A Complex Predicate Analysis of Passives*

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1. Introduction

It has been widely assumed that the process of passivization is one of the instance of NP-movement, namely Case-driven movement. However, if we adopt Chomsky's (1995) feature checking theory, passivization cannot be Case-driven movement since Case feature does not motivate overt movement in this framework. Under the feature checking theory, only strong uninterpretable features, such as the D-feature in T (EPP), cause overt movement and weak uninterpretable features, such as Case-feature, cause covert movement. This entails that passivization in the matrix sentence is caused by the EPP but not Case (cf. Mahajan 1995). A closer observation, however, reveals that in passives in small clauses, where the EPP is irrelevant, the underlying object still undergoes movement, as indicated in (1).

(1) a. *John saw [arrested Bill]
b. John saw [Bill_i arrested t_i]

The examples in (1) suggest that passivization is not caused by the EPP either. I will propose that the movement in passives is caused by the θ-requirement of the passive morpheme, which is a predicate head forming a complex predicate with vP (whose head is assumed to license an external argument of transitive constructions (cf. Hale and Keyser (1993)). We will see some cross-linguistic evidence to show that the passive morpheme is a

predicate head, arguing against the analysis advanced by Jeaggli (1986) and Baker, Johnson, and Roberts (1989), under which the passive morpheme is viewed as an argument. The proposed analysis consequently implies that there is movement into a θ-position within a lexical phrase (cf. Bošković 1994).

2. Movement within a Small Clause

2.1. Motivation of Passivizasion

In this section, I will show that neither Case nor the EPP motivates passivization.

Under the feature checking theory, uninterpretable features must be eliminated by checking for convergence. Uninterpretable features consist of two kinds : strong features, such as the D-feature in Tense (EPP) and weak ones, such as Case feature. Crucially, only the former motivates overt movement (Chomsky 1995). Consider (2).

(2) a. There is [a man in the field]
b. A mani is [t_i in the field]

If the numeration contains *there*, it merges into Spec TP to eliminate the strong D-feature in T, and hence satisfies the EPP, as in (2a). At Sell-Out, the associate *a man* stays in a non-Case position, leaving its Case-feature unchecked. This indicates that Case features, unlike the D-feature of T, can be checked after Spell-Out, namely in the covert syntax. If the numeration does not contain *there*, *a man* moves to Spec TP to satisfy the EPP, as in (2b). The contrast in (2) suggests that the overt movement in (2b) is EPP-driven but not Case-driven.

If we follow Chomsky's claim above, passives should not be formed by Case-driven movement since Case feature does not motivate overt movement. This seems to be correct, as indicated in (3).

(3) a. There is [a man killed in the field]
b. A man$_i$ is killed t_i in the field.

The examples in (3) show that *a man* can stay in a non-Case position at Spell-Out if the numeration contains *there*, as in (3a), but otherwise it moves overtly, as in (3a). The parallelism between (2) and (3) suggests that the movement in the passive sentence in (3b) is EPP-driven but not Case-driven. (Mahajan (1995) has also reached this conclusion on different grounds.)

At first glance, passivization appears to be an instance of EPP-driven movement as argued above, but closer examination reveals that it is not the case. The example of (3a) has already involved movement within the small clause. Since a small clause contains no tense elements, the EPP is irrelevant for the movement in (3a).[1] Furthermore, the movement within a small clause can be seen not only in *there* constructions but in other types of constructions with small clauses.

(4) a. John saw [Bill$_i$ arrested t_i]
b. *John saw [arrested Bill]

(5) a. They heard [the politician$_i$ criticized t_i]
b. *They heard [criticized the politician]

In (4) and (5), the underlined DPs can not stay in its original θ-position and they obligatorily undergo movement. Since no tense element appears in a small clause, (4) and (5) confirm that the movement is not EPP-driven. In addition, we will notice that the movement in (4) and (5) is not Case-driven either, if we compare them with an ECM construction like in (6).

(6) John considered [Mary to be [t_i intelligent]]

The underlined DP in (6) moves to Spec TP from its θ-position to satisfy the EPP, but it does not necessarily move further overtly to the objective Case-position of the matrix verb due to the weakness of the Case feature.

2.2. Subjecthood of Passive Subjects

I will show that the derived passive subject in a small clause, observed in the previous section, exhibits some subject properties ; it is subject to the Subject Condition and it can be modified by subject oriented adverbs. These facts suggest that the underlying object does not move to a matrix Case position but instead, it moves to some kind of subject position within a small clause.

Let us consider first the case of Subject condition indicated by the paradigm in (7) (cf. Chomsky 1973).

(7) a. John saw [pictures of his friend] last night
b. Who$_i$ did John see [pictures of t_i]last night
c. [Stories about Bill] terrified John
d. *Who did [stories of t_i] terrified John

The ungrammaticality in (7d) indicates that *wh*-extraction from a subject is prohibited, unlike the extraction from an object as in (7b). Chomsky notes that an ECM subject observes the Subject Condition, which justifies its subject status, as shown in (8) (the examples are taken from Chomsky (1973 : 249) with slight modifications).

(8) a. John expected [[stories about his son$_i$]to terrify Bill]
b. *Who$_i$ did John expect [[stories about t_i] to terrify Bill]

Crucially, the passive subject in a small clause also observes this condition, as in (9), indicating that it does not raise to a matrix Case-position.

(9) a. *Who$_i$ did John see [[friends of t_i] arrested]
b. *Who$_i$ did they heard [[friends of t_i] criticized]

The ungrammaticality suggests that the underlying object overtly moves to some kind of subject position within the small clause but not to the objective Case position of the matrix verb.

The second test of the subjecthood concerns subject oriented adverbs. It is known that subject oriented adverbs, such as *reluctantly*, modify only

subject in an active sentence, as in (10a), but they behave differently in a passive sentence depending on its occurring position, as in (10b-c) (Jackendoff 1972 : 83).

(10) a. **John** instructed the student reluctantly
b. The student was instructed reluctantly by **John**
c. **The student** was reluctantly instructed by **John**

If the adverb appears in a post-predicate position as in (10b), it modifies the *by*-phrase, and if it appears in a pre-predicate position as in (10c), it ambiguously modifies both the passive subject and the *by*-phrase. Interestingly, we can see the same phenomenon observed in (10b, c) even when the passive predicate is embedded in a small clause. Compare (11a) and (11b).

(11) a. Mary saw [the student instructed reluctantly by **John**]
b. Mary saw [**the student** reluctantly instructed by **John**]
c. **Mary** saw the student reluctantly

In (11a), the adverb appears in a post-predicate position and it unambiguously modifies the *by*-phrase, while in (11b) the adverb appears in a pre-predicate position, modifying both the passive subject and the *by*-phrase. What is significant is that the passive subject is modified by the adverb in (11b). This fact is unpredictable if the underlying object moves to a matrix Case-position, which typically does not allow modification of such adverbs, as indicated in (11c). However, if we assume that the underlying object moves to some kind of subject position in a small clause, the adverbial interpretation in (11b) follows readily.

Subjecthood of the passive subject with respect to the Subject Condition and the interpretation of subject oriented adverb implies that there is some kind of subject position within a small clause with a passive predicate. The underlying object moves to this subject-like position but not to a matrix Case position. This also suggests that the observed movement within a small clause cannot be Case-driven. Since we have discussed that passiviza-

tion cannot be motivated by the EPP, we have reached a conclusion that neither Case nor the EPP motivate passivization and that some other kind of movement must be involved.

3. A Proposal

3.1. A Complex Predicate Analysis

As we have seen, neither Case nor the EPP motivates passivization, but some other kind of movement must be involved in a small clause with a passive predicate. To account for the observed phenomena, I will propose a Complex Predicate Analysis in (12).

(12) A Complex Predicate Analysis

The passive morpheme is a predicate head, which

(i) introduces an external argument *Undergoer*, and

(ii) takes *v*P (Event) as its complement.

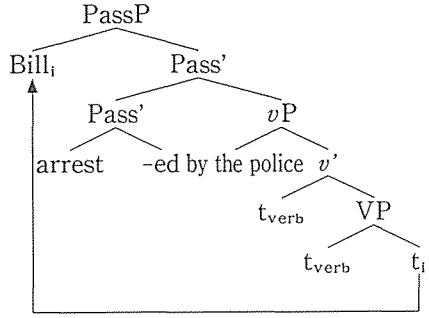
A relevant part of the structure derived from the analysis is given in (14) (*Undergoer* and *Causer* refer to macro roles of thematic roles).

(13) $[_{\text{PassP}}$ Undergoer$_1$ $[_{\text{Pass'}}$ V$_i$-ed $[_{v\text{P}}$ by Causer $[_{v'}$ t_i $[_{\text{VP}}$ t_i Undergoer$_2$]]]]]

The proposal in (12) is an extension of traditional analyses advocated by many authors, such as Kuroda (1965), Le (1976), Saito (1982), Hasegawa (1988), Hashimoto (1988), Washio (1989-90), Hoshi (1994), and Mahajan (1995), among others, for various languages. However, the proposed analysis differs from most of them in that the movement in passives is caused by the θ-requirement of the passive morpheme. For instance, in *John saw* [*Bill arrested by the police*], *Bill* moves to Spec PassP to satisfy the θ-requirement of the passive morpheme, as shown in (14).[2]

(14) a. $[_{\text{PassP}}$ Bill$_i$ $[_{\text{Pass'}}$ arrest-ed $[_{v\text{P}}$ by the police $[_{v'}$ t_{verb} $[_{\text{VP}}$ t_{verb} t_i]]]]]

b.



Our analysis correctly accounts for the phenomena observed in section 2 ; it is not either Case or the EPP, but the θ-requirement of the passive morpheme to motivate the movement in passives.[3]

Note that the proposed complex structure contains two external arguments as it is : one in vP and the other in PassP. It is plausible to assume that a predicate can accommodate only one external argument since, if an external argument is interpreted as a source to bring about state of affair, there cannot be more than one external argument to bring about it. If this is correct, the proposed complex predicate should contain only one external argument. Here, I assume that the one in vP demotes as an adjunct when the complex predicate is formed, realizing as a *by*-phrase.[4] This analysis accounts for the ambiguous status of this phrase between argument and adjunct, discussed below in 3. 2. 1.

3. 2. Some Evidence

3. 2. 1. Subject Position and *By*-Phrase

The proposed analysis leads us to reconsider some characteristics of passives with respect to the following two : (i) θ-relatedness of the passive subject, and (ii) the status of the *by*-phrase.

First, the passive subject should be θ-related. Since the subject position is a θ-position of the passive morpheme according to our analysis, we

expect that expletives can not occur in this position. This is borne out, as shown in (15).

(15) a. *John saw [there arrested a man]
b. *They heard [there criticized a politician]

Notice that (15) can not be ruled out by the Case Theory under the assumption that Case feature is licensed by covert movement, because the Case feature of *a man* or *a politician* could covertly raise to the Case-position to be licensed. However, (15) can be ruled out if we assume that the passive subject position in the small clause is a θ-position, which is required by the passive morpheme.

The subject status of the passive subject shown in 2. 2 also confirms this point. We have seen that an underlying object moves to some kind of subject position but not to a Case position. This naturally follows from our analysis ; the underlying object moves to a syntactically represented θ-position assigned by the passive morpheme. Hence a passive subject exhibits the subject status.

Our second concern is the *by*-phrase, which has been considered to be an adjunct for its optionality. Goodall (1997) recently observes that the *by*-phrase has the argument status despite of its adjunct-like behavior, and further claims that it is syntactically represented as an external argument. Goodall first presents some diagnostic tests showing that the *by*-phrases behave parallel with arguments rather than adjuncts. The tests include ellipsis in (16), VP-fronting in (17), *so*-anaphora in (18), and *wh*-island in (19).

(16) Will the books be returned ?
a. Yes, they will be ____ on Thursday [Adjunct]
b. *Yes, they will be ____ to the store [Argument]
c. ?*Yes, they will be ____ by John

(17) John said the books would be returned, and

a. returned they were ____ last Thursday [Adjunct]
b. *returned they were ____ to the store [Argument]
c. ?*returned they were ____ by Mary

(18) a. ?The books returned on Wednesday, and so were the magazines on Thursday. [Adjunct]
b. *The books were returned to the store, and so were the magazines to the warehouse. [Argument]
c. *The books were returned by John, and so were the magazines by Mary.

(19) a. *How do you wonder whether John killed Bill ? [Adjunct]
b. ?Who do you wonder whether John killed ? [Argument]
c. ?By whom do you wonder whether Bill was killed ?

In each case of (16)-(19), (a) contains an adjunct while (b) contains an argument. Significantly, the (c)-examples with *by*-phrases consistently behave parallel with (b), indicating the argument status of the *by*-phrase. In addition, Goodall observes that the *by*-phrase locates higher than an internal argument, arguing that the phrase has the external argument status, as indicated in (20).

(20) a. The magazines were sent to herself by Mary.
b. *The magazines were sent to Mary by herself.

Since the reflexive should be c-commanded by its antecedent, the grammatical contrast in (20) suggests that the *by*-phrase must be structurally higher than the internal argument, *to Mary*. Assuming that an external argument c-commands internal argument, Goodall concludes that the *by*-phrase is syntactically represented as an external argument, which readily accounts for the facts in (16)-(20). This claim is consistent with our analysis, under which *by*-phrase first merges as an external argument and then demotes to adjunct after a complex predicate is formed.

Furthermore, our analysis can capture the fact that the *by*-phrase has the same range of θ-roles assigned to an external argument (cf. Marantz 1984, Lasnik 1988). As shown in (21), the *by*-phrase bears the same θ-role assigned to an external argument in the corresponding active sentence.

(21) a. John attacked Bill [Agent]
a′. Bill was attacked by John
b. Mary enjoyed the movie [Experiencer]
b′. The movie was enjoyed by Mary
c. Susan received the package [Goal]
c′. The package was received by Susan
d. The skeleton key opened the door. [Instrument]
d′. The door was opened by the skeleton key (Lasnik 1988 : 1)

Since the *by*-phrase is base-generated as an external argument in our analysis, it is natural that they have an external θ-role as shown in (21) and hence it exhibits the argument status as argued by Goodall.

3.2.2. Passive Verbs in Asian Languages

Baker, Johnson, and Roberts (1989) among others claim that both θ-role absorption and Case absorption properties of passives can be attributed to the argument status of the passive morpheme, which requires a θ-role and Case (cf. Jaeggli (1986)). However, the Chinese passive, as in (22), provides evidence against this argument analysis but adds further evidence for the predicate analysis proposed here.

(22) a. Ta **bei** taitai kanjian
He sustain/by wife is+seen
'He is seen by his wife.' (Hashimoto 1988 : 330)
b. Ta **bei** kanjian
He sustain/by see
'He is seen.' (ibid. : 334)

Bei in (22) may first appear to be a preposition since it is known that most Chinese prepositions are derived from verbs. Hashimoto argues that it must not be a preposition as is obvious from (22b), where no purported object is contained if it is a preposition. Hashimoto claims that *bei* is a kind of incomplete verb which forms a complex predicate with a sentential complement.

Passive verbs are found not only in Chinese but also in other Asian languages including Vietnamese, Lao, Cambodian, and Thai. Le (1976) claims that the Vietnamese passive verbs, *bị* and *đ ư' ợ'c*, take a subject DP denoting 'experiencer,' and a sentential complement, as exemplified in (23).

(23) a. Nam **bị** đánh.
pass beat
'Nam was beatn.'

b. Nam **bị** Nga đánh
pass beat
'Nam was beaten by Nga.'

c. Ba **được** khen
pass congratulate
'Ba was congratulated.'

d. Ba **được** thầy khen
pass teacher congratulate
Ba was congratulated by the teacher.' (Le 1976 : 439)

The two kinds of the verbs *bị* and *đ ư' ợ'c* in (23) express different meanings : *bị* means "to suffer, be victim of, undergo or experience something unpleasant, undesirable, unfortuate, or harmful" and *đ ư' ợ'c* means "to receive, obtain, benefit from, undergo or experience something pleasant, desirable, beneficial." Le argues that these verbs are independent predicates, taking their own argument : *Experiencer* (or *Undergoer* in our terms) as an

external argument and event as a complement. A piece of evidence that they are independent verbs comes from the scope of the negative adverb *không*, which modifies an immediately following verb.

(24) a. John bị Paul **không** mời bạn gái cửa nó
pass not invite friend girl belong he
'John suffered : Paul did not invite his girl friend.'

b. John **không** bị Paul mời bạn gái cửa nó
not pass invite friend girl belong he
'John did not suffer Paul's inviting his girl friend.'
(ibid. : 443)

As the translation shows, in (24a), *không* 'not' modifies the following verb *mời*, and in (24b) it modifies the passive verb *bị*. The difference in meaning between (24a) and (24b) suggests that the passive verb is an independent predicate that can be modified by the negative adverb. Le also argues that these verbs take a sentence as a complement. Consider (25).

(25) *Nam bị **và** / **hoặc** / **nhưng** thầy rầy
pass and / or / but teacher scold
'Nam suffered, andor / but the teacher scolded him.' (ibid. : 444)

If the passive verb does not take a sentential complement, we would expect that the sentence following this verb could be conjoined with *và*, *hoặc*, or *nhưng*. The ungrammaticality in (25), however, indicates that the passive construction is not a conjoined construction but a complex construction.

The existence of the passive verbs in Asian languages is most unlikely predictable for the passive morpheme-as-argument analysis proposed by Baker, Johnson and Roberts and others, since argument can not be an independent verb in any form. However, it is often the case that a certain verbal morpheme in one language can be seen as an independent verb in another. Take causative constructions, for example. Japanese uses the morpheme *sase* in the causative construction, while English, which has no

counterparts, uses causative verbs like *cause*, *make*, *force*, etc. Hence the passive verbs in these languages add another evidence for our complex predicate analysis.

4. Consequences

4.1. Movement into a Theta-position

As our analysis allows movement from a θ-position to another θ-position, an immediate question arises as to whether or not the movement violates the θ-criterion. However, if we follow Bošković (1994), such movement is allowed unless it is an instance of improper movement. Consider (26).

(26) Improper movement : θ'-θ-θ'

*John$_i$ [$_{VP}$ t_i remarked [$_{IP}$ t_i to seem that Peter likes Mary]]

(27) can not be ruled out either by the Case theory or the θ-criterion because the DP *John* merges into Spec IP to satisfy the EPP and then acquires a θ-role in Spec VP before ending up in a Case position. Assuming with Li (1990) that θ-and non-θ-positions are essentially different syntactic positions, Bošković argues that the sentence in (26) can be ruled out by appealing improper movement. The DP *John* originates in a non-θ-position, goes through a θ-position and ends up again in a non-θ-position.[5] Hence this movement is ruled out as an instance of improper movement. If this is correct, there must be a case that a single argument may bear more than one θ-role if the movement takes place from a θ-position to another θ-position, unless a non-θ-position intervenes between the two. Boskovic provides such an instance, as in (27).

(27) Proper movement : θ'-θ-θ

A Juan$_i$ le quiere$_j$ [$_{VP}$ t_i t_j [$_{VP}$ gustar Marta t_i]]

θ' θ θ

'Juan wants to like Marta'

A Juan in (27) has inherent Case, which is assigned by the embedded verb, *guster*. This indicates that this DP is assigned the θ-role of *guster* in its complement position, given the standard assumption that an inherent Case is closely linked to a θ-role assigned by a predicate head. Then, this DP moves to the Spec of the upper VP, where it picks up another θ-role of *quiere*, acquiring two θ-roles as a result. Hence, the instance in (28) is a case that a single argument may bear more than one θ-role if the movement is not intervened by a non-θ-position. In other words, movement from a θ-position to another θ-position is allowed within a lexical phrase, where non-θ-positions do not appear. Our analysis is consistent with this claim in that the θ-driven movement of passives takes place within a complex lexical phrase since any non-θ-positions do not intervene the movement from a θ-position to another θ-position, as illustrated in (14), repeated here as (28).

(28) [$_{PassP}$ Bill$_i$ [$_{Pass'}$ arrest-ed [$_{vP}$ by the police [$_{v'}$ t_{verb} [$_{VP}$ t_{verb} t_i]]]]]

θ θ

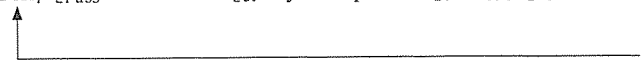
Our analysis of passives supports the possibility of movement from a θ-position to another θ-position within a lexical phrase, as claimed by Bošković. See also Kawasaki (to appear), which argues that such movement takes place in the middle constructions.

4. 2. Case Absorption

Although we have seen that passivization is not caused by Case, Case absorption still seems to be applicable to English.[6] The Case absorption

effect, however, cannot be seen in a sentence like *Bill was arrested by the police*, since I have argued that passivization involves θ-driven movement as illustrated in (12), repeated here as (29).

(29) a. $[_{PassP}$ $Bill_i$ $[_{Pass'}$ arrest-ed $[_{vP}$ by the police $[_{v'}$ t_{verb} $[_{VP}$ t_{verb}



$t_i]]]]]$

b. $Bill_i$ was $[_{PassP}$ t_i $[_{Pass'}$ arrest-ed $[_{vP}$ by the police $[_{v'}$ t_{verb} $[_{VP}$

t_{verb} $t_i]]]]]$

The movement in (29) is not attributed to Case absorption ; the movement in (29a) is θ-driven and that in (29b) is EPP-driven. The example in (29) does not necessarily indicate that Case absorption is involved in the passivization in English. To see the Case absorption effect, we need to consider other derivation, where the external argument of a passive morpheme, namely *Undergoer*$_1$ is filled by merge but not by movement, as in (30).

(30) $[_{PassP}$ $Undergoer_1$ $[_{Pass'}$ V-en $[_{vP}$ by Causer $[_{v'}$ t_{verb} $[_{VP}$ t_{verb}

$Undergoer_2]]]]]$

If Case absorption did not occur, we would expect that the derivation in (30) would converge because the Case feature of the *Undergoer*$_2$ DP could be licensed by the raised verb whose Case assigning feature is retained. But the derivation in (30) is ungrammatical, as shown in (31).

(31) a. *John was attacked by Bill his son

b. *John was attacked his son by Bill

The ungrammaticality in (31) can be accounted for if we assume Case absorption. Since the verb loses its Case assigning feature, the *Undedrgoer*$_1$ can not be licensed, resulting in the ungrammaticality in (31).[7] It could be argued that another instance of Case absorption can be seen in transitive verbs, as in (32).

(32) a. *It was cried by John

b. It was [$_{PassP}$ *e* cried [$_{VP}$ by John t_{verb}]]

The example in (32a), however, does not necessarily suggest that the Case absorption effect must be involved. As implied in (32b), it can be ruled out by the failure of the θ-requirement since there is no DP that satisfies the *Undergoer*$_1$ role of the passive morpheme, which is indicated by *e*. Instead, we can see the effect in the situation of (33), where the θ-requirement of passive predicate is satisfied by merge and the problem raised in (32) is irrelevant.

(33) [$_{PassP}$ Undergoer$_1$ [$_{Pass'}$ V-en [$_{VP}$ by Causer t_{verb}]]]

DP DP

In (33), the θ-requirement of passive morpheme is satisfied unlike in (32). Furthermore, none of the DPs violates the Case Filter because the Case of the *Undergoer*$_1$ DP can be licensed by the matrix Tense, and that of the *Causer* DP is licensed by the preposition. Nevertheless, this derivation is ungrammatical, as shown in (34).[8]

(34) *John was cried by the baby

Let us here define Case absorption under the feature checking theory as in (35).

(35) The English passive morpheme enters into a Case checking relation with a verb.

Once we have defined Case absorption as Case feature checking between a

passive morpheme and a verb, the ungrammaticality of (34) can be attributed to the lack of Case feature of the intransitive verb. (34) is ruled out because the intransitive verb does not have the Case feature to enter into a checking relation with that of the passive verb. Although we have seen that passivization is formed not by Case-driven but θ-driven movement, it seems that the passive morpheme in English still absorb Case. This implies that Case absorption occurs independently of the θ-requirement of passive morpheme in English, and that consequently *Undergoer*$_1$ role of a passive morpheme must be filled by movement.

This property of the English passive predicate may be attributed to the Case checking mechanism that this language employs. Since the system requires that Case feature be checked off by its matching feature, these features must be always paired. As proposed, since an embedded external argument demotes into adjunct, this external argument cannot count as Case checker as a result. Then, no matching Case feature would be available for V unless Case absorption occurs. Case absorption may be a mechanism to save such a situation, and hence Case absorption necessarily occurs in English as an independent mechanism of its Case licensing system.

Furthermore, (30) and (33) above suggest that Case absorption should not be optional. If Case absorption were optional to make it inapplicable in these cases, we would expect that the derivation in (30) and (33), where all the θ-requirement of the passive predicate is satisfied by merger, should converge, contrary to fact. The ungrammaticality in (31) and (34) suggests that Case absorption obligatorily applies to leave the post-predicate DP unlicensed, and hence it should not be optional to allow (30) and (33). (See note 3 for related discussion.)

5. Conclusion

Assuming that Case feature does not motivate overt movement, we have observed that neither Case nor the EPP drives passivization. Moreover, we have seen that the derived subject in passives exhibits some subject properties. Subjecthood of the passive subject with respect to the Subject Condition and the interpretation of subject oriented adverbs implies that there is some kind of subject position within a small clause with a passive predicate. I have put forth a complex predicate analysis, under which the movement in passives is caused by the θ-requirement of the passive morpheme. The analysis entails that the pre-predicate position in passives should be a θ-related position and that the *by*-phrase is an argument. We have seen some cross-linguistic evidence to support our analysis : the existence of passive verbs in Asian languages. As a consequence, we have claimed that θ-driven movement within a lexical phrase is allowed, as claimed by Bošković (1994), and that Case absorption necessarily occurs in English as an independent mechanism of its Case licensing system.

Notes

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[1] The internal structure of small clauses has been at issue. Particularly, attention has been focused on a question as to whether the clause is a lexical head projection or it has more articulated structure with functional heads. It is known that small clauses of perception verbs do not allow Tense-related adverbials and that the interpretation of Tense in the clause depends on the Tense of its matrix clause. This fact suggests that this type of small clauses does not have their own independent Tense element. I will examine small

clauses of perception verbs to exclude the EPP effect.

[2] Contrary to my claim, an example in (i) appears to involve no passivization in a small clause.

(i) There was [$_{sc}$ arrested a man]

Although such a construction in (i) is limited to the archaic styles found in Bible, for example, and seldom used in present-day English, there exists this construction. Under my analysis proposed in section 3, *a man* in (i) must move to Spec PassP, yielding (ii) but ruling out (i).

(ii) There was [$_{sc}$ a man$_i$ arrested t_i]

Here, following Collins (1997), I assume that like transitive verbs, intransitive verbs undergo verb raising to a Transitivity head. Consider (iii)

(iii) There arrived a man to the party

Assuming with Hale and Keyser (1993), Collins assume that the theme DP is base-generated in Spec VP and the locative phrase in VP complement, giving the structure (iv) to the lexical structure of (iii).

(iv) [$_{VP}$ a man [$_{V'}$ arrive [$_{PP}$ to the party]]]

At this point, if *there* merged into Spec TP with the verb in situ in (iv), a wrong word order *there a man arrived to the party* would result. To yield a correct word order, the verb necessarily moves out of the VP to a higher head, which Collins calls Transitivity (Tr) head. It seems to me that Collins' argument is less convincing in that Tr head is assumed only to yield a correct word order and no other motivation is presented. Here, I adopt his basic idea that some kind of verb movement is involved in *there* constructions. With Tr head, (iii) has the structure given in (v).

(v) [$_{TP}$ there [$_{T'}$ T [$_{TrP}$ arrive$_i$-Tr [$_{VP}$ a man [$_{V'}$ t_i [$_{PP}$ to the party]]]]]]

Now let us return to (i). Since the passivized transitive verbs behave like intransitive verbs in Case assignment, it is reasonable to assume that they have a Tr head to host a raised verb. Given the above mechanism, the structure of (i) will be (vi).

(vi) [$_{TP}$ there [$_{T'}$ T [$_{TrP}$ arrest$_i$-ed$_j$-Tr [$_{PassP}$ a man$_k$ [$_{Pass'}$ t_i-t_j [$_{vP}$ Causer [$_{VP}$ t_i t_k]]]]]]]

Hence, it can be said that the apparent counter example in (i) still involves passivization under my analysis.

In this connection, an anonymous reviewer points out that *be verb+ed DP* constructions, such as in (vii), are easily found in the British National Corpus.

(vii) a. Instead was found a pair of trousers, which were not Jeffrey's, and a tomahawk.
b. and under it was found a bell-shaped gold cup with a sphere or sceptre.
c. Near it was found a fragmentary base with a reference to Chois and names including Archermos.

These constructions also contain apparent DP in-situ, such as *a pair of trousers* in (viia), *a bell-shaped gold cup* in (viib) and *a fragmentary base* in (viic). It seems that these sentences have the same effect as locative inversion in that the sentence initial position is always occupied with prepositional phrases. In fact, Bresnan (1994) points out that passivized transitive verbs allows locative inversion, as shown in (viii).

(viii) Among the guests of honor was seated my mother.
(Bresnan 1994 : 78)

Although the DP *my mother* apparently stays in-situ in its base-generated position in (viii), it exhibits some subject properties, as indicated below.

(ix) a. Among the guests of honor was seated my mother reluctantly
b. Among the guests of honor was seated my mother [without PRO realizing I was there too]

(ixa) shows that the DP is modified by the subject oriented adverb and (ixb) shows that the DP can control PRO in the adjunct phrase, both of which are properties of subjects but not object. Hence, these facts suggest that the apparent DP in-situ *my mother* in (ix) moves to Spec PassP to bear some subject interpretation.

[3] The proposal indicates that passives should be classified into at least two types : one with θ-marked subject and the other with non-θ-marked subject. An instance of the latter case is passivization of an infinitival subject, like *John is believed to be happy*. This type of passive behaves parallel with raising predicates such as *seem, likely,* or *certain*, and has epistemic modal reading.

[4] A similar phenomenon is found in Romance causative constructions. Assuming that Romance causatives form complex predicates, Zubizarreta (1987)

observes that an embedded external argument may be phonologically null as in (i).

(i) Ce medicament fait dormir
This medicine makes sleep
'This medicine makes one sleep.' (Zubizarreta 1987 : 108)

As shown in (i), if an embedded external argument is generic or existential, it may be phonologically null and syntactically unrealized, which is often seen in passives. In addition, Zubizarreta claims that an embedded external argument in the complex predicate is assigned a lexically determined Case.

(ii) L'architecte a fait tracer la plan á son associé
The architect made design the plan to his associate
'The architect had his associate design the plan'
(Zubizarreta 1987 : 112)

The embedded external argument *son associé* in (ii) is assigned a dummy preposition *á* rather than structural Case. Comparing it with passives, an embedded external argument in passives is realized as a prepositionnal phrase. I suggest that the same reasoning as I proposed for the passives applies in Romance causative constructions.

[5] One might argue that *John* in (26) cannot be base-generated in the θ'-position for the first place. However, if the θ-criterion is a LF condition, there is nothing to block the merger into a θ'-position in a derivation.

[6] Sobin (1985) claims that Case absorption is not the core property of passive formation. Compare English passives with Ukrainian passives in which an underlying object shows up as a surface subject with accusative Case, as shown in (i).

(i) a. Cerkva bula
church (nom. fem.) be+past+fem.
zbudovana v 1640roc'i
build+past+fem. sg. in 1640 year
'The church was built in 1640.' (Sobin 1985 : 654)

b. Cerkvu bulo
church (acc. masc.) be+past+neut.

zbudovano v 1640roc'i
build+part. +neut. in 1640
'The church was built in 1640.' (ibid. : 653)

In Ukrainian, along with a passive construction familiar from the English passive as in (ia), there is another type of passive as in (ib). In (ia), the underlying object has nominative Case and triggers agreement on the copula and the participle, which indicates that it has moved to a subject position. On the other hand, in (ib) the underlying object retains its accusative Case and does not trigger agreement. This indicates that the Ukrainian passive in (ib) Case absorption does not occur in this passive construction. Sobin concluded, from this fact, that Case absorption of a passive morpheme is, if any, not a universal but a language specific property.

[7] This derivation is possible in some languages, realizing as indirect passive. Compare a Japanese counterpart with the English ungrammatical sentence in the text.

(i) John-ga Bill-ni kodomo-o nagur-are-ta
-Nom -by child-Acc hit-Pass-Past
'John had (his) child hit by Bill.'

It is known that there are two types of passives in Japanese : direct passive and indirect passive. Saito (1982) claims that Case absorption takes place optionally in Japanese, and that direct passive results only when Case is absorbed by the passive morpheme but indirect passive does not involve Case absorption. In our analysis of passives, however, the Japanese direct passive may not necessarily involve Case absorption because θ-driven movement may form direct passive. If this line of argument is correct, we do not have to posit Case absorption and a unified structure, proposed here as in (ii), can be provided for both direct and indirect passives in Japanese.

(ii) $[_{\text{PassP}}$ Undergoer$_1$ $[_{\text{Pass}'}$ V$_1$-ed $[_{v\text{P}}$ by Causer $[_{v'}$ t_1 $[_{\text{VP}}$ t_1 Undergoer$_2$]]]]]

When *Undergoer*$_1$ is filled by movement, direct passive results and when it is filled by merge, indirect passive results. Given this account, we can eliminate the optionality of Case absorption needed under the account proposed by Saito. If Case absorption can be totally eliminated from the account of Japanese

passives, a difference between English and Japanese emerges with respect of Case absorption : present in English and absent in Japanese. If English Case absorption may be attributed to its Case checking system, as I will propose shortly in the text, the absence of Case absorption implies that Case licensing system in Japanese may be different from English ; it should employ a certain Case licensing system other than the checking system that English uses.

[8] Again, a Japanese counterpart of the English ungrammatical sentence is possible.

John-ga akachann-ni nak-are-ta
-Nom baby-by cry-Pass-Past
'John had the baby cried.'

This is because Case absorption does not take place in indirect passive, or it does not take place at all in Japanese passives. See note 7 for this point.

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Synopsis

A Complex Predicate Analysis of Passives

Satoko Osawa

It has been widely assumed that the process of passivization is one of the instance of NP-movement, namely Case-driven movement. However, if we adopt Chomsky's (1995) feature checking theory, passivization cannot be Case-driven movement since Case feature does not motivate overt movement in this framework. Under the feature checking theory, only strong uninterpretable features, such as the D-feature of T (EPP), cause overt movement and weak uninterpretable features, such as Case-feature, cause covert movement. This entails that passivization in the matrix sentence is caused by the EPP but not Case (cf. Mahajan 1995). A closer observation, however, reveals that in passives in small clauses, where the EPP is irrelevant, the underlying object still undergoes movement, as indicated in (1).

(1) a. *John saw [arrested Bill]
b. John saw [Bill$_i$ arrested t_i]

The examples in (1) suggest that passivization is not caused by the EPP either.

Furthermore, I will discuss that the derived subject *Bill* in (1b) exhibits some subject properties, which is unpredictable if it moves to the matrix Case position due to the Case-theoretic reason. (2) indicates that the derived subjects observe the Subject Condition and (3) shows that they can be modified by subject oriented adverbs.

(2) *Who$_i$ did John see [[friends of t_i] arrested]

(3) Mary saw [**the student** reluctantly instructed by **John**]

I will propose that the movement in passives is caused by the θ-requirement of the passive morpheme, which is a predicate head forming a complex predicate with vP. Extending traditional analyses of passives, I will put forth a complex predicate analysis of English passive as in (4).

(4) A Complex Predicate Analysis

The passive morpheme is a predicate head, which (i) introduces an external argument *Undergoer*, and (ii) takes vP (Event) as its complement.

A relevant part of the structure derived from the analysis is given in (5).

(5) $[_{\text{PassP}}$ Undergoer$_1$ $[_{\text{Pass'}}$ V$_1$-ed $[_{vP}$ by Causer $[_{v'}$ t_1 $[_{VP}$ t_1 Undergoer$_2$]]]]]

The analysis entails that the passive subject should be a θ-related and that the *by*-phrase is an argument. There is some cross-linguistic evidence to support our analysis : the existence of passive verbs in Asian languages, which forms a complex predicate with a sentential complement. The existence of such verbs also provides evidence against the analysis advanced by Jeaggli (1986) and Baker, Johnson, and Roberts (1989), under which the passive morpheme is viewed as an argument. The proposed analysis consequently implies that there is movement into a θ-position within a lexical phrase. (cf. Bošković 1994)