

Title	The English Caused-Motion Construction Revisited --A Cognitive Perspective--
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Citation	言語科学論集 = Papers in linguistic science (2004), 10: 41-54
Issue Date	2004-12
URL	https://doi.org/10.14989/66977
Right	
Type	Departmental Bulletin Paper
Textversion	publisher

The English Caused-Motion Construction Revisited

—A Cognitive Perspective—

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1. Introduction

This study aims at reconsidering the English Caused-Motion construction from a cognitive perspective. From the very moment of birth, human beings experience 'movement,' as one of the most fundamental experiences that exists regardless of cultures or societies. What sort of situations will come to mind when we hear the word *movement*? Although 'movement' is familiar through everyday bodily experience and of frequent occurrence, an adequate description of the linguistic category of 'movement' might prove elusive.

Before beginning the discussion, I will review some basic ideas about the linguistic category of 'movement,' which is relevant to the discussion. In this paper, I use this term to mean the event in which a thing moves from one point to another as time passes by, which can be called *location change*. Thus, running in place or waving a hand is not treated as 'movement' here. Consider the following examples.

- (1) Fred went to the library from the park.
- (2) Catharine skied from the top to the foot of the mountain.
- (3) Peter threw the ball to Tom.
- (4) Claire pushed the cart to the store.

I should point out very briefly that there are two types of 'movement'. In (1) and (2), the moving object, which is a person, uses energy to move himself/herself. In (3) and (4), the moving object does not move itself and is caused to move by the subject's energy. That is to say, the former is one type of 'movement' caused by the inner energy of the agent, and the latter is the other type caused by outer energy. What I am going to explore in this paper is the type of expressions of 'movement' caused by outer energy exemplified in (3) and (4). The syntactic pattern in sentences like (3) and (4) is what Goldberg (1995) calls the Caused-Motion construction, in which the subject works as an agent of the caused-motion event, the direct object as a mover, or a moving thing, and the oblique object within the prepositional phrase as a goal. Figure 1 diagrams the caused-motion event.

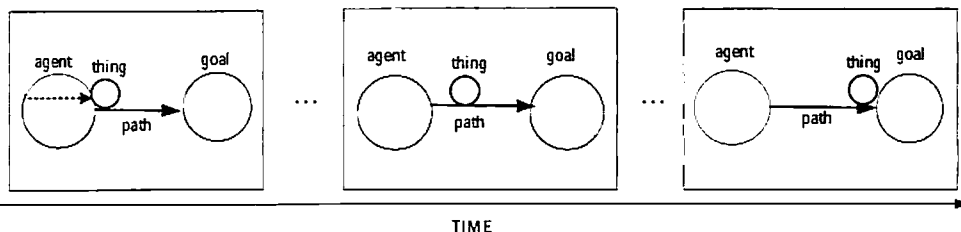


Figure 1

The Caused-Motion construction is meant to designate such physical movement of a thing as Figure 1 shows. However, when this construction pattern is metaphorically projected over possessive domain, Goldberg (1995, 2002) treats the construction as a case of constructional polysemy, because possession

transfer can be seen as an act of giving, which is a general term for all kinds of giving scenes, such as sending a letter or giving a present to someone. Thus, both caused-motion and possession-transfer events can be similar to each other on cognitive grounds. In the next section, I will begin my discussion by focusing on Goldberg's constructional approach.

2. Construction Grammar

2.1 Main Features of Construction Grammar

Construction Grammar has now developed into a mature framework with an established architecture and formal representation (e.g., Goldberg 1995, 2002; Kay and Fillmore 1999; Croft 2001). The trademark characteristic of Construction Grammar is in the insight that language is a repertoire of linguistic patterns that integrate form and meaning in conventionalized ways: *constructions*. Constructions are basic units of language, which exist independently of the particular words, which means that each construction has a specific syntactic configuration which is associated with special semantics. Here I will remark on main features of Goldberg's (1995) Construction Grammar approach which are relevant to the discussion.¹ A key tenet of Construction Grammar is that the basic units of language are learned pairings of form and meaning. In traditional approaches of linguistics, the syntax and the semantics of a construction are supposed to be fully predictable from the components of the sentence. The recognition of subtle semantic differences between related syntactic subcategorization frames has been growing, and there has been increasing focus on the fact that there appears to be a strong correlation between the meanings of verbs and the syntactic frames they can occur in, leading many researchers to speculate that in any given language the syntactic subcategorization frames may be uniquely predictable from the verb's lexical semantics (e.g., Pinker 1989).

An important difference between the two approaches concerns the ontological status of grammatical constructions. Thus, for Pinker (1989), adopting the lexical semantics approach, constructions are nothing more than 'epiphenomena,' which automatically emerge as products of a set of linking rules. As a result of this belief, the notion of constructions has rarely been deliberated since constructions are considered to arise solely from the interaction of a set of general principles concerning syntax with lexicon.

For Goldberg, constructions, i.e. conventionalized pairings of form and meaning, are basic. Basically, any constructional approach is arguing against such a treatment of constructions (e.g., Goldberg 1995, 2002; Croft 2001). Thus, Goldberg (1995) maintains that constructions, as well as lexicon, have their own syntax and semantics, and that certain distribution of lexicon is considered to be a construction if one or more of its properties are not predictable from the components of the sentence or from other aspects of grammar. Since it is sometimes implausible to hypothesize that a verb always determines the meaning or the structure of the whole sentence, Goldberg's (1995) idea seems to have certain reality. Based on this fundamental theory of Construction Grammar, Goldberg (1995) discusses the nature of constructional meaning, the principles that relate verbs and construction, and the relations among constructions. According to Goldberg, constructions designate humanly relevant scenes and such constructional meanings fuse with verbs' frame-semantic meanings, and then the meanings of whole sentences are generated.²

¹ There is a growing international community of researchers who have been pursuing the theoretical model that has come to be known as Construction Grammar, with roots in the University of California at Berkeley, in the early 1980s, especially in the studies of Charles Fillmore.

² Construction Grammar, in dealing with issues of lexical semantics and grammatical patterning, incorporates the scene-based approach to meaning known as Frame Semantics (Fillmore 1984) in which the meaning of words is defined relative to some particular background frame.

Goldberg (1995: 3). for example, takes up the following argument structure constructions as grammatical constructions, shown in Table 1:

Construction	Meaning	Form
1. Ditransitive	X CAUSES Y TO RECEIVE Z	Subj V Obj Obj2 <i>Pat faxed Bill the letter</i>
2. Caused-Motion	X CAUSES Y TO MOVE Z	Subj V Obj Obl <i>Pat sneezed the napkin off the table</i>
3. Resultative	X CAUSES Y TO BECOME Z	Subj V Obj Xcomp <i>She kissed him unconscious</i>
4. Intransitive Motion	X MOVES Y	Subj V Obl <i>The fly buzzed into the room</i>
5. Conative	X DIRECTS ACTION at Y	Subj V Obl _{at} <i>Sam kicked at Bill</i>

Table 1

To sum up the major characteristics of the Construction Grammar approach, Goldberg (1995) shows an advantage of the constructional approach, where by recognizing constructions and verbs to be interrelated but independent. the nature of constructional meaning, the principles that relate verbs and construction, and the relations among constructions are brought to the foreground. The fundamental idea behind this constructional approach to argument structure constructions is that constructions designate humanly relevant scenes, and that language evolved argument structures to encode such basic scenes. The list of correlations that exist between form and meaning given in Table 1 are constructions because their form and associated meaning are not necessarily predictable from the properties of their component parts or from other constructions. On Goldberg's constructional account only a single form-meaning correspondence need be postulated, in that the skeletal syntactic structure is paired with a particular schematic semantic structure of its own.

2.2 The Caused-Motion Construction

According to Goldberg (1995: 152), the Caused-Motion construction can be structurally defined as follows:

[Subj [V Obj Obl]]

The basic semantics of the Caused-Motion construction is basically defined as the causer argument directly causing the theme argument to move along a path designated by the directional phrase: that is, "X CAUSES Y TO MOVE Z." The definition is meant to cover the following expressions.

- (5) They laughed the poor guy out of the room.
- (6) Frank sneezed the tissue off the table.
- (7) Mary urged Bill into the house.
- (8) Sue let the water out of the bathtub.
- (9) Sam helped him into the car.
- (10) They sprayed the paint onto the wall.

As discussed in the previous section, the crucial point in the definition of a construction is that a construction has a unique form-meaning pair independent of the verbs used in the construction. This point is obvious in sentences (5) to (10). It is implausible to hypothesize that any of the verbs used in the above examples has the meaning of "X CAUSES Y TO MOVE," that is, they are not causative verbs at all independent of the construction. It is also unnatural to consider the form [Subj [V Obj PComp]] as an

inherent element of the verbs.³ For instance, the verb *laugh* in (5), which is usually used as an intransitive verb, takes three arguments, and the whole sentence has the meaning “X CAUSES Y TO MOVE Z,” which cannot be attributed to the verb meaning. The verb *laugh* in isolation does not inherently encode the caused-motion semantics. Such a causal interpretation is implied only if the semantics of the Caused-Motion construction fuses with the frame-semantic meaning of the verb.

Thus, the Caused-Motion construction has as its basic sense a causer or agent directly causing a thing to move a new location. This basic sense is extended in various ways over the metaphorical domain. A case of metaphorical extension of the Caused-Motion construction is discussed in the following section.

2.3 The Transfer-Caused-Motion Construction

The last section surveyed the Caused-Motion construction based on Goldberg’s (1995) framework of Construction Grammar. Here I would like to move on to the Transfer-Caused motion construction. Consider the following examples.

- (11) a. John threw the ball at the wall.
 b. John threw the ball to Mary.

Both sentences in (11) show examples of the Caused-Motion construction, but a semantic difference can be seen between them. In (11a), the prepositional phrase *at the wall* designates the locative goal or spatial target of *the ball*, and the meaning of the sentence is that *John* caused *the ball* to move in the direction of *the wall*, which is typical of the Caused-Motion construction. However, in (11b), the prepositional phrase *to Mary* designates more than a locative goal: it designates the intended recipient of *the ball*. Like the other expressions of the Caused-Motion construction, *the ball* thrown by *John* physically moves to *Mary*; but it is not the only meaning of the sentence. *Mary* is intended to receive *the ball* thrown by *John* (i.e., there exists intended transfer of *the ball* to *Mary*). In contrast to the Caused-Motion construction which designates location change of a thing, (11b) can imply change of ownership of a thing from the agent to the recipient.

The metaphorical extension is motivated as an extension of the Caused-Motion construction, because there is a metaphor that involves understanding possession as the “possessed” being located next to the “possessor,” transferring an entity to a recipient as causing the entity to move to that recipient, and transferring ownership away from a possessor as taking that entity away from the possessor. There is a metaphor that involves understanding possession as the “possessed” being located next to the “possessor,” transferring an entity to a recipient as causing the entity to move to that recipient, and transferring ownership away from a possessor as taking that entity away from the possessor. Thus, the construction [Subj V Obj *to*-Comp] is referred to as the Transfer-Caused-Motion construction.⁴ According to Goldberg (1995), the Transfer-Caused-Motion construction as a metaphorical extension of the Caused-Motion construction. There is a metaphor that involves understanding possession as the “possessed” being located next to the “possessor,” transferring an entity to a recipient as causing the entity to move to that recipient, and transferring ownership away from a possessor as taking that entity away from the possessor. Though the Transfer-Caused-Motion construction designates transfer, there is another grammatical construction which has the meaning of successful transfer of a thing to a recipient: the Ditransitive construction. The Ditransitive construction has a form such as [Subj V Obj1 Obj2] and

³ The abbreviation PComp found in some constructional writings stands for phrasal complement and marks a particular syntactic role in head-dependent relations. In this case, PComp stands for a variety of prepositional directionals.

⁴ *To*-Comp stands for a set of the preposition *to* and a noun phrase working as a complement.

its central sense is successful transfer of a thing between a volitional agent and a willing recipient, that is, "X CAUSES Y TO RECEIVE Z." A different point is that the Ditransitive construction means successful transfer, focusing on the state caused by the agent, whereas the Transfer-Caused-Motion construction focuses on the process of transfer. It has been well discussed in the literature that the Ditransitive construction alternates with the *to*-dative construction, whose syntactic structure is identical with the Transfer-Caused-Motion construction. Figure 2 shows the relationship among the three constructions represented by Goldberg (1995: 91)⁵.

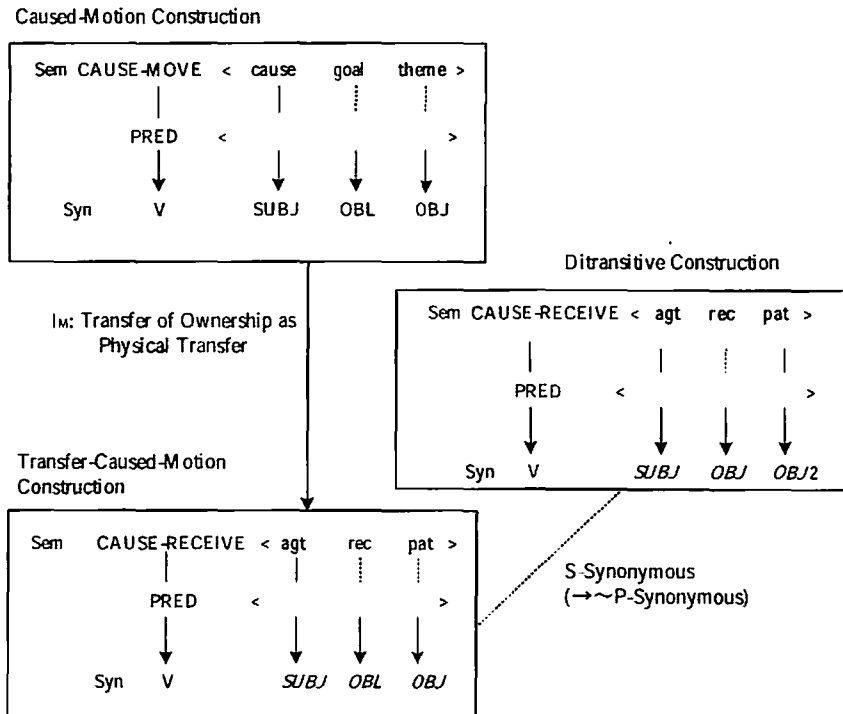


Figure 2

Examples of dative alternation are shown as follows:

- (12) a. John gave Mary a book.
- b. John gave a book to Mary.
- (13) a. John kicked Mary a ball.
- b. John kicked a ball to Mary.

In Goldberg's (1995) analysis, while (14a) and (14b) can be called the Transfer-Caused-Motion construction, (15a) and (15b) are literally defined as the Caused-Motion construction.

- (14) a. The judge awarded custody to Bill.
- b. Bill gave his house to the Moonies. (Goldberg 1995: 89)
- (15) a. Sally threw a football to him.
- b. Sally handed a scented letter to him. (Goldberg 1995: 92)

The objection to Goldberg's dealing with such distinction of literal and metaphorical meanings is well

⁵ The Ditransitive construction and the Transfer-Caused-Motion construction are considered to be mutually independent, semantically synonymous, but not pragmatically synonymous.

founded. In my understanding, the evidence for supporting her analysis is exiguous. Considering that Goldberg has to distinguish the two meanings in order to explain the semantic synonymy of the Transfer-Caused-Motion construction with the Ditransitive construction, the objection will no doubt be raised that her claim that the two constructions are synonymous is against the fundamental idea of Construction Grammar that each construction has a unique pair of form and meaning, and her excuse that the constructions are pragmatically not synonymous does not seem convincing enough.⁶

The Transfer-Caused-Motion and Ditransitive constructions might not be semantically synonymous, or have the same meaning in common, either. In the former construction, one of the aspects of act of giving, namely, the process of movement can be profiled. In my analysis, the semantics of the Transfer-Caused-Motion construction can involve both physical movement and possession-transfer.

3. The Basic Frame of Transfer-of-Possession Verbs

The Transfer-Caused-Motion construction is prototypically symbolized by transfer-of-possession verbs like *give* and *send*, since the verb's semantics involves both the transfer and the location change of a thing. In this section, I will take up an interesting research on the notion of GIVE from Newman's (1996) study.

First of all, the basic frame of GIVE defined by Newman (1996) is that there is a person (GIVER) who has some thing (THING) and this person passes over the thing with his/her hands to another person (RECIPIENT) who receives it with his/her hands, and this frame can be elaborated in many ways since persons function in many related routines and typically act for certain reasons with certain goals in mind. GIVE has encyclopedic meanings, and this fact contributes to the meaning of GIVE type verbs. Though Newman (1996: 37) states that the frame of GIVE is made up of numerous domains such as temporal, sensory, causal, socio-historical, he especially distinguishes the spatio-temporal domain, the control domain, the force-dynamics domain, and the domain of human interest. Among all the domains that Newman (1996) presents, the spatio-temporal domain would be the one which has a significant correlation with the Transfer-Caused-Motion construction. A spatio-temporal domain is a domain which explicates the physical dimension of GIVE. The frame in Figure 3 constitutes the spatio-temporal *base* of many common GIVE-type predicates designating transference of a thing, including English predicates such as *give*, *donate*, *award*, *present*, *bestow upon*, and *hand over*.⁷

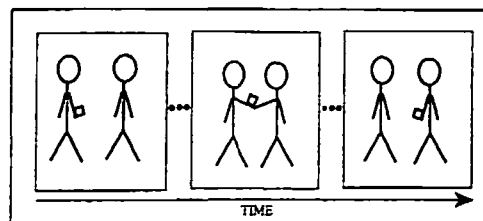


Figure 3

Figure 4 is a simplified diagram of the spatio-temporal domain. When we give a thing to someone, the thing normally changes location from the giver to the recipient through time.

⁶ For further remarks on Goldberg's (1995) pragmatic specification, see Kodama (2001).

⁷ Newman (1996) uses the word *base* to mean that it is the context within which particular GIVE senses are defined, though it cannot simply be equated with any one specific GIVE verb.

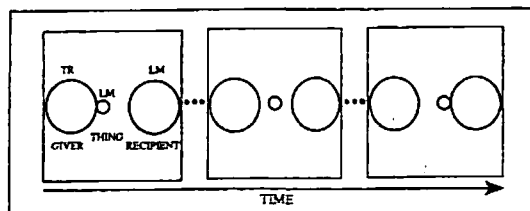


Figure 4

Moreover, Newman emphasizes the importance of such time transition as follows:

- (16) Since this predicate designates a sequence of distinct configurations which evolve through time, rather than being simply a static unchanging spatial configuration, the time dimension of the meaning of the predicate will also be included in the overall profile. (Newman 1996: 40-41)

The strong correlation between the spatio-temporal domain of GIVE predicates and the Transfer-Caused-Motion construction can be best represented by the following quotation:

- (17) In the spatio-temporal domain of GIVE there is a movement of the THING to a RECIPIENT and this is what motivates the marking of a RECIPIENT as a goal or locative. (Newman 1996: 130)

It can be seen that the spatio-temporal domain is quite similar to or almost identical to the semantics of the Caused-Motion construction. In addition, Newman's analysis that the spatio-temporal domain, that is, a domain of movement is included as one of the most important domains in the act of giving may support the proposal that there exists an affinity between possession-transfer and caused-motion events based on the viewpoint of Slobin's (1985) conceptual gestalts⁸

Other than the domain involved in GIVE, we can borrow a useful idea for our discussion about the preposition *to* from Newman (1996), which plays a vital role in the Transfer-Caused-Motion construction. The fundamental meaning of the morpheme is the goal of a path, but in the Transfer-Caused-Motion construction, it designates a recipient. There must be a semantic similarity between the two meanings. Newman (1996) explains that the fact that the recipient is typically stationary and relatively passive in the act of giving encourages a construal of the recipient as a goal. He continues that people can think of the object as moving to the recipient and stopping at the recipient, parallel to what happens when an object moves along a path to a goal. Indeed, *to* does not designate all kinds of locative goal, and there exists a semantic constraint in possibility of occurrence. Consider the next example.

- (18) a. *John threw the ball to the wall.
b. John threw the ball at the wall.

If *the ball* is thrown towards *the wall*, it will break *the wall* or be bounded back, and it is probably impossible that *the ball* stays on *the wall*. As the fact that (18a) is unacceptable demonstrates, the semantic factor that allows the preposition *to* to occur in the Caused-Motion construction is whether or not the goal in the context is a place where the object thrown can stop. If the goal does not fit into this constraint, another preposition occurs in sentences like (18b). It is easy to metaphorically construe the recipient in the act of giving as a place where the object transferred can stop, since the recipient can

⁸ Slobin (1985), in his extensive review of cross-linguistic patterns in language acquisition, suggests that children seek the linguistic means of expressing certain kinds of conceptual gestalts. The most prominent of all such conceptual gestalts are the 'manipulative activity scene,' where an agent acts on a theme or patient and causes a change, and the 'figure-ground scene,' where an object moves with respect to a reference frame.

possess the object. Newman organizes the semantics of *to* as follows:

- (19) Specific meanings of this morpheme are: designating the spatial path leading to a landmark entity, as in *the road to Auckland*; a stretch of time leading up to a particular point in time, as in *in five minutes to three*; movement along a spatial path over a stretch of time, as in *She walked to the store*; the RECIPIENT in an act of giving, as in *She gave the book to me*. All of them are instantiations of the notion of a path, leading to a goal as landmark. Hence, I have shown this as the schematic meaning underlying all the other meanings indicated. Furthermore, there is a similarity in the two meanings represented in *She walked to town* and *He gave the book to Mary*, as explained above. Both of these uses of *to* relate to the movement of some entity through time along a path to a goal. Consequently, I have shown this commonality as a schematic meaning involving movement along a path in a spatio-temporal domain. (Newman 1996: 90)

The two semantic roles of *to* taken up in this paper, namely, the goal of a path and the recipient in act of giving, are originated in the same image schema that is the movement of an entity along a path. The distinction between the two is sometimes not as simple as we think, especially when the skeletal structure of the Caused-Motion construction is realized. Such obscurity is the main focus in the next section.

4. Affinity between Caused-Motion and Possession-Transfer Events

As I have discussed earlier, Goldberg (1995) argues that grammatical constructions have their own forms and meanings, and that constructions designate the meaning of a sentence in top-down manner, independent of lexical items. Then, is it really the case that all the sentences that have the same syntactic form have the same constructional semantics? The pitfall of Goldberg's constructional approach to the Caused-Motion construction will become revealed by assuming that there exists an affinity between caused-motion and possession-transfer events.

4.1 Caused-Motion Event and Locative Goal

First of all, let us examine the following examples:

- (20) John sent the letter to Mary.
 (21)a. John drove the car to Chicago.
 b. John drove the car towards Chicago.

(20) can be construed as the Transfer-Caused-Motion construction, which means that *the letter* was sent by *John* to the place of *Mary* and *Mary* is intended to receive it. It is also true that (21a) shows the same skeletal structure as the Transfer-Caused-Motion construction. Then, does (21a) mean that *John* transferred *the car* to *Chicago* and *Chicago* is intended to receive *the car*, like the other transfer-caused-motion expressions do? No. Since the semantics of the verb *drive* does not contain the sense of giving, unlike typical verbs of giving such as *give* or *send*, the sentence cannot gain the transfer sense. As explained in section 3, *to* is allowed to occur in the Caused-Motion construction if the goal in the context is a place where the object can stop, and (21a) meets this requirement. As a result, while in (20), *Mary* designates a recipient of *the letter* and *Mary* is intended to possess *the letter*, in (21a) *Chicago* is a locative goal where *the car* can stop after moving. Figure 5 diagrams (21a). This figure represents a thing being contained inside an agent because the agent has control over the thing and they move together towards locative goal, though the car physically contains the agent.

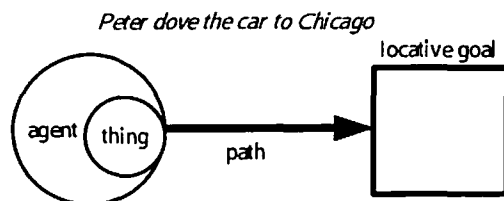


Figure 5

According to Lakoff and Johnson (1999: 32), the source-path-goal schema, which is considered to be equivalent to the event of 'movement,' has the following elements :

A trajector that moves

A source location (the starting point)

A goal, that is, an intended destination of the trajector

A route from the source to the goal

The actual trajectory of motion

The position of the trajector at a given time

The direction of the trajector at that time

The actual final location of the trajector, which may or may not be the intended destination

When something moves, these elements are always essential in the event. Therefore, the Caused-Motion construction, which designates movement of an object, must contain these elements. What I must put an emphasis on is the goal of a trajector, which is not just a place that the object actually reaches, but an intended destination towards which the agent tries to move the object. Although (21a) is not an example of the Transfer-Caused-Motion construction, it shares the same preposition with other typical Transfer-Caused-Motion expressions, and therefore a certain semantic similarity could be seen between them. Both (21a) and (21b) are regarded as the Caused-Motion construction, but the type of directionals differs from each other. While in (21b), *Chicago* is treated as an object in which direction the car driven by John moves, *Chicago* in (21a) is a place where the car can stay after moving. Thus, This notion of goal seen in (21a) is more like a container for an object after moving.

4.2 Caused-Motion Event and Metonymy

In the discussion above, it might seem that, if a locative expression occurs as a *to*-NP phrase, it can automatically designate a locative goal. But even if the preposition *to* occurs with a location, it sometimes designates not a locative goal but a recipient. Consider the following examples.

(22) a. John sent the package to Mary.

b. John sent the package to New York.

The fact that (22b) is grammatical might seem odd, since *New York* does not appear to fit into the constraint that the NP occurring with *to* must be an animate recipient in the Transfer-Caused-Motion construction like (22a). A possible solution is that (22b) just designates physical movement since *New York* is a locative goal and (22b) shows the same surface structure as (21a). However, this cannot be the case, because the verb *send* is definitely one of the typical verbs of giving, and if such a verb occurs with the preposition *to*, the whole *to*-NP phrase must imply an intended recipient. Then, how does *New York* work as an intended recipient of the package sent by the agent?

To answer this question, we need to refer to metonymy.⁹ In the case of (22b), *New York* works as a

⁹ Metonymy is a language expression in which an entity is used to stand for another associated entity in terms

reference point, metonymically suggesting someone in the city who can be recognized from the context by the participants of the conversation. Therefore, a sentence like *John threw a ball to the wall* is still unacceptable, because no metonymic inference is possible from *the wall*.

Figure 6 represents the cognitive structure of (22a) and (22b). The objects drawn with a bold line are profiled and explicit in the sentences. It is clear in these figures that, though the types of nouns in the sentences are different, the sentences share the fundamental semantics of the Transfer-Caused-Motion construction, with arguments such as agent, thing, and intended recipient not explicit in the language expression but metonymically inferable.

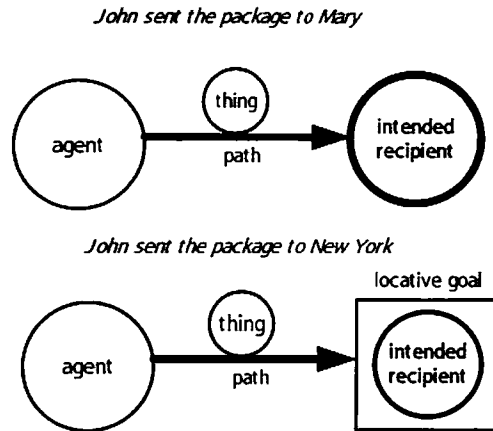


Figure 6

More examples of the Transfer-Caused-Motion construction can be observed almost everywhere in English. In the following examples, *to*-NP phrases metonymically represent certain intended recipients of objects in the act of giving.

- (23) a. IBM donated some computers to the company.
 b. John presented a painting to the museum.

We have seen that a location can designate a recipient through metonymic inference. Then, is there a case in which a person designates a location instead of a recipient in the Caused-Motion construction? Consider the following examples.

- (24) a. Peter threw the ball to Tom.
 b. Peter carried the box to Tom.

Though these two sentences seem to instantiate the same construction, they are not: (24a) is a typical Transfer-Caused-Motion construction whereas (24b) is a Caused-Motion construction that just designates literal location change. Again, metonymic inference is working in (24a) so that *Tom* can designate a locative goal. Contrary to (22b), where a location implies a possessive goal recipient, in (24b), a person may imply a locative or spatial goal, for it is possible for us to infer it through metonymy. That is, *Tom*, or to be precise, where *Tom* stands, functions as a locative goal of *the box*. Figure 7 diagrams (24b). Therefore, (24b) cannot be called the Transfer-Caused-Motion, or an extended construction from the

of proximity. According to Lakoff and Johnson (1980: 36), metonymy has a referential function and allows us to use one entity to stand for another that is related to it. However, metonymy also serves the function of providing understanding. In the example of “the part for the whole,” which part we pick out determines which aspect of the whole we are focusing on. Like metaphor, metonymy is not just a matter of language. Metonymic concepts are part of the ordinary, everyday way we think and act as well as talk. For further discussions, refer to Lakoff and Johnson (1980, 1999) and Yamanashi (1988, 2000).

central Caused-Motion Construction, but just the Caused-Motion construction.

John carried the box to Mary

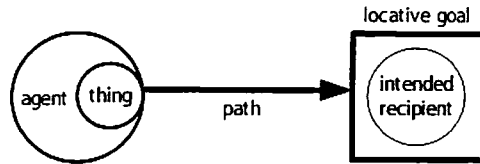


Figure 7

The crucial evidence is that verbs like *throw* can occur both in the Caused-Motion and Ditransitive constructions, whereas verbs like *carry*, which might be similar to *throw* on cognitive grounds, occur only in the Caused-Motion construction.

- (25) a. Peter threw Tom the ball.
 b. *Peter carried Tom the box.

It follows from this that even if the skeletal syntax would make sense, what may be crucially concerned in determining grammaticality is not the actual types of nouns such as a person or a location, but rather event construal as one of the cognitive processes. That is, even if the noun in the *to*-NP phrase literally represents a location, it may be possible to construe it as a recipient, and vice versa, depending on event construal.¹⁰

4.3 Event Construal

As I discussed in the previous section, *Tom* is construed as an intended recipient in (24a), while it is as a locative goal in (24b). Pinker (1989: 218) states that verbs like *throw* designate an instantaneous event preceding the motion of the object in the context of causation of movement, and that verbs like *carry*, a continuous process that is temporally coextensive with the motion of the object. It does not really matter if the agent accompanies the moving object or he/she uses a tool to move it. The crucial point is that, in the event of carrying, the agent can control the object throughout the movement, or he/she can change the path to the goal, which does not mean the agent emits the object, whereas in the event of throwing, the action of the agent is finished before the movement of an object, therefore the path of movement cannot be changed, which means the object is emitted by the agent.¹¹

Pinker, who acknowledges the autonomy of lexical semantics, asserts that it entirely depends on the semantics of a verb whether the verb occurs in a construction or not. That is, a construction is considered to arise solely from the verb's semantics and have no innate semantics. For instance, verbs like *throw* can occur both in the Caused-Motion and the Ditransitive construction, whereas verbs whose semantics might be similar to *carry* occur only in the Caused-Motion construction.

The Transfer-Caused-Motion construction designates transfer, that is, the act of giving, therefore the construction requires a certain element which differentiates *throw* and *carry*. The element is the

¹⁰ Yet, there remains a question concerning metonymy. In the metonymy "a location for a recipient" such as *John sent the package to New York*, reference seems rather free and *New York* can designate any person or institution in the city. But in "a person for a location" such as *Peter carried the box to Tom*, *Tom* needs to designate exactly where he is, and there appears to exist a constraint. Such a difference in possibility will need to be analyzed in further study.

¹¹ Interestingly, verbs like *carry* do not occur with the preposition *at*, whereas verbs such as *throw* do. This is because the semantics of *at* focuses on the direction of motion and in the event of *carry*, direction is not fixed since the agent can freely move with the object:

- (i) a. Peter threw the ball at Tom.
 b. *Peter carried / pushed / pulled / schlepped / hauled the box at Tom.

existence of 'emission' of the object by the agent before 'capture' of it by the recipient in act of giving, for the agent must emit the object so that the recipient can capture it when he/she gives an object to someone. The act of giving may be defined as a process of changing ownership of a thing.

As Pinker (1989) explains, verbs of instantaneous imparting of force in some manner causing ballistic motion like *throw*, *toss*, *flip*, *slap*, *kick*, *poke*, *fling*, or *blast* designate an instantaneous event preceding the motion of the object, which means the emission by the agent. In the case of (24b), however, the agent moves with the object towards the goal, and there is no emission of the object, therefore no transfer is entailed. The *to*-NP phrase in (24b) designates an eventual physical, spatial goal of an object. It becomes clear now why sentences like (22b) and (24b) are not defined as the Transfer-Caused-Motion construction. Figures 8 and 9 show such difference in the types of event.

Peter threw the ball to Tom

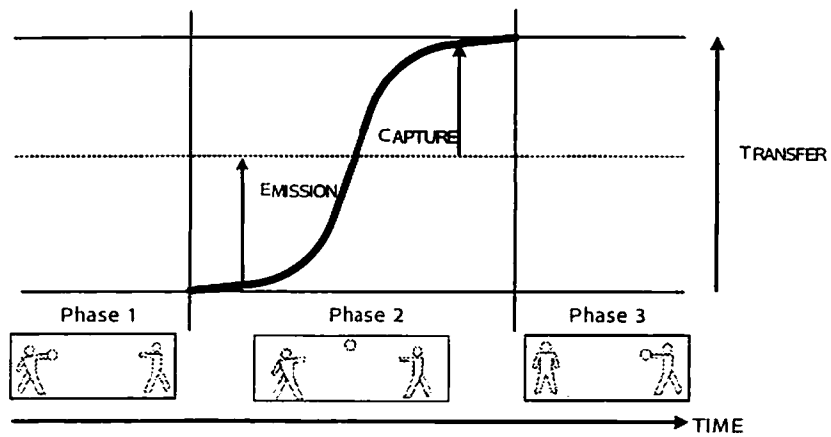


Figure 8

Peter carried the box to Tom

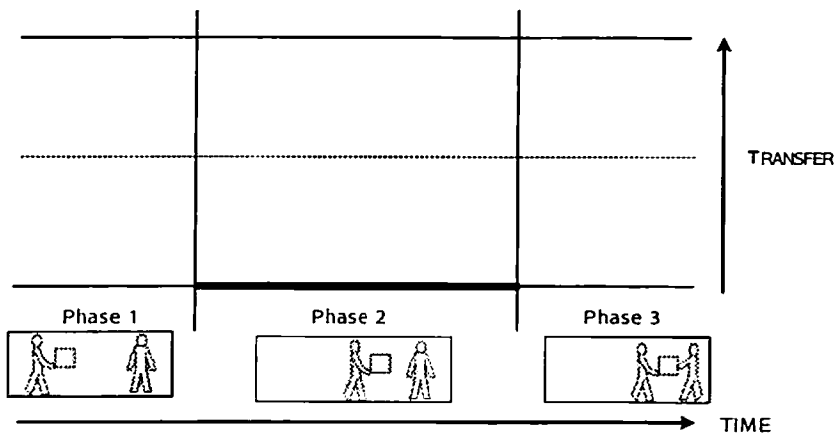


Figure 9

In Figures 8 and 9, Phase 1 designates the state before movement, Phase 2, the process of movement, and Phase 3, the state after movement. On the whole, the Transfer-Caused-Motion construction profiles a transfer image involving physical movement, or location change. Bold lines designate the profiled

phase. For example, the curve of the graph in Figure 8, expressed as the bold line, shows that the profile is on physical movement involving location change.

The fact that transfer requires 'emission' and 'capture' of an object suggests that the Transfer-Caused-Motion construction does not occur with verbs of accompanied-motion like *carry*, *push*, *pull*, *schlep*, or *haul*, even if they occur in the exact form of the construction. It is evident that considering Figures 8, there is the existence of 'emission' of the object by the agent before 'capture' of it by the recipient in act of giving in a throwing-scenario, thus an affinity between caused-motion and possession-transfer events on the level of event construal.

Although Pinker (1989) asserts that a difference in grammaticality between the two types of dative alternation constructions is an automatic consequence of the fine-tuning of the verbs' semantic representations, much deeper discussions on the relationship between Caused-Motion, Transfer-Caused-Motion and Ditransitive constructions can be possible by hypothesizing that event construal imposes such a crucial constraint on verbal syntactic behavior, which otherwise could not be done within the framework of lexical semantics or any such kind of linguistic theory.

5. Concluding Remarks

In this paper, I have reconsidered the caused-motion events, focusing on the relationship between the Caused-Motion, the Transfer-Caused-Motion and the Ditransitive constructions. Reviewing Goldberg's (1995) constructional approach, I have proposed a new standpoint on the Caused-Motion construction in terms of event construal. Since the caused-motion and possession-transfer events contain highly complex semantics and therefore exhibits high affinity to each other, conventional approaches cannot fully capture the relationship between the Caused-Motion construction and the Transfer-Caused-Motion construction. A sentence that is superficially taken as the former construction in conventionalized ways turns out to be classified as the latter construction, if a locative goal is metonymically re-analyzed into an intended recipient. The perspective proposed in this paper will give a new insight into the study of the English Caused-Motion and Transfer-Caused-Motion constructions. As a final point, I should note that my most basic proposal is that there exists affinity gradience between caused-motion and possession-transfer events on the level of event construal, which will concern dativizability. The future direction of this study will be to extend my research to the issues on how children construct abstract linguistic representations of these three constructions out of their item-based constructions in the usage-based approach.

[Acknowledgement]

*I would like to express my appreciation to Andrew Obermeier for reading the manuscript and making a number of helpful suggestions for stylistic improvements. All remaining errors are my own.

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