

EPP and Case in Locative Inversion*

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Kim, Jaemin. 2007. EPP and Case in Locative Inversion. *The Linguistic Association of Korea Journal*, 15(3). 239–256. This paper is concerned with EPP and Case realization in Locative Inversion constructions of English. It is argued that the inverted locative phrase itself satisfies EPP, and the preposition in the fronted PP is the Case realization. To support them, we have used the examples of Chichewa, Korean, and other Dravidian languages. One step further, the DP after V in Locative Inversion constructions has Partative case in LF. This analysis can explain Agreement and Question formation satisfactorily with some pragmatic principles together.

Key Words: EPP, Case, Agreement, Locative Inversion,

1. Introduction

The following examples show that surface position of subject in English can be filled not only by NP but also by PP;¹⁾

- (1) a. On Tuesday seems to be when she goes shopping at Harrod's.
- b. In the distance appeared the towers.
- c. He visited her office.

The name given to the constructions (1a, b) -- locative inversion --

* This paper was supported by the Research Fund of Chonbuk National University in 2005. Thanks to three anonymous reviewers for their comments.

1) Other categories such as CP, AP, and VP can also occur in the surface subject position of English (cf. Aarts 2001). I, however, concentrate only on PP in this paper.

shows two properties of the construction, as Levin & Rappaport Hovav (1995) says. First, it contains noncanonical word order, PP V NP, which seems to be the result from switching the positions of the abstract structures. Second, Case marking and Agreement are different from ordinary NP V ... structures, as in (1c). Also, though it is not syntactic, only very limited class of verbs can appear in this construction.

Because of the noncanonical characteristics, many linguistic literatures deal with one or more characteristics of the construction. As Kim (1997) summarizes, it may be possible to group the previous studies into three typical cases: the properties and the movement mechanism of the PP (Bresnan 1994, Collins 1997, Hoekstra & Mulder 1990 among others), the structural position of postverbal NP (Levin & Rappaport Havov 1995, among others), and the class of the verbs that can be used in this construction (Levin 1993, Levin & Rappaport Havov 1996, Bresnan 1994, among others) have been examined extensively. Also, discourse functions of this construction have been studied in many linguistic literatures (Kim 2000, Birner & Ward 1994, among others). In this paper I concentrate only on the characteristics of the Subjecthood, and Agreement and Case mechanism of the constructions, using English, Chichewa, and Korean data.

For the subjecthood of the constructions, conflicting proposals were made: the postverbal NP as a subject (Rochemant & Culicover 1990), or an unaccusative object (Coopman 1989, Levin 1993), or the preposed locative PP as a subject (Jaworska1986), or a topic. Through her extensive work on the Locative Inversion in English and Chichewa, Bresnan (1994) argues that the inverted PP is a topicalized subject. In other words, by using LFG (Lexical Functional Grammar) model, she argues that the fronted PP remains at the subject position on one level of derivation (a-structure in LFG) and then moves up to the topic position (c-structure in LFG). In this paper, by using English, Korean, and Chichewa examples, I present some Bresnan's (1994) shortcomings, and support Kim's (1997) suggestion again for the preposed locative PP-subject hypothesis. Also, I argue that Agreement mechanism applies

separately from Case assignment. Further I argue that Case and Agreement are meaning-sensitive or meaningful units.

In section 2, I will present general locative inversion constructions in English, Chichewa, and Korean. In section 3, I discuss the previous studies of locative inversion, focusing on the status of the subject in locative inversion constructions. In section 4, the subject and Case assignment mechanism will be discussed. In Section 5, I will explain the different types and the question formation of Locative Inversion constructions. Section 6 is the conclusion of this paper.

2. The Inverted Word Order in English, Korean and Chichewa

In addition to the examples in (1), Locative Inversion in English is illustrated by the following examples:

- (2) a. A lamp was in the corner.
b. In the corner was a lamp.
- (3) a. My friend Rose was sitting among the guests.
b. Among the guests was sitting my friend Rose.
- (4) a. The tax collector came back to the village.
b. Back to the village came the tax collector.
- (5) a. Between six and seven suits her fine.
b. Under the chair is a nice place for the dog to sleep.
- (6) a. In these villages are likely to be found the best examples of this cuisine.
b. Between six and seven seems to suit her fine.

To characterize the term LOCATIVE, Bresnan (1994:75) argues (based on Birner's (1992) corpus-based studies) that the term should be used to subsume a broad range of spatial paths, or directions, and their extension to some temporal and abstract locative domains. As the above examples illustrate, locative inversion construction involves three different kinds of structures: the first one is the construction which, as

I mentioned in section 1, has PP V NP order as in the examples (2b) – (4b), where the preposed locative phrase appears in front of the verb and the postposed subject NP after the verb. The second is the one that has a locative phrase in the subject position without the postposed NP as in the examples (5a, b). The third kind of structure is the examples in (6), which have locative phrases with the raising verbs.

As Bresnen & Kanerva(1992) and Bresnan (1994) show, Chichewa, a Bantu language, has also the same locative inversion phenomena as English. The following examples are from Bresnan (1994):

- (7) a. Chi-tsime chi-li ku mu-dzi
 7-well 7.SUBJ-be 17 3-village
 'The well is in the village.'

- b. Ku mu-dzi ku-li chi-tsime.
 17 3-village 17.SUBJ-be 7-well
 'In the village is a well.'

- (8) Ku mu-dzi ku na-bwer-a a-lendo.
 17 3-village 17.SUBJ-REC.PST-come-FV 2-visitor
 'To the village came visitors.'

- (9) Ku mu-dzi kw-a-yamba ku-gwa mvula.
 17 3-village 17.SUBJ-PRF-start INF-fall 9.rain
 'At the village it has started to rain.' (Lit. 'At the village
 has started to fall rain.')

Korean commonly has the following cases, which have the same structures as the English examples in (5, 6);

- (10) a. Krismas -ihu - ka maeu chup -ta
 Christmas after NM very cold DM
 'After Christmas, it is very cold.'

- b. Chaeksang -mit -i cop -ta
 table under NM small DM
 'The space under the table is not spacious.'

- (11) a. yesess-si eyes ilkop-si sai-ka moikieye coha pointa.
 6 o'clock from 7 o'clock between NM meet good look
 'Between six and seven o'clock looks good to meet.'

- b. chimta mit -i cakiey coheulkes katta.
 bed under NM to sleep good seem
 'Under the bed seems good to sleep.'

When we look at the examples in English, Chichewa, and Korean, it can be said that locative inversion constructions are universal syntactic phenomena although their distribution and syntactic characteristics vary from language to language.

3. Bresnan's (1994) Topicalized Subject PP Argument & Korean Examples

For the strong points and shortcomings of previous argument for the subjecthood of the constructions, I have discussed in Kim (1997) in detail. Here I briefly repeat some of them for convenience's sake. Because of the mixed evidence for the status of the subject in the Locative Inversion constructions, three different kinds of analyses have been proposed. The first analysis is the theme NP subject analysis (Rochemont & Culicover 1990, Stowell 1981, among others). In this analysis the preverbal locative PP is a topic, and the postverbal NP is a subject. The formal derivation of this analysis can be sketched roughly as follows:

- (12) [_{CP} PP_i [_{IP} t_j V t_i] NP_j]

As Kim (1997) argues, although the theme subject analysis explains

the verb agreement cases very well, it does not offer any explanation for the cases of raising construction in which only the subject can be raised, nor for the tag question cases, as follows:

- (13) a. *Between six and seven* seems to suit her fine.
 b. *In the garden* is a beautiful statue, isn't *there*?

Also, as Bresnan (1994) argues, theme subject hypothesis does not explain the detailed correspondences between locative inversion cases in English and Chichewa which does not show the agreement between the theme NP and the verb.

The second analysis is the locative PP subject analysis (Hoekstra & Nulder 1990, Levin 1986, among others). In this analysis, according to the verb in locative inversion constructions, two different derivations can be sketched, as follows: (cf. Levin & Rappaport Hovov 1995:265)²⁾

- (14) (if the verb is an unergative)
 a. D-Structure: $[_{IP} e [_I I [_{VP} NP [_{V'} V PP]]]]$
 b. S-Structure: $[_{IP} PP_i [_I V_j + I [_{VP} [_{VP} t_k [_{V'} t_j t_i]] NP_k]]]$
- (15) (if the verb is an unaccusative)
 a. D-Structure: $[_{IP} e [_I I [_{VP} [_{V'} V NP PP]]]]$
 b. S-Structure: $[_{IP} PP_i [_I V_j + I [_{VP} [_{VP} [_{V'} t_j t_k t_i]] NP_k]]]$

This analysis explains raising phenomena very well, but we have to suggest some explanation for Agree and Case mechanisms in the constructions. Also this analysis cannot explain the impossible Question Formation;

- (16) a. Under the bridge sat a cat.
 b. *Did under the bridge sit a cat?

2) In Section 5, I'll explain the reason why there are two different derivations in locative inversion constructions as in (14) and (15), and suggest Agree and Case mechanisms in the following sections.

- (17) a. In the corner was a man.
 b. *Was in the corner a man?

The third analysis is expletive *there* or *pro* subject analysis (Coopmans 1989, Bobaljik & Joans 1996). The hypothesis states that there is a deleted *there* or *pro* in all locative inversion constructions. This hypothesis, however, is not economical, and there are many locative inversion cases that can occur without an overt *there*, as in (18). Also, it is not desirable or economical to assume *pro* in the subject position, because there is no other constructions that require *pro* in English.³⁾ This analysis can be schematized as in (19):

- (18) a. Into the room (*there) ran Mother. (Bresnan 1994:99)
 b. Out of it (*there) steps Archie Cambell. (Birner 1992:43)

- (19) [_{CP} PP_i [_{IP} *pro* [_{VP} V t_j t_i] NP]]

4. Locative Subject Hypothesis, and Case/Agreement mechanism

To explain the mixed evidence, Bresnan (1994) and Jang (1996) propose the topicalized PP subject hypothesis (TPSH).⁴⁾ In other words, at the level where word order and surface categorial structure are represented, the locative PP is not a subject, but at the level where more abstract grammatical relations are presented, the inverted locative is a subject. Thus, Bresnan argues that movement occurs at the more abstract level, and then the PP moves up to the topic position. And, because the verb agrees with the nominal category inherently, it agrees with the theme NP as in the cases of the existential *there* construction.

3) Jang (1996: 200) indicates some theoretical inappropriateness for the *pro* subject in the locative inversion construction

4) Jang does not follow LFG framework and use the term "topicalized subject," but the results of the derivation are the same.

Differently from Bresnan, Jang argues that first locative PP moves up to [Spec, IP], thereby satisfying EPP, and ends up in [Spec, CP]. Although their theoretical backgrounds are different, the results of the PP movement is the same. Their analysis can be schematized as follows:

$$(20)[_{CP} PP_i C [_{IP} t_i' [_{VP} t_j t_i]NP_j]]]$$

4.1 The Inverted PP as a Subject and P as a Case Realization

Bresnan's TPSH explains the problematic Agreement, Raising, and Attribute VPs in locative inversion very well. However, if we do not assume the multiple (thematic, structure, and functional) structures, it is very difficult to accept Bresnan's TPSH. Another problem in the TPSH analysis is that there is no clear motivation for the second movement of the PP. In other words, why should the fronted locative PP move up again to [Spec, CP]? The fronted PP is designated the special interpretation of presentational focus already.

Because of the mixed reasons and the shortcomings of Bresnan's arguments, I have suggested that the fronted PP is just a subject in Kim (1997). If we assume that the locative PP is the subject of the locative inversion construction, as I have already mentioned in section 3, it can explain the raising and the Tag Question cases, but not the Case-Agree and Number(Phi)-Agree. To solve the agreement problem, Kim (1997) accepted Bresnan's (1994) argument that the verb agrees with its most prominent argument (according to the functional hierarchy of SUBJ > OBJ > ...) that lacks indirect case. In Chichewa, Bresnan argues that locatives are not cases, but gender classes. Thus, the locatives in Chichewa can be categorized as nominal, and the verb agrees with the preverbal locative gender class. The problematic case of agreement in English is that of (21), in which the verb agrees with the locative PP, not with the following NP.

- (21) Under the bed and in the fireplace are not the best (combination of) place to leave your toys.

Here I reject Bresnan's (1994) and Kim's (1997) idea and suggest different explanation for the Agreement in locative inversion constructions. For the Case-Agree I accept Langaker's (1991:234) idea; he argues that Cases are not seen as mechanically induced, semantically empty grammatical markers, but rather as separate predications, whose value can either dovetail with that supplied by other elements or else provide supplementary semantic specifications. What does a case marker profile? He argues that there are two options. First, it may profile the focused participant (making it similar internally to a nominalizer like *-er* or *-ee*). Its effect on a noun phrase is then to derive a more elaborate nominal expression capable of serving as a subject or object. He also argues that alternatively, the case predication may be relational in character, profiling the interconnection between the focused participant and the base relation overall. In this event the case marker is very similar semantically to a preposition.

Thus, I argue that the preposition itself in the fronted locative PP is the realization of Case and the verb Phi-Agrees with the PP. The P in the preposed PP suppresses the appearance of a Case marker in English, because both of them represents same semantic role. Thus, in (22b) Preposition Phrase *from eleven to one* can be used as Object even though it doesn't have any case mark.

- (22) a. *Under the table* is a good place to hide.
 b. He had spent *from eleven to one* at his church.

In (22a) *under* replaces case marker and the verb agrees with the PP, and (22b) *from* replaces case marker.

The theme NP in locative inversion construction may have partative Case in LF, as the NP(DP) in existential *there* construction.

4.2 Parameterizing Variant Case realization System

Differently from the examples of English, Korean locatives have case marker when they are used in the nominal positions as the examples in (10) and (11), here I repeated them as (23) and (24) for convenience' sake;

- (23) a. Krismas -ihu - **ka** maeu chup -t
 Christmas after NM very cold DM
 'After Christmas, it is very cold.'
- b. Chaeksang -mit -**i** cop -ta
 table under NM small DM
 'The space under the table is not spacious.'
- (24) a. yesess-si eyes ilkop-si sai-**ka** moikieye coha pointa.
 6 o'clock from 7 o'clock between NM meet good look
 'Between six and seven o'clock looks good to meet.'
- b. chimta mit -**i** cakiey coheulkes katta.
 bed under NM to sleep good seem
 'Under the bed seems good to sleep.'

In the above examples, the subject PPs have both preposition and subject marker - *ka* or -*i* respectively.

Even when the PP is used in the object position, the same case marking occurs;

- (25) ku -**ka** yesess-si eyes ilkop-si sai -**lul**
 He Nom 6 o'clock from 7 o'clock between DM
 kyohoey-ese ponaess-ta.
 church at spent
 'He had spent from eleven to seven at the church.'

While explaining the case differences in Hindi and Bangla, Jayaseelan(2007) argues that both in Dravidian and in Indo-Aryan, the 'quirky case' subject is marked with both genitive and dative, in that order, in the underlying representation. In Dravidian, the genitive is 'silent'; in Indo-Aryan, the genitive or the dative is silent, depending on the language and whether the DP is experiencer or possessor or the subject of an obligational modal. In other words, he argues that depending on the thematic role of the subject, the case of the subject DP can be differentiated as follows;

(26) (Hindi)

John-ko bukhar hai
 Dat fever be. Pre
 'John has a fever.'

(27) (Bangla)

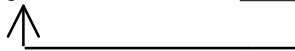
tomar khide pabe
 you. Gen hunger feel. Fut
 'You will feel hungry.'

(28) (Bangla)

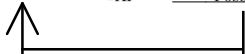
ama-ke jete hobe
 I -Dat go(part) must
 'I must go.'

The derivations he proposes are as follows;

(29) a. BE [_{KP} Spec K^o_{dat} [_{PossP} DP Poss^o NP]]



b. BE [_{KP} DP-Poss K^o_{dat} [_{PossP} t NP]]



c. DP-_{poss-dat} BE [_{KP} t [_{PossP} t NP]]

According to him, either dative or genitive case is assigned for the NP in the subject position, and one of them is selected.

In the same vein, he argues that the locative case-marker is realized as a preposition in Russian, as follows:

- (30) na stole byla kniga.
 on table. loc was book.nom
 'There was a book on the table.'

For the above example he presents the following derivations:

- (31) a. BE [_{KP} S_{Spec} K_{Loc}⁰ [LocP DP Loc⁰ NP]]
- ↑
- └──────────────────────────────────┘
- b. BE [_{KP} DP-Loc⁰ K_{Loc}⁰ [LocP t NP]]
- ↑
- └──────────────────────────────────┘
- c. DP-Loc⁰-K_{Loc}⁰ BE [_{KP} t [LocP t NP]]

He also presents a double case-marking example, as follows:

- (32) u menja byla sestra
 at 1sg. gen was sister.nom
 'I had a sister.'

The preposition *u* 'at' is plausibly the equivalent of dative case. Besides the preposition, there is a genitive case of the subject NP – an instance of double case marking.

Examining the above examples of Korean, Bangla, Hindi and Russian, we can say that the case marking system for the element in the subject position of a sentence should be parameterized; Nominative, Dative, Genitive Case or Preposition, or Nominative Case and Preposition together can appear to show the participants' base relation in a sentence.

Furthermore, in the double subject constructions in Korean, both PP and NP can be used as subjects, as follows; (cf. Yim 2004; 101)

- (33) a. LA-e-ga hanintul-i manta
 LA-at-Nom Koreans-Nom many
 'Many Koreans live in LA.'
- b. uri tongne-e-ga sae kil -i nanta
 our village-at-Nom new road-Nom opened
 'A new road has been opened in our village.'
- c. hangang-e-ga omul-i ssahyotta
 Han River-at-Nom filth-Nom piled up
 'Han River gathered filth.'

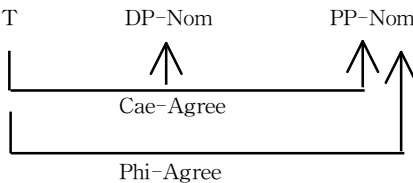
The above examples show that, like an NP, a PP can appear as a subject in a double subject construction with an NP. We can find that the preposed PP is just a subject, not a topic in the above examples.⁵⁾

In sum, I argue that in English Locative Inversion constructions,

5) To suggest his idea of 'Multiple Agree', Yim(2004) adopts Bowers'(2002) Phi-Parameters and Case-Parameters and argues that a probe may or may not have Phi-features and the latter states that a probe may or may not value the Case feature of a matching goal. He applied this idea for Korean honorific expressions. For the Locative Inversion constructions, however, his idea need not be adopted, because both Case and Phi Agree are applied for the fronted PP.

He argues that given this, in (33), T Phi-Agrees and Case-Agrees with the PP, while it only Case-Agree with the DP (without Phi-Agree), as schematized below. (Yim 2004; 102) (refer to the Yim's dissertation for the "multiple checking ability of T")

(1) Phi-Agree and Case-Agree of T (Yim 2004; 102)



Case-Agree reveals as Preposition in the inverted PP and the DP has partative Case as in *there*-construction. As Langaker and Jayaseelan (2007) argues, the function of Preposition is the same as that of the Case marker. Thus, in Korean Locative Inversion cases, the inverted PP is doubly marked, while in English only Preposition appears in the fronted PP and the following DP has invisible structural partative case.

5. Remaining Problems

5.1 Unaccusative verbs and Locative PPs

In section 1, several different types of locative inversion cases were presented. Here I repeat some of them for convenience' sake;

- (34) a. In the corner was a lamp.
 b. Back to the village came the tax collector.
 c. Under the chair is a nice place for the dog to sleep.
 d. Between six and seven seems to suits her fine.

In the example (d), the preposed PP satisfies EPP and the verb agrees with the PP. Because the main verb is a raising verb, the PP is the only candidate to satisfy EPP. In (b), however, the verb *come* is an unaccusative verb. Thus, if we follow the unaccusative analysis as in Haegeman (1994), the NP the tax collector is a candidate to satisfy EPP. Thus we can say that in (b) either the PP or the NP can satisfy EPP and the PP is selected to satisfy EPP in this example. In the same vain, either PP or DP can satisfy EPP in the examples of (a) and (c) where the main verb is a variant of *be*. Thus, Levin & Rappaport Havov (1995:265) presented two different derivation as in (17, 18) of Section 3.

We may argue that the examples like (34a, b, c) are real Locative Inversion construction and the example like (34d) is just a construction where the subject is PP. I, however, will use the term Locative Inversion for all the examples as we did for a long time.

the bed and *to hide* because of the *a good place*, and *between ten and eleven* and *to meet* because of the *a good time*.

The impossible question formation is found in the following examples too:

- (38) a. The earth is round is true.
b. *Is that the earth is round true?
c. Is it true that the earth is round?

The above examples show that in some cases question formation (Subject-Auxiliary inversion) cannot be applied mechanically. What we are going to ask should be considered first and the syntactic rule is applied next.

6. Conclusion

I have attempted to explain EPP and Case realization in Locative Inversion, and argued that the inverted locative phrase satisfies EPP, the preposition itself in the fronted PP is the Case realization, and DP after V in Locative Inversion constructions has Partative case in LF. I also have presented some examples to show that Case for subject may be realized differently from language to language; Nominative, Dative, Genitive, and/or Preposition. This analysis also can explain agreement and question formation, though we may need some pragmatic principles for them. To prove and generalize my argument, we may need to study more extensive examples and other inversion constructions.

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Received: 30 Jun, 2007
Revised: 5 Sept, 2007
Accepted: 10 Sept, 2007