Transitivity in Spatiality, and *Vice Versa**
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1. Introduction

To those who are familiar with Bolinger (1975, 1977), the title should seem to be contradictory in terms. In his terminology, verbs with the meaning of spatiality, as opposed to (true) transitivity, are such that resist to passivization. Spatiality is a concept that refers to both purely spatial and existential relationships. To cite his remarks, "The semantic contrast is between true patients as defined and things or persons that are merely located with reference to others or to existence itself, i.e., presence on the scene, or absence." (1975:68) Transitivity, on the other hand, entails true patient, which is genuinely affected by the action of the verb. According to him, the passive is marked for transitivity, and thus there must be a genuinely transitive relationship between verb and patient. A case in point are the following pairs of examples:

(1) a.   The stranger approached me.
    a'.   I was approached by the stranger.
    b.   The train approached me.
    b'.   * I was approached by the train.

Of the two, Bolinger claims, only the second involves a purely spatial relationship, with *me* being a terminus but not someone affected. In (1a), on the other hand, *me* is viewed as affected by the stranger, and in this sense, its passive counterpart is allowed (he also notes that if in a purely spatial sense, (1a') would be just as unacceptable as (1b')).

It is clear from a cursory comparison between these two pairs that after all, the transitivity of a verb, or more precisely the acceptability of a passive sentence is not determined solely on the basis of the verb's semantics, but rather by how the sentence is interpreted with reference to the speaker's or hearer's semantic and pragmatic knowledge of relevance (cf. Hoper and Thompson (1980) among others). Examples analogous to the following, which are also drawn from Bolinger (1975), have been given so often in the literature that it is not necessary to make a comment of my own:

(2) a.   * Chicago has been lived in by my brother.
    b.   The house has been lived in by several famous personages.
(3) a.   * The lake was camped beside by my sister.
    b.   This lake is not to be camped beside by anybody!

In short, the house in (2b) is taken as affected, in that it has acquired an aura thanks

to the people who have lived in it. In (3b) camping is construed as harming the lake, and this construal is made facilitated by virtue of the sentence being a warning (in which negation plays the crucial role).

It is true that the importance of the involvement of such pragmatic factors cannot be overemphasized. Yet this does not necessarily mean that the verb's (lexical) semantic information or a formal principle that is sensitive to it can be thought light of. In what follows, I take the verb *contain*, which Bolinger (1975) claims to be among the verbs that have the meaning of spatiality, in the sense that it resists to passivization, and some others that have much to do with it. To be honest with the reader, I must confess that by the *spatiality* in the title of this paper, I do not mean Bolinger's (1975) sense of the term; it simply refers to predicates that have to do with spatial relation in one way or another. Bolinger's choice of the term seems also to have been motivated by the idea that spatial relations are typically stative, which makes passivization difficult if not impossible. I do not adopt this terminology because *contain* and some of the verbs I will deal with in this paper, in spite of there being some sense of spatial relation, can actually allow passivization.[1] In due course, it will become explicit that the involvement of a certain lexical semantic property of *contain* and its syntactic manifestation makes a certain form of passive sentences ill-formed, and that much the same can be said of some of the verbs whose unpassivizability would have been explained simply by them being stative predicates.

Finally for Introduction, I put an emphasis on the fact that this paper is *not* an attempt to make a theory comparison. After all, it is impossible to do so by reading just a few papers or books for each framework. Actually, I refer mainly to three frameworks of linguistic theory: Relational Grammar, Cognitive Grammar, and Generative Grammar, in this order. What I will seek to do in what follow is to reveal one of the essential properties of language that any linguistic theory of relevance has to capture in one way or another. In my presentation, I make use of the formalism generally assumed in the Generative Grammar. But this is merely due to my familiarity with the theory, and, I hope, is not based on my prejudice against others.

2. *Contain* and the 1AEX

2.1. *On the Passivizability of* Contain

Let us begin by making a brief review of Bolinger's treatment of the verb *contain*. He (1975:69) counts it as among the verbs with the meaning of spatiality, and thus claims it to be one of the unpassivizable verbs, giving the following pair of

examples:

    (4) a.   The package contained a present.

       b.   * A present was contained by the package.

Importantly, that claim is based on the conception that (4b) is derived from (4a) via passivization. In this respect, statements to the same effect are made in Rice (1987:166) and Langacker (1991:346-347). Notice, however, that *contain* in the relevant sense can appear in another construction, as illustrated in (4c):

    (4) c.   A present was contained in the package.

The question then should be raised with reference to the triadic relation between them. In this connection , Jackendoff's (1972:31) argument as to how to tell apart the thematic role of theme will be of much help:

    (5) a.   The circle contains the dot.

       b.   The dot is contained in the circle.

He points out that though it is not clear which NP is the theme and which is the location in (5a), the preposition *in* in (5b) acts as an unmistakable mark of a locative phrase, so *the dot* must be the theme, concluding that *the dot* is the theme in (5a) as well. He makes little statement as to how *the circle* is associated between them, but Anderson (1977:34), following Jackedoff, is more explicit in this respect, and points out that the subject and the object in examples like (5a) appear to be a location and a theme, respectively.

    Some researchers, however, do not make reference to *contain* as used in (4c/5b) at all. Langacker (1991) and Rice (1987) are among them. Others assume that it is (4c) that is the passive counterpart of (4a). Among them is Gruber (1994:93), who further claims that "semantic Case is categorially more specified and blocks Case in the form *by*." In short, Gruber's idea is that *contain* is indeed a passivizable verb and (4b) is ruled out not due to its alleged low transitivity, but because of the wrong choice of preposition. This party of researchers would then be assuming that *contain* is not a verb with the meaning of "spatiality." There are still others who refer to this usage as a kind of adjectival passive, suggesting the lack of transitivity. Bolinger (1975:79) claims that *contain* is a "curious apparent passive," motivated by analogy, in view of the impossibility of adding an agent: *More particles are contained in the first receptacle *(by John) than in all the others combined.* In this view, *contain* as used in *be contained in*, bears no relevance to the question as to whether the verb *contain* is of transitivity or spatiality, and thus does not do harm to the idea that it is of the latter type. I suspect that the first party might also have the same idea, and this would be the reason that they do not take this usage into consideration.

I agree with Gruber, at least in that *contain* is indeed a verb that allows passivization, and consider that the others' claim is untenable in face of the fact that some verbs synonymous to *contain* indeed have the passive sentence that can have an agentive *by* phrase, and accordingly, have the active counterpart with the agent in the subject position:

(6) a.   The package included these files.

    b.   These files were included (by the spy) in the package.

    c.   The spy included these files in the package.

(7) a.   Her scandal involved John.

    b.   John was involved (by Mary) in her scandal.

    c.   Mary involved John in her scandal.

It is concluded then that the impossibility of adding an agent is reduced to lexical idiosyncrasies of *contain*; in fact, there are many passive sentences which have no felicitous active counterpart. I will make a few comments on this issue in section 2.4. At any rate, it is important to see that these examples are also problematic to Gruber and others of the same party, who seek to reject *be contained by* in favor of *be contained in*. By way of illustration, take the examples in (6). Now that it has been shown that there is a derivation in which (6b) is related to (6c), the question to be addressed is whether in addition to that option, (6b) can be derived from (6a) when the *by* phrase is absent. If so, then (6b) would involve a structural ambiguity associated with its two sources. It seems difficult if not impossible, however, to make the case for that. Therefore, I do not take side with the second party, and none of the three for that matter.

It seems that we have now been forced back to the starting point, since the presence of *be contained in* does not preclude *be contained by*. But I do not think so. To take into account the fact that the same verb *contain* can appear in the former form would provide us with more possibilities of solving the question as to the unacceptability of the latter.

2.2. Contain *in Two Derived Forms*

Now the real question to be addressed should be divided into two subparts: one is how to relate each form of *contain*, shown in (8), to others:

(8) a.   The dot is contained in the box.

    b.   The box contains the dot.

    c.   * The dot is contained by the box.

The other is how to account for the ungrammaticality of (8c) in relation to the first question. Putting aside for a moment how to derive (8c), I propose that (8a) and (8b) is related to each other via a common (or identical in crucial respects)

underlying structure, as in (9c):

(9) a.   the dot$_{TH}$ be contained __ in the box$_{LOC}$

    b.   the box$_{LOC}$ contain   the dot$_{TH}$ __

    c.   [   ] be contain   the dot$_{TH}$ in the box$_{LOC}$

As shown in (9), (8a) is derived by passivization: the NP that immediately follows the verb has undergone NP-movement, and so long as this operation is concerned, there arises little trouble; (8b), on the other hand, is derived by raising the locative phrase into the subject position. Notice that some difficulties might arise with the latter derivation. In particular, why is it that the locative phrase can go around the object in an apparent violation of locality of movement? I will return to this and related issues in section 4., and simply assume here that nothing is wrong with them.

Now the question why (8c) is ungrammatical can be given an answer by deriving it from (8b). The idea of (8b) having already been a derived form at that time of derivation reminds us of a certain principle proposed in the framework of Relational Grammar, namely, the 1-Advancement Exclusiveness law (1AEX), which can be informally stated as in:

(10)   The set of advancements to 1 in a single clause contains at most
            one member.   (Perlmutter and Postal (1984:84))

The 1AEX requires that once some element moves to the subject position ("1" in (10) designates the grammatical relation of subject), another element cannot move to the very same position. Now, if passivization applies to (8b), the resulting structure in (8c) is ruled out by the 1AEX, as schematically shown in (11):

(11) a.   [   ] contain the dot in the box   (Loc→1)

    b.   the box contain the dot   (1→Cho, 2→1)

    c. * the dot be contained by the box   (ruled out by the 1AEX)

(11b) is derived from (11a) by raising the locative phrase to the subject position: one instance of advancement to 1. The process of passivization now to be applied to (11b) consists of two components, the latter of which in actual fact is banned by the 1AEX: it makes the subject *en chômage*, which is marked by the *by* phrase, and then would induce another advancement to 1, in this case, of the NP that bears the grammatical relation of object (represented by "2").

The analysis I have just proposed for *contain* is indeed an extension of that which Perlmutter and Postal (1984:91-92) give in order to explain the absence of the passive counterpart of a certain type of sentences. Compare the following two sets of examples:

(12) a.   Five dollars bought a lot of heroin.

b.   1939 found the United States on the brink of disaster.

c.   This cabin can house twenty people.

(13) a.   * A lot of heroin was bought by five dollars.

b.   * The United States was found on the brink of disaster by 1939.

c.   * Twenty people can be housed by this cabin.

In short, such "apparent" active sentences, as in (12), actually involve an instance of advancement to 1, and thus another advancement to 1 gives rise to an 1AEX violation, on account of which the sentences in (13) are marked as ill-formed. Again, an illustration of the derivation for (13a) can be made schematically as in (14):

(14) a.   [ ]   buy   a lot of heroin   for five dollars   (3→1)

b.   five dollars   buy   a lot of heroin   (1→Cho, 2→1)

c.   * a lot of heroin   be bought   by five dollars (ruled out by the 1AEX)

Now I have shown that *contain* as used in the form *be contain by* is ill-formed in a parallel way to other verbs whose passivizability is constrained by the 1AEX when they appear in a certain construction. In other words, it has turned out that *contain* in that usage is of the same type of construction. I will call the construction the setting subject construction, borrowing the terminology of Langacker (1991), for reasons that will become clearer later. Before proceeding, however, I consider the two issues which I briefly mentioned above, and show their relevance to the topic I am dealing with in the present paper.

2.3.   The By *Phrase and Spatiality*

As I have noted in section 2.1., researchers like Gruber assume that the *by* phrase gives way to other kinds of PPs, when the corresponding active subject is semantically marked. In this respect, Nakau (1994:391) and Takami and Kuno (2002:189-193) make essentially identical claims and impose more severe semantic restriction: the *by* phrase in the passive must be an agent (or an experiencer). On the other hand, Perlmutter and Postal (1984:103) argues that there is no such restriction, giving the following examples:

(15) a.   That hypothesis was refuted by the data.

b.   *Bombers have been surpassed by missiles in speed.*

c.   *He was overcome by a feeling of helplessness.*

d.   *The danger of forest fires was increased by the drought.*

e.   The situation was exacerbated by increased dependencies on foreign oil.

f.   *His arrogance is exceeded only by his general unpleasantness.*

g.   *I was reminded of his disappearance by a short news item on page*

5.

h. The class of grammatical sentences is characterized by a set of conditions on well-formed relational networks.

i. *The roof is supported by steel columns.*

j. The house is surrounded by tall elms.

k. His position has been undermined by recent developments.

l. *The consonant cluster is followed by a morpheme boundary.*

m. The money has been relieved by an occasional hurricane.

Takami and Kuno claim that the examples given in Perlmutter and Postal actually have agentive *by* phrases. It should be noted, however, that they do not cite the whole set of them, and I guess this is not accidental and their motivation does not seem to be to avoid redundant repetition; the subset of examples that they do not give (which is marked in italics above) would give rise to difficulties with their claim about the semantic restriction on the *by* phrase.

Notice that even some of these italicized examples arguably seem to contain the *by* phrase that can be agentive (i.e. external causer, in Quirk et al.'s (1985:743) terminology), as in (15g) or (15i), but not all of them cannot be taken to have such an agentive *by* phrase. Of these examples, I pay the most attention to those which involve one of the two classes of predicates that I assume have much to do with the sense of spatiality as I have remarked in Introduction. One class of verbs that I consider to have a non agentive *by* phrase can be given the name of *verbs of spatial arrangement*, for ease of reference. Besides (15l), verbs of this class appear in examples like the following:

(16) a. The tenth is preceded by the ninth.   (Bolinger (1975:72))

b. Line B is intersected by line A.   (Rice (1987:179))

c. An invisible diagonal line running between Shiva and Parvati's eyes is paralleled by another running between their hands.

(John Eskenazi Ltd on Asianart)

As for (16a), Bolinger claims that such a verb has the sense of proximity, which produces a certain effect on the object. The same remark would apply to (16b), in which the extent of proximity is such that cannot increase any more. On the other hand, it is dubious that (16c) has such a sense; *parallel* designates a relation between the two entities that never get "nearer to or further away from each other." (Cf. *LDCE*, S.V. *parallel*, adj. 1) It might be that *precede* and *parallel* are not members of the same class, and the passivizability of *parallel* should be explained in other terms than proximity. Even with *precede*, however, the relevance of proximity is not so obvious as Bolinger claims, since a precedence relation is not

restricted to "immediate" precedence, and thus to speak of "The eleventh is preceded by the eighth." seems to be no less natural as an utterance for describing their relative arrangement.

The other class is that which includes (15a,f); their members are called *verbs of surpassing* in Davis (2001:111). This class also includes:

(17) a.   We were completely outnumbered by the enemy.   (*LDCE*[3])

    b.   Outspent by his opponent 17 times over, White lost, and Gibson believes lack of money was the reason.

(Sojourners Magazine, May-June 1998)

    c.   He was outlived by his father who, on the Prince's death, refused to pay his debts.

(Mottingham Lane to Beckenham Place Park via Sundridge)

    d.   He was survived by his father.

    e.   Although two of the investments were underperformed by the guaranteed investment, the diversification into other assets which did perform well provided a greater long term total return.

(The Power of Diversification)

In view of those examples, one might speculate that the passive subject is in a sense affected to the extent that it is "beaten" or "defeated" by the entity denoted by the *by* phrase. Yet, whether this speculation can be extended to examples like (17c) and (17d) is totally uncertain; in them, the person denoted by *he* had already been dead and in hardly any way could he be regarded as affected. And it is virtually impossible to recognize such a relation in (17e); what the verb has is the sense of "inferiority", and thus it is *the guaranteed investment* that would be "defeated" or "affected". Davis also points out that *out-* can be prefixed to a variety of verbs, almost all of them intransitive (*spend* and perhaps *score* may be exceptions). Note that Bresnan (1982) makes the same observation. The resulting verb is transitive and means roughly that the subject does more of the activity than the object does, or does it more successfully. Both the subject and the object are entitled to take part in the activity in the same status, and thus they hardly constitute a pair of agent and patient with any explicit causal relation between them.[2]

The two classes of verbs I have discussed in this section can indeed be conceived as two subclasses of a more general class, whose members can be dubbed *verb of relative alignment.* Notice that *alignment* entails a frame of reference. This is rather obvious in the case of verbs of spatial arrangement, though the frame is often hard to represent explicitly. In other words, the verbs of that class have a sense of comparison in their essential part. This idea predicts that they behave in

an interesting way that can be summarized in the form of constraint, as in (18):

(18)   The two entities must be coordinate or comparable with each other in status against the frame of reference that is implied by the verb.

By this constraint, we can have a more principled understanding of what the following pairs of examples imply:

(19) a.   * The northern border of Mexico is neighbored by the US.

a'.   Mexico is neighbored by the US.

b.   * The accident was survived by John.

b'.   Bill was survived by John

Bolinger would have accounted for the difference by the parameter of transitivity (Yet, curiously, Bolinger (1975:73) does not mention *neighbor* as used in (19a'); he treats the verb as one of the verbs that "appear to have no contrasting counterpart on the side of true transitivity"). In the account I am exploring in this paper, the difference is due to whether an entity that would bear comparison appears as the object in their active counterpart or not. If not, the verb is not used on a par with verbs of relative alignment, as defined above. Thus, the real question to be addressed is not why (19a) and (19b) are deviant, but why their active counterparts are permitted, as shown in (20):

(20) a.   The US neighbors the northern border of Mexico.

b.   John survived the accident.

I speculate that in those sentences the object NP itself works as the frame of reference. It seems often to be the case that the NP that provides the frame of reference required by the event described can appear as the object just for this reason. Compare: *The boss *slept/overslept the appointed time.*[3] Naturally, such a "fake" object hardly undergoes passivization.

To sum up, what I have shown above is that with verbs of relative alignment, which I consider some sense of "spatial relation" is attributed to, passivization nevertheless can be undergone. Moreover, the *by* phrase that accompanies them can hardly be regarded as designating agent. These results would give rise to difficulties with Bolinger's conception of transitivity, in that unpassivizability of such a verb, with an NP that is not selected in accordance with (18), should be explained in this very regard.

2.4.   On the Null Subject Position at the Underlying Structure

I have assumed in section 2.1. that *contain* as discussed there has a null subject position. Here I make a supplementary statement to this assumption. First of all, as shown in (21), *contain* can appear in the existential construction, and thus need not have an external θ-role to assign:

(21)   Also, in a *Mathematica* "notebook", there contains 3 types of "cells".   (*General Help for Using Calculus &* Mathematica)

This fact seems to suffice for assuming a null subject position for *contain*, though, as shown in (22), not all predicates that can appear in the setting subject construction have *there* as the subject:

(22)   * There bought a lot of heroin for five dollars in 1827.

(Farrell (1993:198))

Takami and Kuno (2002:225) cast doubt on the idea that the setting subject construction, as in (23a), is derived from (23b), on the grounds that the latter is ungrammatical:

(23) a.   This cabin sleeps/houses twenty people.

     b.   * The hosts sleep/house twenty people in this cabin.

     c.   [ ]   sleep/house   twenty people   in this cabin

Such an argument, however, would have been valid under the Standard Theory of Generative Grammar (Chomsky (1965)), based on which we could have made an analogy with the derivation involved in the passive.   The reasoning would have proceeded as follows: First, a sequence of obligatory and optional transformations involved generate the active sentence in (23b), and then, the relevant optional operation transforms it to the sentence in (23a); therefore, if (23a) is grammatical, its active counterpart (23b) must be so.   Yet, as Takami and Kuno note, whether this reasoning can be carried over to Relation Grammar's account of the setting subject construction seems uncertain; the answer depends on how (23b) is treated. Perlmutter and Postal do not make it explicit whether (23b) is eligible at least as an intermediate form from which to derive (23a).   By contrast, under the Minimalists' assumptions, such a question does not arise to begin with, since (23a) is not derived from (23b):   technical details aside, after a set of operations generates a common intermediate structure like (23c), i) an NP that has already been present in it (*this cabin*) is raised by COPY and MERGE, and thus one surface form, as in (23a), is derived; or ii) an NP that is independently generated (*the hosts*) is merged into (23c), resulting in another surface form, as shown in (23b).   Thus, to the extent (23c) is legitimate, whether (23a) is grammatical or not is an issue independent of the unacceptability of (23b).

Indeed this kind of argument would not yield any significant results.   As has often been pointed out in the literature, there are many passive sentences that do not have felicitous active counterparts.   In a similar vein, McCawley (1998:91) observes that (24a) is consistent with a materialistic view of the origin of the Earth, while (24a') says that there was a Creator, and concludes that the former is not a

paraphrase of the latter:

(24) a.   The Earth was formed 4 billion years ago.

    a'.   Someone formed the Earth 4 billion years ago.

    b.   My brother was drowned in a boating accident.

    b'.   ? Someone drowned my brother in a boating accident.

He continues that in the context where (24b) is uttered, no one need have been responsible for your brother's death, with its active counterpart, as in (24b'), bringing in a murderer. The same is more or less true of other verbs. For example, *gift* is such a verb that almost exclusively has an entity with divinity as its active subject:

(25) a.   He was gifted with the power of forceful speech.

    b.   The Lord gifted him with the power of forceful speech.

(Webster)

The following sentences do not have an active counterpart, either, but for somewhat different reasons:

(26) a.   He was bound to be a failure.

    b.   * Someone bound him to be a failure.   (Quirk, et al. (1985:144))

(27)   It is rumored that there will be an election before the end of the year.   (Huddleston and Pullum (2002:1435))

In any way, the point is that the presence of a passive sentence does not entail that of its active counterpart.

    In retrospect, what Bolinger (1975) sought to argue with an abundance of evidence can be summarized as in (28a); and it seems now that with the same degree of validity, we can say as in (28b):

(28) a.   The passive construction has certain semantic restrictions that are not observed in the active.

    b.   The active construction has certain semantic restrictions that are not observed in the passive.

The two statements can be generalized into one, as in:

(29)   Each type of construction has its own semantic restrictions.

As such, this statement is too obvious to deny. The point is that it is not always the case that we can have a proper understanding of a sentence in either voice, be it in the active or passive, or in any form of construction, for that matter, by comparing it with its counterpart in regard to such a grammatical device. Such a comparison might blur some of the properties that the sentence has.

3. Transitivity in Cognitive Grammar

3.1. Setting/Participant and Transitivity

The idea that the sentence in the form *NP contains NP* should be regarded as the setting subject construction is not novel in this paper. Statements to the same effect are also made in Langacker (1991), from which I borrow the terminology for the construction in which *contain* and other verbs in the relevant usage appear. Here let us review Langacker's (1991:346-347) treatment of the construction. The basic tenet of Cognitive Grammar is that in a typical transitive sentence, there is an energy flow from the participant that appears as the subject to another participant, which immediately follows the verb via the action chain $AG{=\!=\!=}{>}PAT$ (AG and PAT designating agent and patient, respectively). On the other hand, the examples in (30), with *see* in the transitive (i.e. non-setting subject) construction, is assumed to have an action chain analogous, represented by $EXPER{-\!-\!-\!-}{>}ZERO$ (EXPER = experiencer, ZERO being a role given to the participant that "merely occupies some location or exhibits some static property" (p. 288)):

(30) a.　　They saw yet another startling development in Thursday.

　　　b.　　They witnessed many historic events in Independence Hall.

When it comes to the setting subjection construction, which is illustrated by the two examples in (31), the subject, being a scene-setting but not a participant, loses its property of being an energy source, which would have guaranteed the verb's transitivity and the objecthood of the post-verbal NP:

(31) a.　　Thursday saw yet another startling development.

　　　b.　　Independence Hall has witnessed many historic events.

It is important to bear in mind here that the semantic property of the subject plays an important role in licensing the object (or the post-verbal NP), an issue I will return to in section 4. At any rate, to take *see* as an example, the difference between the two constructions can be schematically shown as in:

(32) a.　　They　　　　saw　　　　　yet another startling development.

　　　　　participant$_{(EXPER)}$　$\longrightarrow$　participant$_{(ZERO)}$

　　　　　subject　　　　　　　　　　object

　　　　　trajector　　　　　　　　　landmark

　　　b.　　Thursday　　saw　　　　　yet another startling development.

　　　　　setting　　　　　　　　　　 participant$_{(ZERO)}$

　　　　　subject　　　　　　　　　　 ~~object~~

　　　　　trajector　　　　　　　　　　landmark

According to Langacker (1991:346), *see* as used in the setting subject construction, has the more abstract configuration, as shown by *(EXPER----)ZERO*. He further

states that "[w]ith this meaning the verbs are intransitive, for the trajector is not a participant and is not connected to the landmark via an action-chain analogue, but rather through a container-content relation." Now verbs in this use are intransitive, and thus they cannot be passivized, as shown in (33):

(33) a.   * Yet another startling development was seen by Thursday.

b.   * Many historic events have been witnessed by Independence Hall.

Langacker continues that it is not an action-chain analogue, but rather a container-content relation that connects the subject and the post-verbal NP in the setting subject construction. Thus, it is quite natural to generalize the relation into *contain*, as used in (34a):

(34) a.   The dam contains 2000 acre feet of water.

b.   * 2000 acre feet of water is/are contained by the dam.

(35) a.   The dam   contains   2000 acre feet of water..

  setting   participant$_{(ZERO)}$
  subject
  trajector   landmark

Again, in this case, with the subject being a setting, the post-verbal NP assumes a ZERO role, and thus there is no energy flow, and passivization impossible. Notice that in the place of the *(EXPER---->)ZERO* relation for *see*, a single [*ZERO*] relation is profiled in the case of *contain*.

So much for Langacker's analysis of the setting subject construction. Thus, a comparison of the two schematic representations of the energy flow for *see* and *contain* (i.e. (32a,b) vs. (35)) shows that only the former involves some sort of derivational relation, which makes the setting play the role of subject: the parentheses indicate this. On the other hand, the representation for *contain* does not have such parentheses, and thus, Langacker would suppose that *contain* as used in this way appears without recourse to such a derivational process. In this respect, Langacker's analysis of *contain* differs from the one that I am exploring here; indeed, whether what I have called a derivational relation really correspond to the raising of the oblique phrase which I have assumed in the previous section is totally uncertain.

3.2. Two types of "Symmetrical" Predicates

Elsewhere in that work, Langacker deals with what are called symmetrical predicates, which have much to do with the discussion I have made in this paper. To illustrate, consider the following examples, in which he considers the relationship between the subject and the object is symmetrical:

(36) a.   Line A intersects line B.

       b.   The railroad tracks parallel the highway.

       c.   Joshua resembles Jonathan.

To these verbs, he gives a schematic representation of action chain analogue, as in *ZERO----ZERO*, and treats them on a par. However, verbs like *intersect* or *parallel* on the one hand, and *resemble* on the other, should be distinguished, if based on the criterion of their passivizability, as the following pairs of examples given in Rice (1987:179-180) show:

    (37) a.   Line A intersects line B.

        b.   Line B is intersected by line A.

    (38) a.   Tommy resembles the milkman.

        b.   * The milkman is resembled by Tommy.

It is uncertain whether by the representation *ZERO----ZERO*, he would have meant the alleged class of verbs to be passivizable or not. Or else, he might have thought of a heterogeneous class whose members are not uniform in their passivizability. Even though the presence of such a heterogeneous class might be given a conceptual basis in terms of the thesis of prototype, however, their difference in passivizability is still unexplained.

    Note also that even Rice, who notes the difference, does not seem to have succeeded in explaining that fact. Rice (1987:179-180) points out that when the "intersect" relation is asymmetrical, unilateral, and somewhat punctual with a fixed subject-object alignment, passive is less acceptable. Rice gives the following examples, for illustration.

    (39) a.   The transept intersects the nave of this church just in front of the altar.

        b.   ? The nave of this church is intersected by the transept just in front of the altar.

        c.   Naves of this church are intersected by transepts.

Nevertheless, as Rice admits herself, the contrast between (37b) and (39b) is left unexplained, and so is the difference observed among the sentences in (39). It seems that even if the semantic and pragmatic factors that are required so as to yield a felicitous interpretation of a sentence play important roles in deciding the acceptability of the sentence, the meaning of symmetry inherent in *intersect* is not among them, and in this sense has nothing to do with the verb's unpassivizability. It is merely a verb that allows passivization, as I have discussed in section 2.2.

    In contrast, it seems that *resemble* is a verb which in or by itself is not qualified as a passivizable one, to begin with. It is for this reason that *resemble* is generally known as a typical unpassivizable verb. Yet, as Rice (1987:180) points

out, when various factors that directly invoke "the transitive prototype" are in operation, the verb can appear in passive sentences:

(40) a.   The milkman used to be resembled by Tommy.

b.   The milkman isn't resembled by Tommy at all.

c.   The milkman couldn't possibly be resembled by Tommy.

d.   The milkman is unmistakenly resembled by Tommy.

e.   Everyone is resembled by someone.

See Rice (1987) for discussion.   At any rate, the question to be addressed is why *resemble* cannot be passivized without the help of such factors.   Note that Rice's remark that *resemble* "is slightly asymmetric in that it takes either chronology or precedence into account in the subjective appraisal," would suggest, as opposed to *intersect*, that it should be a passivizable verb, contrary to the fact.   Isn't it the case that at least in this alleged class, the transitivity of the verb in question is merely accidental?

Recall that I have argued above that verbs like *intersect* and *parallel* are included among verbs of relative alignment.   But how about *resemble*?   The fact that it is not a passivizable verb is enough to conclude that it is not included in that class.   Then how is it that the unpassivizability of *resemble* should be explained? Now that such a conclusion has drawn, it might be that the question is regarded as of no direct relevance to the present discussion, and is left open for further research. I do not think so, however.   To the contrary, the unpassivizability of *resemble* will be explained just in the same way as that of the other verbs I am dealing with in this paper.

In this connection, of great significance is Fillmore's (1972:12) conception of *resemble*.   He points out that it is often the case that apparent symmetric predicates are not properly symmetric at all, and consider *resemble* to be among them.   In view of examples like *Your brother resembles a horse*, he speculates that one of the terms has the role of stimulus, the other has theme, and the sentence is an expression of a 3-place predicate in which the third and phonetically absent argument is the experiencer, which is understood, when unexpressed, to be identical with the speaker of the sentence.   Fillmore's ideas can be made in conformity with an explanation of the verb's unpassivizability in terms of the 1AEX, by assuming its surface form, as in NP_{THEM} *resemble* NP_{STIML}, to be a derived form of $[\ \ ]$ *resemble* $NP_{STIML}\ NP_{THEM}$.   In other words, the verb also should take the setting subject construction.

Now let us return to the main discussion, and consider the questions that are directly concerned with the 1AEX.   I will show that by dealing with such questions,

the property of verbs in the setting subject construction that will have a great impact on the discussions I have made so far will reveal itself.

4. A Generative Account

4.1. The Setting Subject Construction and Burzio's Generalization

The analysis of the setting subject construction in terms of the 1AEX would give rise to some difficulties, however. What is really problematic is the fact that the 1AEX account is in conflict with another well-known generalization proposed in the framework of generative grammar, namely, Burzio's Generalization.[5] The generalization can be informally stated as in (42) (cf. also, Burzio (1986:185)):

(41)   Burzio's Generalization (as stated in Burzio (2000:196))

If a verb does not assign θ-role to the subject, it does not assign accusative Case to the Object.

For illustration, let us compare the derivations of a passive and an unaccusative sentence, for which the generalization is originally proposed, with that which the setting subject construction is supposed to involve.

In the first place, consider the following schematic representations for a passive sentence:

(42) a.   [ ] T^0 v_{def} be kissed   Mary   by Tom
              (+Case)   (+θ)

b.   Mary T^0 v_{def} be kissed   __   by Tom
         ↑ (+θ,+Case) |_____|

Here the light verb v_{comp} has been made inert, resulting in v_{def}, and this process can be shown as in:[6]

(43) v_{comp} → v_{def} (cf. Chomsky (2001))

The point is that the defective light verb has lost its ability to assign the external θ-role and to check off the accusative Case feature. By this process, no argument can be merged directly into the structure, and the Case feature of the object cannot be checked off. Thus for the Case feature of the NP (and the EPP feature of T) to be checked off, the underlying object is raised to the subject position, and becomes the surface subject. Notice that the 1AEX of the Relational Grammar is reducible to this idea; once rendered defective, it is natural that v_{def} cannot undergo the process of defectivization, again. Anyway, a similar derivation is involved in an unaccusative sentence, as shown in (44):

(44) a.　　[　]　T^0 v_{def} arrive　a train　to the station
　　　　　　　(+Case)　　　　　　　　　(+θ)

　　b.　　a train　T^0 v_{def}　arrive　___　to the station
　　　　　　↑(+θ,+Case)

Again, the NP that was generated in the position that immediately follows the verb moves into the subject position, to avoid a Case filter and an EPP violation

Suppose now that the same process is responsible for deriving the setting subject construction.　In the setting subject construction , however, it is the locative or some kind of oblique phrase that is raised to the subject position but not the post-verbal NP, thus, in opposition to Burzio's Generalization, this NP has to have its Case feature checked off there.　If not, a Case filter violation would have resulted, contrary to the fact:

(45) a.　　[　]　T^0 v_{def} buy　a lot of heroin　(for) five dollars
　　　　　　　(+Case)　　　　　　(+θ,−Case)　　　　　(+θ)

　　a'.　　five dollars　T^0 v_{def} buy　a lot of heroin　___
　　　　　　↑(+θ,+Case)　　　　　　*(+θ,−Case)

　　b.　　[　]　T^0 v_{def} contain　the dot　(in) the box
　　　　　　　(+Case)　　　　　　　(+θ,−Case)　　　(+θ)

　　b'.　　the box　T^0 v_{def} contain　the dot　___
　　　　　　↑(+θ,+Case)　　　　　　*(+θ,−Case)

Obviously, all we have to do is not to criticize a principle which is conceived in the framework other than Generative Grammar just because it is in conflict with one that is widely assumed within it.　Or rather, the question is whether or not the insight that Perlmutter and Postal (1984) seek to capture by the 1AEX is correct or, in other words, has a universal significance that other frameworks also have to pay attention to.　Of course, the same is true of Burzio's Generalization; now that it has been turned out that it is in conflict with an 1AEX account of the setting subject construction, is it possible to leave it as it stands, or should it be given a second thought?

In this connection, it seems of much help to reconsider the implications of Burzio's Generalization that has been ignored.　Though it was developed as a way for describing a purely formal relation at the time of its conception (cf. Burzio (1984)), it also has semantic import.　(I should make it clear, in passing, that by this statement I do not mean that the generalization offers a counterexample to the

autonomy thesis. To the extent that a formal device provides a basis for a semantic property but not *vice versa*, it is autonomous to semantics. Cf. Chomsky (1957)) Informally (and less precisely) speaking, I speculate that what Burzio's Generalization expresses is that a certain semantic property of the subject has much to do with the mechanism for licensing the object, and that this idea has much in common with Langacker's conception of the grammatical relation of object, as I have mentioned in section 3.1.[7]

Moreover, the relation between an external argument and accusative Case is given a structural basis under the Minimalists' conception of Case. Chomsky (1995), extending the proposals made in Hale and Keyser (1993), assumes the basic structure for a typical transitive clause to be like the following, where the verb is decomposed into V and the light verb v:

(46)
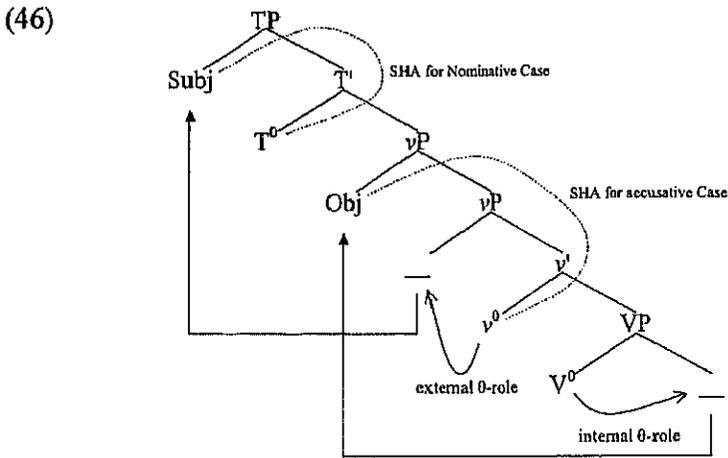
Chomsky argues that the configuration for assignment of the external role is created not by the projections of a (transitive) V, but the projections of an empty "causative" verb v dominating VP. It is the v, Chomsky proposes further, that checks the assuasive Case features of the object through the specifier-head agreement.[8] Martin (1999:12) also points out that Chomsky's (1995) theory of accusative Case and the external argument derives Burzio's Generalization, stating: "Having an external argument implies having v, and having v implies having accusative Case. In other words, Burzio's Generalization!" Notice, however, that though such a conception seems to be on the right track, it simply makes explicit the locus of explanation, and does not provide an principled answer to the question as to why the same light verb both assigns the external θ-role and licenses accusative Case. The answer would reveal itself by taking into account the

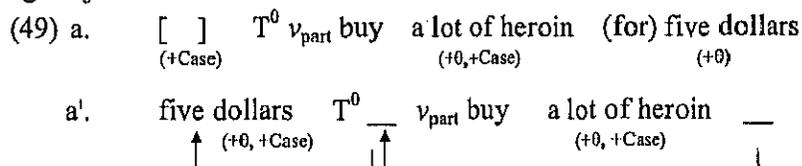speculation I have just made above, to which I will return shortly.

Now, assuming so much, I speculate that the inventory of light verbs includes not only one type of v_{comp} for two place predicates but it should be divided into some subtypes: my proposal is that besides v_{acc}, which takes care of unmarked cases of transitive verbs, v_{part} is present in the inventory of light verbs. The latter kind of light verb is given the name because, I further speculate, the Case licensed by this is identified with partitive Case, which was first proposed in Belletti (1988) and has been explored in the Generative literature thereafter. I will make a several criticism on its treatment as inherent Case below, but at present let us concentrate on the issue at hand. Taking the discussions made so far into consideration, the proposals that I have just made are summarized as (47) and (48):
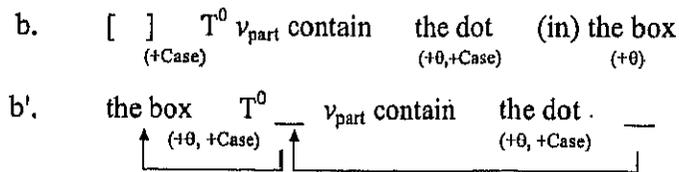
(47) $v \ = \ \{ \, v_{acc} \, , v_{part} \, , \, ... \, \}$

(48) a. v_{acc} licenses accusative (*or* strong) Case of the NP that it attracts, with reference to the thematic relation designated by the verb.

      b. v_{part} licenses partitive (*or* weak) Case of the NP that it attracts, on the basis of the whole-part relation established between its specifier and the complement of the verb.

The qualification that is preceded by *with* in (48a) has been ignored in the Generative literature, but now it has turned out to be expressing an essential property of v_{acc} that plays the crucial role in assigning the external θ-role. Moreover, v_{part} offers a unified solution to the two apparently unrelated problems that I have mentioned above. Recall that I left open in section 2.1. the question as to why the locative phrase can move to the subject position in avoidance of a locality violation for movement, that would have been caused by going around the object NP. The other is how to license the object in the configuration in which Burzio's Generalization predicts would have no Case to assign.

To illustrate, let us consider the derivation I propose to be involved in the setting subject construction:

(49) a.   [ ] T^0 v_{part} buy   a lot of heroin   (for) five dollars
            (+Case)   (+θ,+Case)   (+θ)

      a'.   five dollars T^0 __ v_{part} buy   a lot of heroin   __
            (+θ, +Case)   (+θ, +Case)

b.   [ ] T^0 v_{part} contain   the dot   (in) the box
        (+Case)   (+θ,+Case)   (+θ)

b'.   the box   T^0 __ v_{part} contain   the dot .   __
       (+θ, +Case)   (+θ, +Case)

Here, v_{part} attracts an NP that designates *whole* to its specifier position, a process which is undertaken independent of Case or theta theory, and thus does not give rise to a locality violation with respect to such modules. Then, in order for the NP to be licensed with respect to Case, it must agree with T, and then be raised to its specifier position (or the subject position of the sentence). Notice also that it is nevertheless the case that v_{part} as well as v_{def} is in accord with Burzio's Generalization, though trivially; it does not assign the external θ-role, nor licenses accusative Case.

A few words on the nature of the whole-part relation in question are in order. First, partitive Case as I have proposed above is a structural Case, contrary to the assumption that was made in Bellettti (1988) and has been adopted in the Generative literature thereafter. Belletti (1988) proposed that in some constructions including the existential construction, the NP that immediately follows the verb is not assigned accusative Case on the basis of their structural configuration, but instead is assigned inherent partitive Case, which is based on θ-marking. Notice that θ-marking is undertaken by the sister relation between a predicate and its argument, and accordingly, licensing of inherent Case should also be subject to this restriction. Yet, examples like (50) have occasionally been cited which would cast doubt on the plausibility of such an assumption:

(50)   There will be [a man available]

An attempt to solve this problem is made in Lasnik (1995:627-629). He assumes that in (50), *a man* is θ-marked by the complex predicate [*be-available*] in the specifier position of *be*.

That solution, however, makes use of the configuration non-distinct to that for licensing a structural Case, and thus is all the more questionable. Moreover, Lasnik's idea about θ-marking is based on *be* being a light verb, which does not have its own θ-role, and inherits one from the small clause predicate. This idea hardly seems to be carried over to *see* or other verbs like *contain* or *buy*, which I assume to have v_{part}. The examples in (51), which are drawn from Igarashi (1997: 168-172), and their schematic representation shown in (52), would suggest that the whole rage of small clause complements can also follow *see* as used in the setting subject construction:

(51) a.   In 1906 Cambridge saw three or four of her most learned men compete for the Greek chair.   (*OED*^{2})

     b.   The next few days saw Francis becoming increasingly agitated by my failure to stick close to the molecular models. (J.D. Watson)

     c.   The early decades of the factory system saw indescribable misery inflicted on men and woman and (far worse) helpless children, until reformers enforced changes.   (I. Ashimov)

(52)   *whole* T^0 v_{part} see [$_{part}$ NP V_{inf}/ V-ing / V-en ...]

Moreover, de Hoop (1996:67) points out that the observation on Finnish indefinte NPs that is based on Belletti's theory of inherent Case is not correct. She gives some examples which show that it is not true that there is an incompatibility between partitive Case and a definite NP in Finnish. Thus I conclude that partitive Case is a structural Case, and is licensed by v_{part}.[9]

Another property of the whole-part relation that has to be made explicit is that this relation is specific to v_{part}, and is not involved in other constructions that are derived from a common underlying structure but have another kind of light verb. For illustration, consider the following sets of examples:

(53) a.   The package included these files.

     b.   1977 saw the 200 anniversary of Independence Day.

     c.   Five dollars bought a lot of heroin.

(54) a.   The spy included these files in the package.

     b.   They saw the 200 anniversary of Independence Day in 1977.

     c.   They bought a lot of heroin for five dollars.

I use a slightly different examples here, in order to avoid irrelevant details and to make comparison easier. The point of my proposal that v_{part} is involved in the setting subject construction, as shown in (53), is that the whole-part relation involved is not contingent and v_{part} works as a mechanism for guaranteeing such a relation. By contrast, the putative whole-part relation that would be supposed between the oblique argument and the subject in their active counterparts are merely induced by implication, because nothing would be required to guarantee such a relation. Thus it is quite natural that such a relation is not always explicitly specified: it is obvious that in (54a), a whole-part relation is found between *the package* and *these files*, and the same is true for (54b), in the sense that a particular time consists of a series of particular events. It would be very dubious to assume such a relation for (54c), however, in view of the presence of the preposition *for*, which would designate a replacement (*or* equality) relation. Nevertheless, the price of a commodity must not be more than the amount of money with which to

buy it, but not *vice versa*. In this sense, the amount of money and the price of a commodity can be said to be in a whole-part relation, which I consider is realized in (53c). Moreover, the well-formedness of *the box contains itself* suggests that the relevant whole-part relation is reflexive: *part* need not be proper-part of *whole*. Thus, it is as reasonable to regard (53c) as including the relevant whole-part relation.

Finally and crucially, as a careful reader might have noticed, the idea that v_{part} plays the crucial role in generating the setting subject construction would threaten the explanation of its unpassivizability by the 1AEX to be untenable. This is because the appearance of v_{part} is motivated by the replacement of v_{acc}, but not by making v_{acc} inert, as in the case of v_{def}. In other words, since v_{part} is also a kind of v_{comp}, it is natural to assume that that light verb can also be made inert by the process of defectivization. The process can now be restated in a more general form, as in:

(55)　　　v_X　　$\rightarrow$　　v_{def}

Here X is a variable that ranges over any type of light verb, and thus the rule (56) in itself is applicable indiscriminately. Thus, if as I have remarked above, the content of the 1AEX should be restated in terms of a defective light verb being unable to undergo defectivization again, some other mechanism is called for in order to prevent the setting subject construction from undergoing passivization. I consider that this is not unnecessary complication, nor is that mechanism an otherwise unmotivated and ad hoc one; to the contrary, the mechanism gives us another important insight into the nature of the whole-part relation involved.

In this connection, recall that it is pointed out in Helke (1979) and Bresnan (1982) that an NP that expresses a body-part is in a certain local relation with the subject that designates the whole. To use more recent terminology, what these works show is that the former, being an anaphor,[10] is bound by the latter. Compare the following sets of examples, which are drawn from Helke (1979:33-62) and arranged in a way that makes their parallelism clearer:

(56) a.　　The poor girl lost her mind.

　　b.　* The poor girls lost her mind.

　　c.　* The rich girl's husband lost her mind.

　　d.　* Her mind was lost by the young lady.

(57) a.　　The poor girl hurt herself.

　　b.　* The poor girls hurt herself.

　　c.　* The little girl's farther hurt herself.

　　d.　* Herself was hurt by the poor girl.

By identifying the whole-part relation observed in these example with that of the setting subject construction, I speculate that the unpassivizability of the setting subject construction also obeys that pattern. In other words, I finally propose that Binding Condition A, a device for explaining the grammaticality observed in examples like (56) and (57), should be extended to the setting subject construction. For concreteness, I assume the following version of Binding Condition A:

(58)   If α is an anaphor, interpret it coreferential with a c-commanding
         phrase in D.   (Chomsky [with Howard Lasnik] (1995:100))

For D, let us tentatively assume it to be a minimal clause that contains the anaphor and its antecedent. I conclude then that the establishment of the whole-part relation referred to in (48b) is guaranteed by Binding Condition A. As shown in (59), if not passivszed, the trace of the *whole* NP (which have been raised to the subject position) c-commands the *part* NP in the object position, while the operation of "passivization" breaks the c-command relation required for the whole-part relation, resulting in a Binding Condition A violation:

(59) a.   the box T^0 __ v_{part} contain   the dot
                          (whole)   (part)
                          |_____ c-command for binding _____|

   b.   the dot T^0 v_{def} be contained   by the dot
            *(part)   (whole)

Importantly, we have now arrived at an explanation of the unpassivizability of the setting subject construction without recourse to the 1AEX. Thus if it is the case that the results obtained in the discussion made here can be translated back into Relational Grammar in an appropriate way (the framework as well having to deal with binding and lexical semantic information in anyway), the role of the 1AEX will be reduced to a significant degree. Moreover, it can be speculated now that the new explanation has a wider coverage than one based on the 1AEX, since the latter explanation has to make reference to more than one instance of advancement to 1 being involved. This speculation leads to another prediction, namely that, even structures that cannot be genuinely regarded as involving an advancement to 1 cannot be passivized, so long as it involves the whole-part relation required by v_{part}. I examine in the rest of this section examples which show that this prediction is also borne out.

4.2.   Extension to Other Whole-Part Relations

The subsection is devoted to exploring some extensions of the light verb v_{part}. The first to come is *resemble*, which I have mentioned in section 3.2. Recall that

contrary to Langacker (1991), I suggested the possibility of its unpassiviability being accounted for by the 1AEX. Now that I am seeking for an explanation without recourse to the 1AEX, I will explain that unpassivizability in a different way. The crucial idea is that it is not unnatural to assume that *resemble* also expresses the whole-part relation between the subject and the object. Thus, (60a) can be roughly paraphrased as "There is something of Jane in Mary":

(60) a.　　Mary resembles Jane.

　　b.　　Mary T^0 v_{part} resemble Jane

　　c.　　* Jane is resembled by Mary.

If that paraphrase indeed captures the relevant whole-part relation between *Mary* and *Jane*, the latter of which is receiving a certain metonymic interpretation, it is natural to analyze *resemble* as well to have v_{part}, as shown in (60b), and to attribute its unpassivizability to a Binding Condition A violation.[11]

The whole-part structure can be extended to the unpassivizability of *have*. I put aside issues concerning whether *have* is derived from or related to *be* (cf. Kayne (1993) and references cited therein). Yet even if not, the fact that *have* almost always resists to passivization (except some idiomatic uses) suggests that it contains v_{part} as its appropriate light verb. The idea is further confirmed by the fact that *have* can have the meaning of inalienable possession, which is typically manifested when accompanied by the object that expresses the subject's attribute or its kinship, as shown in (61a):

(61) a.　　Mary has an attractive appearance/a sister.

　　a'.　　Mary　T^0 v_{part} have　an attractive appearance/a sister

　　b.　　* An attractive appearance/a sister is had by Mary.

It is natural to suppose that an inalienably possessed entity as designated by an NP that expresses one's own attribute or property, and one's own relatives as well, constitutes an essential part of oneself. I further assume that such a possession relation can be extended to other kinds of relations that the verb expresses, namely, that of alienable possession, location, and so on. I conclude then that *have* as well selects v_{part}, and for this reason, counts as one of the unpassivizable verbs.

Interestingly enough, some verbs can manifest the relation that is designated by *have*. Among them is *lose*, as used in (62a):

(62) a.　　My friend lost a brother.

　　a'.　　* A brother was lost by my friend.

　　b.　　My friend lost a dollar.

　　b'.　　A dollar was lost by my friend.

A careful comparison will reveal that of the two examples of *lose*, which are drawn

form Bolinger (1975:70), only the one involved in (62a) incorporates possessive *have*, or more precisely, one of the inalienable possession, as in *my friend had a brother*.[12]   And then it is natural to reduce the unpassivizability of *lose* in this sense to that of *have* incorporated.   On the other hand, the primary reason of (62b) being acceptable seems to be that there is nothing that would prevent passivization: to the extent that passivization is indiscriminate and automatic operation and there is no factor interfering actively, passivization is allowed.   With this regard, recall Bolinger's claim that the passive must have a true patient that is genuinely affected by the action of the verb.   It remains totally uncertain, however, why "a dollar" in (62b) counts as a true patient.   Bolinger claims "inattention" is the factor.[13] Inattention?   If so then, it is all the more doubtful that a dollar can be (*or* at least have a potential to be) affected by my friend in reference to the semantics and/or pragmatics of *lose*; or could it be if by such a personage as George Washington, or generations of lovers?

Another case that v_{part} plays an important role is the ambiguity of *break*.   It has often been pointed out in the literature that sentences like (63a), in which a body-part NP appears as the object, can have either agentive or experiencer subject, while when it is passivized, as in (63b), the experiencer reading disappears:

(63) a.   John broke his leg.   (ambiguous: agent/experiencer)

     b.   His leg was broken.   (agent only)

Abney (1987:89) attempts to account for the ambiguity of (63a) by stipulating a different underlying structure for each reading, as shown in (64):

(64) a.   John broke his leg   (agent)

     b.   [   ] broke John his leg   (experiencer)

The point of his idea is that (62b) is parallel to the ditransitive structure of *give*. He further claims to identify the unpassivizability of (63a) in the experiencer reading with that of the ditransitive construction.   As he puts it: "As with *give*, the second object (the "displaced" direct object) cannot be easily passivized: *??The book was given John*, likewise, *his leg was broken* only has the agentive reading, where someone intentionally broke John's leg." (p. 140)   Notice, however, that the unpassivizability of the two verbs is so different that they cannot be regarded as of the same class; in contrast with the rigidity in judging the unacceptability of *break*, that of *give* is far from clear and is subject to variation among native speakers. Thus Abney's analysis is untenable.   In my analysis, on the other hand, the difference in reading is due to the difference of the light verb to be accompanied by: if agentive, v_{acc} assumes the whole responsibility, and if in the experiencer reading, v_{part} takes its place, as shown in (65):

(65) a.　　John　T^0 v_{acc} break　his leg.　　　　　　(agent-patient)

    b.　　John　T^0 v_{part} break　his leg.　　　　　　(whole-part)

Again, the unpassivizability of (65b) is reducible to the v_{part} present.

Finally, let us return to *contain*. The fact that this verb also has an agentive use has been pointed out no less occasionally. In fact, Rice (1987), Langacker (1991), and Schlesinger (1995), to name a few, also make reference to the ambiguity of *contain* in question. The ambiguity is also captured by which of the light verbs, namely, v_{acc} and v_{part}, is selected, as shown in (66):

(66) a.　　the package　T^0 v_{part} contain　a present.

    a'.　　* a present　T^0 v_{def} be contained　by the package

    b.　　a superior force　T^0 v_{acc} contain　the enemy

    b'.　　the enemy　T^0 v_{def} be contained　by a superior force

Now it seems to be unnecessary to repeat the same remark: (66a) is another instance of *contain* as used in the setting subject construction, its passive counterpart ultimately banned by Binding Condition A; in (66b), v_{acc} takes the place of v_{part}, which, according to Langacker, is motivated by the force dynamic construal of the event that the sentence is describing, and thus the sentence can undergo passivization.

5. Concluding Remarks

In conclusion, I would like to put an emphasis on the fact that the inventory of light verbs contains v_{part}, as well as v_{acc}, amounts to saying that language faculty should be equipped with v_{part}, among its other primitives. One of the light verbs is incorporated into a verb, and according which one is the most basic typology of verbs made. If so, then it can be speculated further that such primitives are underlying, or offer the basis for, human cognition.

To summarize the discussions so far, I have shown that the unpassivizability of verbs with v_{part}, should be reduced ultimately to Binding Condition A, which guarantees the whole-part relation that the light verb requires such verbs to have. This fact suggests that the operation of "passivization" is by itself automatic and independent of the kind of light verb, in that in principle that operation could apply to sentences with such a verb. The same is true for the "symmetrical" verbs that I have assumed to have much to do with the sense of spatiality. In these verbs, I have argued, hardly any sense of transitivity is observed, yet they are passivizable to the extent that the two entities that these verbs have as the subject and the object are in a "coordinate" or "comparable" relation to each other. Again, this fact is on a par with the view that passivization is an automatic operation.

As I have pointed out at the onset of this paper, there are many semantic and pragmatic factors that would affect the passivizability of the sentence in question in the actual fact. Yet, what I have sought to show in this paper is that the difference in the kind of light verb that the verb incorporates is one of the crucial factors.

NOTES

[1] To the best of my knowledge, the term *spatiality* has not gained currency as the term that designates a notion opposite to *transitivity*. Interestingly, Schlesinger (1995) does not have the entry for *spatiality* in the "Index" section, though the "Reference" section of the work refers not to Bolinger (1975) but to Bolinger (1977), which is a revision of the former work and has the term *spatiality* in the title.

[2] Davis (2001:111) assumes the set of verbs of surpassing to be generalized into a larger class, which also subsumes the subset including such verbs *contain* or *have*. I do not agree with him, however, on the grounds that the two subclasses are distinguished with respect to their passivizability.

[3] For an attempt to account for the difference between *sleep* and *oversleep* in a rather different point of view, see Yamada (2000).

[4] This putative "analysis" is indeed the reversal of that which Postal (1972) made for *remind*. See that stimulating work for arguments which seem to have general validity for associating *resemble* and *remind*, though I will not finally adopt his ideas.

[5] An attempt to restate the content of the 1AEX in Generative terms is also made in Baker (1988), though he does not make any explicit remarks about its (in)compatibility with Burzio's Generalization.

[6] In Chomsky (2001), v_{comp} is denoted by v^*, and v_{def} simply by v. I do not adopt these notations in order to avoid confusion, saving v for the general term covering both and other cases.

[7] Of course, it is also important not to overemphasize the similarity: what Burzio's Generalization seeks to capture is the relation between transitive verbs and their passivized or "ergative" counterparts, while Langacker's statement is made with reference to the relation between the (typical) transitive construction and the setting subject construction. Strictly speaking, only the first halves of

each statement correspond to each other.

[8] As is often the case with any research program in progress, technical details differ day by day. Thus, it is just for expository purposes that I speak of "specifier-head agreement" here. This statement is largely true of other devices I am assuming in this paper.

[9] Incidentally, de Hoop (1996:111) also provides a piece of evidence that the sentence with *contain* in Dutch also have v_{part}. As she puts it: "... the transitivity of a verb such as [i] is beyond doubt; yet only the weak reading of a weak NP is allowed and scrambling is not possible"

(i) a.　　omdat een krant meestal enkele artikelen bebat　　　　　　　(Dutch)
　　　　　　because a paper mostly some articles contains

　　b.　* omdat een krant enkele artikelen meestal bebat　　　　　　　(Dutch)
　　　　　　because a paper some articles mostly contains
　　　　　　"because a paper mostly contains some articles"

[10] The fact that a body-part NP behaves as an anaphors has often been given Cognitive and Typological supports. See König and Siemund (1999) and Schladt (1999) and references cited therein, for discussions.

[11] Fillmore (1972:12) would have made a brief point for that paraphrase (so brief one that there should be no wonder if anyone might fail to recall it), by reporting an observation to the effect that the *whole* NP must be expressed as a referring expression, but the *part* NP need not.

[12] Of note is the fact that *LDCE* (s.v. *lose*, v. 6) defines *lose* in this sense to mean "to have taken away or *cease to possess*, as through death, destruction, ruin or time" (italics mine). Cf. also, the example in (56a).

[13] In support of this, Bolinger (1975:70) paraphrases (62a) and (62b) into the following sentences, respectively:

(i) a.　　A brother was lost to my friend.

　　b.　* A dollar was lost to my friend.

Again, it seems uncertain what a paraphrase like (ib) (*not* (ia)!) would have to do with the notion of *indifference*. On the other hand, *LDCE* (s.v. *lost*, adj. 7) gives an example analogous to (ia) and paraphrases *lost* into *no longer belonging to*. In the latter case, we can make sense of *have* being incorporated into *lose*, since the concept of (inalienable) possession has much to do with that of affiliation. Cf. also, Fillmore (1968).

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