

Korean-speaking Adults' and Children's Interpretation of Causatives*

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Choe, Jinsun. (2014). Korean-speaking Adults' and Children's Interpretation of Causatives. *The Linguistic Association of Korea Journal*, 22(1), 111-128. This study investigates whether two Korean causative types (morphological and syntactic) have the same entailment properties in adult and child Korean. A Truth Value Judgment Task (Crain & Thornton, 1998) was conducted with sixteen adults and showed that the entailment relation is required for the morphological causative. Twenty-five children participated in the same task and behaved similarly to adults in that they rejected the morphological causative when the caused event did not occur. On the other hand, it was revealed that some children were sensitive to the type of causation depicted in the task. They showed a tendency to link the morphological causative only when it was associated with direct causation, but not with indirect causation. This observed difference between adults and children may be explained by the Iconicity Principle (Haiman, 1983), which predicts the morphological causative to be associated with direct causation, and the syntactic causative with indirect causation.

Key Words: language acquisition, morphological causatives, syntactic causatives, entailment relation, Korean causatives

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1. Introduction

Languages differ with respect to the way they describe causal relationships. For example, in English, either a lexical causative, e.g., *John killed Bill* or a syntactic (periphrastic) causative, e.g., *John caused Bill to die* is used to express causation. Regarding these two kinds of causatives, the general consensus among researchers is that there is a semantic difference between the two, suggesting that they are not fully interchangeable (e.g., Comrie, 1985; McCawley, 1978; Pinker, 1989; Shibatani, 1975; Wierzbicka, 1988; Wolff, 2003). Korean also has two distinct types of causative constructions (morphological and syntactic), and it has been suggested that the semantic difference between the two lies in terms of the type of causation (direct vs. indirect) and the entailment properties requiring the caused event to occur (e.g., Park, 1972; Park, 2003; Patterson, 1974; Shibatani, 1973, 1975; Sohn, 1994). While the majority of the previous studies on Korean causatives have examined the mapping between the causation type and the causative type, not much attention has been paid to the entailment in Korean causatives.

This study investigates whether the two Korean causative patterns have the same (discourse-related) entailment properties in adult and child Korean, and finds that both adults and children require the caused event to occur for morphological causatives. This paper is organized as follows. Section 2 introduces two Korean causative types and provides a summary of previous research, including L1 acquisition studies. Sections 3 and 4 present two experiments on Korean-speaking adults and children's interpretations of the two kinds of causatives with regard to entailment relations. Lastly, Section 5 discusses the findings and concludes the paper.

2. Previous Studies on Korean causatives

2.1. Two Causatives in Korean

Korean has two types of causative constructions – morphological and syntactic causatives. The morphological causative is formed with suffixes such as

-i (other allomorphs include *-li*, *-hi*, and *-ki*), as in (1a), whereas the syntactic causative requires the complementizer *-key* and the verb *ha-ta*, as in (1b).

(1) a. *The morphological causative:*

emma-ka ai-eykey pap-ul mek-i-ess-ta.
 mother-NOM child-DAT rice-ACC eat-CAUS-PST-DECL

'The mother fed the child rice.'

b. *The syntactic causative:*

emma-ka ai-eykey pap-ul mek-key
 mother-NOM child-DAT rice-ACC eat-COMP

ha-yess-ta.

do-PST-DECL

'The mother made the child eat rice.'

There is no general agreement on whether the two constructions are semantically identical or not. Yang (1972, 1974, 1976) claims that morphological causatives are in fact derived from syntactic causatives, and that the two are synonymous. In contrast, a number of researchers (e.g., Park, 1972; Park, 2003; Patterson, 1974; Shibatani, 1973, 1975; Sohn, 1994) have posited a semantic difference between the two in terms of the type of causation and the entailment relations. I will briefly discuss the previous studies regarding these two areas, but the focus of this paper will be on the latter: the notion of entailment relations.

Park (1972), Shibatani (1973, 1975), Patterson (1974) and Sohn (1994) all argue that the two causatives in Korean are distinct constructions with different underlying structures, based on the observation that they express different types of causation. On the one hand, the morphological causative is supposedly used to express direct causation, in which there is typically physical manipulation involving an agentive causer and a patient causee (e.g., a mother putting the rice into the child's mouth in (1a)). On the other hand, the syntactic causative is claimed to be reserved for indirect causation, where there is generally a direction-giving situation, with the causer and the causee both acting as agents (e.g., a mother ordering the child to eat the rice in (1b))¹.

1) Furthermore, Lee (2008) schematically shows that the Korean periphrastic (i.e., syntactic)

Patterson (1974) noticed that one of the properties that distinguish between morphological causatives and syntactic causatives is that only the former entails the caused event (data from Patterson, 1974, p. 28-29). In other words, the eating event described in the morphological causative (2a) must actually occur for the whole sentence to be felicitous, while the same requirement does not hold for the syntactic causative (2b). Therefore, Patterson notes that the syntactic causative (2b) can be continued by a contrary statement such as (3), but the morphological causative (2a) cannot be continued by such a clause.

(2) a. *The morphological causative:*

ku-ka	na-eykey	kimchi-lul	mek-i-ess-una,
he-NOM	I-DAT	kimchi-ACC	eat-CAUS-PST-but

‘He fed me kimchi, but...’

b. *The syntactic causative:*

ku-ka	na-eykey	kimchi-lul	mek-key
he-NOM	I-DAT	kimchi-ACC	eat-COMP

ha-yess-una,
CAUS-PST-but

‘He caused me to eat kimchi, but...’

(3) nay-ka mek-ci an(i)-ha-ess-ta.
I-NOM eat-COMP not-do-PST-DECL

‘I didn’t eat kimchi.’

This is because the morphological causative (2a) entails the completion of the caused event, and thus, the sentence would become a contradictory statement if it were followed by the clause which negates the caused event. On the other hand, it is possible for the syntactic causative (2b) to be accompanied by a negated clause, since it does not require the caused event to occur.

Contrary evidence is presented by Kim (2005), who conducted an acceptability judgment task with the two types of causatives to determine whether they can be followed by a “but-clause” without contradiction. Twelve native Korean speakers were asked to determine whether the given sentence

causative construction represents not only the concept of causing, but also the concepts of letting and permitting.

could be expressed in the given context, by marking either O or X (O for acceptance and X for non-acceptance). The results of her experiment revealed their near-perfect acceptance of most of the sentences, in which each type of causative is combined with a negated clause. This shows that the two causatives do not differ in terms of entailment relations and that neither causative type requires the caused event to occur. This is surprising in that this result goes against Patterson's claim that cause and result are fused in morphological causatives, therefore making it impossible to negate only the result. In other words, Kim's experimental study suggests that not only syntactic causatives but also morphological causatives do not exhibit an entailment relation. Thus, it seems that there has yet been no clear answer to the question of the entailment relations in Korean causatives.

2.2. L1 Acquisition Studies

The studies looking at the acquisition of Korean causatives have observed that morphological causatives are acquired earlier than syntactic causatives (Cho, 1992; Choi, 1999; Lee, 1977; Park, 2009). Choi (1999) notes that in the spontaneous speech samples of Korean-speaking children, two children began to use the morphological causative around 1 year of age (Kim, 1995), while the syntactic causative first appeared by another two children at the age of over 2 years (Kim, 1989). To explain this order of acquisition, Choi (1999) adopts Piaget's claim (1954) that the concept of direct causation is acquired earlier over that of indirect causation, and thus, the morphological causatives, which are usually linked to depict direct causation, are predicted to appear earlier than the syntactic causatives, associated with indirect causation. Indeed, Choi (1999) also finds that Korean-speaking children are sensitive to the directness constraint in their use of the two causatives. Out of 51 morphological causatives produced by four Korean-speaking children, 47 were used to describe direct causation. As for the syntactic causatives, there were only two utterances, both of which were produced under the context of indirect causation.

While the previous studies have focused on the order of acquisition of the two causatives, as well as on the distinction between direct and indirect causation, there have been no studies which investigated Korean-speaking children's interpretation of the two causatives in terms of entailment relations.

3. Experiment 1

The purpose of Experiment 1 is to examine Korean-speaking adults' interpretation of the two types of causatives with respect to the relation of entailment.

3.1. Participants

Sixteen native Korean-speaking adults, aged 24 to 34 (mean age=27;5) participated in the experiment. All of them were recruited in Seoul, Korea and were paid \$5 each as compensation for their time.

3.2. Procedures

A Truth-Value Judgment Task (Crain & McKee, 1985; Crain & Thornton, 1998) was used to test the participants' judgments of the stories and sentences. A written questionnaire with stories and target sentences was provided. After reading each story, the participants were asked to judge whether the target sentence adequately described the story by choosing true or false, and they were asked to write a justification for their answer. In other words, the participants had to evaluate the truth-value of the target sentence, rather than to give metalinguistic evaluation of statements, as in Kim's (2005) study.

3.3. Materials

The materials consisted of twenty-four stories in total, each accompanied by a target sentence. There were twelve experimental stories and twelve fillers. Of the experimental stories, eight had a No-Effect context, where the caused event did not take place, and these were paired with six morphological and two syntactic causatives²⁾. The other four stories each had an Effect context in which

2) The reason for having the different number of items only for the Morphological No-Effect condition was to counterbalance the true/false answers for the entire experiment, since the target response is 'false' only for the Morphological No-Effect condition. Thus, out of twelve experimental items, there were six items in the Morphological No-Effect condition, and two items in each of the three other conditions.

the caused event did take place, paired with two morphological and two syntactic causatives. A sample story translated from Korean with the target sentence is given in (4).

(4) a. *Sample Story (No-Effect)*: Mom was busy preparing dinner in the kitchen while the child was sitting at the table. Mom served rice to the child and told him to eat it, but the child said he did not want to eat it. Mom said, "This is dinner time. You have to eat rice." But the child said he wanted to eat the cookie instead. Mom said no and kept telling him to eat rice, but he didn't listen to her. Finally, Mom said, "Fine. If you finish that rice, then I will give you a cookie." And then Mom started to work busily in the kitchen again. While she was not looking at the child, the child gave rice to the dog who was sitting beside him. After the dog finished eating, the child said to Mom, "Mom, I finished it. Can I have a cookie now?"

b. *Target sentence (morphological causative)*:

emma-ka ai-eykey pap-ul
 mother-NOM child-DAT rice-ACC
 mek-i-ess-eyo.

eat-CAUS-PST-REGISTER

'The mother fed the child eat rice.'

c. *Target sentence (syntactic causative)*:

emma-ka ai-eykey pap-ul
 mother-NOM child-DAT rice-ACC
 mek-key ha-yess-eyo.

eat-COMP do-PST-REGISTER

'The mother made the child eat rice.'

3.4. Predictions

In contexts where there is no effect, a "true" response to a target causative sentence would indicate that the result of the causative is not entailed, whereas a "false" response would indicate that the result is entailed. Following Patterson's claim (1974) about entailment relations in Korean causatives, a

“false” response is expected for the morphological causative, while the syntactic causative should elicit a “true” response. In control contexts, however, where there is an effect (i.e., the result actually occurs), a “true” response was expected for both types of causatives.

3.5. Results and Discussion

Figure 1 shows the mean percentage acceptance of the target sentences in each condition. The results show that Korean adults mostly reject both the morphological and syntactic causatives when there is no effect, while they accept both patterns 100% of the time in the Effect condition. Paired *t*-tests were performed to compare mean percentage acceptance between the two conditions (No-Effect vs. Effect) within each causative type, and there was a significant difference in both causatives (morphological: $t(15)=31.674$; $p<0.001$, syntactic: $t(15)=17.985$; $p<0.001$).

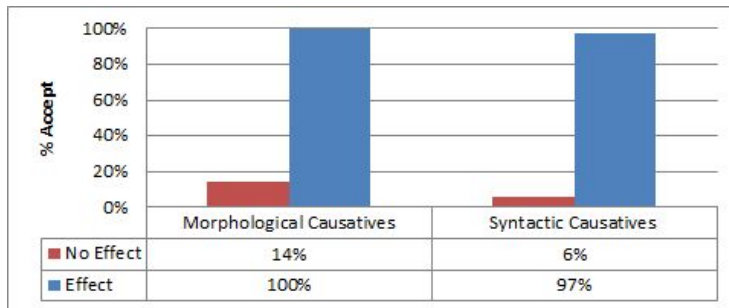


Figure 1. Interpretation of Causatives by Adults

The result for the morphological causative is consistent with Patterson’s claim in that it entails the realization of the caused event. However, the result for the syntactic causative is indeed surprising. As noted earlier, previous work on Korean causatives has suggested that it is not a requirement in syntactic causatives for the caused event to have actually occurred. Yet, the result of the present experiment points in the opposite direction. That is, adults rejected the syntactic causative in the No-Effect condition, treating it just like the morphological causative. This is an intriguing matter that calls for further investigation, especially if we consider the following special property of the

syntactic causative that has been overlooked in the current experiment and that could provide a possible explanation for the unexpected results.

The syntactic causative differs from the morphological causative with respect to the possible case alternation of the causee argument. In general, both types of causatives can use the dative case marker *-eykey* or the accusative case marker *-lul* to mark the causee argument. The syntactic causative, however, has an extra option of using the nominative marker *-ka* instead of the other markers. As illustrated in (5), the causee argument *ai* in the morphological causative can only be marked with either the dative or accusative marker, whereas the syntactic causative allows one more option, which is the nominative marker.

(5) a. *The morphological causative:*

emma-ka	ai-eykey/-lul/*-ka	pap-ul
mother-NOM	child-DAT/-ACC/*-NOM	rice-ACC
mek-i-ess-ta.		
eat-CAUS-PST-DECL		
'The mother fed the child rice.'		

b. *The syntactic causative:*

emma-ka	ai-eykey/-lul/-ka	pap-ul
mother-NOM	child-DAT/-ACC/-NOM	rice-ACC
mek-key ha-yess-ta.		
eat-COMP do-PST-DECL		
'The mother made the child eat rice.'		

In fact, many researchers (Sohn, 1973; Lee, 1985; J.-J. Song, 1988; S.-C. Song, 1988; O'Grady, 1991) have proposed that the different case markers of the causee NP contribute to semantic differences of syntactic causatives. In particular, Lee (2008) argues that there are more differences between the nominative causee on the one hand and the dative/accusative causee on the other than between the dative causee and the accusative causee semantically. For example, the dative causee NP is interpreted as having more control over the caused event than the accusative causee NP, but the nominative causee NP is construed as having more freedom and independence than the dative causee NP.

Thus, the existence of an extra case-marking option in the syntactic causative

suggests that it may be the nominative case marker that signals the supposed difference in entailment relations between the two causatives. In other words, one hypothesis would be that it is, in fact, the case marker on the causee argument, rather than the type of causative, which matters to the entailment relations of the sentence. It may be the case that using a dative or an accusative marker always implies that the caused event has occurred. That is, even the syntactic causative would require an entailment relation as long as it shares the same case marker with the morphological causative. Yet, it is only when the causee argument is marked with the nominative marker that an entailment relation that is supposedly required for such causative sentences is alleviated, and thus, the caused event does not necessarily occur. If this were indeed the case, then the result of the current experiment would not be unexpected, since all of the target causative sentences had the same case marker, the dative marker *-eykey*. Therefore, it would be no surprise that the adults treated the two causatives identically with respect to the entailment relation. At present, however, there has been no previous work that connects the case marking in syntactic causatives to the issue of entailment, and thus, the results of the syntactic causative will not be discussed any further in this paper, since it is a tentative conclusion that needs to be questioned and explored further.

4. Experiment 2

Experiment 2 was conducted with children in order to examine how children interpret the two causatives with respect to the relation of entailment and to compare their interpretations with those of the adults in the previous experiment.

4.1. Participants

Twenty-five Korean-speaking children aged 4;3 to 6;11 (mean age=5;4) were recruited for the study. They were from a kindergarten in Seoul, Korea and were compensated with a gift of \$5 value for their participation.

4.2. Procedures

The same Truth-Value Judgment Task was employed as in Experiment 1, but the stories were presented with pictures via Powerpoint. The pictures and the corresponding texts are shown in Figure 2. After each story, a puppet appeared on the screen and made a statement about what happened in the story. The child was asked to judge whether the puppet's statement was true or false and to give a justification for their choice.

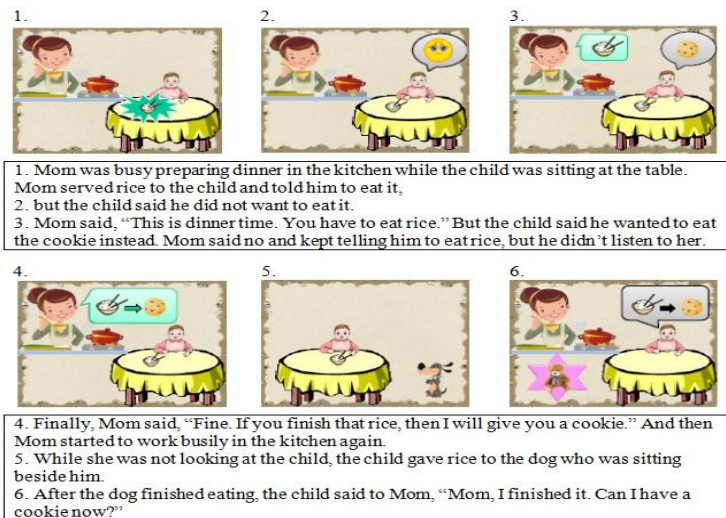


Figure 2. Sample Pictures (with Texts) Shown in the Task

4.3. Materials

The materials and the arrangement of the materials were identical to those used in Experiment 1, except that the total number of stories was reduced, presenting eight experimental stories and eight fillers. Of the eight experimental stories, four had a No-Effect context, where the result does not occur and the other four had an Effect context; each context was paired with two morphological and two syntactic causatives³⁾. Thus, four conditions were created

3) Following the results of the previous experiment as the baseline, there was the same number of items in each condition this time, to counterbalance the "true" answers for the

(Morphological No-Effect, Morphological Effect, Syntactic No-Effect, Syntactic Effect), each with two tokens.

4.4. Predictions

If the children have acquired the required entailment relation for the morphological causative, they should reject the target sentence in the Morphological No-Effect condition, whereas they should accept it in the Morphological Effect condition. Regarding the syntactic causative, it is difficult to make a clear prediction, since the exact nature of the entailment relation in syntactic causatives has yet to be determined.

4.5. Results and Discussion

Of the twenty-five participants, every child answered correctly on more than five of the eight filler items, and thus, no child was excluded in the analysis. Figure 3 summarizes how the children and adults from Experiment 1 interpreted the morphological causative in terms of entailment relations. In the No-Effect condition, children rarely accepted the target morphological causative, as shown by the low acceptance rate in this condition. This pattern contrasts with that in the Effect condition, in which children accepted the morphological causative at significantly higher rates (paired *t*-test, $t(24)=5.850$; $p<0.001$).

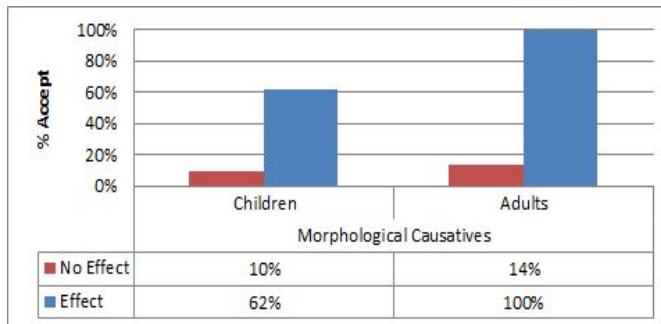


Figure 3. Interpretation of Morphological Causatives by Adults and Children

whole experiment.

The results from the children suggest their awareness of the required entailment relation for the morphological causative. That is, the realization of the caused event is necessary for them to accept the target sentence; they thus reject it in the No-Effect condition, behaving like adults. However, what is surprising in the results is how children responded to the Effect condition. As can be seen in Figure 3, the children's acceptance rate in the Effect condition was only 62%, which is much lower than that of adults. This is especially striking, given that the Effect condition included a context in which the caused event did in fact take place. To put it another way, it was presumed that there would be no reason for anybody, either adults or children, to reject the target causative in this condition, regardless of the type of causative and even regardless of the entailment relation it is associated with. Therefore, the results are puzzling, at first glance, which makes one wonder about the reason behind the unexpected behavior of some children. However, based on a review of the previous work on the semantics of Korean causatives, as well as careful examination of the materials used in the experiment, I hypothesize the following: Some children reject the morphological causative in the Effect condition at a higher rate than adults because they are focusing on the directness of the causation rather than on the result. As mentioned earlier, Shibatani (1973, 1975) and other researchers have claimed that the difference in the meaning of the two causatives in Korean is that the morphological causative is associated with direct causation and the syntactic causative with indirect causation. Such a difference brings up another important factor, namely, the type of causation, which was not controlled in the current experiment. Upon inspection, it turned out that all the contexts used in the experiment happen to be depicting indirect causation, where the causer had no physical contact with the causee. Given that the causation type constitutes a potential confounding factor, it is highly likely that the incorrect mapping of the causative type and the directness of causation led some children to reject the sentence, even when the required entailment relation was satisfied in the Effect condition. This hypothesis receives further support from some of the justifications that children gave after they rejected the morphological causative in the Effect condition. The sample justifications are reported in (6), suggesting that these children were rejecting any sentence that was incorrectly matched with the context depicting indirect causation because they were linking the morphological

causative only with direct causation.

(6) a. *Sample justification after a false response #1:*

“But Dad did not actually put the carrot in child’s mouth.”

b. *Sample justification after a false response #2:*

“Because Mom just told Pooh to wear the socks. Pooh was the one who put them on.”

Based on these justifications, the proposed hypothesis seems reasonable to explain the results. However, since the current experiment was not properly designed to address this matter, it remains an open question to be tested by manipulating the different types of causation.

5. General Discussion and Conclusion

The aim of this paper was to investigate whether two Korean causative types (morphological and syntactic) have the same entailment properties in adult and child Korean. The results of the two experiments can be summarized as follows: (i) Korean-speaking adults accepted the morphological causative when the caused event took place, but rejected it when it did not, indicating the required entailment relation for the morphological causative. (ii) Korean-speaking children also rejected the morphological causative when the caused event did not take place, suggesting that they had acquired the entailment relation associated with it. (iii) Independent of entailment, Korean-speaking children appear to be sensitive to the type of causation, in that they showed a tendency to link the morphological causative only with direct causation, but not with indirect causation. This distinction may be explained by the Iconicity Principle (Haiman, 1983), presented in (7), which predicts an exclusive mapping between the causation type and the causative form, depending on a direct correspondence between linguistic distance (i.e., how close the causative morpheme is to the main verb) and conceptual distance (i.e., how directly the caused event is executed).

(7) The Iconicity Principle (Haiman, 1983):

The linguistic distance between expressions corresponds to the conceptual distance between them.

In other words, this predicts that the morphological causative should be associated only with direct causation given the short distance between the causative affix and the verb. In contrast, the syntactic causative should express indirect causation, because an independent word *ha-ta* acts as the causative morpheme and its distance from the main verb is made greater by the intervening complementizer *-key*. Thus, the Iconicity Principle can be seen as a stronger version of the distinction made in the literature on the semantics of Korean causatives, as it predicts an *exclusive* mapping between the two causatives and the type of causation. What is surprising, then, is that unlike these children who strictly adhered to the Iconicity Principle, the Korean-speaking adults who participated in Experiment 1 were accepting the morphological causative even under the context of indirect causation. Thus, these findings raise a possibility that the distinction between the causative form and the causation type in adult Korean may have to do with mere preference, while in child Korean, it exhibits a categorical contrast involving Iconicity. However, as the type of causation was not manipulated in the current experiment, the issue of both adults' and children's sensitivity toward the type of causation in causatives is left for future research.

Finally, the results of the syntactic causative were not discussed thoroughly, due to the unexpected results from Experiment 1. Yet, the case alternation was suggested as a potential explanation for such results, which may be manipulated as a separate factor in later studies in order to shed some light on the entailment relations associated with Korean causatives in general.

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