Cognate Object Constructions Are Not Monotransitive Constructions[*]
Ken-ichi Kitahara

1. Introduction

Kitahara (2010) proposes that cognate object constructions (henceforth, COCs) are composed of two types of constructions, the event-dependent type and the event-independent type. The former is a construction where the cognate object (CO) functions as an eventive noun which refers to the action denoted by the main verb and its modifier describes the manner of how the action is done (ex. *Brad smiled a charming smile* (Höche (2009:95))). The latter, on the other hand, is a construction where the CO functions as an affected object or an effected object (ex. *Real plants should be planted with warmed water in the tank.* vs. *Don't draw such good drawings.* (BNC; cited in Höche (2009:84))). As already pointed out in many previous studies, the constructions involving eventive COs have syntactic and semantic properties close to the intransitive construction. Therefore, it has often been argued that the CO of the event-dependent type functions as a syntactic adjunct. However, it is also true that the event-dependent COC takes a CO as an overt object complement. Given that the CO of the event-dependent type is an object complement, one might argue that the event-dependent COC should be described as a subtype of the transitive construction. If the event-independent COC is also dealt with as a subtype of the transitive construction based on the fact that it allows various syntactic behaviors like monotransitive constructions, it may be contended that English COCs are constructions which instantiate the transitive construction. But such claim is fatally flawed.

This paper tackles the question of why it is possible that in one type of COC, i.e. the event-dependent type, the intransitive verb takes an overt object complement. Reviewing Höche (2009), who treats COCs as monotransitive constructions, and pointing out some serious problems with her analysis, I will argue that the constructions cannot be incorporated into the transitive construction. My lexical-constructional account will demonstrate that it is necessary to assume that the category of COCs exists independently of any other categories, in particular the intransitive construction and the transitive construction.

2. Höche (2009)

Macfarland (1995) treats English COCs uniformly as constructions in which a

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transitive verb takes a CO as a true object. Along with Macfarland, Höche (2009) also claims that COCs should be dealt with as monotransitive constructions, while recognizing the similarity between one type of COCs and manner adverbs, as illustrated in the following examples:

(1) a. Brad smiled charmingly.
    b. Brad smiled a charming smile.

<div align="right">(Höche (2009:95))</div>

In the adjunct analysis such as Jones (1988), sentence variants like those in (1) have been considered identical expressions of what appear to be truth-functionally equivalent situations. Höche, however, rules out an interpretation of the sentence pair as synonymous, following three fundamental assumptions of Cognitive Linguistics:

(2) Meaning is conceptualization
    Grammatical constructions are meaningful
    Change of form implies change of meaning

<div align="right">(Höche (2009:95))</div>

The assumptions in (2) lead us to expect that a speaker choosing the one or the other form of expression, e.g. favoring the event-dependent COC over an adverb construction, does so in order to express a particular conceptualization of the same situation: The sentence *Brad smiled a charming smile* should not be considered synonymous with *Brad smiled charmingly*.

    In the Cognitive Linguistics paradigm, the reason for the meaning differences between the two variants in (1) is sought in the different conceptual relations that hold between the verb and the respective constituents following the verb. *Charmingly* is a manner adverb. Adverbs are understood in Cognitive Grammar as profiling an atemporal relationship, i.e. interconnections that hold between two or more entities. The specific example of *charmingly* is diagrammed as in Figure 1. In Figure 1, the profiled relationship is assumed to be that between a process (P), which is the schematic trajector of the relation, and a defined region on a scale measuring friendliness/attractiveness/politeness.

    Höche puts special focus on the fact that one cannot conceive of *charmingly* without evoking at the same time an event to which the value expressed by the adverb is ascribed. In this sense, it can be said that an adverb is conceptually dependent. Langacker (1987) defines 'conceptually dependent' as follows:

(3) One structure, *D*, is dependent on the other, *A*, to the extent that *A* constitutes an elaboration of a salient substructure within *D*.

(Langacker (1987:300))

In a grammatical construction, the asymmetry between two component structures differs substantially in their degree of mutual dependences; on balance, one of them (*A*) is autonomous, and the other (*D*) is dependent. When one dependent component presupposes another autonomous component, the dependent component offers a schematic substructure, a so-called *elaboration site* or *e-site*, which is to be elaborated by the autonomous component. Returning to Figure 1, we can see that the event expressed by the verb is indicated by the small square. P constitutes a salient substructure of *charmingly* which needs to be elaborated by a verb designating a process. The constellation of a more autonomous element (verb) and more dependent element (adverb) on the one hand and the verb's functioning as a profile determinant are crucial features for defining the syntactic relation that holds between the two components. In this constellation, *charmingly* functions as a modifier, which is by definition conceptually dependent on the profile determinant, the verb (Höche (2009:96)).
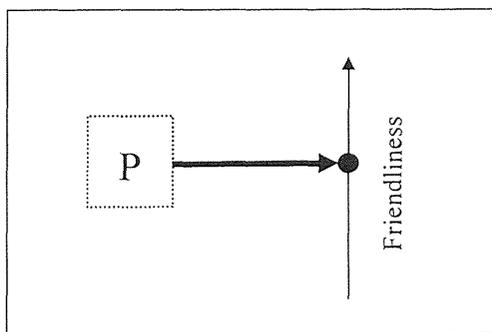
Figure 1. Conceptual content of *charmingly* (adapted from Höche (2009:95))

The nominal *a charming smile*, on the other hand, involves a constituent as a whole profiling a thing instead of an atemporal relation. The relation that holds between the noun *smile* and the adjective *charming* is comparable to that of the verb *smile* and the adverb *charmingly* in that the adjective portrays an atemporal relation as well: It profiles an interconnection between an entity (*smile*) and a scalar value of friendliness. This makes it possible that the nominal *a charming smile* and the adverb *charmingly* are semantically equal.

Höche, however, mentions that the relationship between the full nominal

phrase and the verb is different from that between the adverb *charmingly* and the verb. To describe *a charming smile* as an argument, she probes for the presence of features of nominal complements as defined by Langacker (1987). According to Langacker, when a dependent structure functions as a profile determinant, its inherent substructures are elaborated by more autonomous entities. For example, consider the verb *employ*. In the sentence *The company employed a Polish salesman*, the verb *employ* has two inherent substructures that need to be elaborated for the phrase to completely depict an act of employing: the employer as the verb's trajector and the employee as its landmark. The dependent *employ* which functions as a profile determinant is elaborated by two autonomous entities, the employer and the employee. Höche argues that this is the case for the relation between the verb and the CO. In the case of a COC, a process (verb) is conceptually dependent on its participant; it offers e-sites that need to be elaborated by other entities. The CO (an autonomous participant) elaborates the landmark of the verb, whereby the latter serves as the profile determinant. Therefore, Höche insists that even eventive COs such as *a charming smile* should be regarded as arguments, instead of recognizing them as adverbials. If her analysis is correct, the difference between a verb-adverb structure and a verb-eventive CO structure is one of A/D asymmetry in the first place,[1] and therefore one of conceptual difference between the verb and other constituents of a profiled relation. These different constellations are summarized as in Table 1:

	verb-adverb		verb-eventive CO	
	verb	adverb	verb	eventive-CO
A/D asymmetry	A	D	D	A
Direction of elaboration	elaborater	elaboratee	elaboratee	elaborater
Syntactic function	profile determinant (head)	adjunct	profile determinant (head)	argument

Table 1. Argument/adjunct distinction from a cognitive grammar perspective
(adapted from Höche (2009:97))

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[1] The A/D asymmetry refers to the asymmetry between two component structures differing substantially in their degree of mutual dependence in a grammatical construction; on balance, one of them (A) is autonomous, and the other (D) is dependent. See Langacker (1987) for more details.

However, the situation is not as straightforward as presented so far. As Höche points out, many of the verbs occurring in COCs lack a prominent e-site for a landmark, i.e. they are conventionally associated with one participant only. She contends that this is not exactly what motivates the discussion of COs as adjuncts. Following from the proposal submitted by Langacker (1987) and Croft (2001), the autonomy/dependence distinction is gradient, as are the notions "salient substructure" or "prominent e-site." Therefore, Höche speculates that the argument/adjunct distinction may at best be treated as a continuum, ranging from clear cases of adjuncts (*Brad smiled charmingly*) over COs (*Brad smiled a charming smile*) to clear cases of arguments (*Brad ignored her charming smile*). In other words, the eventive CO has an intermediate status between adjuncts and arguments.

To explain the fact that the verbs which are conventionally used as intransitive can take overt object complements, Höche uses Goldberg's model of Construction Grammar. On the assumption that there can be mismatches between the specifications of verbs and the specifications of constructions, Goldberg claims that a construction can enrich the participant constellation conventionally associated with a particular verb. It is not necessary that each argument role of the construction corresponds to a participant of the verb. For the construction is assumed to add roles not contributed by the verb (Goldberg (1995:54)). Following Goldberg's claim, it would be on the basis of fusing the semantics of a particular construction with the verb that speakers can easily interpret sentences which include verbs 'equipped' with participants which are not determined by the verbs' participant specifications. Consider the following cases:

(4) a. Anthony Everard tried to laugh <u>away his daughters' fury</u>.
    (caused-motion construction)

 b. A correspondent of that chain, that accompanies the British troops, assured that the allied soldiers were applauded <u>to the entrance in the Iraquian city</u>. (caused-motion construction)

 c. I've cried <u>me</u> <u>a river</u>, I've cried <u>me</u> <u>a lake</u>. (ditransitive construction)

 d. Daniel Craig dresses <u>his way to fame</u>. (*way*-construction)
    (Höche (2009:101))

The underlined elements are assumed to be roles added by the respective construction. Höche proposes that, like the examples in (4), the majority of verbs taking a CO should be described as cases where there is a mismatch between the number of participant roles associated with the verb and the number of argument roles of the construction. This implies that the argument structure is 'imposed' on

the verbs by a meaningful argument structure construction. Höche deals with the construction involving an eventive CO as a special, non-prototypical type of the transitive construction offering two argument slots, by postulating that the argument roles are inherent in the construction and not provided by the verb. Then, it is argued that the second argument slot for verbs such as *smile* or *laugh*, which are conventionally associated with the intransitive construction, is made available by the monotransitive construction as a meaningful argument structure construction.

Adopting Goldberg's mode of notation, Höche represents the prototype of monotransitive patterns, as shown in Figure 2. In Figure 2, the semantic layer spells out the semantics directly associated with the construction, i.e. "X CAUSES Y to CHANGE," while the syntactic level presents the syntactic functions V, SUBJ, and OBJ, to which the argument roles are linked:
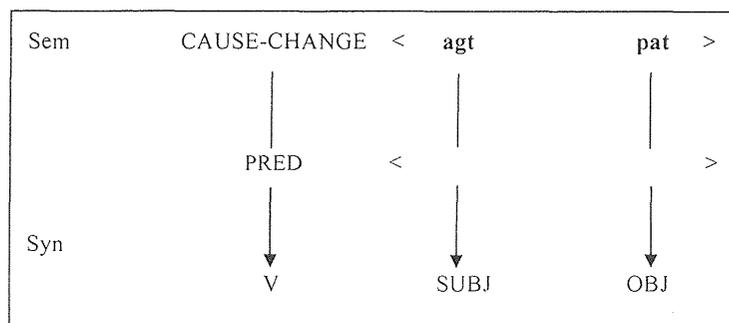
Figure 2. The monotransitive construction (prototype) (Höche (2009:102))

According to Höche, this representation is applicable to the monotransitive construction including an affected object which undergoes a change of state or the one including an effected object that is created through the activity expressed by the verb. Bearing in mind that COs are frequently described as objects of result (cf. Quirk et al. (1985), Macfarland (1995), Takami and Kuno (2002)), she claims that the monotransitive construction with an effected object should be considered as the pattern which sanctions COCs, except for COs of the affected-category.

However, even if it is the construction which provides an additional role, several other conditions must be fulfilled in order to fuse the participant roles of the verb with the argument roles of the construction. Goldberg (1995) argues that there are semantic restrictions on the types of constructions a verb can occur with. According to Goldberg, the participant roles of the verb and argument roles of the construction need to be semantically compatible in order to be integrated. She proposes the following principle:

(5) *The Semantic Coherence Principle*

Only roles which are semantically compatible can be fused. Two roles r_1 and r_2 are semantically compatible if either r_1 can be construed as an instance of r_2, or r_2 can be construed as an instance of r_1.

(Goldberg (1995:50))

The principle in (5) means that in order to meet the specifications of the monotransitive construction with an effected object, the event expressed by a CO needs to be construed as an entity which is effected by the action of the AGENT. Therefore, Höche insists on the need to identify a construal process which plausibly explains how speakers come to perceive an action or the result thereof as a concrete, effected entity.

Höche proposes two construal operations. One construal operation is *conceptual metaphor*. As is well known, conceptual metaphor is a very powerful and ubiquitous cognitive tool. With respect to COCs, one basic type of conceptual metaphors comes into play: ontological metaphors. Ontological metaphors function as means of grasping intangible concepts such as emotions, experiences, ideas, and events as bounded, concrete entities or substances. These metaphors represent mappings which have their source in our interaction with physical, clearly delineated objects and enable us to refer to our experiences, categorize them, group them, quantify them, and, by this means, reason about them (Lakoff and Johnson (1980:25)). EVENTS/ACTIONS ARE OBJECTS/CONTAINERS is one of the manifold ontological mappings which human beings constantly make use of to apprehend the complex nature of events and actions (Höche (2009:103)). As such, they can be perceived as being created, manipulated, possessed, and transferred, as illustrated in the following:

(6) a. I **have** a headache. (Possession) (Lakoff and Johnson (1999:196))
     b. [...] as soon as her back is turned, we **give** the dog **a kick** and it shoots off. (Transfer)   (BNC; cited in Höche (2009:104))

Moreover, as Lakoff and Johnson (1980) observe, activities can be viewed as containers for the actions and other activities that make them up. They can be also viewed as containers for the energy and material required for them and for their by-products. Lakoff and Johnson provide the following example:

(7)   I put a lot of energy into washing the windows.

(Lakoff and Johnson (1980:31))

Note that example (7) reflects a speaker's construing the activity of washing windows as a 'collecting tank' of energetic processes.

Drawing on these insights of conceptual metaphor research, Höche presents the analysis of COs as objects that are effected through the action an AGENT is executing, to explain the occurrence of entities denoting events or actions in the PATIENT slot of the monotransitive construction. She further adds that all those verbs which imply some energetic exchange may occur in the construction, i.e. all those that can be construed as actions which require some amount of energetic input and create some 'output,' be it sorts of sounds (*laugh*, *cry*, *sob*), some kind of verbal utterance (*tell*, *sing*), a bodily movement (*jump*, *dance*, *step*), or the product of cognitive/psychological processes (*think*, *dream*) (cf. Horita (1996)). She mentions that these verbs qualify as the most likely candidates and should be considered as prototypical COC-verbs.

In order to account for the great semantic variety of verbs in COCs, Höche points out the intervention of the other construal operation, *coercion effects*, which shifts the verb's meaning so that it is compatible with the meaning of the construction. Taylor (2002) describes coercion as the phenomenon of one linguistic unit exerting an influence on another unit if combined with it, thereby causing to change its specifications. Goldberg already observes the need to recognize a particular process of coercion in order to account for cases in which a construction requires a particular interpretation which is not independently coded by particular lexical items. Along similar lines, Michaelis (2004) argues as follows:

(8) I assume a coercion mechanism whereby constructional requirements [...] 'win out' over lexical features when the lexical item and the construction upon which it is superimposed have different values for a given attribute. This accommodation mechanism is described [...] as the override principle: [...] If a lexical item is semantically incompatible with its syntactic context, the meaning of the lexical item conforms to the meaning of the structure in which it is embedded.

(Michaelis (2004:51); cited in Höche (2009:105))

With respect to argument structure constructions, it is assumed that coercion effects may be responsible for changes of verb meanings:

(9) a. Hugh **urged** Mrs Tobias **into** her taxi and walked off smartly in the opposite direction.

b. How do you **fit** your elephants **into** a Mini?

The motional meaning of the verbs *urge* and *fit* in these examples, according to Höche, is evoked by the caused-motion construction. Similarly, as for COCs, verbs such as *dream* and *roar* are claimed to be coerced into having a creational meaning by the monotransitive construction as follows:

(10) a. [T]hey **dream** wildly beautiful, but sometimes impossible, **dreams**.
    b. She **roared the roar** of a lioness celebrating her kill.

Höche says that it is the concurrence of coercive effects a construction exerts on the meaning of lexemes therein and a speaker's capacities for construal which enables the use of highly diverse, semantically unrelated verbs in the construction. Thus, even the verbs *dream* and *roar*, which hardly share a common semantic ground, can be used in the COC, 'eliciting' a creational sense for both verbs (Höche (2009:105)).

Höche's description of COCs is summarized in Figure 3:
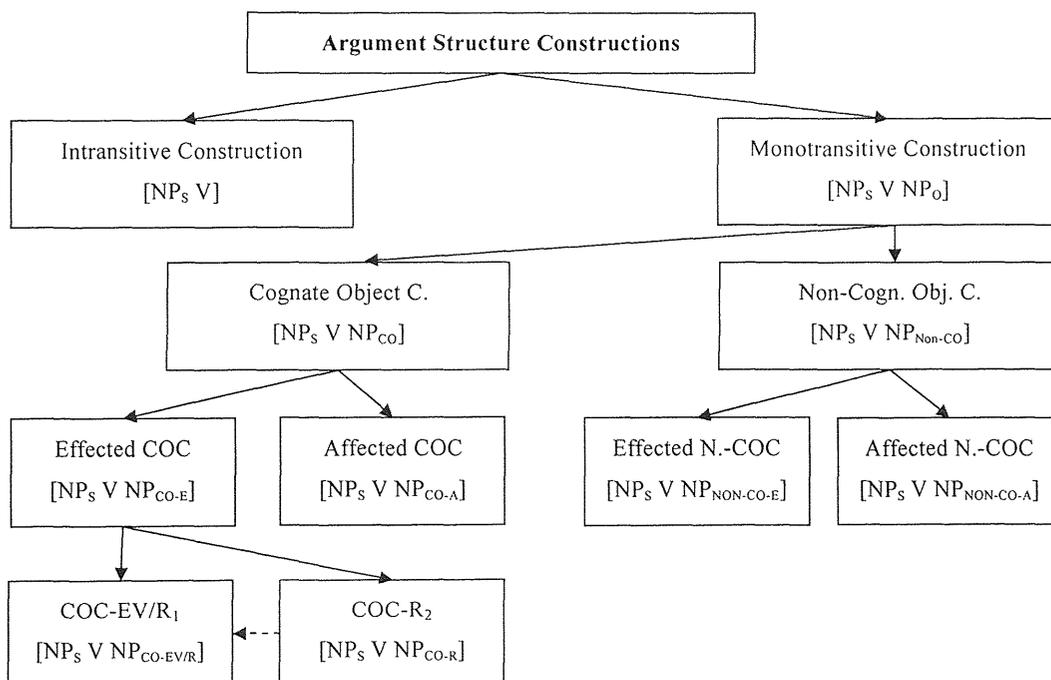
Figure 3. Höche's version of the constructional network of COCs (adapted from Höche (2009:142))

As seen in Figure 3, Höche classifies COCs into Effected COC and Affected COC. Effected COCs are further divided into two types: COC-EV/R_1 and COC-R_2. EV and R stand for event and result, respectively. COC-EV/R_1 corresponds roughly to the type which I call the event-dependent COC, while COC-R_2 and Affected COC the type which is referred to as the event-independent COC. As the names R_1 and R_2 imply, the construction involving an eventive CO is regarded as one type of the transitive construction, i.e. the monotransitive construction involving a resultant object. The dashed arrow shows the metaphorical link between COC-EV/R_1 and COC-R_2. All in all, Höche maintains that all COCs should be incorporated into the transitive construction category.

3. Eventive COs Are Conceptually Dependent

Höche's description of COCs might sound plausible to some people. However, a careful examination suggests that it does not successfully capture the nature of the constructions. First, it is necessary to consider whether eventive COs are conceptually autonomous. Following the basic principle that change of form implies change of meaning, Höche claims that the construction involving an eventive CO, i.e. the event-dependent COC, is not synonymous with the intransitive construction with the corresponding manner adverbial. Her argument is based on the assumption that eventive COs are arguments. If eventive COs are arguments, they must be differentiated from manner adverbials as adjuncts. In the Cognitive Linguistics paradigm, arguments are considered conceptually autonomous, while adjuncts are regarded as conceptually dependent. Her analysis seems to conform to the discipline of Cognitive Linguistics.

However, Höche's analysis has serious empirical problems. The biggest problem is that she ignores syntactic and semantic properties of eventive COs which have been pointed out so far. Although she emphasizes the importance of introspective procedures (p.3), in fact, she seems to dismiss syntactic evidence for the idiosyncratic characteristics of the event-dependent COC as unreliable and useless in her actual practice. Certainly, eventive COs are not fully equivalent to manner adverbials.[2] But it should not be overlooked that they induce syntactic behavior different from normal direct objects, especially resultant objects. She advances no convincing arguments to demonstrate that eventive COs are arguments. The event-dependent COC is not only paraphrasable into the intransitive construction with a manner adverbial. For example, the CO of the event-dependent COC can be separated by a comma or connected with a dash like afterthoughts:

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[2] See Horita (1996) and Kitahara (2010) for a detailed examination of the subtle difference between eventive COs and the corresponding manner adverbials.

(11) a.　He smiled, a nervous smile.　　　　　(Kasai (1980:12))

　　　b.　Mary slept – a very sound sleep.　　　(Kashino (1993:49))

Additionally, the event-dependent COC can be an answer to the question that asks how the action is done:

(12) A:　How did Miss Maple smile?
　　　B:　She smiled a deprecating smile.

(Omuro (1990:75))

(13) A:　How did the girls dance?
　　　B:　The girls danced a nervous dance.

(Horita (1996:239))

It should not be forgotten that the CO of the event-dependent COC exhibits indefiniteness effect like predicate nominals.　Eventive COs can be semantically equivalent with the corresponding manner adverbs, only if they are indefinite:

(14)　　* John screamed *this* scream/*every* scream we heard today.

(Moltmann (1989:301))

(15) a.　Sam danced {*the/every*} beautiful dance.
　　　　　≠ Sam danced beautifully.

　　　b.　Sam smiled {*the/every*} beautiful smile.
　　　　　≠ Sam smiled beautifully.

Notice also that the CO of the event-dependent type cannot undergo passivization and *it*-pronominalization:

(16)　a. * An uneventful life was lived by Harry.　　　(Jones (1988:91))

　　　b.?* Mary danced a staggering/nervous dance, and it was noticeable.

(Horita (1996:249))

All the above examples demonstrate that eventive COs are adjuncts rather than arguments.

　　　Moreover, it seems quite dubious that eventive COs are conceptually autonomous.　In fact, there is no charming smile without the action of smiling (*She smiled a charming smile*), no beautiful dance without the action of dancing (*She danced a beautiful dance*), no heroic death without the action of dying (*She died a heroic death*).　In other words, the verbs evoke eventive COs.　The following

examples clearly show that eventive COs are conceptually dependent:

(17) a. ??John laughed, but in fact he didn't laugh a laugh.

(Macfarland (1995:102))

b. ??Brad smiled, but in fact he didn't smile a smile.

As shown in (17), the use of the verb entails the existence of the CO, since negating the noun results in infelicity. Therefore, the COs which verbs used intransitively take are considered conceptually dependent. Höche also notices that for an event interpretation of *a charming smile*, the degree of salience of a schematic process is no doubt higher than for affected objects or resultant objects. For it is hardly possible to conceptualize the event of *a charming smile* without conceiving of the simultaneous action. Unfortunately, she jumps to the conclusion that event-dependent COCs must be considered as deviations from the prototypical transitive constructions.

What needs to be further emphasized is that the semantic head of a COC should be its CO. As Matsumoto (1996) points out, the COC has some possible interpretations:

(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, 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 example, tango (Reading C). She points out that only the CO of Reading C allows passivization or pronominalization as we observe in instances of the transitive construction.[3] This observation leads us to assume that the syntactic properties of a CO are determined not by the main verb, but rather by its semantic interpretation.

Note also that the semantic interpretation of the CO is compatible with the semantic property of the verb: In (19), while for Readings A and B the verb *dance*

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[3] Kitahara (2010) argues that the event-dependent COC allows for Readings A and B, while the event-independent COC allows for Reading C. However, not all the verbs taking COs occur in both constructions. See section 5 and Kitahara (2010) for more details.

is intransitive, for Reading C it is transitive. Then it follows that the syntactic and semantic status of the CO determines whether the verb is intransitive or transitive. More specifically, the entire CO including its modifier functions as a semantic head of the construction. This goes fundamentally against the traditional view of headhood. However, the category of verb is definable only in relation to each construction.[4]

Recall that when a dependent structure functions as a profile determinant, its inherent substructures are elaborated by more autonomous entities. In the case of the event-dependent COC, the eventive CO functions as a profile determinant, while the intransitive verb is considered conceptually autonomous. The CO denotes the specific process instance profiled by the verb. In this sense, it can be said that the inherent substructures of the eventive CO are elaborated by the existence of the verb. My analysis is summarized in Table 2. If my analysis is correct, then it follows that the event-dependent COC may be thought of as a non-prototypical instance of the intransitive construction, rather than that of the transitive construction.

	verb-adverb		verb-eventive CO	
	verb	adverb	verb	CO
A/D asymmetry	A	D	A	D
Direction of elaboration	elaborater	elaboratee	elaborater	elaboratee
Syntactic function	profile determinant (head)	adjunct	verb	profile determinant (semantic head/adjunct)

Table 2. A/D asymmetry from a lexical-constructional perspective

4. Corpus Data

Ironically, my analysis that the construction involving an eventive CO should not be considered an instance of the transitive construction is supported by the corpus data which Höche herself compiles and provides. To gain insights into the actual use of COCs by native speakers of English, Höche provides a statistical analysis of usage data extracted from the BNC. Her close analysis of the BNC

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[4] My lexical-constructional account conforms to the following basic principles: (i) Categories are construction-specific, (ii) heads are construction-specific, and (iii) constructions are schemas. For more detailed discussion of the basic tenets of Construction Grammar, see Iwata (2006, 2008), Kitahara (2010).

yields 3,139 instances of COCs, involving 109 different verbs. Table 3 gives an overview on the frequency of the 25 most frequent verbs occurring in COCs, including information about their semantic class and the type of the COC:[5]

	Verb	CO	Total COC	Type of CO	semantic class of verb
(1)	live	life	699	EV/R_1	existence
(2)	sing	song	466	R_1	performance
(3)	tell	tale	401	R_1	verbal communication
(4)	smile	smile	203	EV/R_1	non-verbal communication
(5)	sow	seed	198	A	putting
(6)	produce	product	141	R_2	creation
(7)	give	gift	128	A	change of possession
(8)	build	building	100	R_2	creation
(9)	die	death	87	EV/R_1	disappearance
(10)	think	thought	78	R_1	mental activity
(11)	see	sight	72	A	perception
(12)	do	deed	67	EV/R_1	execution
(13)	name	name	45	A	verbal communication
(14)	dream	dream	45	EV/R_1	mental activity
(15)	weave	web	26	R_2	creation
(16)	smell	smell	24	A	perception
(17)	feel	feeling	23	A	perception
(18)	drink	drink	23	A	ingesting
(19)	feed	food	21	A	ingesting
(20)	fight	fight	19	EV/R_1	social-interaction
(21)	grin	grin	18	EV/R_1	non-verbal communication
(22)	plant	plant	17	A	putting
(23)	sleep	sleep	14	EV/R_1	bodily process
(24)	dance	dance	12	EV/R_1	performance
(25)	laugh	laugh	10	EV/R_1	non-verbal communication

Table 3. Top 25 of verbs in COCs in the BNC (Höche (2009:125, 298-300))

With respect to the types of COCs, Höche comes up with a fourfold distinction: EV/R_1 (*live a life, smile a smile, die a death*), R_1 (*tell a tale, sing a song*), R_2 (*produce a product, weave a web*), and A (= AFFECTED) (*sow a seed, drink a drink, smell a smell*). R_1 refers to the type whose nominals denote created entities which are event-result like. As seen in Table 3, it is impossible to describe COCs as a single, homogeneous category; rather they should be discussed as a heterogeneous category. Even if it is true that COCs constitute a family of constructions, all of them are not incorporated into the transitive construction.

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[5] According to Höche, the semantic classes of verbs in Table 3 are based on Levin's (1993) system.
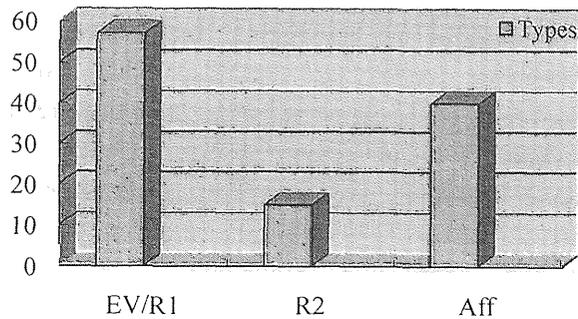
Figure 4. The distribution of CO-types in the BNC (adapted from Höche (2009:128))
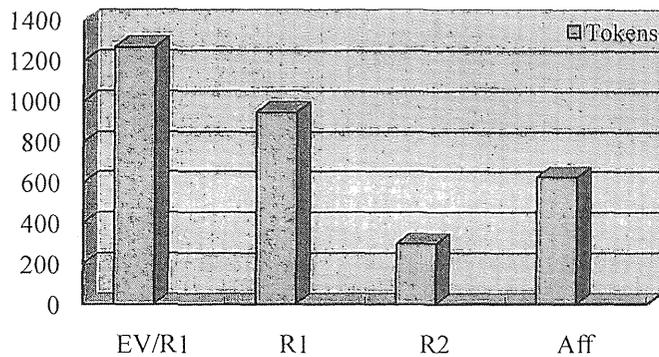
Figure 5. The distribution of CO-tokens in the BNC (adapted from Höche (2009:129))

COC-EV/R_1 is roughly equivalent to the type which I call the event-dependent COC. According to Höche, this type of COC constitutes the prototypical type of the constructions. This view is supported by the type and token frequencies of the single classes. The corpus data suggests that slightly less than half of the 109 forms fall into the COC class comprising those instances which are most commonly described as COs in previous studies: 49 items (types) found in 1270 concrete instances of usage (tokes) are of EV/R_1 that designates an abstract action or event. On the other hand, 5 items (947 instances) belong to the R_1 type, 40 items (625 instances) are categorized as affected COs, and 15 items (297 instances) are grouped as effected objects of the type R_2. On the basis of these corpus data, we can hypothesize that it is the EV/R_1 type that forms the core of a network of English COCs, since both type and token frequency point at a prominent status of this

subcategory.[6]

Moreover, in order to describe the associations between verbs and COCs, Höche conducts the so-called collexeme analysis, which measures the collostructional strength between a construction and lexemes which are attracted to a particular slot in the construction. The method provides results which indicate whether a particular lexeme occurs in a construction more or less often than expected by chance and thus can be used as a measure of the strength of attraction or repulsion between word and construction (Stefanowitsch and Gries (2003)). Rankings obtained by such collostructional analysis are considered to represent actual language usage more adequately than rankings elicited through raw frequency counts. For her calculations, she inputted the different types of frequency needed for such an analysis into the program *Coll. Analysis 3. A program for R for Windows 2.x* (Gries (2007)). Table 4 shows Top 30 of significantly attracted collexemes in the COC:[7]

	Collexeme	OF	Coll.strenghth		Collexeme	OF	Coll.strenghth
(1)	live (EV/R_1)	699	Infinite	(17)	feed (A)	21	16.0352252
(2)	sing (R_1)	466	Infinite	(18)	dance (EV/R_1)	12	11.0907643
(3)	tell (R_1)	401	Infinite	(19)	fight (EV/R_1)	19	10.1506220
(4)	sow (A)	198	Infinite	(20)	farm (A)	6	9.1245645
(5)	smile (EV/R_1)	202	297.9094632	(21)	sleep (EV/R_1)	14	8.7065932
(6)	produce (R_2)	141	118.8687254	(22)	sigh (EV/R_1)	8	6.1915389
(7)	build (R_2)	100	83.1064042	(23)	think (R_1)	78	5.9205229
(8)	dream (EV/R_1)	45	74.1631838	(24)	light (A)	8	5.6867855
(9)	die (EV/R_1)	87	67.0985713	(25)	pray (EV/R_1)	7	5.0026088
(10)	name (A)	45	49.3171758	(26)	tie (A)	7	4.2810390
(11)	weave (R_2)	26	42.5363268	(27)	edit (A)	5	4.0938225
(12)	give (A)	128	32.8022754	(28)	paint (R_2)	7	3.8935361
(13)	smell (A)	24	30.6824942	(29)	laugh (EV/R_1)	10	3.4179565
(14)	grin (EV/R_1)	18	20.5684481	(30)	yawn (EV/R_1)	2	2.4074298
(15)	drink (A)	23	19.2846741		...	...	...
(16)	plant (A)	17	18.3931186		**Totals**	**3139**	

Table 4. Top 30 of significantly attracted collexemes in the COC (Höche (2009:134, 298-300))

Table 4 indicates that of the high significant 30 verbs 12 are members of the EV/R_1 subcategory, 3 are categorized as the R_1 type, 11 belong to the A type, and 4 are

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[6] As regards the distribution of CO-types/tokens, Höche includes R_1 into the EV/R_1 category. However, as already mentioned, the syntactic and semantic properties of the R_1 type are different from those of the EV/R_1 type (see also Höche (2009)). Thus I distinguish precisely between EV/R_1 and R_1 in Figures 4 and 5.

[7] OF = observed frequency

instances of the R_2 type. These data lend further support to Höche's hypothesis that COC-EV/R_1 must be considered the core form of COCs.

One question arises here: If COCs are monotransitive constructions, why does COC-EV/R_1, but not COC-R_1, R_2, or Affected COC, form the core of a network of the constructions? In other words, why are not COC-R_1, R_2, and Affected COC prototypical types of the constructions? Needless to say, these constructions have syntactic and semantic properties close to the prototypical instances of the transitive construction. If Höche's analysis were correct, prototypical instances would be dealt with as non-prototypical ones. Her claim clearly conflicts with the basic ideas of prototype theory.
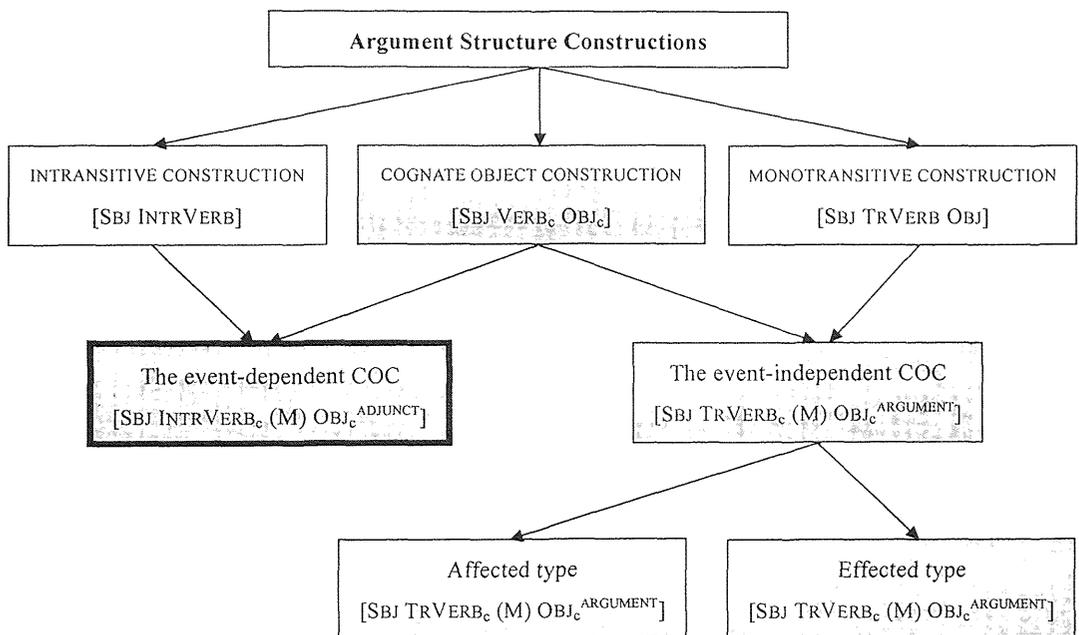
Figure 6. Alternative version of the constructional network of COCs

An alternative to overcome such contradiction is to describe COC-EV/R_1, i.e. the event-dependent COC, as a special instance of the intransitive construction. If the EV/R_1 type regarded as a prototypical member is a special instance of the intransitive construction, it is no wonder that the types which have properties close to the transitive construction, COC-R_1, R_2, and Affected COC, are classified as peripheral members of COCs. Therefore, I assume that the event-dependent COC is a special case of the intransitive construction, while the event-independent COC is that of the transitive construction. In addition, to properly capture the fact that the

event-dependent COC is a non-prototypical member of the intransitive construction, whereas it is a prototypical member of COCs, it is necessary to assume that the category of COGNATE OBJECT CONSTRUCTION exists independently of any other categories, in particular the intransitive construction and the transitive construction. Hence, I propose the following constructional network of English COCs.

As seen in Figure 6, the event-dependent COC is a special instance of the intransitive construction, while the event-independent COC is that of the transitive construction. By abstracting over these two types of constructions, we now have an abstract COGNATE OBJECT CONSTRUCTION. The event-dependent type is a prototypical member of COCs, as indicated by the bold-line rectangle. Such multiple parents are the norm rather than the exception (cf. Iwata (2006, 2008)).

5. Prosodic Function

One might comment that while my description of COCs sketched in Figure 6 will enable us to describe the observed corpus data, it remains unclear how to verify that the category COGNATE OBJECT CONSTRUCTION is psychologically real. Example (20a) is interpreted only as an instance of the event-dependent COC, and (20b) as an instance of the event-independent COC, since the CO of the former does not allow syntactic behaviors such as passivization and *it*-pronominalization. It might be objected that it is impossible to assume the category COGNATE OBJECT CONSTRUCTION subsuming two types of COCs, since there is no apparent relation between (20a) and (20b):

(20) a. The tree grew a century's growth within only ten years.

(Takami and Kuno (2002:42))

b. The team produced a product. (Höche (2009:165))

However, the category COGNATE OBJECT CONSTRUCTION is psychologically real. The evidence for this is that the above examples share the same property: The objects are morphologically or semantically related to the verbs themselves. According to Taylor (2003), for some constructions, the formal characterization needs to include prosodic information. In light of the prosodic information, all COCs would be subsumed under the category COGNATE OBJECT CONSTRUCTION. Osaki (2000) offers an explanation for the development of COCs in English. His research makes it clear that COs were pleonastically inserted as alliterative filler words in late OE poetry and they were stylistically preferred to create alliteration in late OE prose. In short, COs were originally required for alliteration in written English. This may be knowledge a contemporary speaker of English does not have.

However, even today, COCs are most frequently found in written texts:

(21)   On Nicholas stopping to salute them, *Mr Lenville laughed a scornful laugh*, and made some general remark touching the natural history of puppies.   (Charles Dickens, *Nicholas Nickleby*)

(22)   Johnnie looked hopefully at his father; he knew that shoulder was tender from an old fall; and indeed it appeared for a moment as if Scully was going to flame out over the matter, but in the end *he smiled a sickly smile* and remained silent.

             (Stephen Crane, *The Blue Hotel*)

(23)   'Mr. Rochester, if ever *I did a good deed* in my life – if ever *I thought a good thought* – if ever *I prayed a sincere and blameless prayer* – if ever *I wished a righteous wish*, – I am rewarded now. To be your wife is, for me, to be happy as I can be on earth.'

             (Charlotte Brontë, *Jane Eyre*)

(24)   But she joined in the forfeits, and *loved her love* to admiration with all letters of the alphabet.   (Charles Dickens, *A Christmas Carol*)

(25)   *Flies wove a web* in the sunny rooms;

             (Virginia Woolf, *To the Lighthouse*)

(26)   He smelled the tar and oakum of the deck as he slept and *he smelled the smell of Africa* that the land breeze brought at morning.

             (Ernest Hemingway, *The Old Man & the Sea*)

In the above examples, *laugh-laugh*, *smile-smile*, *do-deed*, *pray-prayer* belong to the event-dependent COC, while *think-thought*, *wish-wish*, *love-love*, *weave-web*, *smell-smell* instantiate the event-independent COC. Notice that the obligatory attention to sound repetition and rhythm allows us to experience the texts as different from ordinary ones. There seems to be no doubt that the event-dependent COC and the event-independent COC share the same prosodic function. Hence it is quite natural to suppose that there exists the category COGNATE OBJECT CONSTRUCTION subsuming all the instances of COCs.

6. Metaphor?

To address the question why verbs used intransitively can take overt object complements, Höche adopts Goldberg's construction grammar approach and claims that two construal operations, ontological metaphor and coercion, are responsible for the make-up of the construction involving an eventive CO. This analysis, however, has some problems which would be associated with theoretical foundations of

Cognitive Linguistics.

In order to claim that the eventive CO is conceptualized as a thing via the EVENT/ACTIONS ARE OBJECTS/CONTAINERS metaphor, one must make it clear what is preserved in the metaphorical mapping. Lakoff (1993), who characterizes metaphor as a mapping from a source domain to a target domain, proposes the following principle:

(27) *The Invariance Principle*
Metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain.   (Lakoff (1993:215))

According to the Invariance Principle, target domain structure exists prior to metaphorical mappings. Thus not only must both source and target domain properties be taken into account, but also target domain properties must be seen as playing a central role in determining the preserved properties (Iwata (1995:174)):

(28) A corollary of the Invariance Principle is that image-schema structure inherent in the target domain cannot be violated, and that inherent target domain structure limits the possibilities for mappings automatically.
(Lakoff (1993:216))

For example, consider the TIME IS MOTION metaphor. We can find many examples, such as the following, in which the concept of time is structured according to motion, as follows:

(29) a. The time will come when…
     b. The time has long since gone when…
     c. The time for action has arrived…
(Iwata (1998:519))

The examples in (29) suggest that there are similarities between spatial and temporal concepts. However, the parallels between the two domains are not created by a metaphorical mapping. They differ as to dimensionality: Physical motion is three-dimensional, whereas time is one-dimensional. Thus, perfect parallelism fails because the two domains are quite differently structured. This is illustrated in the following example:

(30)　*　The time {zigzagged/curved/meandered}.　　　(Iwata (1998:519))

Clark (1973) points out that time ought to be described using one-dimensional spatial terms, because it is one-dimensional.　Given that one-dimension is the only possibility in the temporal domain, it comes as no surprise that the temporal domain is not compatible with the verbs *zigzag*, *curve*, and *meander* which do not express a line.

On the other hand, the verb *spread*, which expresses a mass's movement over a two-dimensional area as in (31) or a radial movement of multiplex entities as in (32), can be used in the temporal domain, as shown in (33):

(31)　　The syrup spread out.　　　　　　(Lakoff (1987:432))
(32) a.　They spread south and colonized the plains of Africa.　(*COBUILD*)
　　　b.　Settlers soon spread inland.　(*OALD*)
　　　　　　　　　　　　　　　　　　　　(Iwata (1995:177))
(33) a.　Their experience of elation was spread over twenty years.
　　　b.　spread the payments over three months.　(*OALD*)
　　　　　　　　　　　　　　　　　　　　(Iwata (1998:520))

The temporal path is one-dimensional and continuous.　In (33a), a continuous, linear entity occupies a certain extension on the temporal path, while in (33b) occasions of payment are distributed evenly on the time line.　The examples in (33) show that when the verb *spread* is used in the temporal domain, its image-schematic structures change from two-dimensional and three-dimensional to one-dimensional. One-dimension is a limited portion of two dimensions and three dimensions, and in this sense parts of the image-schematic structure can be said to be preserved, in accordance with (34):

(34) Only parts of the image-schematic structure that are compatible with inherent target domain structure are preserved in mappings.
　　　　　　　　　　　　　　　　　　　　(Iwata (1995:194))

In the case of the CO of the event-dependent type, on the other hand, it is not easy to tell what counts as the preservation of image-schematic structures.　What needs to be noted is that the CO of the event-dependent type does not show the syntactic and semantic properties of an object of result.　For example, the construction allows both a non-delimited reading and a delimited reading, depending on context:

(35) 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))

If eventive COs are construed as objects that are effected through the action an agent is executing, the degree of dynamicity seen in (35) should not be obtained, since by default resultant objects cannot describe non-delimited events:

(36) a. * Carpenters built a house for a week.   (Tenny (1994:27))
    b. Mouton published the book in a month/*for a month.

                                     (Tenny (1994:160))

If Höche's analysis is correct, it follows that parts of the image-schematic structure that are *not* compatible with the inherent target domain structure is preserved in the construal of the eventive CO. The examples in (35) and (36) demonstrate that Höche's proposal clearly violates the Invariance Principle.

    One might think that this type of CO is a non-prototypical direct object and that it preserves the part of the inherent target domain in that it can co-occur with an indefinite article. However, all the nouns which co-occur with an indefinite article do not always function as arguments, as illustrated in the following:

(37) a   Yesterday is *a beautiful day.*
    b. You've been away *a long time.*

In the above examples, *a beautiful day* and *a long time* do not function as arguments. If the eventive CO is a predicate nominal or an adverbial accusative, it is no surprising that it can occur with an indefinite article. It seems difficult to demonstrate that the eventive CO is construed as a thing via the EVENTS/ACTIONS ARE OBJECTS/CONTAINERS metaphor, on the basis of the possibility of co-occurring with an indefinite article. To make an unsubstantiated claim may lead to create confusion in the description of COCs. Metaphor should not be an excuse for lack of precision or the "Anything goes" attitudes (Iwata (1995)). Thus, I do not commit myself to the relationship between eventive COs and the EVENTS/ACTIONS ARE OBJECTS/CONTAINERS metaphor.

7. Coercion Effects?
    Let us turn to the issue whether coercion effects are required for the make-up

of the event-dependent COC. Iwata (2008) points out that coercion effects are not a necessary feature of constructions. Overriding effects can be used as a diagnostic only for limited cases. According to Michaelis (2004), coercion effects are observed only with one type of constructions. She divides constructions into two types, *concord constructions* and *shift constructions*, as defined in (38a) and (38b), respectively:

(38) a. *concord construction*

A construction which denotes the same kind of entity or event as the lexical expression with which it is combined.

b. *shift construction*

A construction which denotes a different kind of entity or event from the lexical expression with which it is combined.

(Michaelis (2004:28-29))

In the case of shift constructions, the Override Principle in (39) is at work:

(39) *The Override Principle*

If a lexical item is semantically compatible with its morphosyntactic context, the meaning of the lexical item conforms to the meaning of the structure in which it is embedded. (Michaelis (2004:25))

Following Michaelis' classification, the event-dependent COC would be considered instances of shift constructions. One might take the following examples as the ones that establish the necessity of positing coercion effects in the construction:

(40) a. He smoked a sad cigarette.

b. He smoked a discreet cigarette.

c. How/*What did he smoke?

The noun *cigarette* refers exclusively to a pre-existing thing used for smoking, but not to the action of smoking. Thus, one might expect that *a sad cigarette* or *a discreet cigarette* functions as an affected object, i.e. a thing CO. However, the CO including *cigarette* expresses the way it was smoked. In fact, examples (40a, b) can be answers to the question with *how* like (40c). The adjectives do not apply literally to the head nominals. The CO *a sad/discreet cigarette* has the same function as an external modifier, so to speak. The above examples are based on authentic language data:

(41) a. She found a moment's privacy in the back hall and smoked a quick cigarette. (Jaclyn Weldon White, *Whisper to the Black Candle: Voodoo, Murder, and the Case of Anjette Lyles*)

b. He changed out of uniform, smoked a quiet cigarette, and then walked through the main terminal to meet his wife.

(Dennis Kenyon, *Appointment on Lake Michigan*)

The examples in (40) and (41) seem to indicate that the constructional meanings of the event-dependent COC should not be reduced to the noun alone.

However, as far as I know, the *smoke-cigarette* type is the only example which demonstrates that a coercion works in the event-dependent COC. If such coercion effect is inherent in the higher-order schema, every verbs and nouns ought to occur there. But this is not the case:

(42) a. * The glass broke a crooked break.

(Levin and Rappaport Hovav (1995:40))

b. * She arrived a glamorous arrival.

(Levin and Rappaport Hovav (1995:148))

c. * Phyllis existed a peaceful existence.

(Levin and Rappaport Hovav (1995:150))

The event-dependent COC cannot override verbs like *break*, *arrive*, and *exist*. Not every verb occurs in the event-dependent COC. Therefore, we cannot postulate that coercion effects are inherent in higher-level constructions.

Goldberg virtually limits herself to schematic, abstract constructions in emphasizing the top-down character of constructions. Höche, on the other hand, professes to adopt the usage-based model which emphasizes the bottom-up nature of constructions. Höche's approach is supposed to be incompatible with Goldberg's. To answer the question why in the event-dependent COC the intransitive verb can take an overt object complement, I cannot understand why she is engaging in such an inconsistent practice and why she does not pay much attention to more concrete constructions, in which the verb meaning and the constructional meaning are close to each other. Taking into account syntactic and semantic properties of the instances of the construction, we would analyze the object complements as semantically close to adverbials. This means that the specifications of the verb correspond with those of the construction, even though there is a mismatch between the form and meaning of its CO. Most of the instances of the event-dependent COC are thought of as concord constructions, except for the *smoke-cigarette* type.

Hence, coercion effects are not required for the description of all the instances of the construction.[8] To explain the fact that not every verb occurs in the event-dependent COC, we need to posit a verb-specific construction that specifies each verb occurring in the construction.

Höche's analysis on COCs is reductionist. She intends to provide a comprehensive description for the constructions, following the basic principles of Cognitive Linguistics or Construction Grammar. Thus, my analysis and Höche's share a number of fundamental assumptions. The main difference between the two analyses concerns how to represent verb meanings. Höche seems to consider that verb meanings can be defined in pure isolation. In fact, adopting Goldberg's model of Construction Grammar, she deals with prototypical COCs as constructions in which there is a mismatch between the number of participant roles with the verb and the number of argument roles of the construction. Therefore, she must use special mechanisms to overcome the incompatibility between the verb and the construction.

My lexical-constructional approach, on the other hand, assumes that there are no atomic primitives and that grammatical categories such as intransitive verb or transitive verb are construction-specific. Whether a given verb can occur in a particular construction or not is a matter of whether the whole string embedding the verb in that construction can instantiate a relevant construction or not. Neither verbs nor constructions appear in isolation. Verb meanings are only definable with respect to the constructions they occur in (Croft (2003:64)). In this sense, my approach is nonreductionist and maximalist. Thus, my proposed account does not need to postulate that the number of participant roles these verbs are associated with does not correspond with the number of argument roles offered by the constructions and that the constructions enrich the participant constellation conventionally associated with these verbs. Instead of positing coercion effects, my lexical-constructional approach assumes that verb-specific constructions handle selectional restrictions of these verbs. See Kitahara (2010) for more details.

8. Conclusion

My lexical-constructional account makes it clear that the CO of the event-dependent type functions as an adjunct, rather than an argument, and it is a special case of the intransitive construction. Unlike Höche's, the proposed account does not posit complex construal operations such as conceptual metaphors and coercion effects, to address the question why the intransitive verb can take a CO. In this respect, my proposed lexical-constructional analysis provides a more natural

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[8] In this respect, I agree with Iwata (2008) that coercion effects should be taken to argue for the existence of lower-level constructions rather than that of higher-level constructions.

explanation for the complex nature of the constructions.

Why can the event-dependent COC take an overt object complement? The answer is that the CO can be semantically equivalent to a manner adverbial. In fact, it is not unusual in English that NPs function as adverbials:

(43) a. I travel *second class*.
    b. You should never abandon your job *this way*.

In (43), italicized NPs function as adverbial accusatives. These NPs can be widely used in various constructions. However, there is a striking difference between the CO of the event-dependent type and adverbial accusatives: The eventive CO is virtually restricted to occurring in the event-dependent COC. In other words, only in the construction can it function as an adverbial. In this sense, the CO of the construction is more idiomatic than adverbial accusatives. Given the fact that the event-dependent COC is not isolated and productive, the construction may be regarded as a constructional idiom. If the event-dependent COC is a constructional idiom, it is quite natural that it has a syntax which is unique to the construction in question, i.e. the verbs which are conventionally used as intransitive take overt object complements. From the above discussion, I conclude as follows:

(44) *Why is it possible that in one type of COCs the intransitive verb takes an overt object complement, i.e. CO?*
    The intransitive verb can take a CO because the construction in which the verb occurs is a constructional idiom. Since the CO can function as an adverbial, there is no mismatch between the number of participant roles associated with the main verb and the number of argument roles of the construction. In this sense, most instances of the event-dependent COC are considered concord constructions.

Langacker (1991) mentions that the construction involving an eventive CO describes an act by means of a marginally transitive expression. This remark may be a little misleading: He never identifies the construction with the transitive construction. Now his remark should be modified as follows: The construction describes an act by means of a *superficially* transitive expression.

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