

CONSTRAINTS ON DETRANSITIVIZED RESULTATIVE CONSTRUCTIONS BASED ON AFFECT VERBS*

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1. Introduction

English has a kind of resultative constructions exemplified in (1) (cited from Levin and Rappaport Hovav (1995)), which we will refer to in this paper as the Detransitivized Resultative Construction (DRC for short).

- (1)a. Sudsy cooked [them all into a premature death] with her wild food.
- b. 'I'm glad you didn't stay at the Club drinking [yourself dottier].'
- c. Having ... drunk [the teapot dry] ...
- d. Drive [your engine clean].

The DRC is similar to the Transitive Resultative Construction (TRC) like those in (2) in that they are based on transitive verbs. The difference between them can be found in their object selection: the postverbal NP in the DRC, unlike the one in the TRC, is not a semantically selected object of the verb but a fake one, as is the case with the Unergative Resultative Construction (URC) in (3).

- (2)a. The earthquake shook the old houses to pieces.
- b. The boxer knocked the man breathless.
- c. She shook her husband awake.
- d. He kicked/pushed the door open.
- (3)a. Dora shouted herself hoarse.
- b. I ... ruthlessly roused Mr. Contreras by knocking on his door until the dog barked him awake.
- c. Sylvester cried his eyes out.

In the DRC, the resultative phrase is predicated of the fake object, and they semantically form a kind of small clause which represents a resulting state caused by the action denoted by the verb. This small clause structure is referred to, in this paper, as the 'resultative

small clause.’ (The resultative small clauses in (1) and in the examples below are indicated by square brackets.)

Levin and Rappaport Hovav (L&RH) (1995) define the verbs which can appear in DRCs (DRC verbs) as “unspecified object verbs.” They are transitive verbs with their original objects (internal arguments of the verbs) phonetically unrealized but still receiving the interpretation of a semantically unspecified referent. However, it has been pointed out in Nogawa (2005) that L&RH’s characterization of DRC verbs is inaccurate. In the next section, we will briefly review the discussion there.

One of the conclusions drawn from the observation in Nogawa (2005) is that not only unspecified object verbs (which correspond to EFFECT verbs in Nogawa’s (1994) analysis) but also AFFECT verbs as well are potential DRC verbs. (See Nakau (1994) and Nogawa (1994, 2005) for the categorization of these verb classes.) This conclusion, however, faces another problem. We find that DRCs with some AFFECT verbs are in fact ruled out. The question to be considered in section 3 is, then: What is the proper description of grammatical DRCs based on AFFECT verbs? Through our examination of the data, we will see that the construction is under two semantic constraints on the internal structure of their resultative small clause. Section 4 makes concluding remarks.

2. Observation in Nogawa (2005): AFFECT Verbs as DRC Verbs

Following Carrier and Randall (1992), L&RH (1995) claim that the verbs which fit in DRCs like those in (1) must be what they refer to as “unspecified object verbs.”¹ Unspecified object verbs are transitive verbs in their original uses but are detransitivized in the DRC construction with their implicit objects interpreted as referring to some semantically unspecified referents. The verbs in the grammatical examples in (1) *cook*, *drink*, and *drive* may actually take unspecified implicit objects.² On the other hand, verbs which do not take an unspecified (implicit) object are unable to construct grammatical DRCs.³ Since the verbs *destroy*, *frighten*, and *hypnotize* may not take unspecified objects (as shown in (4)), they cannot occur within DRCs (as in (5)).

- (4) a. The bombing destroyed *(the city).
- b. The bears frightened *(the hikers).
- c. The magician hypnotized *(the volunteers).
- (5) a. *The bombing destroyed [the residents homeless].
- b. *The bears frightened [the campground empty].
- c. *The magician hypnotized [the auditorium quiet].

I have argued in Nogawa (2005) that the categorization of DRC verbs in L&RH’s

analysis is unsatisfactory, pointing out that it raises, at least, three problems: two empirical ones and one conceptual one, which will now be reviewed briefly.

One problem is concerned with the fact that there are DRCs which are *not* based on unspecified object verbs. Under the analysis of Nogawa (1994), which discuss the relationship between verb classes and interpretation of their implicit complements, verbs which allow unspecified interpretations for their implicit objects are EFFECT and ACT verbs, whereas those which allows only specified interpretations are AFFECT verbs (see Nakau (1994) and Nogawa (1994, 2005) for further details). If L&RH's analysis is correct, we predict that the EFFECT class alone fall into the DRC verbs.⁴ The fact is, however, that even AFFECT verbs are allowed to constitute DRCs. Note that the verbs in (6) have only AFFECT verb use and thus the constructions are all DRCs, not TRCs.

- (6)a. Matilda **poked** [a hole in the rice paper screen] (with her cane).
- b. Stephanie **burned** [a hole in her coat] (with a cigarette).
- c. Frances **kicked** [a hole in the fence] (with the point of her shoe).

(Levin and Rapoport (1988))

The DRCs involving AFFECT verbs above are all acceptable, where the implicit objects of these verbs each serve a specified interpretation. The nullified original object (i.e., the PATIENT object) of the verb in (6a), for example, cannot be anything unspecified but the rice paper screen. Thus, AFFECT verbs can also be included among DRC verbs, because DRCs based on these verbs should be acceptable.

The second empirical problem is that there are DRCs which are based on unspecified object verbs but *are* ruled out.

- (7)a. *The bears **frightened** [the campground empty]. (= (5b))
- b. *The magician **hypnotized** [the auditorium quiet]. (= (5c))

Note that the verbs in (7) are AFFECT verbs and their internal arguments which are syntactically unrealized are the targets (the PATIENT objects) of the acts of frightening and hypnotizing. The verbs can be classified into *amuse*-type psych-verbs (cf. Levin (1993)). Levin points out, as cited in (8), that this type of psych-verbs can be found in the Unspecified Object Alternation, and in that alternation the missing objects receive unspecified interpretations.

- (8) In this alternation [Unspecified Object Alternation], the unexpressed object in the intransitive variant receives what has been called an “arbitrary” or “PRO-*arb*” interpretation. That is, this variant could be paraphrased with the transitive form of the verb taking “one” or “us” or “people” as object.

(Levin (1993: 38))

We notice that the internal arguments of the verbs in (7) are both what L&RH call as “unspecified objects,” because what is frightened or hypnotized there is ‘people in general.’ Then, at least the verbs *frighten* and *hypnotize* may be considered to be unspecified object verbs.⁵ If L&RH’s categorization of DRC verbs were correct, the DRCs in (7) should also be ruled in, contrary to the fact.

The last problem with L&RH’s analysis is a conceptual one. It is the violation of the selectional restriction of DRC verbs. English implicit complements, unlike Italian *pro* complements, have no structural position in the syntax (see Rizzi (1986)). It has also been pointed out in the literature that the (semantic roles of) missing complements in English are still required even by the detransitivized (or intransitivized) verbs, and thus those semantic roles must be listed on the lexical conceptual structures (LCSs) of the verbs. If L&RH’s observation is correct and DRC verbs take an implicit unspecified object, they must also involve in their LCSs the thematic roles of the (unrealized) internal arguments.

However, DRC verbs select a small clause construction, which denotes a result state, instead of an NP complement denoting a PATIENT referent. And ungrammaticality of the following examples, where the original internal argument and the small clause argument are both realized, indicates that the result state and the PATIENT argument are in complementary distribution in the LCSs of the verbs.

- (9) a. *Matilda poked *the rice paper screen* [a hole in it] (with her cane).
- b. *Stephanie burned *her coat* [a hole in it] (with a cigarette).
- c. *Frances kicked *the fence* [a hole in it] (with the point of her shoe).

As long as categorization of DRC verbs are discussed only in relation to the interpretations of their implicit objects, as in L&RH (1995), the problem of selectional restriction arises. Rather, DRC verbs should be better characterized as having no internal PATIENT argument but having a resultative small clause instead. (See also the discussion in Nogawa (2005: 3.2).)

To summarize, verbs in DRCs are not necessarily restricted to unspecified object verbs, as L&RH (1995) claim. As we have seen above, DRCs based on AFFECT verbs can also be acceptable. Then, we may say that the DRC has a less severe restriction on its verb. That is, the (transitive) verb involved must simply be able to be “detransitivized” (or intransitivized).

3. DRCs with AFFECT Verbs

3.1. Grammaticality

Now, we must say that L&RH's generalization of the DRC verb is insufficient. As revealed in Nogawa (2005), DRCs with AFFECT verbs can also be grammatical. Interpretation of implicit complements is not a crucial factor for grammatical DRCs, or, at least, the DRC verb should not be characterized by the interpretations of their implicit complements alone. Reference to their interpretation necessarily leads to the wrong asymmetry between AFFECT and EFFECT verbs. Thus, irrespective of the interpretations of their implicit complements, any transitive verbs which have lost their objects are capable of occurring in DRCs. As long as transitive verbs can convert into intransitive verbs, AFFECT verbs, as well as EFFECT verbs, may constitute DRCs.

Although we have seen that AFFECT verbs are potential DRC verbs, which is one of the conclusions drawn in Nogawa (2005), we notice that DRCs with some AFFECT verbs may constitute grammatical DRCs and others do not. For example, DRCs with the verbs *cook*, *drink*, and *drive* (in (1)) and with *poke*, *burn*, and *kick* (in (6)) are well-formed whereas DRCs with *destroy*, *frighten*, and *hypnotize* (in (5)) are not. This fact leads us to another problem, which will be discussed in the remaining of this paper. That is, which AFFECT verbs may and may not appear in DRCs, and why is it so? What makes such a difference in acceptability of DRCs? Now we have to consider proper description of the constraints on DRCs. Specifically, the problem we have to consider here is the contrast between the AFFECT verbs which allow DRCs (the examples provided in (1) and (6)) and those that do not (those in (5)). In the next section we will discuss semantic constraints on DRCs with AFFECT verbs.

3.2. Two Constraints on DRCs with AFFECT Verbs

In this section we will see that grammaticality of DRCs with AFFECT verbs do not depend on their verb selection. We will argue specifically that the construction is under two constraints on the internal structure of its resultative small clause itself, which consists of a fake object and a resultative phrase. Acceptable DRCs with AFFECT verbs do satisfy the constraints whereas unacceptable ones do not.

Let us consider the examples in (6), repeated below, where AFFECT verbs are involved and the constructions are all grammatical.

- (6)a. Matilda **poked** [a hole in *the rice paper screen*] (with her cane).
- b. Stephanie **burned** [a hole in *her coat*] (with a cigarette).
- c. Frances **kicked** [a hole in *the fence*] (with the point of her shoe).

We notice that all these examples have one property in common. The shared property is that the ‘original’ internal arguments of the verbs (namely the PATIENT objects), which are not in the object position, but are syntactically realized within the resultative phrases. (They are italicized in the examples.) The nullified real object of the verb in (6a) is the rice paper screen, which we can find within the resultative phrase. The referent of *her coat* in the resultative phrase in (6b) is what Stephanie burned. Likewise, in (6c), the target of the act of kicking, which is to be assigned the original thematic role PATIENT, is realized as *the fence* in the resultative phrase.⁶ Note that the fake object *a hole* in each example is not the target of the act of poking, burning, or kicking. Thus, we have the following sentences.

- (10) a. Matilda **poked** *the rice paper* (with her cane).
 b. Stephanie **burned** *her coat* (with a cigarette).
 c. Frances **kicked** *the fence* (with the point of her shoe).
- (11) a. *Matilda **poked** *a hole*.
 b. *Stephanie **burned** *a hole*.
 c. *Frances **kicked** *a hole*.

These sentences, then, suggest that the construction has a constraint on its resultative small clause. That is, the original internal argument of the verb involved is somehow realized in the resultative phrase. We propose the following as a constraint on the well-formed DRCs with AFFECT verbs.

- (12) A grammatical DRC with an AFFECT verb must have the original internal argument of the verb syntactically realized in the resultative predicate.⁷

In other grammatical DRCs with AFFECT verbs, provided below, the constraint in (12) is also satisfied. (Here again, the original internal arguments of the verbs are italicized.)

- (13) a. But Meckler’s style, Jenny thought, would have been to **cut** [a hole in *the netting of the lacrosse stick*] — and to have left the useless stick in the sleeping Hathaway’s hands.
 (J. Irving, *The World According to Garp*, 43)
- b. She grabbed a pack of Marlboros from a table, snapped a lighter, and **drew** [flame into *the cigarette*].
 (W. Harrington, *Columbo: The Game Show Killer*, 123)
- c. Brinsky **shook** [another cigarette from *a pack of Marlboros*], looked at it a moment, apparently thought better of it, and returned it to the pack.
 (W. Harrington, *Columbo: The Helter Skelter Murders*, 134)
- d. Acid **ate** [holes in *my suit*].

- e. Termites **ate** [*holes in the wood*].

In (13a), the referent of *the netting of the lacrosse stick* is the target of the act of cutting and is syntactically realized in the resultative PP. The syntactic object *a hole* refers to something that comes into existence as a result of that action. In (13b), what she drew cannot be flame itself but the referent of *the cigarette* in the resultative phrase. What Brinskey shook, in (13c), is *a pack of Marlboros*, again in the resultative phrase, and as a result the referent of *another cigarette* pops out of the pack. What are affected by the act of ‘eating’ in (13d) and (13e) are *my suit* and *the wood*. They are placed within the resultative phrases and *holes* in the object position refer to what were made as a result of the act of eating.

Further look at the examples in (6) and (13) reveals that, in addition to the syntactic realization of their internal arguments, they have another property in common. That is, the syntactic objects, which are subjects of the resultative predicates, all represent certain kinds of entities which come into existence (i.e., resultant entities). We have seen that the referent of the NP object *a hole* in each example in (6) refers to an entity which comes into existence as a result of the act of poking, burning, or kicking. The referents of the syntactic objects in (13) also exist in the real world (or in the domain of the actor), only after the act of cutting, drawing, shaking, or eating. Thus we might add another constraint saying that the fake object in the construction must be a resultant object.

However, this constraint is not satisfactory. The notion of resultant object is too severe to explain the grammaticality of the following DRCs.

- (14) a. Columbo walked toward the house, **slapping** [ash off *his raincoat*], then pulling on the knot in his tie.

(W. Harrington, *Columbo: The Game Show Killer*, 60)

- b. “Yeah,” I mumbled as I **rubbed** [the sleep out of *my eyes*].

(R. K. Siegel, *Whispers: The Voices of Paranoia*, 32)

- c. A guy on his way through this sitting room, on his way to kill people with a knife, stops to **clean** [mud off *his shoe*]?

(W. Harrington, *Columbo: The Helter Skelter Murders*, 50)

- d. Victoria Stopped and **pressed** [fingers to *her eyes*], squeezing out tears.

(W. Harrington, *Columbo: The Game Show Killer*, 77)

- e. He **pinched** [the fire out of *his cigar*] and deposited it in his raincoat pocket.

(W. Harrington, *Columbo: The Game Show Killer*, 57)

They are grammatical DRCs based on AFFECT verbs. They satisfy the first constraint in (12), since the internal arguments of the verbs (again italicized) are placed within the

resultative phrases. But the fake objects (underlined) are *not* resultant object, which is against our expectation. *Ash* in (14a) refers to what had been on his raincoat. Sleepiness denoted by *the sleep* in (14b) *did* annoy the speaker, and thus caused him to rub his eyes. The referent of *mud* in (14c) pre-exists and sticks to his shoes before the act of cleaning. In (14d), Victoria's fingers cannot, say, stick out of her palm as a result of pressing her eyes. What comes out of his cigar in (14e) is *the fire*, and thus it must have already been on his cigar before pinching. Thus, they all lack the second property because the fake objects are not resultant objects.

How can we generalize the nature of the fake objects in grammatical DRCs with AFFECT verbs? One possible way to categorize the fake objects in (6) and (13) and those in (14) into one class is by simply saying that they all refer to something which appears or disappears after the denoted action. The referents are understood as something which comes into or goes out of sight (whether physically or not). One might wonder how it can be possible to classify appearance and disappearance of an entity into one category, because they denote completely opposite events. Granting their difference, we should notice here that they can be considered to form one natural group in that they both refer, in a way or the other, to a change of an entity in its existence. The resultative small clause in the construction represents an event where the referent of the fake object changes its existence. Then, we have another constraint on the construction, which can now be stated as follows:

- (15) A grammatical DRC with an AFFECT verb must have a fake object whose referent undergoes a change in its existence as a result of the denoted action.

Let us now turn to the ungrammatical DRCs based on AFFECT verbs, exemplified in (5), repeated below.

- (5) a. *The bombing **destroyed** [the residents homeless].
 b. *The bears **frightened** [the campground empty].
 c. *The magician **hypnotized** [the auditorium quiet].

The verbs in (5) are AFFECT verbs and the resultative constructions based on these verbs are judged to be ungrammatical. We find that in each sentence the original internal argument, the PATIENT object, of the verb is not represented in the resultative phrase and the fake object does not refer to something which comes into existence or stops existing.

Let us start with (5a). The intended meaning of the sentence is that the bombing destroyed, assumingly, a certain district or building, and as a result the residents became homeless. The target of the bombing (and the intended PATIENT of the verb *destroy*) is, then, that district and is required to be realized within the resultative phrase. The

resultative phrase, however, does not contain the PATIENT object, and (*being*) *homeless* cannot be the target that the act of destruction is aimed at. Thus, (5a) violates the constraint in (12). Moreover, the residents do not come into existence or vanish as a result of the destruction, violating the constraint in (15) as well. Likewise, in (5b), the target of the act of frightening is people in the campground, not (*being*) *empty*, causing a violation of (12). Moreover, while the campers do leave the campground, the campground itself does not vanish at all, violating (15). In (5c), the state of being *quiet* is the result state of the event, not a target of the magician’s hypnotization. The auditorium does not (dis)appear even after the magician hypnotizes the audience. Thus, all the resultative predicates (or parts of them) do not contain the PATIENT objects in the events denoted by the verbs, and the fake objects in these examples do not refer to something which appears or disappears. Then, in the examples in (5), neither of the two constraints is not satisfied and thus the sentences are all ruled out. Therefore, we conclude that the proper description of the DRC in question consists of the following two constraints: the internal argument of the verb must be syntactically realized in the resultative predicate, and the referent of the fake object must refer to something which undergoes a change in its existence.

We predict, then, that DRCs with the verbs in (5) can be grammatical if they are well-formed with respect to the constraints in (12) and (15). This prediction is correctly born out in the following examples. They are also based on the AFFECT verbs in (5) ((16)) and on the verb *charm* ((17)) but are much more acceptable (even though they might have a somewhat poetic sound) :

- (16) a. The bear **frightened** [a scream out of *the mute*].
 “The bear frightened the mute and he could scream.”
 Cf. The bear **frightened** [the hell out of *me*]!
- b. The psychiatrist **hypnotized** [the old memories from/out of *the amnesiac*].
 “The psychiatrist hypnotized the amnesiac, and she could recall her old memories.”
- (17) The piper **charmed** [a dance from *the snake*].
 “The musician charmed the snake and the snake started to dance.”

In (16a), the internal argument of the verb *frighten* is realized as *the mute* in the resultative phrase, as is required, and the referent of the fake object *a scream* is what comes out of the mute’s mouth as a result of the denoted action. The sentence is perfectly acceptable. The verb *hypnotize* in (16b) has its semantic object *the amnesiac* in the resultative phrase, and the referent of the syntactic object *the old memories* is recalled and comes to mind.

The verb *charm* is also an AFFECT verb which, in its basic transitive use, takes a PATIENT object. In (17), the verb appears in a DRC, where the internal arguments is syntactically realized in the resultative phrase, and what is referred to by the fake object *a dance* is an instance of the performance by the snake, which is observable only after snake-charming gets started. Then, we can say that, even with the problematic verbs *frighten* and *hypnotize* (and *charm*), the DRCs become acceptable if the constraints in (12) and (15) are satisfied.^{8,9} We can conclude that the unacceptability judgment of the sentences in (5) should be attributed to the violation of the two constraints on the construction, rather than to the nature of the verbs involved. This strongly supports our argument that the DRC with an AFFECT verb is under the two constraints on its resultative small clause.

While the acceptable examples so far satisfy the constraints in (12) and (15), there still remain other grammatical DRCs with AFFECT verbs. In those DRCs, the constraints we have proposed do not seem to be imposed upon them. In other words, any resulting states can be represented by the resultative small clause following the verb: the internal argument of the verb need not be realized in the resultative phrase and the referent of the fake object does not necessarily change its existence. Let us consider the grammatical sentences in (1), repeated below, which exemplifies this type of DRCs.

- (1) a. Sudsy **cooked** [them all into a premature death] with her wild food.
- b. ‘I’m glad you didn’t stay at the Club **drinking** [yourself dottier].’
- c. Having ... **drunk** [the teapot dry] ...
- d. **Drive** [your engine clean].

They are DRCs based on AFFECT verbs. The requirements imposed on the construction, however, are not fulfilled by the original internal arguments of the verbs and the fake objects in these sentences. In (1a), the implied object of the verb *cook* appears within the adjunct phrase *with her wild food*, which is outside the resultative small clause. The fake object referent does not change its existence by appearing or disappearing. In (1b), considering the unmarked interpretation of the missing object of the verb, which is confirmed by the resultative phrase *dottier*, we can naturally say that what the speaker had been afraid of being drunk was alcohol. But it is not at all syntactically realized within the sentence. Moreover drinking alcohol cannot be any trigger to cause appearance or disappearance of the referent of the fake object *you(rself)*. In (1c), the fake object *the teapot* compels us not to interpret the nullified object as alcohol as in (1b) but as the liquid in the teapot, probably tea, which is not in the resultative predicate. And, as for the teapot, it does not change its existence even after the act of drinking the tea. The implied

object of the verb *drive* in (1d) must be ‘your car,’ but, again, it is not overtly realized within the resultative phrase. Moreover, the referent of *your engine* must pre-exist before driving and do not vanish afterward. Thus, these sentences all do not satisfy the constraints but are quite acceptable. They look exceptional in that they can escape the constraints. We must ask what is the difference between (6, 13, 14) on the one hand and (1) on the other. However, we cannot fully discuss the issue in this paper, and we will leave it to further investigation.¹⁰

We have seen in this section that the DRC with an AFFECT verb is under two semantic constraints on the internal structure of its resultative small clause, and the acceptability of the constructions do not depend on the nature of the verbs involved.

4. Concluding Remarks

In this paper, we have argued that acceptability of DRCs which are based on AFFECT verbs do not depend on the verbs involved. They have two semantic constraints on the internal structure of their resultative small clauses. Those constraints are (i) the original internal argument of the verb must be realized within the resultative phrase, and (ii) the fake object must refer to an entity which changes its existence by appearing or disappearing as a result of the action denoted by the verb. Further investigation of the nature and implications of the two constraints will reveal some problems which could not be discussed in this paper.

* I am indebted to John N. Wendel and Bruce Brinkman, who patiently acted as informants.

NOTES

1 They claim as follows:

- (i) Resultative phrases predicated of either fake reflexives or nonsubcategorized NPs (whether possessive or not) are also found with a certain class of transitive verbs. The class includes those verbs that, like *eat*, allow intransitive uses with an unspecified object interpretation (*Sylvia ate*), as well as transitive uses (*Sylvia ate the grapes*). (L&RH (1995: 37))

2 Those verbs may, of course, keep their original internal argument as their overt objects and construct another type of resultative constructions, namely TRCs. For example, in the following sentence, cited from L&RH (1995: 37), the postverbal NP *all your flesh* is not a fake object but is lexically selected by the verb *cook*.

- (i) “It is the heat,” complained another old auntie. “Cooking all your flesh dry and brittle.” (A. Tan, *The Joy Luck Club*, 71)

3 L&RH state as follows:

- (i) [A]s pointed out by Carrier and Randall (1992, in press), transitive verbs that do not independently allow the omission of an unspecified object cannot be found in resultative constructions with postverbal NPs that are not selected by the verb. (L&RH (1995: 38))
- 4 ACT verbs also allow unspecified object in their intransitive uses (cf. Nogawa (1994)). However, they are intransitive in nature, and thus they cannot appear in DRCs. The resultative construction in which the ACT verbs may appear is the URC.
- 5 Levin's claim below confirms our claim that the verbs in question fall into the AFFECT verb class, which takes an affected (PATIENT) object.
- (i) This alternation is restricted to verbs with affected objects. It is found with a more limited set of verbs in English than in Italian: primarily the verbs listed here [*advise*-verbs and *amuse*-type psych-verbs]. It is possible that not all the psych-verbs listed above may participate in this alternation. (Levin (1993: 38))
- 6 Thus, the sentence *Frances kicked a hole in the fence*, in its unmarked reading, does not have the following interpretation:
- (i) Frances kicked a ball at the fence and as a result a hole was made in the fence.
- 7 This does not necessarily mean that the internal argument of a DRC verb is preserved in the LCS of the verb, which is the idea rejected in Nogawa (2005). Since elimination of the internal argument of a DRC verb in its LCS and its syntactic realization in the resultative small clause are seemingly inconsistent, we need to explain its implication. However we have to leave open the investigation of the semantic and syntactic nature of the 'internal argument' in the resultative phrase.
- 8 Even though the examples in (16) and (17) are judged as grammatical, the following sentences are not.
- (i) a. */?*The bear frightened [paralysis out of *the campers*].
 "The bear frightened the campers and the fear froze their blood."
 b. *The psychiatrist hypnotized [calmness on *the (deranged) patient*].
 "The psychiatrist hypnotized the deranged patient, and she calmed down."
- The difference between them lies in the nature of the fake objects: those in (16) and (17) refer to something which disappears whereas those in (i) above (*paralysis* and *calmness*) are what come into existence. Although the difference in acceptability may be attributed to this semantic difference, we cannot fully discuss this issue in this paper.
- 9 The other problematic verb *destroy* rejects any attempts to improve acceptability of its DRCs (cf. Kageyama (1996)). Consider the following examples:
- (i) a. *The bombing destroyed [the residents out of *the town*].
 "The bombing destroyed the town and as a result, the residents went out of the town."
 b. *The bombing completely destroyed [tons of rubble from/out of *the town*].
 "The bombing destroyed the town and there remained only tons of rubble."
- Ungrammaticality of the sentences in (i) might be related to the fact that the verb does not allow the (transitive) Material/Product Alternation exemplified in (ii) (cf. Levin (1993)).
- (ii) a. The Romans destroyed the town.
 b. *The Romans destroyed the city into ruins.

- c. *The Romans destroyed ruins from the city.

(Levin (1993: 239))

In (ii c), the product *ruins*, which comes into existence as a result of the destruction, occupies object position, but it is not the original internal argument (PATIENT) of the verb *destroy*. The semantic object of the verb is syntactically realized within the PP, representing the material. Thus, the sentence has a construction similar to the one in (5a). Since we cannot discuss this issue in this paper, we have to leave it to further investigation.

10 As for the first constraint in (12), we might say that the internal arguments are still interpretable in one way or another, and thus need not be syntactically represented within the resultative phrases. For example, with an adverbial phrase (as in (1a)), through unmarked object interpretation of a detransitivized verb ((1b) and (1d)), or by drawing a natural inference from the fake object ((1c) and (1d)). However, we need to answer the question of why the sentences in (5) (and others), which do not satisfy the constraints either, cannot be grammatical as ‘unconstrained’ DRCs. The internal arguments of the verbs, ‘the district,’ ‘the campers,’ and ‘the audience,’ can easily be implied by the sentences.

Moreover, we must answer how these sentences overcome the second constraint in (15). The answers to these questions might be revealed by analyzing the nature of the two constraints and the aspects of the verbs involved.

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