

## Middle and *Tough*-Constructions in English\*

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### 1. Introduction

The purpose of this paper is to explore the semantic difference between the middle and the *tough*-construction in English, as illustrated in (1):

- (1) a. This book sells easily.  
 b. This book is easy to sell.

We will refer to (1a) and (1b) as the middle and the *tough*-construction, respectively (hereafter MC and TC). These two constructions, despite their syntactic difference, share at least three properties. First, in both constructions, the logical object becomes the grammatical subject. Secondly, they describe some generic property of their subject with respect to the easiness or toughness of an event's actualization. Thirdly, they imply a human entity as an actor, and thus cannot be formed from predicates that do not take the human subject when used transitively. The verb *rot*, for example, selects for only the inanimate external argument, and therefore cannot form both the MC and the TC:

- (2) a. All that sugar/ \*His mother rotted John's teeth.  
 b. \*John's teeth rot easily.<sup>1</sup>  
 c. \*John's teeth are easy to rot.

It is observed, however, that the distribution of the MC is more restricted than that of the TC. The verb *buy*, for example, cannot form the MC, but only the TC:

- (3) a. \*This book buys easily.  
 b. This book is easy to buy.

There exist no cases in which a verb can form only the MC. That is, where the TC is unacceptable, so is the MC, as in the following:

- (4) a. \*Harry is easy to resemble.  
 b. \*Harry resembles easily.

Why is it that the MC is more restrictive than the TC? This paper will provide a semantic explanation of the distributional difference between the two constructions.

This paper is organized as follows. In section 2, three previous analyses will

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<sup>1</sup> The sentence in (2b), though unacceptable as a middle, can be interpreted as a simple generic statement formed from ergatives (*John's teeth rotted*); it can mean that the event of John's teeth rotting may be provoked by the slightest cause.

be taken up: Van Oosten (1977, 1986), Takami (1996, 1997) and Schlesinger (1995). It is argued that Schlesinger's analysis presents a good foundation of the comparative study of the MC and the TC. Section 3 claims that the notion of pre-existence plays an important role in explaining the difference between the two constructions. It is also argued that this notion is crucially related to the idea of Schlesinger that the subject of the MC is assigned the Agent case, whereas that of the TC is not. Section 4 makes concluding remarks.

## 2. Previous analyses

### 2.1. Van Oosten (1977, 1986)

By assuming the notion of responsibility, Van Oosten claims that the MC is used when we regard the agent as irrelevant to the action of the verb and the patient as primarily "responsible" for the actualization of the action. To demonstrate her claim, she uses the following examples:

- (5) These clothes will clean with no trouble because...
- a. ...they're machine-washable.
  - b. ...\*I'm good at washing.

Van Oosten observes that when the sentence is in the MC, the adverbial clause can modify only the patient, not the (understood) agent. The unacceptability of (5b) is said to stem from the fact that the reason adduced in (5b) relates to the agent rather than to the patient subject. If the patient (*the clothes*) is not made subject, as in (6), then either reason is acceptable:

- (6) It will be no trouble to clean these clothes because...
- a. ...they're machine-washable.
  - b. ...I'm good at washing.

A similar observation is made for the TC. Van Oosten claims that the TC "is used when a property of the referent of the subject bears primary responsibility for the occurrence of the predicate" (Van Oosten (1986:108)). She observes that in the TC some inherent properties of the subject are understood to be responsible for the situation expressed by the infinitival complement. Let us compare (7) with (8), where the sentence is not in the TC (The examples are from Van Oosten (1986:114)):

- (7) Joe is impossible to talk to because...
- a. ...he's as stubborn as a mule.
  - b. ...\*he's out of town.
- (8) It's impossible to talk to Joe because...
- a. ... he's as stubborn as a mule.
  - b. ... he's out of town.

The reason adduced in (a) relates to one of the inherent properties of Joe, whereas the situation described in (b) is relevant to his current state, which is not an inherent property of him. According to Van Oosten, this difference explains the unacceptability of (7b), since (b) does not express any properties that can be understood to make impossible the situation expressed by the infinitive in the TC, namely, to be responsible for the described situation. That is, (7b) is incompatible with the semantics of the TC.<sup>2</sup>

Intuitively, we can agree with the idea that each subject of the MC and the TC has the responsibility entailment. This analysis, however, cannot capture the distributional difference between the MC and the TC. For example, as for the difference observed in (3), the notion of responsibility cannot explain why the entity to be bought is excluded from the subject of the MC, but not from that of the TC. In explaining the incompatibility of *buy* with the MC, Van Oosten says that what is bought cannot be responsible for the situation involved. Then, it is predicted that *buy* could not enter into the TC as well if one analyzes it as the type of construction whose subject is interpreted as having responsibility. Yet the fact is, as (3b) shows, contrary to this prediction. Thus, Van Oosten's analysis is unsatisfactory in that it fails to account for the difference between the two constructions.

More importantly, such a test for responsibility as used in (5) does not bring the same result if it is applied to the TC.

- (9) These clothes are easy to clean because ...
- a. ...they're machine-washable.
  - b. ...I'm good at washing.

If the subject of the TC were regarded as responsible for the described situation, (9b) would be unacceptable because it expresses the agent as being responsible for facilitating the event of cleaning clothes. Yet, in fact, either reason is perfectly acceptable, unlike the case of (5). This fact suggests that the subject of the TC should not be understood to be responsible for the described event, at least in the same way as that of the MC.

## 2.2. *The Functional Account of Takami (1996, 1997)*

Takami (1996) presents a well-formedness condition for the TC, depending on the notion of characterization. He assumes the condition that "the *tough*-construction is acceptable if the subject is characterized by the rest of the sentence (Takami 1996: 96)" and calls it "Characterization Condition for the *Tough*-Construction". His idea is based on the following observation:

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<sup>2</sup> Like Van Oosten, Kim (1996) also argues that the subject of the TC has the responsibility reading and that it carries the Cause argument. According to him, the TC should be viewed as a causative construction like *the movie made John happy*.

- (10) a. This bed is comfortable to sleep in.  
 b. \*This bed is comfortable to sleep near/beside/under.

As we notice in (10), the acceptability of each sentence is affected by the choice of preposition. According to Takami, the unacceptability of (10b) is due to the failure of successful characterization of the subject referent. That is, the possibility of comfortably sleeping *near/beside/under this bed* does not give any properties of the bed; the bed itself is not involved in the action of sleeping. On the other hand, in (10a), the characterization of the subject goes well because the fact one can comfortably sleep *in this bed*, is interpreted as offering a property of the bed. Contrasts like (10) are not observed in the corresponding sentences in (11).

- (11) a. It is comfortable to sleep near/beside/under this bed.  
 b. To sleep near/beside/under this bed is comfortable.

Based on these facts, he claims that the difference in acceptability between (10b) and (11) is captured well by the Characterization Condition.

Further, Takami (1997) applies the notion of characterization to the MC as well, suggesting that the subject of the MC must be characterized well. According to him, we may say that successful characterization depends on whether the middle sentence conveys a “newsworthy information” on its subject (see also Fellbaum (1985:23)). Observe the following contrast:

- (12) a. This dress buttons.  
 b. ??This dress fastens.

Takami argues that (12a) is acceptable because it describes how a particular dress is fastened, i.e., it is newsworthy to say that a dress is buttoned rather than zipped shut or fastened in any of the other ways dresses are typically secured. On the other hand, (12b) is unacceptable because it does not convey any worthwhile information on its subject; it is difficult to imagine what kind of dress is described, and thus the subject is not characterized enough. (A similar observation can be found in Fellbaum (1985:23-4) and Fagan (1988:201, 1992:189).)

This type of analysis implies that the acceptability of the MC and the TC is heavily affected by context. For example, the addition of adverbs like *easily* improves the acceptability of (12b). Even in the absence of such an adverb, as Fagan (1992:278) says, (12b) will become acceptable under the interpretation where a girl keeps trying on dresses that do not fit and cannot be fastened, and then finally finds a dress that fastens. In this case, as Fagan points out, contrastive stress should be put upon the subject of the sentence.

As for the TC, Takami (1996:97) gives an interesting example which shows that its acceptability is sensitive to context.

- (13) a. ??/\* The tall buildings were impossible for John to walk in front of.  
 b. The tall buildings were impossible for John to walk in front of because there was a temporary road block.

In (13), the acceptability depends on the presence or absence of the *because*-clause. Takami argues that in the absence of the *because*-clause, it is difficult to imagine what kind of property the buildings have, whereas its presence makes it possible to interpret the sentence as the one that characterizes the buildings.<sup>3</sup>

Examples like (13) can be found across the two constructions, as in the following:

- (14) a. ??London approaches easily.  
 b. ??London is easy to approach.  
 (15) a. London approaches easily, when there's not much traffic. (Rosta 1992:330)  
 b. London is easy to approach, when there's not much traffic.

As observed in (14), the verb *approach* cannot occur in both constructions in an out-of-blue context. The context being set up properly, the sentences in (14) become acceptable, as in (15). Owing to the information expressed in the *when*-clause, we can easily imagine what kind of property the city of London has.

I agree with the idea of Takami that the notion of characterization is necessary to explain the distribution of middle and *tough*-sentences and their acceptability is heavily dependent on context. There are, however, some cases where the notion of characterization does not play a decisive role:

- (16) a. \* Japanese dancing doesn't learn easily any more than Fijian dancing.  
 b. \* Wordsworth's poems remember more easily than Shelley's poems.  
 c. \* His arguments understand so clearly because he always demonstrates with lots of specific examples. (Yoshimura 1995:297-8)

Verbs like *learn*, *remember*, and *understand*, Yoshimura (1995) argues, do not form acceptable middles in any and every context. The notion of characterization cannot capture the above fact, since we can easily imagine, in the context described by each sentence, what kind of property each subject has. The subjects of (16) undergo successful characterization; nevertheless (16) is unacceptable. The evidence that these sentences satisfy the characterization condition would be certified by the fact that the *tough*-version of (16) is perfectly acceptable, as in (17):

- (17) a. Japanese dancing isn't any more easy to learn than Fijian dancing.  
 b. Wordsworth's poems are easier to remember than Shelley's poems.

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<sup>3</sup>Takami points out that (13a), though unnatural in an out-of-blue context, will become acceptable if the information described by the *because*-clause has been already shared by the speaker and the hearer.

- c. His arguments are easy to understand because he always demonstrates with lots of specific examples.

The difference in acceptability between (16) and (17) suggests the limit of the analysis dependent on the notion of characterization. Indeed, the characterization condition works well in explaining the nature shared by the MC and the TC, but it fails to explain the difference between the two.

### 2.3. Schlesinger (1995)

In his discussion of the relation between grammatical subjects and conceptual or cognitive categories, Schlesinger (1995) makes an observation that the subject of event predicates is agentive, whereas the subject of state predicates is frequently non-agentive. Consider the following examples.

- (18) a. The little boy threw the ball.  
b. John resembles Uncle Paul.

It is generally said that the predicate in (18a) describes an event, whereas (18b) a non-eventive situation. He roughly divides subjects into two groups: the agent-like subject and the subject whose attributes are designated by the predicate. He argues that the former is assigned the "Agent-case", and the latter "Attributee case", and that both cases are linked to grammatical subjects. (The term *case* here corresponds to what is usually called *semantic relation* or *thematic role*.) According to him, the Agent case is characterized in terms of three features: CAUSE, CONTROL, and CHANGE. He thinks that a prototypical Agent has all three features, and the subject of (18a) is regarded as a typical Agent because it refers to an entity that is in motion, causes the activity and controls it. Interesting is the idea that a noun phrase that has any one of the three features can be a candidate for being assigned the Agent case, and hence for becoming the subject. For examples:

- (19) a. The butter melted in the sun.  
b. My little dog remained indoors all day long.

The subjects in (19) have only one or two of the characteristic agentive features, yet he proposes that these are also in the Agent case. (For a detailed discussion, see Schlesinger (1995, chapter 2)). This concept of Agent is different from the way the term is commonly used.

Unlike the Agent case, the Attributee case is defined by a single feature. According to Schlesinger, "Attributee" represents both a feature, ATTRIBUTEE, and a case, and the Attributee case is assigned to any noun phrase that has the feature ATTRIBUTEE. Schlesinger (1995:131) argues that "a noun phrase can be an Attributee if it is intended to tell us something new about its referent, to attribute something to it". The subject of (18b) is called the Attributee of its predicate since

the predicate expresses some attribute of the subject.

Based on this idea, Schlesinger argues that the Attributee case is assigned to the subjects of both middle and *tough*-sentences, since they involve state predicates and their subjects are “characterized” by the predicates. As we notice, this idea is quite similar to that of Takami, which we saw in the previous section. They differ in the analysis of the subject of the MC. Schlesinger thinks that in addition to the Attributee case, the Agent case (his extended agent case) is assigned to the subject of the MC and hence the subject is in both the Agent case and the Attributee case. Like Van Oosten, he argues that the subject has “primary responsibility” for the described situation; in his terminology it has CAUSE, which is one of the characteristic features of the Agent case. Thus, we can regard his approach to the MC as a mixture of the ideas of Van Oosten and Takami, hence it results in analyzing the subject of the MC as having the two semantic functions.

It is important to notice, however, that Schlesinger and Van Oosten differ in the analysis of the subject of the TC. Van Oosten regards the subject of the TC as having responsibility; Schlesinger probably doesn’t think so, since he analyzes it as not having the Agent case. Although he does not explain a basis for characterizing the subject of the TC as such, it might be argued that the subject of the verb *be* is consistently assigned only the Attributee case. That is, the verb *be* does not have the ability to assign the Agent case to the subject. Thus, the subject of the TC, though it may be understood to be responsible for the action expressed by the infinitive clause, is not assigned the Agent case, since the TC takes the verb *be* as its main predicate. Middle sentences, on the other hand, do not select stative verbs like *be* but invariably non-stative verbs as their main predicates, though the sentence as a whole describes a stative situation in the sense that it receives a generic interpretation. It may be that non-stative verbs can assign the Agent case to the subject, even when they are used in generic sentences. To illustrate the idea, let us consider the following:

- (20) a. Sophie is timid.  
 b. Sophie walks to the library everyday.

Both (20a) and (20b) can be treated as generic statements, yet they differ in the selection of verb types; the former takes a stative verb, whereas the latter takes an agentive verb. Both subjects are assigned the Attributee case, yet in addition to this case, the subject of (20b) is assigned the Agent case, since it is treated as the subject of agentive verbs like *walk* as well as that of stative predicates like *walks to the library everyday*. In this respect, the sentence in (20a) should be distinguished from (20b), and the same observation applies to the MC and the TC.

Schlesinger’s analysis of the case category is contrary to the way most current

case theorists might analyze it, yet we entirely agree with his idea since it presents the possibility to capture not only the similarity but also the difference between the MC and the TC. That is, the subject of the MC is different from that of the TC in the number of semantic functions they have; the former is in the Agent and Attributee case, whereas the latter is given only the Attributee case. However, Schlesinger gives no linguistic evidence in support of his idea. In concrete, what linguistic significance does the analysis give to the comparative study of the two constructions? In the next section, I will argue that his idea is crucially relevant to the distributional difference between the two.

### 3. The Semantic Difference

#### 3.1 *The Basic Feature of the Agent*

The fact that the subject of the MC functions as the agent means that its referent must be understood to exist prior to the situation described by the predicate. If an agent were not present in advance of the occurrence of the described event, it could not do the action described by a verb, nor control the action, nor cause the action or event, nor even experience the situation. We will regard this property as necessary to qualify as the agent and refer to it as “pre-existence”. That is, pre-existence is thought to be the basic feature that all the agents ought to have. It follows naturally that the subject of the MC must possess the feature of pre-existence. Thus, we assume the following condition at work:

(21) Pre-Existence Condition

An entity qualifies as the subject of the MC if it is understood to be pre-existent prior to the situation described by the main verb.

This condition strongly indicates that an entity which is understood to be non-pre-existent cannot appear in that position, as this would conflict with the characterization of the subject of the MC as bearing the Agent case. This idea is verified by the following contrast:

- (22) a. Sandy ground digs easily.  
 b. ??Small holes dig easily.

The semantic contrast observed in the subjects of (22) is equivalent to what Fillmore (1968) calls the “affectum/effectum” contrast: *sandy ground* corresponds to the former and is understood to exist prior to the action of digging, whereas *small holes* is the latter and its existence results from the described actions. It is this difference, not the failure of the proper characterization of the subject, that causes the grammaticality contrast. It is easy to imagine that the size of a hole is relevant to facilitating the action of digging. Thus, the subject of (22b) surely undergoes successful

characterization, which explains why the corresponding *tough* sentences do not show such a contrast as observed in (22):

- (23) a. Sandy grounds are easy to dig.
- b. Small holes are easy to dig.

Given the facts observed in (22) and (23), we can summarize the semantic difference between the MC and the TC as follows:

- (24) The subject of the MC must be pre-existent to the situation described by the predicate, whereas that of the TC need not be.

It is proposed that this semantic difference is a factor that brings about the distributional difference between the two constructions. It is important to emphasize that the generalization in (24) is based on Schlesinger's description of the MC and the TC. The subject of the MC has the feature CAUSE and is in the Agent case, and hence must possess the feature pre-existence. On the other hand, the subject of the TC is not assigned the Agent case, and hence is not required to bear that feature. If Schlesinger's analysis is on the right track, what we have to do next is to demonstrate that the statement in (24) is true.

The following contrasts also provide corroborating evidence for (24):

- (25) a. \* The truth reveals/shows easily.
- b. \* The idea suggests/proposes easily.
- (26) a. The truth is easy to reveal/show.
- b. The idea is easy to suggest/propose.

In the event described by *reveal* or *show*, the object to be revealed or showed cannot be identified before the action takes place; we cannot perceive the object until the action has finished. Likewise, what is suggested or proposed is not regarded as being present in the situation before the action of suggesting or proposing. These entities should be perceived as not having the property of pre-existence, which is assumed to reside in the entity that causes the described situation, and hence they cannot appear in the subject position of the MC, but in that of the TC, as (25) and (26) show.

### 3.2. *Extension of the domain of existence*

As I have argued in Kusayama (1997), the domain of 'existence' relevant to the notion of pre-existence is not limited to a physical one. The idea that the notion of existence is extended to abstract fields is illustrated by the following examples:

- (27) a. The box is *on the chair*.
- b. A good idea is *in his mind*.
- c. There is a fallacy *in his knowledge of Christianity*.
- d. The diamond is *in the possession of Mr. King*.

Each of these sentences includes the existential *be* with the preposition *in* or *on*.

These examples reflect how we understand the notion of existence. We can observe that (27a) alone describes the existence of an entity in a certain physical location, while the others express the metaphorical or abstract situation in which something is in existence in an abstract domain. (27b, c) and (27d) refer to the existence of the subject referent in the conceptual domain (*his mind, his knowledge*) and in the possessional domain, respectively. We can conclude that the notion of pre-existence applies to several abstract domains as well as to physical domains. It is important to note that the selection of the domain of existence (physical or abstract) is determined by the semantics of a verb and its arguments.

With the idea of domain extension in mind, let us consider the verb *teach* and *learn*. These verbs describe an abstract situation where information is transmitted from one's domain of knowledge to others' domains. We argue that what is taught must be pre-existent in the domain of the teacher's knowledge; if not, he or she cannot teach anything about it. The verb *learn*, on the other hand, does not describe such a situation, because what is learned is regarded as coming into existence in the learner's domain of knowledge after the action of learning. Given this, we can explain the contrast between (16a) and (17a), repeated as (28a, b), which the analysis based on the notion of characterization fails to explain, as we have seen before:

- (28) a. \*Japanese dancing doesn't learn easily any more than Fijian dancing.  
 b. Japanese dancing is more difficult to learn than Fijian dancing.

The ungrammaticality of (28a) stems from the fact that the subject referent is not understood to be pre-existent. The subject of (28b) need not be pre-existent, for it is understood to be the attributee of the predicate, not the agent. Thus, (28b) is acceptable, though the subject does not bear the feature pre-existence. As we can predict correctly, unlike the verb *learn*, *teach* can appear in both constructions:

- (29) a. English teaches easily. (Endo 1986)  
 b. English is easy to teach.

This is because we can regard the knowledge to be taught as such that it is already stocked in the teacher's mind before the action of teaching starts.

Verbs like *remember* and *understand* belong to the same class of mental process as *learn*. For what is remembered or understood is interpreted as coming into existence in one's conceptual domain after the described event has completed. Thus, the object of these verbs also disqualifies as the subject of the MC but qualifies as that of the MC, as in the following:

- (30) a. \*Wordsworth's poems remember more easily than Shelley's poems.  
 (= (16b))

- b. \*His arguments understand so clearly because he always demonstrates

with lots of specific examples. (=16c))

(31) a. Wordsworth's poems are easier to remember than Shelley's poems.  
(=17b))

b. His arguments are easy to understand because he always demonstrates  
with lots of specific examples. (=17c))

This line of analysis predicts that the verb *forget* will behave differently from the verb *remember* in respect to the compatibility with the MC, since the knowledge to be forgotten should be regarded as pre-existent in one's conceptual domain. In fact, the verb *forget* can appear in the MC as well as in the TC:

(32) a. Miserable memories don't forget easily.

b. Miserable memories are difficult to forget.

The idea of domain shift also plays a role in the cases relevant to the verbs *buy* and *sell*. The former can appear in the TC, but not in the MC:

(33) a.??The low mortgage on these houses means that they buy easily.

b. The low mortgage on these houses means that they are easy to buy.

The situation described by *sell* and *buy* is abstract in the sense that both describe a change of ownership. It is argued that the object of *buy* is understood not to be pre-existent, since it means "to acquire ownership of goods", ownership being materialized through the action of buying. That is, in the action of buying, the ownership of goods is not interpreted as pre-existent in the buyer's possessional domain, though it may be understood to be pre-existent physically. Thus, the object of *buy* cannot appear in the subject of the MC, since it does not qualify as the Agent case for lack of the feature pre-existence.<sup>4</sup>

As for *sell*, what is sold or ownership of goods must be present already in the seller's possessional domain; it is impossible to sell what is not yet in existence in his or her possessional domain. Thus, the verb *sell*, unlike *buy*, can appear in both constructions, as shown in (1). The following contrast will also contribute immensely to the validity of our analysis:

(34) a. That race wins easily.

b. \*That prize {wins/gets/gains} easily.

The subject referent in (34a) is understood to be pre-existent, for it is interpreted as a

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<sup>4</sup> The example of (33a) is cited from O'Grady (1980:66), yet the judgement of the sentence is from my own research. Unlike O'Grady, the native speakers I have consulted with all judged the sentence as unnatural, though thinking it as better than the sentence in (3a) i.e. \**this book buys easily*. The reason for the MC in (33a) to be felt more natural than the MC in (3a) is that in the subject of the former is characterized better than that of the latter; in (33a) we can easily understand what properties the subject has. The unnaturalness of (33a), on the other hand, is due to the violation of the condition of pre-existence in (21), as we have seen above. Thus, it is argued that our analysis can explain the subtle difference in acceptability, which O'Grady overlooks.

setting where the event takes place. The subject referent in (34b), on the other hand, is not pre-existent, but construed as coming into existence in his or her possessional domain after a game or competition has ended. Thus, the subject NP in (34b) is unable to have the feature CAUSE, and hence disqualify as the Agent case. The corresponding *tough*-sentences do not show such a contrast:

- (35) a. That race is easy to win.  
 b. That prize is easy to {win/get/gain}.

This is because the TC does not require the subject to be in the Agent case, but only to be in the Attributee case.

### 3.3. *Argument against the affectedness approach*

A number of studies of English middles (Fellbaum and Zribi-Herts (1989), Wilkins (1987), Roberts (1987), Hale and Keyser (1987), for example) argue that only predicates with affected arguments may form the MC. These studies define the notion of affectedness in almost the same way. Fellbaum and Zribi-Hertz (1989:28), for example, characterize affected arguments as follows:

- (36) An argument A (of a verb or predicate) is AFFECTED by the action or process P referred to by the verb if the referent of A exists prior to the P and if its inherent properties are modified by P.

As is expressed by the first *if*-clause, the notion of pre-existence is included in the above characterization of affected arguments. Then, it might be claimed that the notion of affectedness would be a useful device for capturing the distributional difference between the TC and the MC if we propose that the subject of the MC must be an affected argument, whereas that of the TC need not be.

This approach, however, involves a conceptual problem. That is, the notion of affectedness is not well motivated on conceptual grounds. In concrete, we cannot understand why the subject NP in the MC must be an affected argument. Within our framework, the affectedness constraint can be viewed as a natural consequence of the characterization of the subject of the MC as being assigned the Agent case. Notice that it is not the notion of affectedness but the notion of pre-existence that is essentially relevant to the formation of the MC. This fact has been overlooked by almost all the studies depending upon affectedness. They appear to have argued that crucially relevant to the well-formedness of the MC is the notion of “undergoing change” as specified in the second *if*-clause in (36), rather than the notion of pre-existence. Roberts (1987), for example, equates the term *Theme* with the notion of affected argument and defines it as an argument that undergoes a change of state. The idea underlying the affectedness approach is that the subject of the MC is equivalent to Theme or Patient arguments as defined in terms of “undergoing change”,

which are subject to the lexical rule of “Externalize Theme”. The following contrast has been regarded as conclusive evidence in support of this idea:

- (37) a. This fabric launders nicely.  
 b. \*This poem learns easily. (cf. (28a))

As far as I know, all the studies depending on the idea of affectedness have treated the above contrast as relating to the notion of “undergoing change”, but not to the notion of pre-existence, claiming the following: the subject of (37a) is an affected argument, because its property is changed; the fabric becomes clean through laundering, while the subject of (37b) is not affected, because its property is not changed by the action of learning. This seems to be a plausible explanation. I argue, however, that this is not a proper treatment of the fact. Crucially related to the grammaticality contrast in (37) is whether the subject referent is understood to be pre-existent or not, as we have argued in the previous section, but not whether the subject undergoes a change or not. The subject of (37a) is understood to exist prior to the action of laundering, whereas that of (37b) is not pre-existent in that the knowledge of the poem is interpreted as being gained through the process of learning.

There is good evidence in favor of the idea that the contrast in (37) should be explained in terms of the notion of pre-existence. As has been often pointed out in the literature, the affectedness account confronts a number of empirical problems. The verbs *read* and *photograph*, for example, can enter into the MC, though they do not have affected arguments as undergoing a change:

- (38) a. This scientific paper reads like a novel.  
 b. A person who isn't self-conscious photographs well. (Fiengo 1980:50)

The inherent properties of the book and the person are not changed in any way by the activity of reading and photographing. For our approach, it is not so surprising that the objects of *read* and *photograph* qualify to appear in the subject of the MC, since they satisfy the condition of pre-existence in (21).<sup>5</sup> It should be concluded that the notion of pre-existence, but not the notion of “undergoing change”, is primarily related to the well-formedness of the MC.

Faced with the fact that verbs like *read* and *photograph* cannot appear in the MC, Tenny (1987) claims that affectedness should be defined in terms of the notion of “delimitedness”, which relates to an aspectual property, rather than “undergoing change”. She characterizes a verb as “an affectedness verb if and only if it describes an event that can be delimited by the direct argument of the verb (p. 79)”. According to Tenny, the affectedness defined in this way can explain why verbs like *read* and

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<sup>5</sup> The approach depending on the notion of undergoing change faces with other empirical problems. For a detailed discussion of this issue, see Kusayama (1997).

*photograph* qualify to enter into the MC: the referents of the internal arguments (*this scientific paper* and a *person who isn't self-conscious*) can be considered as aspectually affected arguments, since they "measure out" the events of reading and photographing. This view of affectedness also involves a number of empirical problems, however. As Tenny (1994:15) points out, verbs of creation such as *build* and *write* describe a delimited event: in the event of building a house, for example, when the house is complete, then the house-building is also complete. The final stage of the completed house provides a temporal terminus for the event. Nevertheless middles formed from such verbs are unacceptable, as in the following:

- (39) a. \*These cabinets build easily. (Taniguchi 1994:192)  
 b. \*This paper writes easily. (Van Oosten 1985:106)

As we notice, the notion of pre-existence plays a role in explaining the unacceptability of (39): those which are created are not pre-existent, since they are understood to exist after the action of creation. Thus, we may point out that Tenny also overlooks the importance of pre-existence.

The problem with Tenny's approach, however, lies not only in the fact that her definition of affectedness lacks the notion of pre-existence, but also in her idea that MCs are formed only from the class of predicates which describe a delimited event. The following examples cast doubt even upon the necessity of delimitedness for the well-formedness of the MC.

- (40) a. The car drives easily.  
 b. This piano plays easily.

The events described by *drive the car* and *play this piano* have no distinct end point in time, yet they form perfectly acceptable middles, as (40) shows.<sup>6</sup> This fact suggests that the notion of delimitedness is totally irrelevant to the formation of the MC.<sup>7</sup>

So far, we have argued that the affectedness approach involves not only the theoretical insufficiency but also some empirical problems, and that the notion of pre-existence plays a role in the formation of the MC. It cannot be overemphasized that the idea of pre-existence is not derived from the notion of affectedness, but from the idea that the subject of the MC is assigned the Agent case. That is, our approach is conceptually different from the affectedness approach in that the latter analyzes the subject NP as the externalized Theme/Patient. It has been argued in this paper that

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<sup>6</sup> Tenny (1987, 1994) employs adverbial expressions like *in an hour* and *for an hour* as a reliable test for delimitedness. This test reveals that predicates like *drive a car* and *play a piano* describe a non-delimited event, as in the following.

- (i) a. He drove the car (for an hour/\*in an hour).  
 b. He played the piano (for an hour/\*in an hour).

<sup>7</sup> In Kusayama (1997), I point out a number of problems with Tenny's aspectual approach other than (39) and (40). For a detailed discussion of this topic, see Kusayama (1997).

the concept of the subject of the MC as the Agent plays a decisive role in explaining the difference between the MC and the TC.

### 3.4. *Good Attributee constraint*

In the previous section, we have objected to the two types of affectedness approaches — the “undergoing change” approach and the aspectual approach. Our objection is well established with a number of evidence. However, there are cases that seem to be unable to explain without the notion of “undergoing change” or “delimitedness”:

- (41) a. \*The wall (hits/kick) easily.  
 b. The wall (hits/kick) down easily.

As the above contrast indicates, the acceptability of *hit* and *kick* as middles strongly depends on the presence or absence of an adverbial or particle like *down*. The notion of affectedness appears to be useful in accounting for the contrast. Along the line of Tenny’s idea, *hit* and *kick* inherently describe a non-delimited activity, and thus ineligible for the MC, as in (41a). The addition of *down* to these verbs changes their aspectual type, as in *John hit the wall (for/\*in an hour)*, vs. *John hit down the wall (\*for/in an hour)*, and hence (41b) are acceptable as middles. The notion of “undergoing change”, on the other hand, may argue that the grammaticality contrast in (41) can be ascribed to the fact that the addition of *down* produces an eventuality that specifies a change of state in the subject (*the wall*).

Although contrasts such as (41) seem to favor these two affectedness approaches, we must find another explanation, since they are shown to be untenable with a lot of counterexamples, as we have seen in the previous section. But how do we make it possible to account for phenomena like (41)? Can we submit an alternative solution to the problem other than the affectedness approaches? The key to solve this problem lies in the fact that the subject of the MC is assigned the Attributee case in addition to the Agent one. Before going into my analysis, let us briefly discuss Schlesinger’s analysis of the subject of passive sentences.

Schlesinger (1995) argues that the surface subject of passive constructions is also assigned the Attributee case, since the predicate contains the stative verb *be*. He claims that the subject of a passive sentence is required to be a “good” Attributee, by which he means that it must be intended to tell us something new about its referent, to attribute something to it. As we notice, what Schlesinger has in mind is equal to Takami’s idea of characterization. Consider the following examples:

- (42) a. \*The office was left by Fred at five o’clock.  
 b. \*The corner was turned by Kate.

According to Schlesinger (1995), the unacceptability of (42) is due to the fact that the

subjects are not characterized, and hence do not make “good” Attributees. Given this, we can propose the following general constraint at work:

(43) Good Attributee Constraint

If a NP is assigned the Attributee case, it must be a good Attributee.

This constraint indicates that the subject of a characterizing sentence must be a “genuine” Attributee, since it is assigned the Attributee case. Thus, Takami’s idea that the subject of the MC and the TC must be characterized well can be derived from the idea that they are classified as characterizing sentences. The characterization condition is not specifically relevant to the MC and the TC, but to all the constructions whose subjects are in the Attributee case.

Returning now to the problem of (41), we can explain why verbs like *hit* and *kick* are ineligible for the MC without an adverb or particle like *down*. I claim that the unacceptability of (41a) should be ascribed to the fact the subject referent does not make a “good” Attributee in that it is difficult to interpret the sentence as describing a certain characteristic of the wall. That is, the subject NP in (41a) violates the constraint of (43), and hence (41a) is unacceptable. In contrast, the acceptability of (41b) can be attributed to the fact the subject referent in (41b) is understood to be a good Attributee. Notice that the addition of *down* helps us to interpret the subject (*the wall*) as a good Attributee. Owing to the presence of *down*, certain properties of the wall is considered to be strongly involved in the actualization of that action.

If the proposed analysis is right, it is predicted that the corresponding *tough* and passive sentences will show a contrast as observed in (41), because their subjects are also in the Attributee case. The prediction is borne out by the fact below:

- (44) a. \*The wall is easy to hit/kick.  
 b. The wall is easy to (hit/kick) down.

- (45) a. \*The wall can be hit/kicked easily.  
 b. The wall can be (hit/kicked) down easily.

The reason for the unacceptability of (44a) and (45a) should be explained in the same way as in the case of (41a). They are unacceptable, since the subject NPs cannot be interpreted as “good” Attributees. As for the acceptable sentences in (44b) and (45b), the same analysis as in (41b) is applicable: their acceptability comes from the fact that the subject referents are characterized in the way that we can imagine their attributes from the rest of the sentences.

Based on the facts observed in (44) and (45), we may safely say that the contrast in (41) should not be accounted for by the notion of affectedness dependent upon “undergoing change” or “delimitedness”. The affectedness approach cannot capture the fact that phenomena as seen in (41) are observed across the MC, the TC and the

passive construction. For it is untenable to say that the subject of these three constructions must be an affected argument. (Such an analysis would be attacked by numerous counterexamples.) That is, the notion of affectedness is irrelevant to these phenomena. Of relevance is the notion that each subject of these constructions is assigned the Attributee case. It is thus concluded that the contrast in (41) comes from the fact that the subject of (41a) is not characterized enough to be a good Attributee, whereas that of (41b) is understood to be a genuine Attributee.

It is important to notice that the subject of the MC, though the involved verb is non-stative, is subject to the condition of (43), since the MC belongs to the class of characterizing sentences, and hence is assigned the Attributee case as well as the Agent case. Notice also that the subject of the TC and the passive construction is not assigned the Agent case but only the Attributee case. I have argued that this difference and similarity play an important role in the comparative study of the MC and other related constructions.

#### 4. Concluding remarks

The ultimate difference between the MC and TC is that the subject of the former bears the two semantic roles, i.e. the Agent and the Attributee, whereas the subject of the latter has a single semantic role, i.e. the Attributee. This difference significantly explains the reason why the MC is more restrictive than the TC. As we have argued, the fact that the subject is assigned the extended Agent case entails that it must be pre-existent. The fact that the subject is assigned the Attributee case, on the other hand, implies that it should be "characterized" in the way that we can understand its attributes from the rest of the sentence, that is, it must be understood to be a "good Attributee". Thus, the formation of the MC is subject to the two constraints; the surface subject of a middle sentence must be pre-existent and must be a genuine Attributee. The formation of the TC, on the other hand, is restricted by a single constraint; the surface subject of a *tough*-sentence must be a genuine Attributee. It is concluded that this is one of the factors that bring about the distributional difference between the middle and the *tough*-construction in English.

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