# On the Categorial Constraint on the Resultative Phrases in Detransitivized Resultative Constructions

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#### Abstract

Detransitivized resultative constructions (DRCs) allow PPs but not APs for their resultative phrases. This paper discusses this categorial restriction in line with Rappaport Hovav and Levin (1996) and Nogawa (2008). It will be argued that DRC resultative phrases must contain a proper NP position for syntactic realization of the internal arguments of the verbs. The NP position will be defined in terms of obliogatoriness and syntactic configuration.

#### 1. Introduction

Resultative constructions in English allow APs and PPs for their resultative phrases. Consider the following examples, where the resultative phrases are indicated in bold.<sup>1)</sup>

- (1) AP resultative phrase
  - a. So El Topo climbs from the cave and goes down the mountain to a nearby town, where he buys dynamite and returns to blast the cave **open**.

Donald Siegel, Whispers, 59

b. When they reached the alcove of a building, Indy had knocked the Nazi **cold** and stripped off his uniform.

Rob MacGregor, Indiana Jones and the Last Crusade, 129

c. [A]nd he slipped on the ice and knocked himself **unconscious** on the frozen footpath.

John Irving, The World According to Garp, 95

- (2) PP resultative phrase<sup>2)</sup>
  - a. But as the monster leaped, a red laserlike beam stopped it in midair and blew it to bits.

William Harrington, Columbo: The Helter Skelter Murders, 140

b. She tossed her head to one side to flip her long dark hair off her face.

William Harrington, Columbo: The Helter Skelter Murders, 58

c. My husband says that if you write to me again, he'll beat your brains to a pulp.

John Irving, The World According to Garp, 237

d. Realizing there was no one else around, he jerked back his arm, balled his fingers **into a fist**, and smashed the officer in the face.

Rob MacGregor, Indiana Jones and the Last Crusade, 133

The categorial range of the resultative phrases varies, however, depending on the types of resultative constructions. The purpose of this paper is to provide a possible account of the restricted range on the resultative phrases of the type which we will refer to in this paper as the detransitivized resultative construction (the DRC).

#### 2. Resultative Phrases in DRCs

English has so-called fake object resultative constructions, where the postverbal NPs are not 'normal' objects (semantically selected by the verbs) but are fake objects. Consider the following examples.

- (3) a. Dora shouted herself hoarse.
  - b. You may sleep the unborn baby quiet again ...
  - c. Sylvester cried his eyes out.
- (4) a. \*Dora shouted herself.
  - b. \*You may sleep the unborn baby.
  - c. \*Sylvester cried his eyes.

The verbs in (3) are unergative verbs. Since unergatives are inherently intransitive, they cannot take the postverbal NPs in (3) in their original use ((4)). Hence, the sentences are fake object resultative constructions, taking a fake object in their postverbal positions.

As can be seen from the bold-faced constituents in (3), fake object resultative constructions also seem to allow APs and PPs for their resultative phrases.<sup>3)</sup> When we take a closer look at the data, however, it is revealed that the categorial range of the resultative phrases does vary depending on the types of fake object resultative constructions.

Among fake object resultative constructions, we find one type of constructions which involve a transitive verb but do not realize its internal argument as a syntactic object. Consider the following examples.

- (5) 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: 278))

Although the verbs in (5) are transitive, the postverbal NPs are not semantically selected by the verbs, as is shown by the sentences in (6). Rather, we can see that it is the NPs within the

resultative phrases that correspond to their internal arguments.

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

Thus, even with transitive verbs, the sentences in (5) are fake object resultative constructions. We call this type of fake object resultative constructions the detransitivized resultative construction (abbreviated as the DRC). We add some more examples of the DRC below.

(7) 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.

John 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. William Harrington, Columbo: The Game Show Killer, 123
- 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**?

William Harrington, Columbo: The Helter Skelter Murders, 50

d. Brinskey shook another cigarette **from a pack of Marlboros**, looked at it a moment, apparently thought better of it, and returned it to the pack.

William Harrington, Columbo: The Helter Skelter Murders, 134

e. Termites ate holes in the wood.

As the examples in (5) and (7) show, DRCs allow PPs for their resultative phrases. However, we do not find DRCs with an AP resultative phrase. AP resultative phrases are not attested in DRCs. Moreover, we notice that the following constructed DRCs with an AP resultative phrase are all unacceptable.<sup>4)</sup>

- (8) a. \*The party secretary will correct the names of the married absent from the list. (meaning the party secretary will correct the list, and as a result, the names of the married will be absent form the list.)
  - b. \*The accountant intentionally revised the information absent from the file.(meaning the accountant intentionally revised the file, and as a result, the information became absent form the file.)
  - c. \*The volunteer workers cleaned empty cans and garbage gone from the beach.
    (meaning the volunteer workers cleaned the beach, and as a result, empty cans and garbage are gone from the beach.)
  - d. \*The safecrackers wiped all their fingerprints lost from the safe.
     (meaning the safecrackers wiped the safe, and as a result, all their fingerprints were lost from the safe.)

Note that the postverbal NPs are not the normal objects (the internal arguments) of the transitive verbs. In (8a), for example, what the secretary will correct is the list itself, not the names of the married people.

- (9) a. The party secretary will correct {the list/\*the names of the married}. (on the interpretation intended in (8a))
  - b. The accountant intentionally revised {the file/\*the information}. (on the interpretation intended in (8b))
  - c. The volunteer workers cleaned {the beach/\*empty cans and garbage}. (on the interpretation intended in (8c))
  - d. The safecrackers wiped {the safe/\*all their fingerprints}.(on the interpretation intended in (8d))

This means that the constructions are not transitive resultative constructions as those in (1) but DRCs with an AP resultative phrase. In the next section, we will provide an account of the fact that the categorial range of DRC resultative phrases is restricted to PPs.

#### 3. Analysis

In this section we will provide an account of the range of resultative phrases of DRCs. Specifically, we argue that the analysis in line with Rappaport Hovav and Levin (1996) and Nogawa (2008) accounts for this fact. We will firstly review the theories presented in Rappaport Hovav and Levin (1996) and Nogawa (2008), and then give an explanation of the categorial restriction on DRC resultative phrases.

## 3.1. Rappaport Hovav and Levin (1996) and Nogawa (2008)

Rappaport Hovav and Levin (1996) discuss two types of resultative constructions exemplified below.

- (10) a. The dog barked the neighbor awake.
  - b. The phone rang me out of my slumber.
  - c. Sleep your wrinkles away!
  - d. They drank the teapot dry.
  - e. The cattle ate the field bare.
- (11) a. Tracy washed the soap out of shirt.
  - b. Pat rubbed the oil into the wood.
  - c. Sandy wiped the crumbs off the table.
  - d. The weaver rinsed the dye out of the material.
  - e. Terry swept the leaves off the sidewalk.

They argue the sentences in (10) are accomplishments which are derived through complex predicate formation in the syntactic component, and thus are referred to as syntactically-derived accomplishments. On the other hand, those in (11) are lexically-derived accomplishments, which are derived by template augmentation of event structures. As can be seen, the latter type of accomplishments are our DRCs, and the former are a type of fake object resultative constructions, which we called in Nogawa (2005, 2006a,b, 2008) unergative resultative constructions (abbreviated as UERCs in this paper).<sup>5)</sup>

Rappaport Hovav and Levin propose three syntactic and semantic constraints on proper formation of DRCs.<sup>6)</sup> Firstly DRCs must meet the well-formedness conditions, which are formalized by Rappaport Hovav and Levin as follows.

## (12) Subevent Identification:

Each subevent in the event structure template must be identified by a predicate in the syntax.

## (13) Argument Realization:

- a. There must be at least one argument XP in the syntax per subevent in the event structure template.
- b. Each argument XP in the syntax must be associated with an identified subevent in the event structure template.

(Rappaport Hovav and Levin (1996: 5f.))

They require that in deriving DRCs, the event structure added by template augmentation in the semantic component should be syntactically licensed.<sup>7), 8)</sup>

Second, DRCs (in contrast to UERCs) are subject to a semantic restriction, which is stated by Rappaport Hovav and Levin as follows.

(14) [T]he added material must be compatible with the constant that the verb lexicalizes. Specifically, it must be construable as part of a prototypical event of the type named by the verb. (Rappaport Hovav and Levin (1996: 8))

If the result state in the event structure, which is added by template augmentation, is a typically intended result of an activity, Rappaport Hovav and Levin assume that it can be construed as part of a prototypical event which is derived based on the activity. For example, the verb *rub* (a verb of the surface contact) denotes an activity where "application of stuff to a surface" can easily be understood as a typical intention of the activity (as well as the motion of something over a surface). Thus, this construability of the result state semantically licenses template augmentation, deriving the following event structure.

#### (15) [[ x ACT y ] CAUSE [ BECOME [ z <*STATE*> ]]]

The last constraint is stated by Rappaport Hovav and Levin as follows.

(16) [T]he augmented event structure must be that of a possible lexical item.

(Rappaport Hovav and Levin (1996: 8))

In addition to this, Rappaport Hovav and Levin approve the proposal presented in Kiparsky (1997: 476) that "Simple predicates refer to single events (and consequently, simple causatives refer to direct causation)." This means that the constraint requires that if augmented event structures are causative structure (accomplishments), it should be construable as a single unitary core event (i.e., a direct causation).

This constraint explains the fact that the added subevent, which is syntactically realized as the resultative phrase, must contain the internal argument of the verb. That is because just by putting the internal argument within the resultative phrase, the resulting state can be seen as directly caused by the first subevent denoted by the verb. In other words, it is the only possible construction which denotes the event where the resulting state can be properly regarded as its part. Otherwise, the derived accomplishment cannot be construed as a single unitary core event. This is the case with UERCs (syntactically-derived accomplishment). We can see that the causal relation found in each of the UERCs in (10), repeated below, is not a direct one, but an indirect one.

- (17) a. The dog barked the neighbor awake.
  - b. The phone rang me out of my slumber.
  - c. Sleep your wrinkles away!
  - d. They drank the teapot dry.
  - e. The cattle ate the field bare.

In (17a), for example, the dog's barking is just a sound-emission and has no direct effect intended on the neighbor.

With relation to this constraint, Nogawa (2008) also discusses the obligatory realization of the internal argument of the verb within the resultative phrase. In the discussion, I proposed a semantic account, which is in line with Rappaport Hovav and Levin's, within the framework of Levin and Rappaport's (1988) lexical subordination.

I assumed in Nogawa (2008) that DRC verbs are assigned the following complex lexical conceptual structure (LCS).

## (18) LCS: [ x CAUSE [z GO (TO/FROM) y] BY [x DO y]]

The original LCS of the DRC verb is subordinated and is represented as [x DO y] above. Since the DRC verb is inherently transitive, it takes an internal argument (represented as a variable (y)). The other component (i.e., the matrix part) of the LCS is introduced by lexical subordination, and represents the resulting event. This part is syntactically realized as the resultative small clause. As a whole, the LCS in (18) can be read as 'x causes z to move to/from

y by means of making an act on y.' Note that the two components share the same variable y (which is the internal argument of the verb), besides the subject variable x.

In the complex LCS above, derived by lexical subordination, the result component (resulting event) and the manner component (causing event) are linked together. Since resultative constructions express a causal relation, the two components must form a (direct) causal chain. To make this possible, the two events represented by those components must not be entirely unrelated to each other, and there must be some causal link to make these two parts integrated into one. I proposed that that link is realized as the internal argument of the verb contained in the resultative phrase, which can play the role of a connector by functioning as a variable in each of the subevents.

To summarize, both Rappaport Hovav and Levin's and my analyses provide possible accounts of the properties unique to the DRC, especially the syntactic realization of the "normal" object within the resultative phrase. <sup>10)</sup> In both analyses, the internal arguments of the verbs are analyzed as playing the role of a connector between the two subevents of the constructions. This means, in turn, that in order to be properly licensed as proper DRCs, resultative constructions must have a syntactic position within their resultative phrases, in which their internal arguments can be realized. In other words, the resultative phrases of the DRCs must have an NP position which serves for the internal argument of the verb. With this in mind, let us see why DRCs have categorial restriction on their resultative phrases.

## 3.2. An Account of the Categorial Restriction on DRC Resultative Phrases

As we have seen in section 2, DRC resultative phrases can be PPs but not APs. Let us start with DRCs with a PP resultative phrase. The relevant examples in (5) and (7) are repeated below.

- (19) 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).
  - d. 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.
  - e. She grabbed a pack of Marlboros from a table, snapped a lighter, and drew flame **into** the cigarette.
  - f. 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**?
  - g. Brinskey shook another cigarette from a pack of Marlboros, looked at it a moment,

apparently thought better of it, and returned it to the pack.

#### h. Termites ate holes in the wood.

By syntactic realization of normal direct object in the proper resultative phrase, DRCs can be licensed to be properly construed as having a core unitary event structure. The activity denoted by the verb and the resulting state represented by the resultative phrase cannot be split into two distinct, mutually independent events but must be interpreted as one integrated event. This can be done by realizing the internal argument of a DRC verb in the resultative phrase. And thus, the resultative phrase must contain an NP position which can be served for the argument. Since a PP resultative phrase consists of a preposition and its complement NP, it provides the NP position.

How about AP resultative phrases? Although they may also contain an NP position, the following constructed DRCs with an AP resultative phrase, repeated from (8), are all unacceptable.

- (20) a. \*The party secretary will correct the names of the married absent from the list. (meaning the party secretary will correct the list, and as a result the names of the married will be absent form the list.)
  - b. \*The accountant intentionally revised the information absent from the file.(meaning the accountant intentionally revised the file, and as a result the information became absent form the file.)
  - c. \*The volunteer workers cleaned empty cans and garbage **gone from** *the beach*.

    (meaning the volunteer workers cleaned the beach, and as a result empty cans and garbage are gone from the beach.)
  - d. \*The safecrackers wiped all their fingerprints lost from the safe.
     (meaning the safecrackers wiped the safe, and as a result all their fingerprints were lost from the safe.)

Let us take the sentence in (20a) as an example. The DRC satisfies all the constraints proposed in Rappaport Hovav and Levin (1996). Concentrating our attention to the added subevent, we can see that it is syntactically identified ((12)) and the postverbal NP the names of the married can be licensed as a proper argument realization ((13)); the added subevent (deletion of some information from a list) is compatible with the verb, and can easily be construed as a typical intention of the activity of correcting the list ((14)); finally, the whole sentence is constructed in such a way that the augmented subevent can be construable as a single unitary core event, (i.e., a direct causation). Also, the sentence satisfies the two constraints proposed in Nogawa (2006) (cf. note 9). The intended patient of the verb the list is contained within the resultative phrase, and the resultative small clause, consisting of the postverbal NP and the resultative phrase, represents a change in existence of the object referent (in this case, disappearance).

Despite the fact that the sentence is constructed so that all the constraints can be satisfied, it is totally unacceptable. Unacceptability of this and the other sentences in (20) indicates that NPs within APs are not qualified as proper servers for the internal arguments of DRC verbs.

Now, how can we define 'proper' NP servers for the internal arguments of DRC verbs? What specifically are the differences between the NPs within PPs and those in APs? We can easily conjecture that there are two distinctions between them. One is concerned with obligatoriness of NPs. PPs consist of a preposition and its complement NP. The NP is an obligatory constituent. On the other hand, APs consist of an adjective and its sister constituent PP, though the PP is not necessarily an obligatory constituent to the AP. The NP position within AP is optional.

The other distinction between the NPs within PPs and those within APs is concerned with their configuration: PPs and APs differ in their relation to the NPs within them. PPs immediately dominate their complement NPs, whereas APs do not immediately dominate the NPs within them. Even if APs have a PP complement, they just indirectly dominate the NP within the PP. We assume that the optionality of the NP position and the lack of immediate domination of the NP position render APs as defective resultative phrases for DRCs. Thus, in contrast with PPs, AP resultative phrases do not serve a well-qualified NP position for the internal arguments of DRC verbs. Assuming that obligatoriness and direct domination of NPs define the proper NP server, we can conclude that APs can be regarded as defective NP holders and account for the unacceptability of DRCs with an AP resultative phrase.

Now, given that the proper NP position within a resultative phrase is a premise for grammatical DRCs, we can consider an implication for another type of DRCs. There are DRCs which appear to involve an adverbial particle as their resultative phrases. Consider the following examples.

(21) a. And also I always have my Swiss Army knife in my pocket and it has a saw blade which could cut a man's fingers **off**.

Mark Haddon, The Curious Incident of the Dog in the Night-Time, 34

b. [T]he guy got mud on his shoe. He wiped it **off** on the grass.

William Harrington, Columbo: The Helter Skelter Murders, 50

- c. She shook out a cigarette and dropped the pack into the big pocket on her gray uniform
   William Harrington, Columbo: The Helter Skelter Murders, 261
- d. I tore **off** all my ribbons to fix hair, lace shoes, wrap a present, and tie a ring.

Robert Munsch, Ribbon Rescue, 25

These sentences may be analyzed as involving a phrasal verb. We can observe, however, a clear semantic parallelism between the sentences of this type and DRCs with a PP resultative phrase. For example, compare the sentences between (21b) and (19f) and between (21c) and (19g) ((19f)

and (19g) are repeated below).

- (19) f. 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**?
  - g. Brinskey shook another cigarette **from a pack of Marlboros**, looked at it a moment, apparently thought better of it, and returned it to the pack.

Considering this fact, we assume in this paper that DRCs with an adverbial particle are resultative constructions involving a PP resultative phrase with its NP complement deleted phonologically (cf. Gorlach (2004)).<sup>11)</sup> In the example in (21a), for example, the adverbial particle *off* is assumed to have its object NP syntactically, say *the palm*, though omitted phonologically.

## 4. Concluding Remarks

In this paper, we have seen that the categorial range of resultative phrases of DRCs can be captured in line with the analyses of Rappaport Hovav and Levin (1996) and Nogawa (2008). It has been cleared that APs, in contrast with PPs, are defective as a resultative phrase in DRCs. DRC resultative phrases must provide a proper NP position for the internal arguments of DRC verbs, and the internal arguments must be properly contained within the resultative phrases. The notion of proper containment can be defined in terms of obligatoriness and syntactic configuration (i.e., direct domination). Since the NP positions are provided optionally within APs, and are too 'deep' to be dominated directly, DRCs with an AP resultative phrase become ungrammatical.

There remains a question on the categorization of the DRC resultative phrases: Why NP resultative phrases are not attested in DRCs? (We can naturally generalize this question to ask why NP resultative phrases are rather rare in resultative constructions at all.) NP resultative phrases could be proper servers for the internal arguments of DRC verbs. We leave this question for further research.

#### Notes

- \* I am grateful to Takashi Yoshida and an anonymous reviewer for useful comments and suggestions on an earlier draft of this paper. Also, I would like to thank Sandra Tanahashi for kindly acting as an informant. All remaining inadequacies are my own.
- 1) Notice that the examples in (1)-(2) are all transitive resultative constructions. Transitive resultative constructions may have NPs as their resultative phrase, though NP resultative phrases are rather rare.
  - (i) NP resultative phrase
    - a. But he had not told Fleming to colour them those colours.

James Joyce, A Portrait of the Artist as a Young Man, 14

b. [H]is blood had dyed every square inch of it an ugly reddish brown.

William Harrington, Columbo: The Helter Skelter Murders, 42

c. He opened the door a crack.

Rob MacGregor, Indiana Jones and the Last Crusade, 95

- 2) There are also resultative constructions which appear to involve an adverbial particle as their resultative phrase. See the discussion in section 3.2.
- 3) NP resultative phrases are not attested in the fake object resultative construction (cf. note 1). We tentatively assume that the lack of NP resultative phrase in the construction is accidental, and do not discuss this issue in this paper.
- 4) The relevant adjectives in (8) all takes a PP headed by the preposition *from*. This is not a mere coincidence but is due to the fact that the DRC has to satisfy some syntactic and semantic constraints, which will be discussed in 3.1.
- 5) The sentences we saw in (3) are also UERCs (syntactically-derived accomplishments). Resultative phrases of UERCs will not be discussed in this paper.
- 6) As we will see, the constraints provide possible explanations for some characteristics of lexicallyderived resultative constructions, i.e., DRCs.
- 7) Rappaport Hovav and Levin (1996) note that the conditions in (12) and (13) constrain the relation between a semantic aspect (i.e., event structure) and syntax not only of lexically-derived resultative accomplishments (DRCs) but also of syntactically-derived ones (UERCs).
- 8) The following are the lexical event structure templates assumed by Rappaport Hovav and Levin.

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(i) a. [ x ACT_MANNER> (y) ] (activity)

b. [ x <STATE> ] (state)

c. [ BECOME [ x <STATE> ]] (achievement)

d. [[ x ACT_MANNER> ] CAUSE [ BECOME [ y <STATE> ]]] (accomplishment)

e. [ x CAUSE [ BECOME [ y <STATE> ]]] (accomplishment)
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With the templates in (i), the conditions in (12) and (13) explain the fact that resultative constructions (accomplishments with the template in (id)) can be derived from activities (e.g., verbs like *wipe* and *rub*) but not from accomplishments (e.g., verbs like *break* and *dry*).

- 9) The same constraint on DRCs is proposed in Nogawa (2006), which is formalized as follows.
  - (i) A grammatical DRC with an AFFECT verb must have the original internal argument of the verb syntactically represented in the resultative predicate.(Nogawa (2006: 32))

Another semantic restriction is also proposed in Nogawa (2006), which is formalized as follows.

- (ii) 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. (Nogawa (2006: 34))
- 10) Their analysis also explains the fact that the postverbal NP of the lexically-derived resultative construction can be the subject of the middle construction. Furthermore, it accounts for the universal nature of lexically-derived resultative constructions (contrary to syntactically-derived ones). See

Rappaport Hovav and Levin (1996).

11) This statement might seem inconsistent with our claim above that the NP within a PP is an obligatory constituent. We assume that syntactic realization of the internal argument of a DRC verb and its phonological realization are distinct. Grammatical DRCs are licensed by a syntactic NP within PP, irrespective of its phonological covertness. I thank Takashi Yoshida for bringing this point to my notice.

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