

# On the Predicative Cognate Object Construction and the Adjunct Resultative Construction: A Construction Grammar Approach to Language Universals\*

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## 1. Introduction

This paper is concerned with two distinct constructions as follows:

- (1) a. Sam smiled a beautiful smile.
- b. The river froze solid.

Sentence (1a) is an instance of cognate object constructions (henceforth, COC), whereas sentence (1b) is one of so-called resultative constructions (RC).

The purpose of this paper is twofold. One is to argue that, in Present-day English, COCs form a complex category consisting of two types, the predicative COC and the referential COC. The other is to show that the predicative COC is remarkably similar to one type of RCs such as (1b), the adjunct RC, and to propose a hypothesis: If a language has the use of the adjunct RC, then it has the use of the predicative COC. I will demonstrate that it is useful in typological studies of constructions to mention human cognitive abilities that are involved in language.

This paper is organized as follows. Section 2 begins by briefly reviewing previous analyses of COCs and points out some serious problems in these analyses. Section 3 adopts a construction grammar approach and gives an account for various properties of COCs and for the problems in the previous analyses. The result of this section shows that COCs form a complex category consisting of the predicative COC and the referential COC. Section 4, based on the proposal of Iwata (2006), argues that RCs also form a complex category consisting of two types (the adjunct RC and the argument RC), and that there are striking parallels between the predicative COC and the adjunct RC. Section 5 further illustrates that languages, which belong to different language families, permit both the predicative COC and the adjunct RC, and formulates a working hypothesis. Section 6 is a brief conclusion.

## 2. Previous Analyses

In this section, let us look at some of previous analyses and see how they deal with COCs.

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### 2.1. *Adjunct COs and Argument COs*

With respect to COCs, a central issue is whether the cognate objects (henceforth, CO) are adjuncts or arguments. The adjunct analysis of COs is advocated by Jones (1988) and Moltmann (1989). On the other hand, Massam (1990) and Macfarland (1995) advocate the argument analysis.

Let us begin by reviewing the adjunct analysis. The reasons why COs are treated as adjuncts are summarized as follows. First, COs cannot undergo passivization:

- (2) a. \* A weary sigh was sighed by Bill.
- b. \* A gruesome death was died by John.

(Jones (1988:91))

In (2a, b), the COs *a weary sigh* and *a gruesome death* cannot be passivized.

Secondly, COs are optional:

- (3) a. John died a painful death.
- b. John died.

(Moltmann (1989:300-301))

The CO *a painful death* is omissible as exemplified in (3b).

Thirdly, COs exhibit the indefiniteness effect:

- (4) \* John screamed *this* scream/*every* scream we heard today.

(Moltmann (1989:301))

Example (4) shows that COs cannot occur with strong determiners. In view of the fact that predicate nominals also exhibit the indefiniteness effect (cf. Higginbotham (1987)), the adjunct analysis argues that the ungrammaticality of sentence (4) is ascribed to the predicative status, namely the adjunct status of the CO.

Fourthly, COs cannot be topicalized, like certain adverbial event predicates:

- (5) a. \* Beautifully, Mary sang the song.
- b. \* to study Linguistics, John persuaded Mary.
- (6) a. \* A painful death, John died *t*.
- b. \* A shrill scream, John screamed *t*.

(Moltmann (1989:301))

Note that the COs in (6) behave the same as the adverbial event predicates in (5).

The above four pieces of evidence indicate that COs are not arguments, but rather are adjuncts. On the other hand, the argument analysis gives examples where COs behave as arguments. As pointed out by Macfarland (1995), there are passive sentences containing COs that are acceptable:

- (7) Life here had been lived on a scale and in a style she knew nothing about.

(Macfarland (1995:112))

In sentence (7), the CO *life* is the subject of the passive, which is acceptable.

In addition, COs occurring with strong determiners are not always unacceptable:

- (8) a. Tom sneezed *every* sneeze that we heard that day.  
 b. Zack screamed *many* screams before we quieted him down.

(Massam (1990:169))

Contrary to the view that COs exhibit the indefiniteness effect, the COs in (8) can occur with strong determiners.

Furthermore, it is not impossible to topicalize COs:

- (9) Such a crazy whooping laugh, Norma would never laugh; so there must have been someone else in the room. (Massam (1990:181))

Massam (1990) mentions that it is possible to topicalize a CO if it contains new information. In fact, sentence (9) is quite acceptable.

Finally, COs pattern with arguments in that they allow long *wh*-movement:<sup>1</sup>

- (10) a. ? What book<sub>i</sub> did Chris wonder [whether Lee read *t<sub>i</sub>*]?  
 (Macfarland (1995:105))  
 b. ? [What kind of smile]<sub>i</sub> did Chris wonder [whether Lee smiled *t<sub>i</sub>*]?  
 (Macfarland (1995:106))

When a constituent is an argument, as in (10a), it can be moved to initial position for a question. As shown in (10b), COs can also undergo such movement.

As is clear from the preceding data, COs exhibit different syntactic properties. Because of the contrasting behaviors of COs, there is no consensus of opinion as regards whether COs are adjuncts or arguments. Given the examples in (2)-(10), it is wrong to treat COs uniformly as either adjuncts of the verb or arguments. Accordingly, Pereltsvaig (1999) proposes to distinguish between two types of COs: adjunct COs and argument COs. It seems most prudent to accept her proposal.

## 2.2. Takami and Kuno (2002)

In order to capture the syntactic properties of COCs, Takami and Kuno (2002) argue that the verbs occurring with COs should be classified into intransitive verbs or transitive verbs. By their definition, the COC is the construction in which an intransitive verb takes a CO. The construction in which a transitive verb takes a CO is not dealt with as the COC. In sum, the property of the main verb determines whether the sentence belongs to the COC. They introduce three criteria for this classification: passivization, *it*-pronominalization, and modification. Consider the following examples:

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<sup>1</sup> Examples (10a, b) are marked “?” since each sentence incurs a subadjacency effect (cf. Rizzi (1990)). Macfarland, however, supposes them to be not ungrammatical.

- (11) a. \* A silly smile was smiled by Sam.  
 b. A merry dance was danced by Sam. (Jones (1988:91))
- (12) a. Mona smiled a tantalizing smile. \*Rose smiled *it*, too. (Horita (1996:243))  
 b. Mary danced an exotic dance. She danced *it* to show us her experiences in Asian countries. (Takami and Kuno (2002:149))
- (13) a. \* She smiled a smile. (Horita (1996:243))  
 b. She danced a dance. (Horita (1996:222))

As shown in examples (11)-(13), the CO of the verb *smile* cannot undergo passivization and *it*-pronominalization, and further it needs modifiers, in contrast with the CO of the verb *dance*. Thus, Takami and Kuno class the verb *smile* as an intransitive verb and the verb *dance* as a transitive verb. Likewise, from the above criteria, they propose that the verbs *laugh* and *die* are intransitive verbs, whereas the verbs *live* and *scream* are transitive verbs. They conclude that the constructions where the verbs *smile*, *laugh*, and *die* occur belong to the COC, while those where the verbs *dance*, *live*, and *scream* occur do not. In their approach, the syntactic properties of the COC are defined by the main verb.

This solution sounds convincing at the first sight. Takami and Kuno's analysis, however, does not provide a natural explanation for many phenomena. Firstly, although Takami and Kuno classify the verb *live* as a transitive verb, the passive forms of the non-COC where it occurs are not always acceptable:

- (14) a. Harry lived an uneventful life.  
 b. \* An uneventful life was lived by Harry. (Jones (1988:91))

Irrespective of the fact that the same verb appears both in (7) and (14), there is a striking difference in the acceptability of each sentence.

Secondly, there are examples in which the CO of the transitive verb *dance* cannot undergo *it*-pronominalization. Observe the following:

- (15) a. Mary danced a traditional dance, and *it* was noticeable.  
 b. ?\*Mary danced a staggering/nervous dance, and *it* was noticeable. (Horita (1996:240))

The CO in (15b) cannot undergo *it*-pronominalization, while can in (15a).

Thirdly, we can find examples where the CO of the intransitive verb *smile* can undergo passivization and *it*-pronominalization. Consider the following examples:

- (16) a. She smiled Marilyn Monroe's smile (in "Gentlemen Prefer Blondes").  
 b. Marilyn Monroe's smile was smiled by Mary.

- c. Mary smiled Marilyn Monroe's smile. Nancy smiled *it*, too.

(Kitahara (2006:54))

Contrary to the expectation of Takami and Kuno, sentences (16b, c) are acceptable.

Finally, intransitive verbs do not always need modifiers for their COs, as is illustrated in the following example:<sup>2</sup>

- (17) She smiled a smile, and up she hopped.

(Thomas Hardy, *Life's little Ironies*)

In (17), the CO of the verb *smile* does not need any modifiers, unlike that in (13a).

As is observed above, it is quite dubious that the syntactic properties of COCs are defined only by the main verbs. The question why even among the COCs of the same verb there is variation in acceptability remains unanswered.

### 3. A Construction Grammar Approach to COCs

In this section, I adopt a construction grammar approach and give a highly coherent account for various properties of COCs and for the problems in the previous analyses.

#### 3.1. *Constructions and Construction Grammar*

In construction grammar (cf. Goldberg (1995), Croft (2001)), constructions are assumed to be pairings of form and meaning. Construction grammar takes the constructions as the basic or primitive elements of syntactic representation and defines categories in terms of the constructions they occur in; that is, categories are construction-specific. For instance, whether a verb belongs either to the class [Intransitive Verb] or the class [Transitive Verb] is construction-specific. To put it differently, constructions superimpose their syntax and semantics upon lexical verbs.

We have shown that it is reasonable to distinguish between adjunct COs and argument COs. In addition, we have argued that the syntactic properties of COCs are not defined only by the verb.

With these points in mind, I propose that so-called COCs consist of two types: *the predicative COC* and *the referential COC*. The former type has the form [Subj IntrVerb Adjunct CO]. On the other hand, the other type has the form [Subj TrVerb Argument CO]. The category of the verb is definable only in relation to each construction. For instance, Takami and Kuno define the category of the verb *dance* independently of the constructions (i.e. the predicative COC and the referential COC) where it occurs. They cannot therefore explain the reason why the verb *dance* behaves both as an intransitive verb and a transitive verb. It is most important to

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<sup>2</sup> Example (17) is cited from the following website:

<http://etext.library.adelaide.edu.au/h/hardy/thomas/crusted/chapter2.html>

capture that the verb *dance* that occurs in the predicative COC is not the same as the verb *dance* that occurs in the referential COC. Each construction superimposes its syntax and semantics upon the verb *dance*. The reason why the COs of the same verb do not show the same syntactic properties is that each of the predicative COC and the referential COC specifies the properties of its components, even of the verb. What is missing in previous analyses is the contribution of constructions themselves to the acceptability of linguistic expressions.

What needs to be further emphasized is that each COC has its own meaning. Consider the following:

- (18) Mary danced a beautiful dance.
- (19) Reading A: *the activity of dancing is beautiful.*  
 Reading B: *the result of activity of dancing is beautiful.*  
 Reading C: *a certain type of dance, e.g. a tango, is famous for its beauty.*

(Matsumoto (1996:214))

According to Matsumoto (1996:214), sentence (18) can be interpreted in three ways: (i) she danced in a beautiful way (Reading A), (ii) she danced, which resulted in a beautiful dance (on the whole though she may have fallen onto her hands and knees) (Reading B), or (iii) she recreates an existing beautiful type of dance, for instance, tango (Reading C).

In what follows, let us focus on the form and meaning of each COC and elucidate to which construction these three readings are attributed.

### 3.2. The Predicative COC

Let us first take a closer look at the predicative COC. The CO of the predicative COC is an optional element in apposition with the sentence consisting of the subject and the verb. In fact, it can be marked off by means of a comma or a dash. Observe the following:

- (20) a. He smiled, a nervous smile. (Kasai (1980:12))  
 b. Kitty laughed – *a laugh musical, but malicious.* (Jespersen (1924:138))

The CO of this construction functions as a predicate appositive (cf. Curme (1947), Inui (1949)) and further specifies the manner of action denoted by the verb. In fact, the CO of the predicative COC can alternate with the corresponding adverb with virtually no difference in meaning (Nakau (1994)). Consider the following:

- (21) a. Ann slept a sound sleep. (Nakau (1994:318))  
 b. Mary smiled a beautiful smile. (Matsumoto (1996:199))  
 c. The girls danced a nervous dance. (Horita (1996:239))

In (21), each CO further specifies the manner of action denoted by the verb, and

therefore can be replaced with the corresponding adverb of manner, as in (22):

- (22) a. Ann slept soundly. (Nakau (1994:318))  
 b. Mary smiled beautifully. (Matsumoto (1996:199))  
 c. The girls danced nervously.

Note here that in the predicative COC, the lexical semantics of the verb and its CO are not completely independent of each other. Verbs of action imply the way the activities are carried out. In this sense, the CO of the predicative COC is just further specifying (or modifying) the notion that is implied by the verb meaning.

In addition, the predicative COC can be an answer to the question that asks how the action is done. Observe the following examples:

- (23) A: How did Miss Maple smile?  
 B: She smiled a deprecating smile. (Omuro (1990:75))

- (24) A: How did the girls dance?  
 B: The girls danced a nervous dance. (Horita (1996:239))

As shown in (23) and (24), the predicative COC is acceptable as an answer to the question with *how*. Again, there is no doubt that the CO of the predicative COC further specifies the manner of action denoted by the verb.

Moreover, even unmodified COs can modify the notions that are implied by the verb meanings. Observe the following examples:

- (25) a. Joseph dreamed a dream. (Hashimoto (1998:128))  
 b. He walked a walk and talked a talk well beyond his years. (Omuro (2004:145))

Jespersen (1924) mentions that unmodified COs are rare in actual speech, for the simple reason that they add nothing to the verbal notions. Sentences (25a, b) might be then judged redundant. However, it is not the case. According to Hashimoto (1998), the COs in (25) allow for intensifier interpretations. For instance, sentence (25a) can be interpreted as *Joseph certainly dreamed*. The reason why COs without modification sometimes do not result in redundancy is that they are used to further specify to what degree the activities denoted by the verbs have been carried out.<sup>3</sup> I class the COCs containing such COs as instances of the predicative COC.

In summary, the CO of the predicative COC functions as a predicate appositive and further specifies the notion (manner, degree, etc.) implied by the verb. As we

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<sup>3</sup> In this case, the COs cannot undergo passivization and *it*-pronominalization. Takami and Kuno's criterion modification thus may not be valid for determining whether the verbs occurring with COs are intransitive or transitive verbs.

have already seen in (19), Reading A mentions how the activity denoted by the verb is carried out. Hence, it is natural to consider that Reading A is consistent with the predicative COC.

On the other hand, many linguists claim that this type of CO is a resultant object (Jespersen (1924), Quirk et al. (1985), Macfarland (1995), Takami and Kuno (2002)). Consider the following examples:

- (26) a. John made *a box*.
- b. The carpenter built *the house*.
- c. I'm digging *a hole*.

(Quirk et al. (1985:750))

In sentences (26a-c), *a box*, *the house*, and *a novel* are produced only as a result of the activities denoted by the verbs *make*, *build*, and *write*, respectively. Takami and Kuno (2002) mention that the COs in (27a-c), just like the objects in (26a-c), represent results of the actions denoted by the verbs:

- (27) a. Sue slept *a sound sleep*.
- b. Jack sneezed *the most tremendous sneeze I had ever had*.
- c. He yawned *a jaw-cracking yawn*, finger-combed his damp hair, linked his hands behind his neck, and stretched.

(Takami and Kuno (2002:156))

Sentence (27a) says that a sound sleep resulted from Sue's sleeping; (27b) says that Jack sneezed, which resulted in the most tremendous sneeze the speaker had ever heard; (27c) says that 'he' yawned, which resulted in a jaw-cracking yawn. Takami and Kuno conclude that the COs in these examples are resultant objects whose *referents* are produced by the actions represented by the verb. As observed above, Reading B describes the result of activity denoted by the verb. If the CO of the predicative COC is taken as a resultant object, it may be reasonable to think that Reading B is ascribed to the predicative COC.

However, this analysis cannot answer the question why the predicative COC allows for Reading A, and why the CO can be replaced with the corresponding adverb of manner. Besides, Takami and Kuno overlook the fact that the CO of the predicative COC cannot undergo *it*-pronominalization (cf. (15b)).

In this connection, Kasai (1980) offers the following insightful view:

- (28) In the expression 'to dream a strange dream,' 'a strange dream' may be taken as a resultant object in that the result of activity of dreaming was 'a strange dream.' However, 'a strange dream' is, strictly speaking, not a resultant object. Comparing 'to dream a strange dream' with 'to dig a hole,' we readily find that the event which 'to dream a strange



dream' represents is different in character from the one which 'to dig a hole' does. The verb *dream* is a self-contained verb. When we say 'to dream a strange dream,' 'to dream' and 'a strange dream' are co-extensive and unfold at the same time. By contrast, 'to dig' is not co-extensive with 'a hole.' 'A hole' is created through the activity of digging.<sup>4</sup> (Kasai (1980:5))

This view is consistent with the notion *range*, which Halliday (1966) introduces (cf. Nakau (1994)). According to Halliday, *range* is co-extensive with, is indeed merely a nominalization of, the process. It may be realized by an etymologically cognate item. The following examples show that the CO of the predicative COC is co-extensive with the event denoted by the verb:

(29) a. He smiled a beautiful smile.

b. At the same time as he smiled, his facial expression became beautiful.

In example (29a), 'to smile' and 'a beautiful smile' are co-extensive and unfold at the same time. Therefore, it is possible to spell out what example (29a) means explicitly by means of such a periphrastic expression as (29b).

By taking the notion *range* into account, we can explain why the predicative COC allows Reading A and B: Two interpretations of the predicative COC depend on how the CO highlights the event denoted by the verb. In Reading A, the CO highlights the intermediate step of the event which the verb represents. On the other hand, with respect to Reading B, the CO highlights the event which the verb represents in its entirety. This proposal is borne out by the following facts:

(30) a. Mary laughed {for an hour/\*in an hour}.

b. Josie danced {for an hour/\*in an hour}.

c. Martha sang {for an hour/\*in an hour}.

(Tenny (1994:39))

The verbs which take COs typically describe non-delimited events. When they occur in the predicative COC, a delimited reading becomes available:

(31) a. Mary laughed a mirthless laugh {for an hour/in an hour}.

b. Josie danced a silly dance {for an hour/in an hour}.

c. Martha sang a joyful song {for an hour/in an hour}.

(Nakajima (2006:680))

In sentences (31a-c), the presence of each CO allows one to understand that the event of laughing, dancing, or singing progresses from beginning to end and to focus attention either on the intermediate step of the event or on the event in its entirety.

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<sup>4</sup> The translations are my own and aim to be as literal as possible to help readers focus on the original language.

The ambiguity strongly suggests that the CO of the predicative COC is not a resultant object but range, which is co-extensive with the event denoted by the verb. It is this property that makes possible both Reading A and B.

### 3.3. *The Referential COC*

Next, we turn to the referential COC. The CO of this construction functions as a referential object. This claim is supported by the following facts. First, the CO of the referential COC is passivizable. Consider the following example:

- (32) The blood-curdling scream that they had all heard in countless horror movies was screamed by one of the campers. (Langacker (1991:363))

In sentence (32), the CO can undergo passivization, like a direct object. Langacker (1991) mentions that the scream referred to in (32) transcends the specific event denoted by the verb and represents a particular, recognizable type of scream whose existence is therefore independent of any single instantiation. The CO of the referential COC thus behaves as a direct object, which represents a type.

In addition, the CO of the referential COC can undergo *it*-pronominalization. Observe the following:

- (33) a. John sang a beautiful song. He sang *it* to cheer her up.  
 b. He lived a happy trouble-free life. He could live *it* because his wife took care of all the difficulties. (Takami and Kuno (2002:149))  
 c. Mary screamed a blood-curdling scream and she screamed *it* practically in my ear. (Takami and Kuno (2002:153))

The COs in (33) are construed as specific types. For instance, *a happy trouble-free life* is construed as a kind of life. Once created, type may continue to exist independently of the action that spawns it. Sentences (33a-c) thus can be appropriately paraphrased by the following expressions:

- (34) a. John recreated a beautiful song.  
 b. He recreated a happy trouble-free life.  
 c. Mary recreated a blood-curdling scream.

It is noteworthy that sentences (33a-c) bear a resemblance to the following:

- (35) a. She acted the part of Ophelia.  
 b. They are playing the Egmont Overture. (Quirk et al. (1985:750))

As is the case with sentences (33a-c), the activities in (35) recreate the referents, specific, replicable types. Quirk et al. (1985) treat the objects in (35) as one type of resultant objects. If the CO of the referential COC is also taken as one type of resultant objects, it seems no wonder that it is referential and can undergo *it*-pronominalization.

Furthermore, the referential COC can be used as the answer to questions with *what*. Observe the examples in (36) and (37):

(36) A: What did he sing?

B: He sang a beautiful song.

(Omuro (1990:75))

(37) A: What (sort of dance) did the girls dance?

B: They danced a traditional dance.

(Horita (1996:239))

Sentences (36B) and (37B) are acceptable as replies to (36A) and (37A) because each CO is construed as a type executable by other agents. Again, the CO of the referential COC is considered to function as a referential object.

An interesting feature of the referential COC is that the CO does not exhibit the indefiniteness effect. Consider the following examples:

(38) a. Tom laughed *many* ridiculous laughs.

(Horita (1996:234))

b. The actress smiled *various* smiles for the photographer.

(Rice (1988:209))

Each of the COs in (38a, b) is construed as a replicable type, i.e. a kind of laugh or smile, and a referential entity. They can thus co-occur with strong determiners.

In sum, the CO of the referential COC functions as a referential object, i.e., it refers to a type separate from the action denoted by the verb. Reading C means that one recreates an existing type. Reading C is thus attributed to the referential COC.

It is by now clear that COCs are not monolithic but form a complex category consisting of the predicative COC and the referential COC.<sup>5</sup> The predicative COC has the form [Subj IntrVerb Adjunct CO] and the CO functions as a predicate appositive which further specifies the notion that is implied by the verb meaning. Moreover, the CO of the predicative COC is co-extensive with the event denoted by the verb. This property makes possible Reading A and B. On the other hand, the referential COC has the form [Subj TrVerb Argument CO] and the CO functions as a referential object which represents a particular type. It is this property that allows for Reading C. This characterization of the predicative COC and the referential COC accounts straightforwardly for their contrastive grammatical behavior and affords a natural explanation for why the COs of the same verb do not show the same syntactic properties.

In comparison with the referential COC, one might think that the predicative COC is idiosyncratic in that the postverbal element behaves not as an argument, but as

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<sup>5</sup> For a detailed discussion about the relation between the predicative COC and the referential COC, see Kitahara (2007).

an adjunct and further specifies the notion that is implied by the lexical semantics of the verb. Such properties, however, are not limited to the predicative COC. In the next section, we will discuss that the predicative COC is remarkably similar to the adjunct RC.

#### 4. The Predicative COC and the Adjunct RC

This section shows that there are remarkable parallels between the predicative COC and one type of RCs. First, in accordance with Iwata (2006), I argue that RCs form a complex category consisting of two types, the adjunct RC and the argument RC. Next, I draw parallels between the predicative COC and the adjunct RC.

##### 4.1. *The Adjunct RC and the Argument RC*

In the literature, sentence (39a) is often cited as an instance of RCs, along with sentence (39b):

- (39) a. The river froze solid. (= (1b))  
 b. The joggers ran the pavement thin.

According to Iwata (2006), however, the former type behaves differently from the latter type, so that the two types of RCs need to be handled differently. The result phrase of the former type can be omitted without affecting the well-formedness, whereas that of the latter type cannot:

- (40) a. The river froze. (Iwata (2006:457))  
 b. \* The joggers ran the pavement.

(Levin and Rappaport Hovav (1999:200))

On the basis of this behavioral difference, the former type is referred to as the adjunct RC, while the latter type is referred to as the argument RC.<sup>6, 7</sup>

Interestingly, the result phrase of the adjunct RC does not describe a newly introduced result state. In sentence (39b), an instance of the argument RC, the verb *run* does not entail the state of being thin. On the other hand, in sentence (39a), an instance of the adjunct RC, the verb *freeze* entails the state of being solid. This is further confirmed by the following definition from LDOCE Online:

- (41) If a liquid or something wet freezes or is frozen, it becomes hard and solid because the temperature is very cold.

Thus, it is clear that the result phrase *solid* simply further specifies a change implied

<sup>6</sup> Although later Iwata revised these terms, for convenience of discussion, I use them.

<sup>7</sup> Washio (1997) distinguishes three types of resultatives (strong, weak, and spurious resultatives). Washio's strong resultatives correspond to the argument RC and his weak and spurious resultatives the adjunct RC. The distinction between weak and spurious does not seem necessary. For details, see Iwata (2006).

by the verb meaning. The same holds true for the following:

- (42) John painted the wall black.

In example (42), while the verb *paint* does not imply that something becomes black, it clearly contains the notion “color” as its lexical semantics. It goes without saying that one cannot paint a wall without giving it a color. Therefore, the result phrase of the adjunct RC is not a result state independent of the verb meaning. Rather, it is further specifying the notion that is implied by the verb meaning.

Note in passing that the result phrase of the adjunct RC allows for an intensifier interpretation. For instance, the adjunct RC in (43a) can be paraphrased by (43b), in some circumstances:

- (43) a. The lake froze solid.  
b. The lake froze completely.

In this case, the result phrase of the adjunct RC further specifies the degree to which the freezing event has been carried out.

Let us continue with the investigation of the adjunct RC and the argument RC. The semantic property of the result phrase of the adjunct RC manifests itself with respect to the possibility of *wh*-question. As shown in (44) and (45), the result phrase of the adjunct RC can be a reply to the question with *how*, whereas that of the argument RC cannot:

- (44) A: How did the puddle freeze?  
B: Solid.  
(45) A: How did s/he beat the metal?  
B: \*Flat.

(Iwata (2006:469))

The reason why (44) is fully acceptable is that one can ask about the specific character of an implied result state, but not that of a non-implied one as in (45).

Moreover, according to Levin and Rappaport Hovav (1999), one remarkable aspect of RCs has the semantics “X becomes Y by V-ing.” In fact, sentence (46a), an instance of the argument RC, can be paraphrased by (46b):

- (46) a. The joggers ran the pavement thin. (= (39b))  
b. The joggers caused the pavement to become thin by running.

(Levin and Rappaport Hovav (1999:199))

On the other hand, sentence (47a), an instance of the adjunct RC, cannot be appropriately paraphrased by (47b):

- (47) a. The pond froze solid.  
b. The pond got solid/solidified by freezing.

(Levin and Rappaport Hovav (1999:206))

A crucial fact about sentences like (47a) is that the freezing event and the state change of becoming solid are co-extensive and unfold at the same time:

- (48) a. The pond froze solid. (= (47a))  
 b. At the same time as the pond froze, its surface became solid.

It is not impossible to spell out what sentence (48a) means explicitly by means of such a periphrastic expression as (48b). In the adjunct RC, the change of state that the result phrase represents is co-extensive with the event denoted by the verb.

There are still further behavioral differences between the adjunct RC and the argument RC. As is well known, in RCs, a spatial path (into the soup) and a PP for a change of state (from crunchy) cannot co-occur:

- (49) \* The vegetables went from crunchy into the soup. (Goldberg (1995:83))

Goldberg (1995) argues that this is because a change of state is a metaphorical motion and that one cannot traverse both a literal path and a metaphorical path at the same time. Goldberg therefore proposes the following constraint:

- (50) The Unique Path Constraint: If an argument X refers to a physical object, then more than one distinct path cannot be predicated of X within a single clause. The notion of a single path entails two things:  
 (i) X cannot be predicated to move to two distinct locations at any given time *t*, (ii) the motion must trace a path within a single landscape.  
 (Goldberg (1995:82))

However, as Iwata points out, the adjunct RC is not subject to this constraint. Consider the following:

- (51) a. He spread the butter thin. (Washio (1997:17))  
 b. He spread the butter thin on the bread. (Iwata (2006:463))

In sentence (51a), an instance of the adjunct RC, when the verb *spread* takes the result phrase *thin*, Goldberg would predict that this result phrase does not co-occur with a spatial path PP. But, as in (51b), the two phrases appear at the same time.

All these pieces of evidence show that RCs are not monolithic. It is quite reasonable to distinguish the adjunct RC from the argument RC.

#### 4.2. *The Parallelism between the Predicative COC and the Adjunct RC*

Surprisingly, there are striking parallels between the predicative COC and the adjunct RC. First, in either construction, the postverbal adjunct, the CO or the result phrase, can be omitted:

- (52) John died (a painful death).  
 (53) The river froze (solid).

Secondly, each construction can be a reply to the question with *how*:

- (54) A: How did Miss Maple smile?

B: She smiled a deprecating smile.

(= (24))

(55) A: How did the puddle freeze?

B: Solid.

(= (44))

Thirdly, either postverbal adjunct further specifies the notion that is already implied by the verb meaning. The CO of the predicative COC further specifies the manner, etc. implied by the verb meaning, whereas the result phrase of the adjunct RC does the change of state. Besides, recall that the CO of the predicative COC and the result phrase of the adjunct RC allow intensifier interpretations.

Fourthly, in either construction, what the postverbal adjunct represents is co-extensive with the event denoted by the verb:

(56) a. He smiled a beautiful smile.

b. At the same time as he smiled, his facial expression became beautiful.

(= (29))

(57) a. The pond froze solid.

b. At the same time as the pond froze, its surface became solid.

(= (48))

One more point to be noticed about these two constructions is that the host NP, i.e. the NP of which the postverbal adjunct is predicated, is not grammatically encoded. In the case of the argument RC, the result phrase is predicated of the direct object:

(58) a. They yelled themselves; hoarse<sub>i</sub>.

b. The joggers ran the pavement; thin<sub>i</sub>.

(Iwata (2006:465))

As shown in (58), this predication relation is grammaticalized so strongly that the host entity finds its way into the direct object position even when the verb is normally thought to be intransitive. On the other hand, according to Iwata, the same is not true for the adjunct RC. Consider the following:

(59) a. There was a sudden noise in the corridor outside and then several bumps before the door opened wide.

b. I closed my eyes tight for once and placed my palms together.

(ibid.)

The verb *open* may be followed by the result phrase *wide* as in (59a), and *close* by *tight* as in (59b). Note here that the predication relation does not hold between the AP and its apparent host. The subject entity in (59a) cannot be said to be wide as in (60a), nor can the direct object in (59b) be said to be tight as in (60b):

(60) a. ?\*The door was wide.

b.?\*My eyes were tight.

(ibid.)

Likewise, sentence (61a) does not entail (61b).

(61) a. He spread the butter thin. (= (51a))

b. # The butter became thin. (Iwata (2006:465))

The result phrase of the adjunct RC simply further specifies an implied change. It does not require that the host NP is grammatically encoded. This property thus allows the result phrase of the adjunct RC to be predicated of some implicit entity. This is further confirmed by the following examples:

(62) a. The door opened wide.

b. At the same time as the door opened, its aperture became wide.

(63) a. I closed my eyes tight.

b. At the same time as I closed my eyes, my muscle of eyes became tight

(64) a. He spread the butter thin. (= (51a))

b. At the same time as he spread the butter, its thickness became thin.

In (62a)-(64a), the host NPs are not explicitly expressed. However, by using peripheral expressions, one can identify what entity the result phrase of the adjunct RC is predicated of; indeed, *its aperture*, *my muscle of eyes*, and *its thickness*, are implicit hosts. It seems significant to note that the host of the result phrase of the adjunct RC is involved in our body of knowledge evoked by the verb. For instance, when one asserts that in (62a) the verb *open* implies the state of being wide, one is actually drawing an inference, aided by the knowledge that it is the aperture that becomes wide. Without such knowledge, i.e. frame (cf. Fillmore (1982)), one cannot understand what sentence (62a) means. The result phrase of the adjunct RC is predicated of what is evoked by the verb frame; that is, it highlights different facets of the verb frame.

Similarly, the modifier of the predicative COC does not also request that the host NP is explicitly expressed. Consider the following:

(65) a. He smiled a beautiful smile. (= (29a))

b. He died a heroic death.

c. He danced a beautiful dance.

In (65), the modifiers are not predicated of the object noun and the subject. This is confirmed by the following:

(66) a. His smile was beautiful.

b. His death was heroic.

c. His dance was beautiful.

(67) a. He became beautiful by smiling.



- b. He became heroic by dying.
- c. He became beautiful by dancing.

Sentences (65a-c) cannot be appropriately paraphrased by (66a-c) or (67a-c). It is natural to assume that the modifier of the predicative COC is predicated not of the object or the subject, but rather of some entity which is implied by the lexical semantics of the verb, as is shown in the following examples:

- (68) a. He smiled a beautiful smile.
- b. At the same time as he smiled, his facial expression became beautiful. (= (29))
- (69) a. He died a heroic death. (= (65b))
- b. At the same time as he died (has the good grace to die), his mode of death became heroic.
- (70) a. He danced a beautiful dance. (= (65c))
- b. At the same time as he danced, his movement became beautiful.

As is the case with the result phase of the adjunct RC, the modifier of the predicative COC highlights different facets of the verb frame, *his facial expression* in (68a), *his mode of death* in (69a), *his movement* in (70a). There is no doubt that each of the predicative COC and the adjunct RC has an implicit host.

Now the parallelism between the predicative COC and the adjunct RC is evident. In the next section, we will consider why the predicative COC and the adjunct RC parallels each other from a typological perspective.

## 5. A Typological Study of the Predicative COC and the Adjunct RC

In section 4, we have captured the parallelism between the predicative COC and the adjunct RC. Of course, I will not claim that the predicative COC and the adjunct RC belong to the same category. The predicative COC and the adjunct RC each are independent constructions. First, they differ in what kind of verbs may occur. For instance, change of state verbs like *break* cannot appear in the predicative COC, whereas they can in the adjunct RC:

- (71) a. \* The glass broke a crooked break. (Takami and Kuno (2002:134))
- b. The fuselage broken open. (Iwata (2006:475))

In addition, the syntactic form of the predicative COC is different from that of the adjunct RC. While the syntactic form of the former is [NP V NP], that of the latter is [NP V(P) AP]:

- (72) a. Sam smiled a beautiful smile. (= (1a))
- b. The river froze solid. (= (1b))
- c. He spread the butter thin. (= (48a))

It seems uncontroversial that the predicative COC and the adjunct RC do not belong to the same category and that they are independent of each other.

However, it is certainly not by chance that some parallels are drawn between the predicative COC and the adjunct RC. Here it is most important to shift our focus on their cognitive basis. The predicative COC and the adjunct RC share the same semantic structure: the postverbal adjunct highlights different facets of the verb frame. In this structure, the frame evoked by the verb serves as a reference point for affording mental access to the desired host (i.e. implicit host). In other words, one conception serves as a reference point for purposes of establishing mental contact with another conception. Such semantic structure is also observed in the following:

(73) She bought *Lakoff and Johnson*, used and in paper, for just \$ 1.50.

(Langacker (1999:199))

In sentence (73), the object *Lakoff and Johnson* does not refer to the authors themselves but their work. The frame evoked by *Lakoff and Johnson* serves as a reference point affording mental access to the desired target (i.e. Lakoff and Johnson's work). Such semantic structure is a manifestation of our fundamental cognitive ability, *reference point ability* (cf. Langacker (1999)). The predicative COC and the adjunct RC is motivated by the same cognitive ability.

According to Langacker, reference point ability is fundamental and ubiquitous, and serves a useful cognitive and communicative function. Given the predicative COC and the adjunct RC are linguistic manifestations of reference point ability, it can be predicted that many languages may permit these two constructions, because reference point ability is one of most fundamental cognitive abilities which all human beings have.

This prediction is supported by cross-linguistic considerations. For instance, French allows for the adjunct RC:

(74) J'ai noué les lacets de mes chaussures bien serré.

'I tied the laces of my shoes very tight.'

(Washio (1997:29))

In sentence (74), the result phrase *serré* does not agree with its seeming host *mes chaussures*, despite the fact that adjectives must agree in French. If the result phrase agree with *mes chaussures*, it should be *serrés*. Therefore, there is no doubt that sentence (74) is an instance of the adjunct RC, for the result phrase is not predicated of any grammatically encoded host. Interestingly enough, in French, the predicative COC is also possible:

(75) a. Jean-Pierre a dansé une grande danse.

'Jean-Pierre danced a grand dance.'

(Pereltsvaig (1999:537))

- b. Jean-Pierre a vécu une vie heureuse.  
 ‘Jean-Pierre lived a happy life.’

Sentences (75a, b) can be construed as instances of the predicative COC.<sup>8</sup>

Next, let us investigate whether Japanese permits both the adjunct RC and the predicative COC. The adjunct RC is possible in Japanese:

- (76) a. Ike-ga kachikachi-ni koot-ta.  
 The pond-NOM solid freeze-PAST  
 ‘The pond froze solid.’  
 b. Boku-wa me-wo kataku toji-ta.  
 I-TOP eye-ACC tight close-PAST  
 ‘I closed my eyes tight.’

On the other hand, the predicative COC is not perfectly felicitous:

- (77) a. Boku-wa utsukushii odori-wo odot-ta.  
 I-TOP beautiful dance-ACC dance-PAST  
 ‘I danced a beautiful dance.’  
 b. \*?Kare-wa utsukushii warai-wo warat-ta.  
 He-TOP beautiful smile-ACC smile-PAST  
 ‘He smiled a beautiful smile.’

While sentence (77a) is fully acceptable, sentence (77b) is quite marginal. In addition, even in (77a), Reading C may be preferred. One might expect that in Japanese the predicative COC is not possible.

However, we can easily find instances of the predicative COC in literary works.<sup>9</sup> Consider the following:<sup>10</sup>

- (78) a. Sakoku irai no nagai nemuri wo  
 the national isolation policy since-GEN long sleep-ACC  
 nemuri-tsuzukete-kita mono-wa...  
 sleep-PRF ones-TOP  
 ‘the ones which has slept a long sleep since the national isolation policy...’

<sup>8</sup> Sentences (75a, b) can be also construed as instances of the referential COC. Whether a COC is taken as the predicative COC or as the referential COC depends on the interpretation of the accompanying modifiers. For details, see Kitahara (2006, 2007).

<sup>9</sup> As is the case with Japanese, the predicative COC in English is also used in very limited contexts: religious prose, nursery rhyme, and literary works which are written in rhyme (cf. Kurata (1986), Kitahara (2006)). In this respect, the proper characterization of the predicative COC, I believe, can be obtained by taking a usage-based view of constructions (cf. Croft (2001)).

<sup>10</sup> Examples (78a, b) are cited from the following websites:

[http://www.aozora.gr.jp/cards/000158/files/1504\\_14585.html](http://www.aozora.gr.jp/cards/000158/files/1504_14585.html)

[http://www.aozora.gr.jp/cards/000040/files/46168\\_22668.html](http://www.aozora.gr.jp/cards/000040/files/46168_22668.html)

(Toson Shimazaki, *Yoakemae*)

- b. Hitori-de                      niyatto                      bukimina    warai-wo  
 alone                      in a meaning manner    uncanny    smile-ACC  
 warat-teiru.  
 smile-PROG

‘He is smiling a uncanny smile alone, in a meaning manner.’

(Sakunosuke Oda, *Shigatsubaka*)

The COs in (78a, b) can be appropriately paraphrased by the corresponding adverbials:

- (79) a. nagai    nemuri-wo    nemuri-tsuzukete-kita  
 long    sleep-ACC    sleep-PRF  
 ‘have slept a long sleep’  
 b. nagaiaida              nemuri-tsuzukete-kita  
 for a long time    sleep-PRF  
 ‘have slept for a long time’  
 (80) a. bukimina    warai-wo    warat-teiru  
 uncanny    smile-ACC    smile-PROG  
 ‘smiling an uncanny smile’  
 b. bukimini    warat-teiru  
 uncannily    smile-PROG  
 ‘smiling uncannily’

The CO *nagai nemuri-wo* in (79a) can be replaced with the corresponding adverbial *nagaiaida* as in (79b). In this case, the CO further specifies how long the activity denoted by the verb has been carried out. Likewise, the CO *bukimina warai-wo* in (80a) can be paraphrased by the corresponding manner adverb as in (80b). Thus, it seems not too implausible to think that examples (78a, b) are instances of the predicative COC.

Moreover, there are examples in which COs allow intensifier interpretations:

- (81) a. hita hashiri-ni hashiru  
 ‘run without stopping’  
 b. hira ayamari-ni ayamaru  
 ‘beg someone’s pardon earnestly’  
 c. doshaburi-ni furu  
 ‘rain in torrents’

Examples (81) differ from (78) in that each of the COs co-occurs with the particle *ni* and further specifies to what degree the activity is carried out. For instance, the CO *hasiri-ni* in (81a) further specifies (emphasizes) the degree to which the running is

carried out. I class sentences (81a-c) as the predicative COC.

As is the case with the above languages, Chinese also permits for the adjunct RC and the predicative COC:

- (82) a. Ta tu hong le qiang.  
He paint red ASP wall  
'He painted the wall red.'
- b. Wo jin jin di bi shang le yanjing.  
I tight close ASP eye  
'I closed my eyes tight.'

- (83) a. kan yi kan  
look a look  
'have a look'

(Zhou (1999:264))

- b. ting yi ting  
listen a listen  
'have a listen'

In examples (83a, b), the COs *yi kan* and *yi ting* repeat the form of the verb *kan* and that of *ting*, respectively. These COs function semantically as intensifiers. For instance, (83a) can be paraphrased by such an expression as *look briefly*. The COs *yi kan* and *yi ting* are thus treated as adjuncts. This is confirmed by the following:

- (84) a. kan yi kan Xiaoli  
look a look Xiaoli  
'have a look at Xiaoli'

(Zhou (1999:275))

- b. ting yi ting yinyue  
listen a listen music  
'have a listen to music'

The predicative COC in Chinese can take a direct object, other than the CO. It seems uncontroversial that the COs in (83) and (84) are not arguments but adjuncts.

It is worth noting here that the predicative COC in Chinese does not require modifiers for the CO:

- (85) a. \* kan yi ke pa de kan  
look a uncanny look  
'have an uncanny look'
- b. \* ting yi re xin de ting  
listen a hard listen  
'have a good listen'

As we observed in Japanese and Chinese, there is variation in the predicative COC among languages. However, it is evident that both the predicative COC and the adjunct RC are possible in a variety of languages.

We need to capture the fact that not only in English but also in French, Japanese, and Chinese, the predicative COC and the adjunct RC are possible. Our discussion relates the presence of the adjunct RC to the presence of the predicative COC. According to Comrie (1989), many statements about language universals relate the presence of one property to the presence of some other property, i.e. state that a given property must, or can only, be present if some other property is also present. Such statement is called *implicational universal*. In accordance with Comrie, I formulate a working hypothesis as follows:

- (86) If a language has the use of the Adjunct RC, then it has the use of the predicative COC.

Hypothesis (86) is based on the assumption that these two constructions are motivated by the same cognitive ability, i.e. reference point ability. Of course, it goes without saying that a great deal more research is necessary to establish the validity of this hypothesis. However, this hypothesis, I expect, is highly universal.

Construction grammar puts emphasis on the idea that constructions are language-specific (cf. Goldberg (1995, 2006), Langacker (1999)). However, we should not overlook that constructions are comparable across languages in terms of their function and their semantic structures (Croft (2001)). Although the concept of a universal construction type does not play a role in contemporary construction grammar, in my opinion, reference to human cognitive abilities would allow us to be successful in identifying universal or cross-linguistic construction types.

## 6. Conclusion

In conclusion, this paper has shown that COCs form a complex category consisting of the predicative COC and the referential COC, and that the predicative COC and the adjunct RC have the same semantic structure. In addition, I have illustrated that different languages allow for both the predicative COC and the adjunct RC, and formulated the hypothesis that if a language has the use of the adjunct RC, then it has the predicative COC. My immediate hope is that the construction grammar approach taken here will act as a stimulus for more research for identifying universal construction types.

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