extra argument for the PR or Mary. Or in any case, the complex verb *ssise-cwu-* ‘wash for someone’ is unlikely to be reflexive.

¹⁴ I am aware that this statement deserves further explication. However, I defer this task for future research.

3.3.3. Summary.

To summarize, in this subsection, I offered two types of generalizations as the constraints on MAC-type EPC's in Korean. One was a condition on PM's; the other was a condition on predicates. They are summarized in (44).

(44) *Constraints on MAC-type EPC's in Korean:*

- a. The PM's are either body parts or physically attached to the PR.
- b. The verb is non-reflexive.
- c. The verb is an action verb (e.g., *hit*, *kick*, *grab*) or has a physical affect on the object.
- d. The verb is agentive: i.e., it assigns the subject the AGENTIVE role.

3.4. Differences between MAC's and MNC's in Korean

In the previous subsection, we derived constraints that seem to be responsible for the grammaticality of an MAC-type EPC. I have been implicitly emphasizing that we are concerned only with MAC's. The reason was that there seems to be a kind of asymmetry between MAC's and MNC's. As we have observed, an MAC requires the condition on PM's to be satisfied. But there seems to be no such constraint on MNC's; any kind of PM seems to occur in the sentence. This is illustrated by (45).

- (45) a. **Mary-ka** **emeni-ka** yeppu-ta.
 Mary-NOM **mother-NOM** pretty-DEC
 'It is Mary whose mother is pretty'.
- b. **Mary-ka** **cha-ka** oyche-I-ta.
 Mary-NOM **mother-NOM** foreign.product-COP-DEC
 'It is Mary whose car is a foreign product.'

As exemplified earlier and stated in the generalization on PM's, kinship terms such as *mother*, and non-relational nouns such as *car* cannot occur in MAC's. Why is it then possible for them to occur in MNC's? I hypothesize that this asymmetry between MAC's and MNC's has to do with "affectedness" vs. "aboutness" condition in the sense of Hirotani (2000). In MNC's, the PR surfaces as the subject of the sentence though it may carry focus. It is probably safe to say that the subject of a sentence is what the sentence is about or predicated of. Hence, it can be argued that as long as the combination of the PM and the predicate asserts something "about" the PR, the sentence is grammatical. This of course calls for a much more thorough investigation that goes beyond the scope of this paper.¹⁵

¹⁵ The asymmetry between Korean MAC's and MNC's with respect to what kinds of PMs can appear in the sentence does not seem to be language-specific. Evidence comes from Mohawk, which is an American-Indian language. According to Baker (1999: 293-4), this language has five kinds of EPC's, and among them two are derived by noun-incorporation. Importantly, Baker offers the following observation about Mohawk, which seems to be parallel to the Korean case at hand. He notes that when an EPC is derived by noun-incorporation, it is normally the case that

Note that in MNC's, there is no predicate restriction. That is, it does not matter whether the predicate is stage (s)-level or individual (i)-level, or perfective vs. imperfective, as shown in (46) and (47).

(46) a. Mary-ka elkwul-I **yepputa.** (I-level)
 Mary-NOM face-NOM **pretty.**
 'Mary is pretty of face.'

b. Mary-ka hwa-ka **na-ass-ta.** (S-level)
 Mary-NOM Anger-NOM **arise-PAST-DEC**
 'Mary is angry.'

(47) a. Mary-ka chip-i **pwulta-ass-ta** (Perf)
 Mary-NOM house-NOM **burn-PAST/PERF-DEC.**
 'Mary's house got burnt (down).'

b. Mary-ka chip-i **pwulta-ko-iss-ta** (Imperf)
 Mary-NOM house-NOM **burn-COMP-PROG-DEC.**
 'Mary's house is burning.'

Indeed, the leniency of MNC's in terms of the restrictions on PM's and predicates seems to be quite remarkable in comparison with MAC's. Again I suspect that the "aboutness condition" might be playing a role here. Despite the uncertainty with this kind of pragmatic or cognitive condition, I believe that there is some truth to this line of analysis. On the other hand, I also suspect that this phenomenon may be governed by other factors that are yet to be discovered.

only BPN's can appear in object position, whereas there is no such restriction on subject position. The following data illustrate this.

(1) a. Wa'-khe-**hšín**-óhare-'. (mono-transitive V)
 FACT-1SG:SUBJ/FEM:SG:OBJ-**leg**-wash-PUNC
 'I washed her leg.'

b. *Wa'-hi-'**sere**-ht-óhare-'.
 FACT-1SG:SUBJ/MASC:SG:OBJ-**car**-wash-PUNC
 'I washed his car'.

(2) a. Ro-[**a**]nitskwara-tsher-a-hnír-u. (intransitive verb)
 (NEUT:SG:SUBJ)/MASC:SG:OBJ-**chair**-NOM-∅-be.hard.STAT.
 'His chair is hard.'

The contrast between (1) and (2) above shows that when the PM is an object of a transitive verb, it must be a BPN, and hence the ungrammaticality of (1b) results. In contrast, when it appears as the external argument or subject of an intransitive verb, which is roughly equivalent to an English adjective, there is no such restriction. This fact suggests that there might be more languages that exemplify this asymmetry between objection position and subjection position. Thus, there arises a need for further research on this phenomenon, based on some typological survey.

4. Closing remarks

I would like to close this paper by comparing the proposed analysis with previous work on the Korean EP phenomenon. I then close the paper by pointing out some remaining problems.

4.1. Comparison with previous analyses

The issues surrounding the Korean EP phenomenon fall into two classes: i) extra Case-licensing and ii) the grammatical statuses of the PR and the PM. Obviously, these two problems are interconnected. But most previous research on this topic has been concerned only with the first problem. The most representative previous studies on this topic are Kim 1989, 1990 and Cho 1998. The former appeals to *Case concord* between nominals that are associated with each other. This analysis is problematic, however, because there are cases where the PR and the PM do not necessarily agree in Case (e.g., ECM constructions), as shown above. On the other hand, Cho 1998 postulates the presence of the functional-head *KP* in the sense of Bittner and Hale (1996). This account is also problematic. First, it cannot account for why in certain instances the PR and the PM disagree in Case. Second, in view of the principle of economy of derivation, this proposal is not so desirable, because it posits numerous movements to derive a structure that contains *multiple* PM's (See the original work for the details).

In contrast, the proposed analysis can readily capture the Case disagreement between the PR and the PM, because it argues that structural Case markers are homophonous with focus-markers and hence can be ambiguous. Furthermore, the present approach is economical because everything is base-generated. But as acknowledged above, this approach is not clear as to what determines the choice of a focus-marker over another among *-ka*, *-lul*, and *-ey*.

The other overarching issue about the EPC has to do with the grammatical status of the PM. As far as I know, the argument vs. adjunct status of the PM is much debated in the literature. Moreover, authors are not so clear about their stands except for H.-S. Yoon (1989, 1990), and J.-M. Yoon (1989). These authors claim that the PM is base-generated as the sister to the verb in an MAC. This implies that these authors are treating the PM as an argument of the verb.

In the present paper, I offered evidence in favor of this view. Hence I adopted H.-S. Yoon's (1989) syntactic structure in my analysis of the Korean EP phenomenon. But I believe that the proposed analysis made progress in at least two aspects. First, while these previous studies investigate only MAC's, the present study deals with all the three EPC's, including MDC's and MNC's. Second, unlike the previous studies, the present study offers evidence that the PM is a true argument of the predicate of the EPC.

There is, however, an alternative approach to this problem: Kim (1989) argues that the PM is some sort of adjunct which modifies the predicate. Although she does not develop this into a formal account, one way of implementing her idea in a formal semantic framework would be to analyze the PM as an endocentric adjunct operator. That is, it converts predicates of type $\langle e, et \rangle$ (e.g., **hit**) and $\langle et \rangle$ (e.g., **pretty**) into predicates of type $\langle \langle e, et \rangle \rangle$, $\langle e, et \rangle \rangle$ and $\langle \langle et \rangle \rangle$, $\langle et \rangle$, respectively. The idea is that the PM becomes an operator on the verb or adjective. In this process, the *relationality* of the PM gets transmitted through the verb or adjective, thereby allowing it to be reconnected with

the PR. Interestingly, this system generates truth-conditions which are identical to those we have derived for the Korean examples in the proposed system.¹⁶ Given this identity between the truth-conditions produced by the two approaches, it is not clear which approach should be adopted.

But there seems to be evidence in favor of the PM-as-an-argument approach rather than the PM-as-an-adjunct approach. First of all, as illustrated above in (15-16), the PM in an EPC is not optional. If it is indeed an adjunct, it should be possible to omit it. Second, as the conditions on predicates have shown, the semantics of predicates play an important role in licensing EPC's. If the PM is an operator that takes the predicate as its argument, this is not expected, for it is concerned only with the semantic type of the predicate. Third, on the PM as-an-adjunct-operator approach, it seems harder to account for why there should be such an asymmetry between MAC's and MNC's. This is because one would expect to find the same kind of operators at work, regardless of their syntactic positions. Fourth, if the PM is an adjunct, it is not so clear why it never surfaces with an oblique Case-marking on it: as we have observed, it is marked only by *-ka*, *-lul*, or *-ey*. Finally, if the PM is an adjunct, it is expected to have more freedom with respect to its syntactic position than it does in an EPC. As noted, however, this is not the case. On the basis of this discussion, I conclude that the present analysis is more desirable than a PM-as-an-adjunct-approach.

4.2. Remaining problems

First, as I have alluded in the several mentions of “affectedness” and “aboutness” conditions, there is little doubt that cognitive and/or pragmatic factors are playing an important role in the Korean EP phenomenon. But, such a notion is intrinsically fluid and hence it is not clear at this point exactly how these factors can be implemented within a formal framework. Second, as far as truth-conditions go, there is no difference between an EPC and its corresponding IPC. But, native speakers intuit that the two constructions mean something different. Furthermore, not every EPC has an IPC counterpart or the other way around, as shown in (48-49).

- (48) a. **Nay-ka mok-I malu-ta.** (EPC)
 I-FOC neck-NOM dry-DEC.
 ‘It is me who is thirsty’
- b. **#Na-uy mok-I malu-ta.** (IPC)
 I-GEN neck-NOM dry-DEC.
- (49) a. ***/# Kyengchal-I na-lul chip-ul swusayk-ha-ess-ta.** (EPC)
 Police-NOM I-FOC house-ACC search-do-PAST-DEC
- b. **Kyengchal-I na-uy chip-ul swusayk-ha-ess-ta.** (IPC)
 Police-NOM I-GEN house-ACC search-do-PAST-DEC
 The police searched my house.’

¹⁶ For reasons of space, I do not offer the full computation of each example. I hope the reader will take my statement at face value or do the derivation on her own.

In the formal system adopted in this paper, we cannot account for this *inalterability* between an EPC and its IPC counterpart. I leave these issues for future research.

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