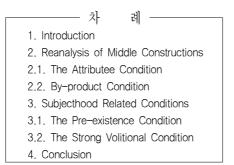# On Mismatched Middle Constructions

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1. Introduction

Various studies on Middle constructions have been made from many perspectives based on different theoretical backgrounds. However, these discussions are related to analysis of three components: a surface subject, a predicate, and an adverbial. Focusing the three elements which are necessary to analyze middle constructions, we will attempt to investigate their characteristics in this paper.

First, let us examine the constraints on the surface subject of middle constructions. The most noticeable constraint on middle constructions is about affectedness (Hale & Keyser 1987; Roberts 1987; Fagan 1988; Pinker 1989; Hoestra & Roberts 1993), which claims that only the verbs

with affected objects can license middle constructions. In other words, the surface subject in middle constructions must be affected by the predicate verb. This constrain, however, is either too wide or too narrow. On one hand, some middles are unacceptable though their subjects are surely affected. On the other, some others can be perfectly grammatical in spite of no affectedness to their subjects. The two-fold weakness of the affectedness constraint can be illustrated in (2) and (3):

(2) a. *The car hits easily.
    b. *The door kicks with difficulty.
(3) a. I don't photograph very well.
    b. Your film screens well.

Considering the inadequacy of the affectedness constraint, Yoshimura & Taylor (2004) suggests the responsibility condition, under which the subject referent of middle constructions has to be able to be construed as possessing properties which significantly facilitate and initiate the unfolding of the process in question. It is easy to see that the certain properties of *I* and *your film* contribute much to the process of photographing very well and screening well respectively, but it is hard to reason what kind of contribution either *the car* or *the door* makes to the process of hitting and kicking. The difference between (2) and (3) lies in whether the subject can be construed to be responsible for the process denoted by the verb or not.

Second, as for the constraints on verbs, the aspectuality condition is most widely recognized (Fagan, 1992; Roberts, 1987). It allows the activities and accomplishments to enter middle constructions, excluding the states and achievements.

(4) a. The truck drives easily. (activity)
   b. This vase breaks easily. (achievement)
   c. * Tom believes easily. (state)
   d. * The dirtiness of the street notices easily. (achievement)

However, the aspectuality condition fails to account for the unacceptability of (5).

(5) a. * Small towns destroy easily.
   b. * Kidnappers do not murder easily.

Though both verbs in (5) satisfy the aspectuality condition, they cannot form middle constructions. This means that the verbs are incompatible with middle constructions. It seems that this ungrammaticality is related to what extent a verb is agentive. However, it is hard to judge whether a certain verb is too agentive to enter middle constructions on the basis of the notion of agentivity as an abstract matter of continuum.

Third, middle constructions obligatorily appear to require an adverbial except for some cases (such as negation of emphasis). Without an adverbial modification, middle constructions could not contain adequate new information to satisfy Grice's conversational maxim (Goldberg & Ackermanm, 2001; Yoshimura & Taylor, 2004).

(6) a. The car drives like a boat/ easily/ 365 days a year/ only in the summertime.
   b. * The car drives.
   c. That car doesn't drive.
   d. These red sports cars DO drive, don't they?

Under our assumption that cars can be driven, (6b) does not convey any new information. So middle constructions need adverbial modification in most cases. However, not all adverbials are eligible for middle constructions.

(7) a. * The novel sells proudly.
    b. * Polyester cleans carefully.

Fellbaum(1986) points out that those agent-oriented manner adverbs that are not compatible with middle constructions. And the adverbials in middle constructions should be in the final positions (Hale & Keyser 1987). As such, the adverbials in middle constructions are restricted semantically or according to their positions. However, all those constraints mentioned above cannot always guarantee acceptable middles.

(8) a. English teaches easily.
    b. * English learns easily.

In (8), it is absolutely plausible to construe that certain properties of English contribute much to initiating and facilitating the process of teaching as well as learning. And the verbs *teach* and *learn* are closely related in semantics. Both of them are seen to be similar in showing aspectual properties and agent-orientation, even if not the same. Furthermore, the adverbial *easily* is at the same position. That is, both middles meet all the constraints discussed above; they are distinctive greatly in acceptability.

We will examine the Proto-Roles Hypothesis suggested by Dowty (1991) which provide several advantages in analyzing middle constructions. Dowty (1991) puts forward the Proto-Roles Hypothesis, treating role types as cluster concepts further than discrete categories. Though

arguments seem to be surfaced as a variety of role types, only two role types are sufficient in describing argument selection: PROTO-AGENT and PROTO-PATIENT. Dowty offers the preliminary lists of properties that characterize these two role types, as below:

(9) Contribution Properties for the Agent Proto-Role:
  a. volitional involvement in the event or state
  b. sentience (and/or perception)
  c. causing an event or change of state is another participant
  d. movement (relative th the position of another participant)
  e. exists independently of the event named by the verb

(10) Contributing Properties for the Patient Proto-Role:
  a. undergoes change of state
  b. incremental theme
  c. casually affected by another participant
  d. stationary relative to movement of another participant
  e. does not exist independently of the event, or not at all

Dowty points out that combinations of certain properties correspond to the familiar role types.[2]

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2)

AGENT is volition+causation+sentience+movement.

EXPERIENCER is sentience without volition or causation.

INSTRUMENT is causation+movement without volition or sentience.

THEME is most typically change+ incremental-theme+ dependent-existence+ casually-affected.

SOURCE and GOAL are not really defined by any properties, and they are obliques in many cases. In other words, oblique roles are neutral in terms of the features of Proto-Roles.

According to Dowty's argument selection principle, an argument, when its predicate entails the greatest number of Proto-Agent properties, will be lexicalized as the subject of the predicate.

Though there are some verbs that entail subject existence (9e) without (9a-d), there are apparently no verbs that entail any of (9a-d) without entailing existence (9e). In brief, an argument used as a subject should "exist independently of the event named by the verb".

2. Semantic Function Related Conditions

The predicate of middle constructions, though active in morphology, takes a non-agent NP as its subject. In other words, there is a superficial mismatch between the grammatical subject and the predicate. Let us now try to keep finding out the key to this paradox.

2.1. The Attributee Condition

Middle constructions are characteristic of the inherent property (or properties) of the grammatical subject rather than represent a certain event. Fagan (1988) notes that "middles are not used to report event, but to attribute a specific property to some objects"(p.200). Condoravdi(1989) points out that middle constructions have generic interpretation where an inherent characteristic property of the subject is predicated, while the agent is downgraded. As a result, middle constructions select a non-agent thematic role as its subject, which leads to a "mismatched" argument structure. Schlesinger (1995) claims that the grammatical subject of middle constructions should be regarded as Attributee. He observes a semantic condition of middle constructions:

(11) The Attributee Condition:
    The subject nominal of MC must be well attributed.

    The examples below illustrate how this condition works:

(12) a.*This dress fastens.
    b. This dress buttons.
(13) a.*The wall hits/kicks easily.
    b. The wall hits/kicks down easily.

    (12b) is acceptable because it describes how a particular *dress* is fastened. That is, it is because a dress is *buttoned* rather than *zipped* shut or fastened in any of the other ways dresses are typically secured, but (12a) fails to attribute a specific property, for it is assumed that all dresses can be *fastened*. For (13), not having the participle *down*, the sentence cannot be interpreted as describing a certain characteristic of *the wall*. We can find that the presence of *down* has certain property (being prone to collapsing) of *the wall* realized.

2.2. By-product Conditions

    The attributee condition causes middle constructions to attribute something to the grammatical subject, so all the constituents should contribute to this semantic function integratively. A closer examination also shows that all the constraints suggested above are just some by-products of the attributee condition.
    Let us examine the correlation between the attributee condition and the constraints on adverbials. Here we have to ask whether adverbials are obligatory. In (12b), *This dress buttons* shows that as long as the

grammatical subject can be properly attributed, the adverbial is not necessary. Although adverbials are necessary in most cases, agent-oriented adverbials are not absolutely suitable for middle constructions. It is because middle constructions need the non-agent subject, naturally suppressing or backgrounding the role of the agent. In fact, the same adverbials in different positions may induce different interpretations (Jakendoff, 1972). The adverbial describes the process manner at final and modifies the entire predicate in initial, suggesting the result of an event. Middle constructions express the facility of initiating an event instead of the result of the event. Adverbials in middle constructions must occupy the final positions.

Next, we will investigate the correlation between the attributee condition and the responsibility condition. It is natural that when the event is employed to attribute a nominal, the referent of a nominal related to the event plays the most important role. If the referent plays a so trivial role in an event, the event does not impose a proper attribute on the nominal. In a sense, the attributee condition and the responsibility condition are mutual in spite of inverse perspectives. That can be illustrated by (14).

(14) a. The medicine cures well.
    b. *The scalpel cures well.

In the process of curing a patient, *the medicine* contributes much more than *the scalpel* does. Correspondingly, in the same process, *the chamomile* can be attributed well, but *the scalpel* not.

we will also consider the correlation between the attributee condition and the aspectuality condition. According to the attributee condition, middle constructions should be able to depict the inherent and constant property of the subject referent. That is, the attributee condition also entails middle

constructions into generic interpretation. Middles state propositions that are held to be generally true. And they do not describe particular events in time (Keyser & Roeper 1984). Roberts (1987) claims that middle formation is a process of stativization.[3] In other words, middle formation undergoes a process of imperfectivization. Of course only perfective verbs can be imperfectivized (Refer to example (4)). Since state and achievement verbs are already imperfective, they cannot be futher imperfectivized. So we can claim that the aspectuality condition is subject to the Attributee Condition.

Lastly, we will consider the correlation between the attributee condition and the agentivity condition. As analyzed already, due to the semantic function, middle constructions background the role of the agent semantically, in fact suppresses it syntactically usually. As a result, strong agentive verbs should be filtered out. The operable criterion to test whether a certain is too agentive to enter middle constructions will be figured out later. It is clear that all those middle formation conditions proposed up till now are just some requirements for each constituent in middle constructions to work compatibly to realize its semantic function as a whole. All of them are subject to the attributee condition in nature. But the attributee condition only presents the motivation to select such a "mismatched" argument structure, leaving the question what makes it grammatical and unique untouched. The next section aims to unravel such mysteries mainly based on the proto-roles hypothesis.

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3) I) *This language understands easily.

   ii) *This story believes easily.

The inability of state verb to appear in middle constructions is one of the things that make middle constructions different from other types of non-eventive constructions in English.

3. Subjecthood Related Conditions

3.1. The Pre-existence Condition

Many scholars (Fagan,1992; Oosten 1977,1986; Voorst 1988. Yushimura & Taylor 2004) argue that the non-agent subject of middle constructions appear to play an agent-like role in the sense that this nominal, due to its prominent properties, can be construed to be responsible for the occurrence of the event involved. According to Lakoff(1977), responsibility is the most central of all the agent properties that typically pair with subjecthood. The term (responsibility) functions the same as one of Dowty's contributing properties for the agent proto-role, causing an event or change of state. Though causation is an important and prominent feature of subjecthood, it is not the basic one. That is why the responsibility condition proves to be untenable.

According to Dowty (1991), what is vital for a non-agent nominal to be the qualified subject is independent existence. This means that pre-existence is the basic one among various features of the agent. The notion of pre-existence overlaps with Dowty's independent existence. It is theoretically safe to take pre-existence as the basic and vital feature of subjecthood. Thus another middle formation condition can be assumed as bellow:

(15) The Pre-Existence Condition:
      The referent of the MC subject must be pre-existent prior to the
      event named by the main verb.

Typically, the objects created do not exist until the process of creating. Just as Fellbaum (1986) notices, the verbs referring to the creation of the object denoted by the patient NP cannot be employed in middles.

(16) a. *This house builds easily.
　　 b. *This poem writes easily.

　　The domain of 'existence' relevant to the notion of pre-existence is not limited to a physical one; instead, it can be extended to the metaphorical or abstract.

(17) a. French teaches easily.
　　 b. *French learns easily.
(18) a. The books sell well.
　　 b.*The books buy well.

　　Such data are hardly accounted for and known as notorious pairs in literature. But the differences between each pair are apparent when the notion of pre-existence in abstract domain is applied. Because what is learned is commonly regarded as coming into existence in the learner`s domain of knowledge after the action of learning. Similarly, what is\bought is not coming into existence in the buyer`s domain of possession or ownership until the transaction of buying. In each pair, the latter`s failing to satisfy the Pre-existence Condition leads to unacceptability. But it should be noticed that the Pre-existence Condition imposes unbalanced effects on the middle formation in the generic and specific contrasts, as shown in (19) and (20) respectively:

(19) a.*This wool sweater knits easily. (specific)
　　　 b.*This bridge builds easily. (specific)
　(20) a. ?Wool sweaters knit easily (generic)
　　　 b. ?This type of bridge builds easily. (generic)

For the specific sentences in (19), the Pre-existence Condition works forcefully. But for the generic counterparts in (20), different scholars have different judgments. Fellbaum(1986) regards them unacceptable. However, in the eyes of Achema & Schoorlemmer, they are unproblematic. A natural question is why the generic ones are more acceptable though they all contradict the Pre-existence Condition literally. It is because the concept of blueprint or schema works here. The generic ones are comparatively easier to activate the relevant blueprints which in turn facilitate the interpretation of such sentences. That is, the Pre-existence Condition is satisfied with the schematic knowledge of the same categorical referents in our mind. In contrast, it is not so easy for sentences with specific subjects, which refer to entities only coming into existence as a result of the very action in question. So we argue that the Pre-existence Condition surely exists there linguistically though world knowledge impacts our grammatical judgments substantially.

3.2. The Strong Volition Condition

According to Dowty(1991), all the arguments in the subject position of middle constructions are of certain degree of the resemblance to proto-agent, some possess more features of proto-agent, and some others fewer. But it does not mean that they are proto-agents themselves. Then what after all makes them distinguishable?

With a thorough comparison between the features of proto-agent and the ones of all other non-agent roles, it would be clear that all but one contributing property of proto-agent can be possibly shared by other non-agent roles. That is the volitional involvement in the event or state. So the grammatical subjects of middle constructions do not qualify to undertake the property of volition. Furthermore, is`s widely accepted that

the agent is implicit or depressed in middle constructions. All these facts show that there is no argument that is capable of taking on the property volition in middle constructions. All these facts show that there is no argument that is capable of taking on the property of volition in middle constructions. If a verb in middle constructions necessarily entails strong volitional involvement of agent, it is ungrammatical. So another condition for middle formation goes like this:

(21) The Strong Volitional Condition:
    Any verbs necessarily entailing strong volition are incompatible with middle constructions.

Of course, most verbs, except for unaccusatives, have the potential to entail volition. Let us examine how can we make a judgment whether a certain verb can meet the strong volitional condition or not. Admittedly most verbs seem to entail volition, we argue that only the ones necessarily entailing strong volition cannot enter English middle constructions. Agents must be always involved volitionally in the events denoted by such verbs, involving no volition, for the volition is a prominent aspect of such verbs' inherent semantics. Indeed, it would be very odd or unreasonable if a sentence simultaneously takes a strong-volition verb and an adverbial indicating no or weak volition. For example:

(22) a. ??The enemy destroyed our cities without intention.
     b. ??The politicians carelessly murdered President Lincoln.

Based on such an observation, it is concluded that if a verb is semantically incompatible with an adverbial indicating weak or no volition, it can be regarded of strong volition, in turn, it is incompatible with MC.

Thus the Strong Volitional Condition of middle formation is much more operable though it`s related to the agentivity condition in a sense.

4. Conclusion

In this article, we have attempted to solve two intricate problems about middle constructions, to reanalyze the middle formation conditions and unravel the mysteries about the paradoxical argument structure from three perspectives: what motivates such a mismatched argument structure, what licenses it and what makes it unique from others.

First, middle constructions function to characterize a non-agent argument, and naturally downgrade the role of the agent. So the superficially mismatched argument structure is selected. In order to manifest this semantic function, the subject referent must be attributed well, and all the constituents in middle constructions have to contribute to it cooperatively. And this semantic function also entails middle formation into a process of imperfectivization. Thus all the conditions discussed in section 1 come into being which are subject to the attributee condition in nature.

Second, pre-existence is the basic and vital property for non-agent arguments to be qualified subjects. The pre-existence Condition is there to make this "mismatched" argument structure linguistically legitimate.

Third, volition distinguishes the grammatical subject of middle constructions from other agent subjects. Middle formation should meet the strong volition Condition to exclude verbs which semantically clash with its subject.

In short, the semantic function selects the argument structure; in turn it derives some specific restrictions on the construction as a whole as well as the individual lexical items in it. The proto-roles hypothesis enlightens

us much as to the paradoxical language phenomenon. Middles involve a complex interplay between syntax, semantics and lexicon, and thus provide a rich source of data with which grammatical theories can be tested.

The proper characterization of the verbs that can undergo middle formation and the question what exactly makes these verbs different from those that are not eligible for this process, are notoriously difficult questions(Ackema & Schoolemmer, 2005). We are not to say the present study can solve all the mysteries about this superficially mismatched argument structure completely; however, it does shed light onto the nature of middle constructions, especially in terms of middle formation conditions.

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Abstract

This article will attempt to solve two intricate problems about middle constructions: to reanalyze the middle formation conditions and to unravel the mysteries about the mismatched argument structure. The semantic function selects the argument structure; in turn it derives some specific restrictions on the construction as a whole as well as the individual lexical items in it. The proto-roles hypothesis enlightens us much as to the paradoxical language phenomenon. Middles involve a complex interplay between syntax, semantics and lexicon, and thus provide a rich source of data with which grammatical theories can be tested.

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