

A Pragmatic Condition for *Cause-Causative Passives* *

Mai Osawa

1. Introduction

This paper is concerned with the passivisability of periphrastic causative sentences with the verb *cause*, which we will henceforth refer to as *cause-causatives*. In previous studies, Mittwoch (1990) and Mair (1990) claim that *cause-causatives* cannot be passivised, as shown in (1):

- (1) a. The inflation caused prices to rise.
 b. * Prices were caused to rise (by the inflation).

(Mittwoch (1990:119))

The passive sentence of a *cause-causative*, henceforth referred to as a *cause-causative passive*, is alleged to be ungrammatical, as seen in (1b). However, there are certain contexts in which *cause-causative passives* can be used:

- (2) The Negro came to the United States of America in 1619. [...] Before the Mayflower, [...] *hundreds of Negroes [...] were caused to perish in the middle of the sea*, simply because the mean and cruel task master, the white man, would walk down the aisle and stumble over Negroes chained to the ship and say, “We have too many on board. Dump them over into the sea.”
- (<http://www.randomhouse.com/highschool/catalog/display.pperl?isbn=9780609609149&view=excerpt>)

As the italicised part shows, the *cause-causative passive* is acceptable and actually used in (2).

Mittwoch (1990) and Mair (1990) merely point out the fact shown in (1) and do not provide any explanation. Furthermore, very few serious attempts have been made to account for the passivisability of *cause-causatives* and little is known about the behaviour of *cause-causative passives*. The purpose of this study is to clarify the nature of *cause-causative passives*, and to offer an explanation for why it is difficult to accept *cause-causative passives* on their own.

The organisation of this paper is as follows. In the next section we will examine data collected from the Internet, and show that *cause-causative passives* are not acceptable on their own, but can be used in a certain limited context. Based on this observation, we will propose a condition for the use of *cause-causative passives*. In section 3, we shall examine the plausibility of our condition. In section 4, we will argue that the condition can be extended to account for the passivisability of a similar construction to the *cause-causative* construction. In section 5, we will attempt to explain why the passive constructions we analyse require contextual support for their

proper use. Finally, in section 6, we will make our concluding remarks.

2. The Nature of the Facts

In this section we will examine four pieces of data collected from the Internet.¹ Intuitively, there seem to be two common features among the data: one is concerned with the subject of a *cause-causative passive*; the other is concerned with the cause of the event expressed by a *cause-causative passive*.

2.1. Subjects as Topics

This subsection deals with the first common feature, which is concerned with the subject of a *cause-causative passive*. Observe the following example with respect to the *cause-causative passive* in italics and the context surrounding it:

- (3) The Negro came to the United States of America in 1619. [...] Before the Mayflower, [...] *hundreds of Negroes* [...] *were caused to perish in the middle of the sea*, simply because the mean and cruel task master, the white man, would walk down the aisle and stumble over Negroes chained to the ship and say, 'We have too many on board. Dump them over into the sea.' (= (2))

In (3), the subject of the *cause-causative passive*, (*hundreds of*) *Negroes*, appears in the preceding context as the first line shows. The *cause-causative passive* describes what happened to that subject. This accords with the notion of topic defined by Chafe (1987) and Lambrecht (1994).² Lambrecht (1994:131) defines the notion of “topic” as follows: “[A] referent is interpreted as the topic of a proposition if in a given situation the proposition is construed as being about this referent.” As seen in (3), the subject of the *cause-causative passive* occurs beforehand and the passive sentence is construed as a proposition about the subject. We can then assume that the subject of a *cause-causative passive* functions as the topic of the sentence.

Let us confirm this point further:

- (4) By controlling rotor speed in relation to wind speed, the aerodynamic power extracted by the blades from the wind was manipulated. Specifically, *the blades were caused to stall in high winds*. In low and moderate winds [...] (<http://www.nrel.gov/docs/legosti/fy98/24311.pdf>)

In (4), the subject of the *cause-causative passive*, *the blades*, is mentioned before the sentence and the *cause-causative passive* describes what happened to the subject. Thus, the subject represents the topic of the sentence.

The following examples are slightly different from the cases in (3) and (4):

- (5) The singer Janet Jackson, it was proved during the Super Bowl programme last weekend, is possessed of a right breast. And when an

American breast is exposed on peak-time television, can litigation be far behind? “As a direct and proximate result of the broadcast,” a writ proclaims, *viewers “were caused to suffer outrage, anger, embarrassment and serious injury.”*

(<http://www.guardian.co.uk/law/story/0,,1144514,00.html>)

- (6) An earthquake of that magnitude would cause general alarm and things like vases could topple over[...] In 1984, a 5.4 magnitude tremor in north Wales caused chimney pots to fall off houses in Liverpool, 100 miles away, [...] *Weak walls could be caused to crumble [...]*

(http://www.guardian.co.uk/uk_news/story/0,,500045,00.html)

In (5) and (6), there are no explicit expressions that correspond to the subject of the *cause-causative* passive in the preceding context. It might appear that the subject does not function as the topic of the sentence. A closer look, however, reveals that the subject of a *cause-causative* passive does serve as the topic of the sentence.

In (5), the subject, *viewers*, does not appear in the preceding context, but we can easily infer the existence of viewers from the words *television* and *broadcast*. This makes the word *viewers* accessible from the context, and the *cause-causative* passive describes what happened to the viewers. Thus, the subject serves as the topic of the sentence.

Similarly, in (6) the subject of a *cause-causative* passive does not occur in the preceding discourse. Instead, related words such as *chimney pots* and *houses* are introduced. These words, especially *houses*, remind us of walls which are part of houses. Moreover, things like vases will fall easily during a tremor. These fragile things may be associated with weak walls in this discourse. It is reasonable to consider, therefore, that weak walls already appear in the preceding context. The *cause-causative* passive in italics expresses what could happen to the subject. Consequently, the subject functions as the topic of the sentence in (6).

The topicality of the subject seems to be more important in *cause-causative* passives than in other passive constructions. The subject of a *cause-causative* passive must always serve as the topic of the sentence, whereas that of a canonical passive sentence does not need to serve as the topic. This is demonstrated by the use of a passive sentence as a presentational sentence, which as a whole represents new information and is topicless. Observe the following instances:

- (7) a. What happened?
 b. A dog was run over.
 c. * Prices were caused to rise. (= (1b))

The question *What happened?* in (7a) asks what event occurred. An answer to the

question is necessarily a presentational sentence which explains what event took place, and thus the sentence as a whole represents totally new information and is topicless. As an answer to the question in (7a), the canonical passive sentence in (7b) is appropriate, whereas the *cause-causative* passive in (7c) is not. This is because a canonical passive sentence does not need to contain any topic to be used, while the subject of a *cause-causative* passive must always function as the topic of the sentence.

From the above, we can conclude that the subject of a *cause-causative* passive must function as the topic of the sentence.

2.2. *Causes of Events*

This subsection deals with the second common feature seen among the data, which is concerned with the cause of the event expressed by a *cause-causative* passive. Observe the following. For the sake of clarity, the relevant parts are in italics.

- (8) The Negro came to the United States of America in 1619. [...] Before the Mayflower, [...] hundreds of Negroes [...] were caused to perish in the middle of the sea, *simply because the mean and cruel task master, the white man, would walk down the aisle and stumble over Negroes chained to the ship and say "We have too many on board. Dump them over into the sea."* (= (2))

In (8), the reason why Negroes were caused to perish in the sea (the command of the mean task master that they should be dumped into the sea) is described in the context following the *cause-causative* passive. From this we can say that in cases where a *cause-causative* passive is used, the cause of the event the sentence denotes is described in the context. Let us confirm this point with further examples:

- (9) *The singer Janet Jackson*, it was proved during the Super Bowl programme last weekend, is possessed of a right breast. And when *an American breast is exposed on peak-time television*, can litigation be far behind? "As a direct and proximate result of the broadcast," a writ proclaims, viewers "were caused to suffer outrage, anger, embarrassment and serious injury." (= (5))

In (9), the cause of the event that led viewers to *suffer outrage and anger* is that Janet Jackson exposed her right breast and they were forced to watch it. This is expressed in the context, as the italicised parts show. The same situation holds for the following instances:

- (10) *By controlling rotor speed in relation to wind speed, the aerodynamic power extracted by the blades from the wind was manipulated.* Specifically, the blades were caused to stall in high winds. In low and moderate winds [...] (= (4))

- (11) *An earthquake of that magnitude* would cause general alarm and things like vases could topple over[...] In 1984, *a 5.4 magnitude tremor* in north Wales caused chimney pots to fall off houses in Liverpool, 100 miles away, [...] Weak walls could be caused to crumble [...] (= (6))

Each of the italicised parts represents the cause of the event described by the passive sentence, and it is expressed in the context.

This also seems to be a characteristic unique to the use of *cause-causative passives* because the cause does not need to be expressed in the context when other passive constructions are used. In a canonical passive sentence, for example, the cause (i.e. the active subject) can be realized as the *by*-phrase.

- (12) Body temperature is lowered by aspirin. (Mittwoch (1990:119))

In (12), the cause of body temperature lowering is aspirin, and this is shown in the *by*-phrase of the sentence. So, the cause of a canonical passive sentence does not need to be expressed in the context.

2.3. *Descriptive Generalisation*

We have revealed two characteristics common among *cause-causative passives*: one is that the subject of a *cause-causative passive* serves as the topic of the sentence, and the other is that the cause of the event a *cause-causative passive* denotes is described in the context. Based on these observations, we propose the following descriptive generalisation as a condition for the use of *cause-causative passives*:

- (13) In order for a *cause-causative passive* to be acceptable, the subject must function as the topic of the sentence, and the cause of the event expressed by the sentence must be described in the context.

This seems to be a prerequisite condition for the use of *cause-causative passives*. We will examine the plausibility of the generalisation in (13) in the following section.

3. A Pragmatic Condition for the Use of *Cause-Causative Passives*

We shall examine the validity of our condition for *cause-causative passives* and show that condition (13) must be satisfied when the construction is acceptable.

First, the subject of a *cause-causative passive* must function as the topic of the sentence; this is confirmed by the following examples:

- (14) When a patient has a headache, the doctor should prescribe aspirin. While aspirin relieves the patient's headache,
 a. * his body temperature is also caused to drop.
 b. it also causes his body temperature to drop.

In the preceding context given in (14), there is no expression which corresponds to the subject of the *cause-causative passive*, (*his*) *body temperature*. As we have seen,

when *cause*-causative passives are acceptable, the passive subject or related words appear in the preceding context, and the construction is a sentence that describes what happens/happened to the subject. In (14), however, the subject is not introduced into the discourse, and it cannot represent the topic of the sentence. Hence, *cause*-causative passives cannot be used in such a case, as seen in (14a), but the active counterpart is used, as in (14b). In this way, we can illustrate the plausibility of the first condition; the subject of a *cause*-causative passive must serve as the topic of the sentence.

Next, let us turn to the second point: the cause of the event expressed by a *cause*-causative passive must be described in the context. Consider the following:

- (15) * Concerning his body temperature, it is also caused to drop.

Even though the sentence in (15) is arranged to make the subject the topic of the sentence, it is unacceptable. This is because there is no context in which the cause is described. Confirm this point further:

- (16) He was running a high fever this morning, and he went to a doctor.
 a. So the doctor's treatment caused his body temperature to drop.
 b. * So his body temperature was caused to drop.
 c. * So his body temperature was caused to drop by the doctor's treatment.
 d. ??So by the doctor's treatment, his body temperature was caused to drop.

In (16), *a high fever*, which is the related word to the subject of the *cause*-causative passives in (16b-d) is introduced in the preceding sentences and the subject represents the topic of the sentence. Nevertheless, sentence (16b) is unacceptable because the cause of why his body temperature was caused to drop is not expressed in the preceding context. In this case, a *cause*-causative such as that in (16a) can be appropriately used. Moreover, even if the cause is represented in the *by*-phrase, as in (16c), a *cause*-causative passive is not acceptable. From these, it follows that the cause must be expressed in the context surrounding *cause*-causative passives. Interestingly, the acceptability of sentence (16d) is barely increased when compared with (16c). In (16d), the *by*-phrase, which denotes the cause, is put before the matrix clause, in which the cause and the effect are arranged according to the natural order of the world.³ Sentence (16d) is, however, still almost unacceptable, because the cause is expressed in the sentence itself, not in the discourse. Here it is also confirmed that the cause must be described in the context.

These facts illustrated in (14-16) show the validity of our condition in (13). Consequently, now we are in a position to predict the following:

- (17) Although *cause*-causative passives are not accepted on their own, if they satisfy condition (13), they will be acceptable.

Let us examine whether this prediction is born out. Previous studies have claimed that the following instances are unacceptable:

(18) * Prices were caused to rise (by the inflation). (= (1b))

(19) * Body temperature is caused to drop by aspirin. (Mittwoch (1990:119))

As we have predicted, these sentences can be licensed under the well arranged context where the subject of a *cause-causative passive* serves as the topic of the sentence, and the cause is explicitly described. This is shown in (20) and (21):

(20) The oil crisis caused a serious inflation in the 70's in Japan. Inflation lead to a general increase in prices and a fall in the purchasing value of money. Needless to say, *prices were caused to rise* in this country.

(cf. *the inflation caused prices to rise*)⁴

(21) When a patient has a headache and fever, the doctor should prescribe aspirin for the headache. While aspirin relieves the patient's headache, *his body temperature is also caused to drop*.

(cf. *it also causes his body temperature to drop*)

In (20), the *cause-causative passive* in italics, which is alleged to be unacceptable at the sentence level is used. Here the subject is introduced in the preceding discourse, and the sentence in question describes what happened to the subject. Thus, the subject serves as the topic of the sentence in (20). As for the condition for the cause, the context points to *inflation* as the cause of the event, i.e., *prices were caused to rise*; thus the *cause-causative passive* is accepted in (20).

Likewise, in (21), the *cause-causative passive*, which is difficult to accept on its own is used. The subject, *(his) body temperature*, is accessible from the related word *fever* in the preceding context, and the *cause-causative passive* describes what happened to the subject. The subject, then, functions as the topic of the sentence in (21). It is also clear from the context that the cause of the event described is aspirin. Hence, the *cause-causative passive* in (21) is acceptable.

The examples in (20) and (21) illustrate that even the *cause-causative passives* assumed to be unacceptable at the sentence level can be used in contexts which satisfy the condition in (13). This also points to the conclusion that *cause-causative passives* are not acceptable by themselves, but can be licensed in contexts where the subject serves as the topic of the sentence and the cause of the event is described.

4. Applications

It should be clear by now that the condition for *cause-causative passives* in (13) and the prediction in (17) are plausible. Let us now apply our condition to a related construction; we shall show that the condition for the use of *cause-causative passives*

not only applies to this construction, but can be extended to the passive of a causative sentence with the verb *make*, henceforth referred to as *make-causative passives*.

4.1. Unintentional Make-Causative Passives

It is well known that *cause-causatives* express unintentional causation. This is exemplified in (22):

- (22) a. * John deliberately caused Mary to do the dishes.
 b. John accidentally/inadvertently caused Mary to drop her books.
 (Givón (1975:61f.))

The examples in (22) show that *cause-causatives* are not compatible with adverbs like *deliberately* that denotes the intentionality of the subject, i.e. the Causer, whereas they are with adverbs like *accidentally* and *inadvertently* that express the unintentionality of the Causer. From this contrast, we can say that *cause-causatives* express unintentional causation.

In contrast, *make-causatives*, which are another periphrastic causatives, generally express intentional causation, as shown in (23):

- (23) a. John deliberately made Mary do the dishes.
 b. * John accidentally/inadvertently made Mary drop her books.
 (Givón (1975:62))

Make-causatives, as in (23a), occur with the adverb *deliberately*, while they do not with *accidentally* and *inadvertently*, as in (23b). *Make-causatives* thus denote intentional causation.

It is, however, pointed out by Ohashi (1985) and Okuyama (1992) that *make-causatives* can also express unintentional causation:

- (24) The confusion made me change my mind. (Okuyama (1992:172))
 (25) a. John intentionally made Mary drop her books. (Ohashi (1985:54))
 b. John accidentally made Mary drop her books. (Ohashi (1985:54))

Okuyama (1992), offering example (24), argues that a *make-causative* permits an inanimate subject. It goes without saying that inanimate subjects do not have any intention.⁵ The grammaticality of (24) shows that *make-causatives* also express unintentional causation as well as intentional causation. The examples in (25) denote the (un)intentionality of the Causer. Ohashi (1985) notes that *make-causatives* occur with not only *intentionally* but also *accidentally*. The compatibility with *accidentally* also shows that *make-causatives* can express unintentional causation.

Here, we can recall that *cause-causatives* express unintentional causation, as seen in (22). Since *make-causatives* such as (24) and (25b) also express unintentional causations, they are semantically similar to *cause-causatives*. Interestingly, the passive of a *make-causative* which expresses unintentional causation (hereafter

“unintentional *make*-causative passive”) is difficult to accept by itself, as is the case with a *cause*-causative passive. Observe the following:

- (26) a. The rain made the mushrooms come out.
 b. ? The mushrooms were made to come out (by the rain).⁶

(Mittwoch (1990:113))

In (26a), the *make*-causative occurs with an inanimate subject, and the sentence expresses unintentional causation. It is difficult to passivise the *make*-causative in (26a), as shown in (26b).

If we take into account the semantic similarity between *cause*-causatives and unintentional *make*-causatives, then we can predict that unintentional *make*-causative passives are also subject to the condition for *cause*-causative passives in (13). Actually, unintentional *make*-causative passives which are not acceptable on their own can be used in contexts where the passive subject functions as the topic of the sentence and the cause of the event is described. Let us observe the following pair of examples:

- (27) a. ? The mushrooms were made to come out (by the rain). (= (26b))
 b. One kind of mushroom needs a lot of rain to grow and it usually comes out in June every year. But it rained enough for the mushrooms in May this year and so *they were made to come out* one month earlier than usual. (cf. *the rain made them come out*)⁷

In (27b), the passive subject, *they (mushrooms)*, is mentioned beforehand, and the *make*-causative passive describes what happened to the subject. Thus, the passive subject represents the topic of the sentence. The cause of the event, *a lot of rain*, is given in the context. Embedded in the context shown in (27b), the unacceptable sentence in (27a) is judged to be acceptable.

Our prediction is verified further by the following contrast:

- (28) a. ? I was made to change my mind by the confusion.⁸
 b. A coup d'état happened in my country which left the capital in confusion. Though I had decided to retire from politics, *I was made to change my mind* to support the prime minister.
 (cf. *the confusion made me change my mind*)

Sentence (28a) is the passive counterpart of sentence (24), and it is difficult to accept at the sentence level. This, however, can be licensed contextually, as in (28b). Here, the subject, *I*, is introduced in the preceding discourse and the *make*-causative passive denotes what happened to it. So, the passive subject serves as the topic of the sentence. Moreover, we can easily understand from the context that the coup d'état, or the confusion was the cause of the event.

4.2. *Revised Condition*

As we have predicted, not only *cause*-causatives, but unintentional *make*-causatives can be passivised in a certain context. It follows then that the condition for *cause*-causative passives in (13) holds also true for unintentional *make*-causative passives. We then revised condition (13) as in (29). Henceforth, we will group *cause*-causative passives and unintentional *make*-causative passives together, and refer to them as unintentional periphrastic causative passives for convenience.

- (29) In order for an unintentional periphrastic causative passive to be acceptable, the subject must function as the topic of the sentence, and the cause of the event expressed by the sentence must be described in the context.

In the next section, we shall attempt to account for the reason why unintentional periphrastic causative passives require this condition in order for them to be acceptable.

5. Contextual Support Required

As we have seen, unintentional periphrastic causatives cannot be passivised by themselves, but can be passivised in contexts which satisfy condition (29). In this section we will explain this fact with the notion of “affectedness” proposed by Bolinger (1975).

Bolinger (1975:67) proposes the following hypothesis for the passive in English:

- (30) The subject in a passive construction is conceived to be a true patient, i.e., to be genuinely affected by the action of the verb.

Bolinger (1975) uses this principle, i.e. affectedness, to account for the passive of a simple transitive construction and the pseudo-passive construction, and he does not deal with constructions with bare and *to*-infinitive complements. As will be argued, the notion of affectedness also has the possibility of being able to explain the passivisability of unintentional periphrastic causatives.

5.1. *Affectedness Constraint*

To begin with, we shall briefly illustrate the hypothesis in (30) with some of the examples in Bolinger (1975:74):

- (31) a. George left the city.
 b. * The city was left by George.
 c. The city was left by all the male inhabitants.

In (31a), George being merely an ordinary citizen, his leaving the city has no significant effect on that city; the city is not affected by the action of the verb. Hence,

sentence (31a) cannot be passivised, as in (31b). In contrast, sentence (31c) is acceptable, because all male inhabitants leaving the city is extraordinary, and it is easily assumed that the city was affected in some significant way; for instance, the sentence allows us to draw an inference that the described event caused the city not to fulfil its social function. The city is thus conceived to be the Patient.

Consequently, as Bolinger (1975) claims, a passive sentence needs a Patient who is construed to be affected by the action of the verb. Though Bolinger (1975) does not define the precise notion of affectedness, on the basis of his analysis we assume that whether or not the Patient is affected depends on whether or not the Patient undergoes a change to a new place or state (Ikegami (1991), Nishimura (1996), cf. Lakoff (1977)).^{9, 10}

5.2. *The Absence of a Patient*

With the above discussion in mind, let us consider the case of unintentional periphrastic causatives. We assume that unintentional periphrastic causatives do not contain the Patient who is affected to change to a new state. This is why they cannot be passivised on their own. Our assumption seems to be supported by the syntactic structure of unintentional periphrastic causatives (cf. Mittwoch (1991), Fujimoto (1995)).

Mittwoch (1991) points out that the structure of the complement clause to the causative *make* which can be passivised is like that of complement clause to object control verbs, whereas the structure of complement clause to the unintentional causative *make* is a constituent. This is illustrated by the following bracketed examples:

- (32) a. She made [me] [clean the floor]. (cf. Mittwoch (1990:113))
 b. I was made to clean the floor (by her). (Mittwoch (1990:113))
 (33) a. The rain made [the mushrooms come out]. (cf. (26a))
 b. ? The mushrooms were made to come out (by the rain). (= (26b))

In the complement clause of (32a), the subject NP and the bare infinitival VP following it independently form a unit. In this case, the sentence can be passivised, as in (32b). In the complement clause of (33a), the sequence [NP + VP] forms a unit as a whole, and the sentence cannot be passivised on its own, as in (33b).

Fujimoto (1995) argues this contrast further. He posits that the complement clause in *make*-causatives has two types of structures: one is the object control structure, and the other is the small clause structure (Iceland (1993)).¹¹ He shows the difference in their structures by considering the following two behaviours of *make*-causatives. The first one is concerned with the voice of the complement clause and the interpretation of the whole sentence; in a *make*-causative with an object control

complement, changing the voice of the complement affects the logical meaning of the whole sentence. In contrast, if the infinitival complement has the small clause structure, changing the voice of the complement does not have any impact on the logical meaning of the whole sentence (Chomsky (1965), Gee (1977)). Observe the following:

- (34) a. We made the doctor examine Mary.
 b. We made Mary be examined by the doctor. (Fujimoto (1995:170))
- (35) a. The confusion made me change my mind. (= (24))
 b. The confusion made my mind be changed.

The sentences in (34) do not express the same meaning. In (34a), it is the doctor that we forced to examine Mary, while in (34b) it is Mary that we forced to undergo an examination from the doctor. This is one of the characteristics seen among sentences with object control verbs. In contrast, the sentences in (35) express the same logical meaning. This is characteristic of sentences with verbs which take small clause complements.

The second test concerns the strandability of the subject NP, or the omissibility of the VP, of the complement clause. When two sentences with an object control complement are coordinated, it is possible to omit the VP of the second complement leaving its subject NP behind. This is not possible when sentences with small clause complements are coordinated (Iveland (1993)). Observe the following:

- (36) a. Mary will make John leave, but I don't think she'll make Rex. (Iveland (1993:17))
 b. ? The rain will make the mushrooms come out, but I don't think it will make the flowers.

In (36a), the subject NP of the second complement is stranded and the infinitival VP is omitted in the second conjunct. This is one of the features found in object control complements. On the other hand, in (36b), the second VP in the complement cannot be omitted in the second conjunct leaving its subject NP behind. This is characteristic of small clause complements.

Based on these observations, Fujimoto (1995) concludes that the complement clause in *make*-causatives has two types of structures, i.e. the object control structure and the small clause structure. He also points out that the *make*-causative with an object control complement can be passivised, whereas the *make*-causative with a small clause complement cannot be passivised.

Mittwoch (1991) and Fujimoto (1995) merely point out the fact seen above. It is therefore necessary to consider further the relationship between the difference in the

structure of the complement clause and the passivisability of *make*-causatives in terms of affectedness. Observe the following examples again:

- (37) a. She made [me] [clean the floor]. (= (32a))
 b. I was made to clean the floor (by her). (= (32b))
 (38) a. The rain made [the mushrooms come out]. (= (33a))
 b. ? The mushrooms were made to come out (by the rain). (= (33b))

In (37a), the sentence has an object control complement. As we have seen, in the complement clause, the subject NP is independent of the bare infinitival VP. Then we can assume that only the NP can be affected by the action of the verb, and the NP can be construed as a Patient. Therefore, the passive counterpart of (37a) has the Patient as its subject, and the sentence can be accepted, as in (37b).

On the other hand, in (38a), the unintentional *make*-causative has a small clause complement. In this complement structure, the sequence [NP + VP] is a constituent, and the NP is not independent of the VP. In this case, it is impossible for the NP to be affected independently by the action of the verb, and the NP cannot be the Patient. Thus, the subject of the passive counterpart of (38a) is not the Patient, and the sentence cannot be accepted, as in (38b). Consequently, unintentional *make*-causatives do not contain an entity which can be independently the Patient. This is why unintentional *make*-causatives cannot be passivised.

Let us now turn to *cause*-causatives. Since the complement clause to the verb *cause* contains the infinitival *to*, we cannot regard it as a small clause complement. If, however, we reveal that the sequence [NP + *to*-infinitival VP] is a constituent, the account of the passivisability of unintentional *make*-causatives seen above holds true also for that of *cause*-causatives. Let us consider whether *cause*-causatives behave similarly to unintentional *make*-causatives with respect to Fujimoto's two criteria. First, as we have seen in (35), in unintentional *make*-causatives, changing the voice of the complement clause does not affect the logical meaning of the whole sentence. Likewise, in *cause*-causatives, Huddleston and Pullum (2002) note that sentences (39a) and (39b) are semantically equivalent:

- (39) a. This caused both of us to overlook the inconsistency.
 b. This caused the inconsistency to be overlooked by both of us.
 (Huddleston and Pullum (2002:1235))

So, though the complement of (39a) is active and that of (39b) is passive, the logical meaning of each sentence is the same. We can then say that unintentional *make*-causatives and *cause*-causatives display the same behaviour in this respect.

Next, in unintentional *make*-causatives, as in (36b), when two sentences are coordinated, it is impossible to omit the VP of the second complement leaving its

subject NP behind. Similarly, in *cause*-causatives, as in (40), the second VP in the second conjunct cannot be omitted leaving its subject NP behind:

- (40) ? The inflation will cause prices to rise, but I don't think it will cause the purchasing value of money.

From this, it also follows that unintentional *make*-causatives and *cause*-causatives behave in the same way.

Furthermore, both unintentional *make*-causatives and *cause*-causatives allow a sentential idiom in their complements. This is one of the characteristics of verbs whose complement clause as a whole is a constituent. Observe the following:

- (41) a. All hell breaks loose.
 b. Hurricane Katrina made all hell break loose in the USA.
 c. Hurricane Katrina caused all hell to break loose in the USA.

The sentential idiom in (41a) denotes the meaning of *the beginning of chaos*. The sentences in (41b) and (41c) show that unintentional *make*-causatives and *cause*-causatives naturally allow this sentential idiom to occur in their complement clauses; sentences (41b) and (41c) successfully mean that Hurricane Katrina brought chaos to the USA.

The behaviours shown above lead us to conclude that unintentional *make*-causatives and *cause*-causatives have similar complement clauses; the sequence [NP (*to*) VP] constitutes a constituent. Therefore, the account of the passivisability of unintentional *make*-causatives is also valid for *cause*-causatives. Consider the following examples:

- (42) a. The inflation caused [prices to rise]. (cf. (1a))
 b. * Prices were caused to rise by the inflation. (= (1b))

In (42a), the whole complement clause is a constituent. In this complement, the subject NP cannot be independent of the *to*-infinitival VP. It is therefore not possible for the NP to be affected independently by the action of the verb, and the NP cannot be the Patient. The subject of the passive counterpart of (42) therefore is not the Patient, and the sentence cannot be accepted, as in (42b). Consequently, *cause*-causatives do not contain an entity which can be independently the Patient. This is why *cause*-causatives cannot be passivised.

From the above argument, we conclude that the reason why unintentional periphrastic causatives cannot be passivised at the sentence level is that they do not contain the Patient affected to undergo a change to a new state. In other words, the NP in the complement clause of unintentional periphrastic causatives cannot be identified as a Patient from the lexical information of the verb.

As we have seen, however, unintentional periphrastic causative passives can be

accepted in certain contexts. It is therefore predicted that contexts which satisfy the condition in (29) give the NP in the complement clause a Patient-like role, which in turn makes unintentional periphrastic causative passives acceptable.

5.3. *Affectedness Constraint Satisfied Contextually*

As argued by Bolinger, the subject must be the Patient in a passive sentence. Thus, when unintentional periphrastic causative passives are acceptable, their subject should also be the Patient. To be qualified as a Patient, the subject must be affected to undergo a change to a new state. We argue that this is ensured by contexts which satisfy the condition in (29). For ease of reference, we repeat the condition below:

- (29) In order for an unintentional periphrastic causative passive to be acceptable, the subject must function as the topic of the sentence, and the cause of the event expressed by the sentence must be described in the context.

Specifically, we propose the following hypothesis:

- (43) If the condition in (29) is satisfied, the subject can be construed as a Patient, and unintentional periphrastic causative passives can be accepted.

Here, we consider a case where *cause*-causative passives are acceptable:

- (44) a. * Prices were caused to rise by the inflation. (= (1b))
 b. The oil crisis caused a serious inflation in the 70's in Japan. Inflation lead to a general increase in prices and a fall in the purchasing value of money. Needless to say, *prices were caused to rise* in this country.
 (= (20))

For ease of explanation, let us first deal with the second part of the condition in (29): the cause of the event expressed by a *cause*-causative must be described in the context. The discourse in (44b) tells us that inflation occurred because of the oil crisis. Inflation occurring should have been a cause which had an influence on something. Therefore, the existence of the Patient who was affected by the occurrence of inflation is inferred. To have the Patient, we first need the cause which has impact on it. Thus, the cause of the event must be described.

In the case of (44b), we understand from the context that it was inevitable that some changes in prices and the purchasing value of money take place. Thus, either of them has the possibility of being a Patient. Here, it is important to consider the first part of the condition: the subject must function as the topic of the sentence.

If the impact from the occurrence of inflation hit prices, it is natural to make prices the subject of the sentence which is construed as a proposition about the subject. Therefore, the subject functions as the topic of the sentence. The *cause*-causative

passive in (44b) denotes that prices were compelled to rise, that is, prices were affected and underwent a change to a new state, *rising*.¹² Consequently, the subject, *prices*, is successfully construed as a Patient.

As in (44a), *cause*-causatives cannot usually be passivised, because the passive subject cannot be construed as a Patient from the lexical semantics of the verb *cause*. It is the context that tells us that the inflation and the rise of prices were the cause and the effect, respectively. We cannot find this relationship unless we have background knowledge about them. It is in context that adequate information shows that *prices* is the Patient who was inevitably affected in some way. In this way, contexts which satisfy the condition in (29) give the subject of *cause*-causative passives a Patient-like role. Note that the two parts of the condition must be satisfied together, as seen in section 3. When each part of the condition is satisfied, we can use *cause*-causative passives to state which entity is a Patient, and what change the Patient is subject to. That is, when the affectedness constraint is satisfied contextually, the passive subject is successfully construed as a Patient.

To sum up, when the subject of an unintentional periphrastic causative passive serves as the topic of the sentence and the cause of the event is described in the context, the subject is successfully construed to be the Patient affected to undergo a change in its state, and the sentence can be accepted.

6. Concluding Remarks

In this paper, we have concerned ourselves with the passivisability of unintentional periphrastic causatives. Unintentional periphrastic causative passives are not acceptable at the sentence level, but can be licensed in contexts where the subject can function as the topic of the sentence and the cause of the event is described. Because unintentional periphrastic causative passives do not contain the Patient who is affected and undergoes a change to a new state, they cannot be accepted. However, in a context which satisfies a certain condition, the subject of an unintentional periphrastic causative passive can be construed as a Patient, and unintentional periphrastic causative passives are accepted.

NOTES

* This paper is based on my MA thesis submitted to the University of Tsukuba in 2006. I would like to express my gratitude to the following people for helpful comments and discussions with me in the course of developing the idea to be presented: Yukio Hirose, Nobuhiro Kaga, Naoaki Wada, Masao Okazaki and Hiroaki Konno. I am also grateful to Yurika Kambe, Ken-ichi Kitahara, Shun Kudo and Suguru Mikami for their helpful comments on earlier versions of this paper. My special

thanks go to Owen Davies for kindly acting as an informant. I remain responsible for any errors.

¹ I have found 15 examples on the web, but I only use four out of them for the sake of convenience in this study. The data was chosen upon the condition that the texts should be written by native speakers of English, and should be found in newspapers (e.g. Guardian Unlimited), academic papers, and web sites which seem to contain the official use of English.

² See Chafe (1987) and Lambrecht (1994) for further details.

³ Generally speaking, causes precede effects in the natural world, based on our encyclopaedic knowledge. Therefore, it seems that sentence (16d) is slightly better than sentence (16c). This might be explained by Haiman's iconicity (1983). See Haiman (1983) for a detailed discussion.

By the way, in example (2) the cause is described after the event described by the *cause-causative passive* and the example is impeccable. Actually, in most of the data taken from the web, the discourse goes from causes to effects. Nevertheless, cases such as (2) are actually used, which may be because of other factors besides iconicity, such as information structure and so on. In this paper, we shall not go into a detailed discussion, because it is not relevant to the present discussion.

⁴ In (20) and (21), the active counterpart of a *cause-causative passive* can be used, because it is acceptable either with or without an appropriate context. Therefore, it is safe to say that a *cause-causative passive* can be used as well as its active counterpart in contexts.

⁵ The inanimate subject in (24) is not interpreted as an animate entity, even metaphorically.

⁶ Mittwoch (1990) remarks without explanation that a *make-causative passive* is less natural to use than its active counterpart, as in (26).

⁷ The same account as that for (20) and (21) holds true for (27b) and (28b).

⁸ An informant has pointed out to me that sentence (28a) may not be strictly ungrammatical but it is too far from natural to be easily acceptable.

⁹ See Ikegami (1991) and Nishimura (1996) for details.

¹⁰ Lakoff (1977:244) defines the notion of Patient as follows: "a patient, [...] undergoes a change to a new state" in terms of transitivity (see also Taylor (1989)).

¹¹ Fujimoto (1995) takes a complement clause without tense and copula as a small clause. A small clause complement is illustrated by the complement of the ECM verb *believe*:

(i) John believes *Mary proud of herself*. (Fujimoto (1995:168))

Note that the complement above lacks the sequence *to be*.

¹² The reason why not the passive of a simple transitive sentence, but a *cause-causative passive* is used in (44b) is perhaps that the meaning of compulsion or unavoidability should be expressed in such a discourse. This point, however, needs further consideration.

REFERENCES

Bolinger, Dwight (1975) "On the Passive in English," *The First LACUS Forum*, ed. by Adam Makkai

- and Valerie Becker Makkai, 57-80, Hornbeam Press, Columbia, S.C..
- Chafe, Wallace (1987) "Cognitive Constructions on Information Flow," *Coherence and Grounding in Discourse*, ed. by R. S Tomlin, 21-51, John Benjamins, Amsterdam.
- Chomsky, Noam (1965) *Aspects of the Theory of Syntax*, MIT Press, Cambridge, MA.
- Fujimoto, Shigeyuki (1995) "Shieki Kobun," *Eibunpo eno Izanai*, ed. by Takeo Saito, Shosuke Haraguchi, and Hidekazu Suzuki, 167-181, Kaitakusha, Tokyo.
- Gee, James Paul (1977) "Comments on the Paper by Akmajian," *Formal Syntax*, ed. by Peter W Culicover, Thomas Wasow, and Adrian Akmajian, 461-481, Academic Press, New York.
- Givón, Talmy (1975) "Cause and Control: On the Semantics of Interpersonal Manipulation," *Syntax and Semantics* 4, 59-89.
- Haiman, John (1983) "Iconic and Economic Motivation," *Language* 59-4, 781-819.
- Huddleston, Rodney D. and Geoffrey K. Pullum (2002) *The Cambridge Grammar of the English Language*, Cambridge University Press, Cambridge.
- Ikegami, Yoshihiko (1991) *Eibunpo wo Kangaeru*, Chikuma Library, Tokyo.
- Iveland, Paula (1993) "VP Small Clauses," ms., University of California, Santa Cruz.
- Lakoff, George (1977) "Linguistic Gestalts," *CLS* 13, 236-287.
- Lambrecht, Knud (1994) *Information Structure and Sentence Form: Topic, Focus and the Mental Representations of Discourse Referents*, Cambridge University Press, Cambridge.
- Mair, Christian (1990) *Infinitive Complement Clauses in English*, Cambridge University Press, Cambridge.
- Mittwoch, Anita (1990) "On the Distribution of Bare Infinitive Complements in English," *Journal of Linguistics* 26, 103-131.
- Nishimura, Yoshiki (1996) "Bunpo to Imi," *Eigo no Imi*, ed. by Yoshihiko Ikegami, 71-93, Taishukan, Tokyo.
- Ohashi, Kazuhito (1985) "Shiekidoshi *make to have* no Ichi Kosatsu," *Tsukuba Eigo Kyoiku* 6, 50-59.
- Okuyama, Mika (1992) "*Make-Causatives and Have-Causatives in English*," *Tsukuba English Studies* 11, 171-197.
- Osawa, Mai (2006) *On the Passivisability of Cause Causatives in English*, Unpublished MA Thesis, University of Tsukuba.
- Taylor, John (1989) *Linguistic Categorization: Prototypes in Linguistic Theory*, Clarendon Press, Oxford.

Doctoral Program in Humanities and Social Sciences

University of Tsukuba

e-mail: osawa.mai@gmail.com