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ON THE PASSIVE AS A LEXICAL PROCESS*

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This paper consists of two more or less discontinuous parts, both of which, I believe, make significant contributions to a lexical approach to passives. The lexical analysis of the passive I will propose in the first section basically follows Bresnan (1980b), whose analysis will be quickly reviewed below. How it differs from hers is that the control phenomenon is treated not by lexical equations but by an interpretive rule which works on the base structure. Accordingly, the lexical representations of the proposed analysis are altered from hers; in the lexicon it is not necessary to specify which argument serves as the subject of the following VP complement. By interpreting the subject of the VP complement at the surface structure, a raising and/or equi construction that involves the passive is easily accounted for without tracing back to where the subject starts out. Such a simple account of this particular structure is made possible only by adopting a lexical analysis. Hence, it can be considered as an argument for a lexical approach to the passive.

In the second section, the passive in Japanese is examined, by comparing two approaches, the transformational and the lexical. It will be shown that only the lexical approach can handle the following phenomenon insightfully: There are two types of objects, passivizable and nonpassivizable, which are syntactically undistinguishable at the time a putative transformational passive would apply. But the difference between these two types of objects is relevant to how they are represented in the lexicon. Hence, the Japanese passive operation

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has to be accounted for lexically. Comparing the passive in Japanese and English, I claim that universal and language-specific characteristics of this process are revealed only when it is universally treated as a lexical operation. Hence, the second section also presents an argument for a lexical approach to the passive.

The passive and raising/equi structures

In this section, I will first quickly sketch Bresnan's (1980b) analysis as a representative of the past lexical approaches to the passive, with an emphasis on how it deals with the interactions of passives, raising, and equi constructions. In her analysis, "grammatical relations are lexically encoded by assigning grammatical functions to the predicate argument structures of lexical items. The predicate argument structure positions may be identified with thematic roles such as AGENT, THEME, INSTRUMENT, etc.; the grammatical function assignment then associates these thematic roles with grammatical functions (SUBJECT, OBJECT, etc.)." (Bresnan (1980b: 3-4)) Hence, lexical encoding of grammatical relations for the active verb love, for example, is formalized as follows.

- (1)
- | | | | |
|------|---------|---------|--|
| | (SUBJ) | (OBJ) | |
| love | (|) | ← lexical assignment of grammatical function |
| | | | |
| | ↪ | ↪ | ← predicate argument structure |
| | arg 1 | arg 2 | |
| | (AGENT) | (THEME) | |
- (Bresnan (1980b: 126))

A lexical rule of the passive, which is formalized in (2), directly works on the lexical representation of a transitive verb (a verb that contains (OBJ) in its lexical form).² The effect of the passive is to alter grammatical functions without restructuring the predicate argument structure. Therefore, the thematic role assigned to each grammatical function of the active predicate is carried over to the newly assigned grammatical function.

(2) The Passive in English

Change in Lexical Form	(SUBJ) ↦ ∅ / (BY OBJ)
	(OBJ) ↦ (SUBJ)
Morphological Change	V ↦ V _[part]

By way of (2), (3) will be produced from (1).

- (3) [lov-ed]_{V_[part]}; love ({ (BY OBJ) }₁, (SUBJ)₂)
- (AGENT) (THEME)

Now, let us see how her lexical operation accounts for the

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three verbs involved in (4b), namely try, force, and kiss, impose semantic selections or thematic relations to their 'logical objects.' Hence, John bears both grammatical and thematic relations to all three predicates.

So, as has been observed, Bresnan's analysis can certainly deal with the passive structure appearing in equi/raising constructions by referring to lexical equations. However, all it can show is that what transformations can do can also be done with lexical rules. In other words, the lexical approach to the passive does not seem to present any advantage over the transformational approach, as far as the constructions in question are concerned. In both transformational and previous lexical approaches, a complicated step-by-step operation, as shown above, is necessary, because they treat the 'subject' as an obligatory element in their operations; in transformational approaches a syntactic subject is required and in previous lexical approaches a subject argument is required in lexical representations. Moreover, both approaches do not and cannot express the generalization in (7), which is inherent in the passivized equi/raising structure.

- (7) When more than one passive participle occurs consecutively (without \bar{S} or NP boundary), there is at most one NP serving as the subject of all the passive participles.

If this generalization is captured, it automatically follows that cancer is the subject of both believed and caused in (4a), and John is the subject of tries, forced, and kissed in (4b). Then, such a step-by-step operation becomes totally unnecessary in order to identify the subject of these predicates.

To incorporate this generalization, I assume that lexical entries include, among other things, specifications of 'syntactic contexts' (=the syntactic frame (SF)) and more abstract functional representations (=the functional frame (FF)). The SF roughly corresponds to the familiar strict subcategorization. The FF expresses what is variously termed the specification of predicate argument structure, grammatical functions, and thematic roles (and possibly selectional restrictions.)⁴ By setting up these two different frames in the lexicon, the fact that the subject argument does not necessarily appear in syntactic constituent structure is expressed. This is missed in Bresnan's representations of lexical items. By treating (SUBJ) equally to (OBJ) or other syntactically obligatory arguments, she needs to employ lexical equations to identify the subject argument, along with the configurational specification of arguments.

Let me clarify this point further. In her framework, grammatical functions are responsible for the mapping between predicate argument structure and syntactic constituent structure. I assume the grammar of each language includes a specification of how a grammatical function is expressed in syntactic constituent structure. In English, a grammatical function depends on the position of the

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The presented definition and rule can account for not only the interpretation of the subject of a VP complement (VCOMP in Bresnan's sense) but also for predication phenomenon. Observe the following.

- (12) a. John wants to persuade Mary to leave.
 b. John believes Mary to be likely to win the game.
 c. John considers Bill as a genius.
 d. We elected John president.
 e. They washed the clothes clean.
 f. John felt angry.

In (12a), Mary is interpreted as the subject of to leave, and John as the subject of both wants... and to persuade.... Similarly in (12b), Mary serves as the subject of to be likely... and to win the game, and John as the subject of believes.... The rest of the examples in (12) are the case of predication. The object of the main verb is interpreted as the subject of the following PP, NP, and AP for (12c), (12d), and (12e), respectively. In (12f), John serves as the subject of both felt and angry, exactly as in Chomsky (1970). This shows that the range of the phenomena that the subject interpretive rule (11) can account for is much wider than that of equi/raising constructions.

Now we are in the position of observing how this proposed analysis treats the passive structure. The operation of the lexical passive is basically the same as Bresnan's rule (2). However, this operation also has an effect on the SF of the lexical item. Thus, the passive operation is considered to have three sub-parts: the change in FF, the change in SF, and the morphological change.

(13) The Passive in English

Change in FF	SUBJ \mapsto \emptyset / OBL	OBJ \mapsto SUBJ
Change in SF	\emptyset \mapsto \emptyset / PP _{by}	NP \mapsto \emptyset
Morphological Change	V \mapsto V _[part]	

Rule (13) has an advantage over (2) in differentiating the universal characterization of the passive from the language-particular operation. Perlmutter and Postal (1977) argue that the passive is universally characterized as follows; the subject of the active appears as oblique and the object appears as the subject of the corresponding passive. This is expressed in the change of FF in (13). On the other hand, the language-particular instantiation of the passive may differ in the specification of the oblique function and of the passive morphology. The changes in SF and verbal morphology correspond to such language-particular characteristics. Notice that the above mentioned difference between the universal and nonuniversal nature of the passive nicely accords with the difference between the FF and the SF of lexical items. I.e., the FF of the lexical item is more or less universal, while the representations in the SF, which stipulate how arguments in the FF are syntactically expressed, are subject to language-particular specifications. If this distinction

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VPs, namely the top most NP in that structure. This is because through the passive operation the object of the predicate, which may serve as the subject of the following VP(s), is changed into the (SUBJ) that has to be interpreted at the surface. Hence, this proposed analysis not only can account for the passive and equi/raising construction in a simple and straightforward fashion but also incorporates a generalization that has never been expressed in previous analyses.

There is a further interesting consequence. An advantage in the analysis I am advocating is found in analyzing noun phrases such as the following.

- (16) a. [_{NP} the disease [_{VP} believed [_S to be caused by hot dogs]]]
 b. [_{NP} the man [_{VP} forced [_S to be kissed by Mary]]]

In my framework, these examples will be accounted for analogously to those in (4). The head NP c-commands all the passive predicates, serving as their subject. Note that in order to account for the examples in (16), previous lexical analyses, where the control information is given in the lexicon, cannot identify the head NP as the subject of the passive participles, believed and forced. They may have to employ a subject interpretive rule similar to (11) for these constructions.

The above examples in (16) would give considerable difficulties to a transformational approach such as trace theory. If the phrase following the head NP is considered to be a VP or AP, the object of a passive predicate cannot move. Hence, the examples in (16) cannot even be described. This is illustrated in (17a) by using (16b) as an example. On the other hand, if an abstract sentential source, which contains COMP and subject NP positions, is assumed to be an underlying structure for the phrase in question, these examples can certainly be described. However, some ad hoc device has to be postulated so as to eliminate a string of WH[e]-be after Move α applies. This operation is shown in (17b).

- (17) a. [the man [forced (the man) [_S [e] to be kissed [e] by Mary]]]
 ←cannot move— | \ control — | —move NP— |
 b. [the man [_S :COMP [e] be :forced ((^{wh}the man) [_S [e] to be kissed
 : | —move WH— | —move NP— | \ control — | —move NP— | : ...]]]
 : | —later deleted— |

In any case trace theory has to employ an extra device and an abstract sentential source, which is not motivated in other parts of the grammar. Thus, the proposed analysis clearly has another advantage over other lexical analyses as well as over transformational analyses.

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Passives in Japanese

It has been discussed in relation to rule (13) that the passive operation on the FF is universal while those on the SF and verbal morphology are language-particular. In Japanese the oblique function is expressed by a postpositional phrase (PstP). The morphological effect is to attach the suffix (r)are to the verb stem, producing a passive verb stem which takes further inflections such as a tense marker. The passive in Japanese is formalized as follows.

(18) The Passive in Japanese

Change in FF	SUBJ \mapsto \emptyset / OBL	OBJ \mapsto SUBJ
Change in SF	\emptyset \mapsto \emptyset / PstP	NP \mapsto \emptyset
Morphological Change	$V_{[stem]} \mapsto [V_{[stem]} + (r)are]_{V_{[stem]}}$	

Besides such language-particular operations, there is a difference in the passive in English and Japanese. In English, regardless of whether OBJ is assigned a predicate argument (i.e., whether the thematic roles and semantic selection are imposed on OBJ), the syntactic object can be the subject of the passive. Hence a raised object (19) or an object NP in an idiom chunk (20), which does not bear a thematic relation to the predicate, can be passivized.

- (19) a. John believes hot dogs to cause cancer.
 b. Hot dogs are believed by John to cause cancer.

- (20) a. Mary took advantage of John.
 b. Advantage was taken of John by Mary.

On the other hand, in Japanese there are some restrictions on the passivizable objects. I.e., not all the syntactic objects can be the subject of a passive predicate.

In past transformational analyses of passives in Japanese, the following global condition has been proposed, to prevent the passive rule from applying to a derived object which is syntactically undistinguishable from nonderived objects.

- (21) Harada (1973) and Kuno (1978)'s global condition on the passive

Passive cannot subjectivize an NP that used to be a constituent of a sentence embedded in the sentence to which the rule applies.

Presumably there are two cases where (21) is operating: (i) the object raised by Subject-to-Object Raising; (ii) the derived object of the Ni-causative structure. Let me first examine these two cases and later show how these are treated in the lexical analysis without the global condition (21).

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Kuno (1976) argues that a certain class of verbs (thinking and feeling verbs) exhibits the case of raising, if the embedded predicate is an adjective or a nominal adjective (a 'nominal + copula' predicate). Thus, in his analysis (22b) is derived from (22a) by Subject-to-Object Raising.

- (22) a. John-ga [_S Mary-ga baka-da to] omot-ta.
 subj subj stupid think-past
 'John thought that Mary is stupid.'
- b. John-ga Mary-o baka-da to omot-ta.
 obj
 'John thought Mary to be stupid.'

The raised object Mary-o in (22b) cannot be the subject of the pure passive structure as indicated in (23).

- (23) *Mary-ga John-ni(yotte) baka-da to omow-are-ta.
 subj by stupid think-passive-past
 'Mary was thought by John to be stupid.'

Since the transformational operation of the passive simply subjectivizes a syntactic object, (23) cannot be prevented, unless a condition such as (21) is postulated. In such an analysis, no explanation is provided for why the raised object does not act like a normal object.

A similar phenomenon is observed with respect to the object of the Ni-causative. In Japanese, it has been argued that the causative constructions are divided in two types; the O-causative and Ni-causative. Kuno (1973, 1978), Harada (1973), and Shibatani (1976), for example, propose two different deep structures for these two types of causatives. For the O-causative, a matrix object is postulated, while the Ni-causative does not have it.

- (24) a. A deep structure of the O-causative
 John-ga Mary-o [Mary-ga Tokyo-e ik] (s)ase-ta.
 subj obj subj to go cause-past
- b. A deep structure of the Ni-causative
 John-ga [Mary-ga Tokyo-e ik] (s)ase-ta.
 subj subj to go cause-past
- c. A surface structure of the O- and Ni-causatives
 John-ga Mary-_{o} Tokyo-e ik-ase-ta.
 (ni)
- 'John caused Mary to go to Tokyo.'

Surface structures of both types of causatives are identical except that the object (the causee) is marked by o in the O-causative and by ni in the Ni-causative as shown in (24c). To derive (24c) from (24a), several transformations are involved: Equi-NP Deletion under identity with the matrix object; Verb Raising which attaches the embedded verb to the matrix (s)ase; and S-Pruning. As for the Ni-

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Then, the object of (26) and (27b), upon which no thematic role is imposed, cannot be the subject of the passive. Hence, there is no passive counterpart to (22b) or (24c) with ni object. The passive rule can apply to (27a), the predicate of the 0-causative, producing (29).

(29)	<u>sase-rare</u> : V;	sase	(1	2	3)
	'cause-passive'			α	β	γ	
				OBL/∅	SUBJ	COMP	
				(PstP)	VP		
				ni(yotte)			

The passivized causative (25) is given by this predicate (29).¹⁵

It is true that both transformational and lexical analyses succeed in describing the phenomenon in question. However, the former, treating the passive as a syntactic phenomenon, cannot reflect the lexical difference between two types of objects, one thematically related to the predicate and the other not. This difference can be expressed at the deep structure level; the raised object and the object of the Ni-causative are not selected by a predicate to which the passive apply. But the problem of such an approach is that there is no means to preserve this lexical or deep structural information until the passive applies, except by postulating a global condition. The existence of the condition (21) in the transformational analysis is a direct consequence of treating a lexical process as a syntactic one. On the other hand, the lexical analysis as shown above straightforwardly incorporates this lexical information in the lexical passive rule. The fact that thematic information is necessary to describe the phenomenon clearly indicates the passive in Japanese to be lexical.¹⁶

Then the difference between the passive in Japanese and that in English may be characterized by the existence and nonexistence of the proposed condition (28), the differences in passive morphology and oblique function marking aside. This may be extended to the claim that languages may differ depending on whether a passive process utilizes thematic information. Then, it must follow that passivization has to be universally analyzed as a lexical operation in order to characterize similarities and differences across languages. Note that if only the Japanese passive is lexical, as the condition (28) indicates, while the English passive is syntactic, their differences and similarities would never be expressed on the same ground by a minimally different device. Hence, this section also argues for a uniform lexical approach to the passive.

Footnotes

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¹In the proposed analysis, no transformations are necessary. Hence, the base structure is roughly equated with the S-structure in the sense of trace theory, though no PROs or traces are involved.

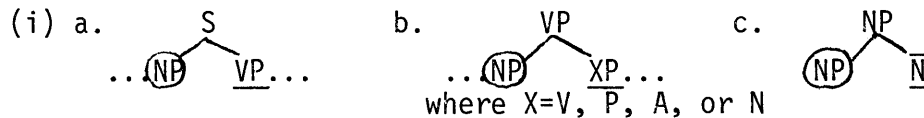
²Altering the base verb to a participle by the passive in English is justified in Bresnan (1980b).

³Which grammatical function serves as a subject of VCOMP is to a certain extent predictable. "In the unmarked case the lexical controller of the complement's subject will be the object if there is one and the subject otherwise." (Bresnan (1980b: 87))

⁴This way of representing lexical items is similar to that in Bresnan (1978), where syntactic contexts and functional structures are given separately.

⁵Although Bresnan (1980b) does not specifically mention how a grammatical function is expressed in syntactic constituent structure in English, I assume (8) is implied in her figures which show syntactic encoding of grammatical functions in surface structure.

⁶Given (10), the following circled NPs, for example, are qualified as controllers for the underlined phrases (controllees).



As shown in Hasegawa (in press), (10) and (11) can account for reflexive and reciprocal interpretations in both English and Japanese.

⁷Following Emonds (1978), the as phrase in (12c) is regarded as a PP.

⁸Note that the passive rule in Japanese accounts only for so-called pure or direct passives. The indirect or adversity passive is, in my framework, to be accounted for syntactically. See Hasegawa (1980, in press).

⁹There is another case where (21) is supposed to be working; the object of the embedded sentence in the causative structure. (See the discussion in Inoue (1976)) The derivation of the causative involves Verb Raising and S-Pruning. (This is discussed in the body of this paper concerning the examples (24).) Hence, at the time the passive applies to the main clause, the structure is considered simplex. This means that if the embedded sentence contains an object, the derived structure cannot syntactically distinguish two objects, one a matrix object (for the O-causative) or a raised object through S-Pruning (for the Ni-causative) and the other an object of the

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embedded sentence.

- (i) a. John-ga Mary- $\left\{ \begin{smallmatrix} 0 \\ ni \end{smallmatrix} \right\}$ hon-o yom-ase-ta.
 subj obj book-obj read-cause-past
 'John $\left\{ \begin{smallmatrix} \text{made} \\ \text{let} \end{smallmatrix} \right\}$ Mary read a book.'
- b. *Hon-ga John-ni(yotte) Mary- $\left\{ \begin{smallmatrix} 0 \\ ni \end{smallmatrix} \right\}$ yom-ase-rare-ta.
 subj by read-cause-passive-past

If the passive applies to (ia) making the object of the embedded verb, hon-o, the subject of the passive, an ungrammatical sentence (ib) results. To prevent this undesirable consequence, (21) is assumed to be operative here; hon-o, which used to be the constituent of the embedded sentence, cannot be the subject of the passive. In the proposed lexical analysis, in contrast, such a problem never arises. See fn. 15.

¹⁰Here, I follow Kuno's observation that (23) is ungrammatical as a pure passive sentence, though it is grammatical as an adversity or indirect passive. See Kuno (1976) for the supportive arguments for this observation. Yamazaki (1979) challenges this claim; however, I do not find her arguments convincing.

¹¹The existence or non-existence of the matrix object supposedly reflects the semantic difference between two causatives. (S)ase in the 0-causative imposes some force on the causee (the matrix object), while (s)ase in the Ni-causative does not. (Thus, no matrix object is postulated for the Ni-causative.) See fn. 12 and fn. 13.

¹²In past literature semantic distinctions between these two causatives have been repeatedly discussed (e.g., Harada (1973), Inoue (1976), Kuno (1973, 1978), Kuroda (1965), Shibatani (1976), Tonoike (1978), etc.). Although a complete agreement on this matter has never been attained, I follow a general understanding that in the 0-causative, the causer has more or less a direct control over the causee, while in the Ni-causative the causer is merely responsible for what the causee does (hence the caused action has to be self-controllable by the causee), though it does not impose a direct force on the causee. The subject of the passivized causative (25) clearly has a tone of being forced by the causer (John-ni(yotte)). Hence, it corresponds only to the 0-causative.

¹³In Hasegawa (1980), I argue that the causative (s)ase has to be analyzed as a verb that selects a VP complement rather than an S. In (27), (27a) is the lexical representation of the 0-causative, in which the OBJ bears a β -thematic role to the predicate, and (27b) is for the Ni-causative. What to be done is to develop a case assignment system which reflects these thematic differences. Cf. Hasegawa (in preparation).

¹⁴Condition (28) may have to be more restricted, since there are some argument types which are thematically related to the pred-

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can be passivized. Consequently the prediction made by the condition (28) is not violated.

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