CAUSATIVIZATION

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INTRODUCTION

Defining the causative construction is not an easy matter. In fact, a successful definition of the causative construction would approximate a thorough grammatical analysis of the construction. Nevertheless, it seems highly appropriate, or even necessary, to give a rough characterization of the causative construction before details of the Japanese causative construction are dealt with. Since a syntactic structure that conveys a causative expression varies from one language to another, a universally valid definition must be given in semantic terms.

The easiest way to define the causative construction is, perhaps, by characterizing the situation, which may be called the 'causative situation', that the construction expresses. Two events can be said to constitute a causative situation if the following two conditions hold:

(1) a. *The relation between the two events is such that the speaker believes that the occurrence of one event, the 'caused event', has been realized at t_2, which is after t_1, the time of the 'causing event.'*

b. *The relation between the causing and the caused event is such that the speaker believes that the occurrence of the caused event is wholly dependent on the occurrence of the causing event; the dependency of the two events must be to the extent that it allows the speaker to entertain a counterfactual in-*

ference that the caused event would not have taken place at that particular time if the causing event had not taken place, provided that all else had remained same.

According to this characterization of the causative situation, English sentences such as *I told John to go* and *I regret that John went* are not causative sentences. The sentence *I told John to go* does not commit the speaker to the belief that the event of John's going occurred after his telling him to do so. Thus, there is no contradiction involved in the sentence *I told John to go, but I don't think he did.* The sentence *I regret that John went* does commit the speaker to the belief that the event of John's going took place, yet the sentence is not a causative sentence.[1] This is because the occurrence of the second event, John's going, is in no way dependent on the event of the speaker's regretting.

On the other hand, sentences like *I caused John to go* and *I made John go*, as well as *I opened the door* and *I sent John to the market*, are causative sentences. All of these sentences commit the speaker to the belief that the caused event has taken place. Thus, sentences such as *I caused John to go, but I don't think he went* and *I opened the door, but it didn't open* involve contradiction. It is also the case that all of these sentences express situations in which the realization of the caused events is wholly dependent on the occurrence of the causing events. That is, these causative sentences would not be appropriate if the situations were such that John went or the door opened in any event, regardless of the speaker's having told John to go or of the speaker's having done something to the door.

In traditional grammar, verbs like *melt* and *kick* are classified as transitive verbs, but the terms CAUSATIVE VERBS and TRANSITIVE VERBS do not coincide. The verb *kick*, for example, is not a causative verb by itself, since a sentence such as *John kicked the ice* does not necessarily convey that there was any caused event following John's kicking the ice. One can, thus, say the sentence *John kicked the ice, but nothing happened to the ice* without involving any contradiction. However, the causative verb *melt* creates contradiction, as shown in the sentence *John melted the ice, but nothing happened to the ice.*

1. MORPHOLOGY

As we have seen, English has two types of causative sentences, one with auxiliary causative verbs such as *cause*, *make*, etc., and the other with morphologically irregular causative verbs, e.g., *open*, *melt*. Japanese causative forms may be also classified into two types on the basis of morphological

[1]The notion involved in this sentence is not that of causation but that of factivity (cf. Kiparsky and Kiparsky, 1971).

regularity. The regular type involves the suffix *sase*, which has a phonological variant form *ase*, as illustrated in (2):

(2)

	Noncausative	Causative
'work'	*hatarak-u*	*hatarak-ase-ru*
'look'	*mi-ru*	*mi-sase-ru*
'walk'	*aruk-u*	*aruk-ase-ru*

a. *Taroo ga hatarak-u.*
'Taro works.'

a′. *Hanako ga Taroo o hatarak-ase-ru.*
'Hanako makes Taro work.'

b. *Taroo ga e o mi-ru.*
'Taro looks at the picture.'

b′. *Hanako ga Taroo ni e o mi-sase-ru.*
'Hanako makes Taro look at the picture.'

c. *Taroo ga aruk-u.*
'Taro walks.'

c′. *Hanako ga Taroo o aruk-ase-ru.*
'Hanako makes Taro walk.'

The other type, illustrated in (3), includes the forms that are related to the noncausative forms in an irregular fashion:

(3)

	Noncausative	Causative
'open'	*hirak-u*	*hirak-u*
'die'	*sin-u*	*koros-u*
'withdraw'	*hikkom-u*	*hikkom-e-ru*
'cry'	*nak-u*	*nak-as-u*

a. *Mado ga hirak-u.*
'The window opens.'

a′. *Taroo ga mado o hirak-u.*
'Taro opens the window.'

b. *Kaeru ga sin-da.*
'The frog died.'

b′. *Taroo ga kaeru o koros-i-ta.*
'Taro killed the frog.'

c. *Musuko ga hikkon-da.*
'The son withdrew.'

c′. *Taroo ga musuko o hikkom-e-ta.*
'Taro withdrew the son.'

d. *Hanako ga nak-u.*
'Hanako cries.'

d′. *Taroo ga Hanako o nak-as-u.*
'Taro makes Hanako cry.'

The forms illustrated in (3) are irregularly related to the noncausative forms; some of the forms that belong to this irregular type have the same shape for both causative and noncausative forms, some causative–noncausative pairs show no morphological relation, and some others involve suffixation of one kind or another. The nonproductive nature of the forms in (3) can be known from the fact that even the suffixed forms cannot interchange the suffixes, while the suffix *sase* involved in (2) can be affixed productively, as shown in (4):

(4)

		Noncausative	Causative
a.	'withdraw'	*hikkom-u*	**hikkom-as-u*[2] *hikkom-ase-ru*
b.	'cry'	*nak-u*	**nak-e-ru* *nak-ase-ru*
c.	'die'	*sin-u*	*sin-ase-ru*

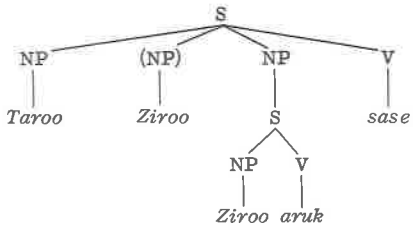
What the preceding observation shows is that, while the regular, productive causative forms in (2) need not be present in the lexicon, the irregular forms in (3) require either that they be present in the lexicon or that the noncausative forms be lexically marked as to the surface forms their causative counterparts take in case some kind of lexical derivational rule is involved. For ease of exposition, the regular causative forms and irregular forms are henceforth referred to as the 'productive causatives' and the 'lexical causatives', respectively.

2. SYNTAX

Syntactic Structures and Processes

It has been proposed in Shibatani (1973a) that the underlying syntactic structure for the productive causative sentence should have the basic form of (5) and that of the lexical causative sentence the basic form of (6):

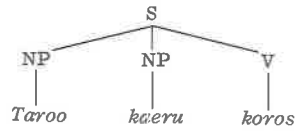
(5)



E.g., *Taroo ga Ziroo o/ni aruk-ase-ta.*
'Taro made/had Jiro walk.'

[2]There is a certain confusion among many speakers of Japanese who abbreviate *sase* as *sas*. For those speakers the *hikkom-as-u* form is well-formed as the abbreviated form of *hikkom-ase-ru*, but not as a variant of *hikkom-e-ru*.

(6)



E.g., *Taroo ga kaeru o koros-i-ta.*
'Taro killed the frog.'

The presence or absence of an extra noun phrase in the matrix sentence in (5) is correlated with the fact that an English sentence such as (7a) translates into two Japanese sentences, (7b) and (7c):

(7)
a. *John caused Bill to walk.*
b. *Zyon ga Biru* ***o*** *aruk-ase-ta.*
c. *Zyon ga Biru* ***ni*** *aruk-ase-ta.*

The sentence with the *o*-marked 'causee' expresses coercive causation, and it corresponds more closely to an English sentence with *make*, while the sentence with the *ni*-marked causee expresses noncoercive causation like an English sentence with *have*.[3] It is for the purpose of reflecting this semantic difference that an extra noun phrase has been posited in the matrix sentence that underlies the coercive sentence.

In the case of the coercive sentence, the main syntactic processes involved are (a) equi-NP deletion, which deletes the subject of the embedded sentence, (b) verb raising, which raises the verb of the embedded sentence and adjoins it to the verb of the matrix sentence,[4] and (c) case-marking rules, which assign *ga* to the surface subject and *o* to the noun phrase that occurs as the second noun phrase in the matrix sentence. The structure underlying the noncoercive sentence, on the other hand, calls for (a) verb raising and (b) case-marking rules, one of which assigns *ni* to the subject of the embedded sentence that has been raised to the matrix sentence following verb raising and tree pruning.

In addition to these processes, there are two additional rules that are purely syntactic. One has to do with the surface neutralization of the coercive and noncoercive causative forms. As observed in (7), if the causative structure involves an intransitive sentence as the embedded sentence, there arise two causative forms, one with the *o*-marked causee and the other with the *ni*-marked causee, reflecting an underlying semantic difference. If, on the other hand, the embedded sentence is transitive, the surface particle for the causee invariably becomes *ni*. For example, a sentence like (8a) is ambiguous as to the coerciveness involved, and the corresponding sentence, (8b), with the *o*-marked causee, is ungrammatical:

[3]These sentences are subsequently referred to as the '*o* causative' and the '*ni* causative'.
[4]The terms VERB RAISING and PREDICATE RAISING are used interchangeably.

(8) a. *Taroo ga Ziroo* ***ni*** *hon o kaw-ase-ta.*
'Taro made/had Jiro buy a book.'
b. **Taroo ga Ziroo* ***o*** *hon o kaw-ase-ta.*

This phenomenon seems to be correlated with a surface structure constraint in Japanese that prohibits two occurrences of N-*o* in a sentence that has only one verb (provided that the sentence is not derived via conjunction reduction or gapping). It appears that the fact that the underlying verb *sase* becomes a suffix rather than remaining an independent verb at the surface level makes the productive causative sentence subject to this constraint. The phenomenon observed in (8) can be accounted for by positing a rule that turns an N-*o* phrase followed by another N-*o* phrase into N-*ni* under the condition that only one verb exists in the sentence. What this account amounts to is to say that there are two underlying structures for sentence (8a) corresponding to the two readings of the sentence, and that the noncoercive structure directly gives rise to (8a) while the coercive structure first becomes (8b), and then the above-mentioned rule turns (8b) into the surface structure identical with the noncoercive form.

The other rule has to do with double causatives. Japanese allows double causatives, but in the surface often only one causative morpheme appears. Observe:

(9) a. *Taroo ga Ziroo ni Itiroo o aruk-**ase-sase**-ta.*
'Taro made/had Jiro make Ichiro walk.'
b. *Taroo ga Ziroo ni Itiroo o aruk-**ase**-ta.*

Both convey the same double causative meaning, and the native speaker prefers the second sentence. Since (9b) also expresses double causation, it must be derived from the same structure that underlies (9a). The most reasonable account for (9b), then, is to posit a rule that says that the double causatives are preferably reduced to the single causative at the surface level; i.e., a *sase-sase* sequence is reduced to just *sase*.

The claims made in the analysis just outlined are the following: (a) While the productive causative involves an embedding structure, the lexical causative does not, and (b) despite the morphological difference, the productive causatives in English and Japanese essentially involve the same type of underlying structure.

When one compares only the pairs of noncausative and causative expressions (2a)–(2a′) and (3c)–(3c′), it is hard to see that the causative forms in these pairs are as different as the preceding analysis claims them to be. From a purely morphological point of view, the causative sentences in the pairs both involve suffixed verbs. However, the classification of the causative forms was made on the basis of productivity, and the fact that this classificatory basis indeed provides a meaningful classification can be shown by examining the

syntactic patterns that the two types of causative forms display. I turn now to several syntactic phenomena in which causative forms classified as lexical causatives show syntactic behavior different from those classified as productive causatives. The phenomena to be presented will also render support to the claim that while the productive causative involves an embedding structure like the one involved in the English productive causative, the lexical causative involves a simplex structure, as illustrated in (5) and (6).

Adverbial Modification

In this section I consider how adverbial modification is correlated with lexical and productive causatives. With productive causative sentences, adverbs can be interpreted as being associated with either the causing event or the caused event. That is, in one interpretation the adverb is a constituent of the clause whose main verbs is *sase*, and in the other it is a constituent of the clause of a caused event. Sentence (10a), for example, may mean either that Taro was silent when he made Hanako come into the room or that Taro instructed Hanako in such a way that she came into the room silently:

(10) a. *Taroo wa Hanako o heya ni damatte hair-ase-ta.*
'Taro made Hanako come into the room silently.'
b. *Taroo wa Hanako o kyuuni tomar-ase-ta.*
'Taro made Hanako stop suddenly.'

Other adverbials behave similarly, as shown in (11):

(11) a. *Taroo wa Ziroo o te de ki ni agar-ase-ta.*
'Taro made Jiro go up the tree with the hands.'
b. *Taroo wa Ziroo o rokuzi ni oki-sase-ta.*
'Taro made Jiro get up at six o'clock.'
c. *Taroo wa Ziroo ni huku o heya de ki-sase-ta.*
'Taro made Jiro put on the clothes in the room.'
d. *Taroo wa Ziroo o heya ni sankai hair-ase-ta.*
'Taro made Jiro come into the room three times.'

One will notice that there is a slight difference in the patterns of modification between time and place adverbials and other adverbials, e.g., manner adverbs. The manner adverb may modify only the manner of the causing agent, as observed in (10). That is, in one interpretation of (10a), it can be the case that only Taro was silent. Time and place adverbials, however, cannot be interpreted as modifying just the causing event. One interpretation of (11b) is similar to one of the interpretations (10a) gives, and it says that only Jiro's getting up took place at six o'clock (with the understanding that Taro's instruction to Jiro occurred before six o'clock). The other interpretation, however, says that both Taro's instructing Jiro and Jiro's getting up

took place at six o'clock, and the sentence does not allow the interpretation that only Taro's instructing Jiro took place at six o'clock (with the understanding that Jiro's getting up took place sometime after six o'clock).

The behavior of the time and place adverbial, as we have seen, is in fact a characteristic of the causative sentence. A noncausative sentence like (12) does not show the same pattern:

(12) *Taroo was Ziroo ni rokuzi ni okiru yoo it-ta.*
'Taro told Jiro to get up at six o'clock.'

Although (12) involves an embedding structure similar to (5), the adverb modifies the sentence differently from what we have seen. In (12), it is possible to have the interpretation that only Taro's telling Jiro took place at six o'clock (with the understanding that Jiro got up sometime after six o'clock, or even with the understanding that Jiro did not get up at all).

Returning now to the causative sentence, one will notice that the same observation holds in the English productive causative sentence; the translations of the preceding examples all have two interpretations with respect to the scope of adverbial modification. In the case of lexical causatives, however, only one interpretation of the adverbial scope is possible:

(13)
a. *Taroo wa Hanako o heya ni damatte ire-ta.*
'Taro put Hanako into the room silently.'
b. *Taroo wa Hanako o kyuuni tome-ta.*
'Taro stopped Hanako suddenly.'
c. *Taroo wa Ziroo o te de ki ni age-ta.*
'Taro lifted Jiro up the tree with the hands.'
d. *Taroo wa Ziroo o rokuzi ni okos-i-ta.*
'Taro got Jiro up at six o'clock.'
e. *Taroo wa Ziroo ni huku o heya de kise-ta.*
'Taro put the clothes on Jiro in the room.'
f. *Taroo wa Ziroo o heya ni sankai ire-ta.*
'Taro put Jiro into the room three times.'

Sentence (13a), for example, does not allow two interpretations similar to those observed in (10a), and here the adverb modifies only Taro's activity. The time and place adverbial modifies whole causative events, and cannot be interpreted as modifying just the caused events (with the understanding that the causing events took place prior to the time specified or in places other than the place specified). For example, (13d), unlike (11b), gives only one interpretation, that both Taro's getting Jiro up and Jiro's getting up took place at six o'clock, and there is no reading that says only Jiro's getting up took place at six o'clock (with the understanding that Taro's causing activity took place before six o'clock).

If one compares the lexical causative *kise-ru* 'put (the clothes) (someone)' and the productive form *ki-sase-ru* 'cause (someone) to put (the clothes)' with the noncausative form *ki-ru* 'put on (the clothes)', appears that the lexical form *kise-ru* also contains the suffix *-se* added to t stem *ki-*. Thus, from a purely morphological point of view, there does n seem to be much difference between *kise-ru* and *ki-sase-ru*. However, co parison of (11c) and (13e) reveals that they display a very different syntac pattern; the lexical causative *kise-ru* patterns together with other irregul hence, lexical causative verbs such as *ire-ru* 'put in', *tome-ru* 'stop', e Thus, the criterion based on the productivity of the form yields a significa classification of causative verbs. More instances that support this classific tion follow.

Reflexivization

Just as the scope of adverbial modification can be interpreted in two wa in the productive causative sentence, the reflexive pronoun can be interpret ambiguously in such a sentence, while no such ambiguity arises in the lexic causative sentence. As extensively discussed by N. McCawley and by Ino (in this volume), the Japanese reflexive pronoun *zibun* 'self' takes a subje noun as its antecedent as a general rule; consequently, when a senten contains just one subject the reflexive pronoun refers uniquely to that subje A sentence like the following, therefore, has no ambiguity as to which nou the reflexive pronoun refers to; it uniquely refers to the subject, Taro:

(14) *Taroo wa Hanako o zibun no heya de ket-ta.*
'Taro kicked Hanako in his room.'
(Lit.) 'Taro$_i$ kicked Hanako$_j$ in self's$_i$/*self's$_j$ room.'

Unlike English, Japanese reflexivization takes place across clause boun aries. Accordingly, if a sentence is derived from a complex structure wit two or more subjects, an ambiguity arises as to which subject the reflexiv pronoun refers to.[5] Sentence (15), for example, is assumed to derive from a underlying structure with two subjects, Taro and Hanako, and it so turn out that the sentence is ambiguous:

(15) *Taroo wa Hanako ni kagami ni ututta* ***zibun*** *o miru yoo ni it-ta.*
(Lit.) 'Taro$_i$ told Hanako$_j$ to look at self$_i$/self$_j$ reflected in the mirror.'

In one reading, the pronoun *zibun* refers to Taro, and in the other Hanak since both Taro and Hanako are subjects underlyingly.

[5]See the chapter by Howard and Niyekawa-Howard in this volume for a constraint on th possibility.

Like the phenomenon of adverbial modification considered earlier, the phenomenon of Japanese reflexivization leads us to suspect that the underlying syntactic structure of a productive causative sentence is complex. This follows from the fact that the reflexive pronoun in a productive causative sentence is ambiguously interpreted; it may refer to the agent of the causing event or that of the caused event. Sentence (16a), for example, is ambiguous; in one reading *zibun* 'self' refers to Taro, and in the other to Hanako:

(16) a. *Taroo wa Hanako ni kagami ni ututta **zibun** o mi-sase-ta.*
(Lit.) 'Taro$_i$ made Hanako$_j$ look at self$_i$/self$_j$ reflected in the mirror.'
b. *Taro wa Ziroo ni **zibun** no huku o ki-sase-ta.*
(Lit.) 'Taro$_i$ made Jiro$_j$ put on self's$_i$/self's$_j$ clothes.'

A lexical causative sentence, on the other hand, displays characteristics found in simplex sentences, since the reflexive pronoun in it cannot be interpreted ambiguously. Unlike (16a), (17a), for example, does not allow the interpretation of the reflexive pronoun as referring to the causee, Hanako:

(17) a. *Taroo wa Hanako ni kagami ni ututta **zibun** o mise-ta.*
(Lit.) 'Taro$_i$ showed Hanako$_j$ self/*self$_j$ reflected in the mirror.'
b. *Taroo wa Ziroo ni **zibun** no huku o kise-ta.*
(Lit.) 'Taro$_i$ put self's$_i$/*self's$_j$ clothes on Jiro$_j$.'

Comparison of the sentences in (16) and (17) with those in (15) and (14) makes it clear that the productive causative sentence patterns together with the sentence arising from a complex structure, while the lexical causative sentence patterns together with a simplex sentence.

Soo Suru Replacement

The proverbal form *soo su-* replaces the verb and some other parts of a sentence under certain identity conditions.[6] Sentence (18a), for example, comes from the structure that underlies (18b) via the *soo-suru* rule:

(18) a. *Taroo ga uinkusu-ru to Hanako mo **soo si-ta**.*
'When Taro winked, Hanako did so, too.'
b. *Taroo ga uinkusu-ru to Hanako mo uinkusi-ta.*
'When Taro winked, Hanako winked, too.'

We have already noted that the Japanese productive causative form appears to have just one verb in the surface, since the causative morpheme

[6]The conditions involved here are not yet precisely known. Cf. Hinds (1973a) for a relevant discussion.

turns into a suffix. The fact that the productive suffix *sase* really functions as an independent verb at a deeper level can be seen when a rule like the *soo suru* rule applies; the *soo suru* rule applies either to the verb of the caused event, i.e., the embedded structure, or to the whole causative verbal complex, i.e., *V-sase*, yielding ambiguous phrases:

(19) *Taroo ga otooto o tomar-ase-ru to, Ziroo mo **soo si-ta.***
'When Taro made his brother stop, Jiro did so, too.'

This sentence is ambiguous; in one reading the phrase *Ziroo mo soo si-ta* 'Jiro did so, too' means that Jiro made his brother stop, too, and in the other it means that Jiro (himself) stopped. This ambiguity can be attributed to the following two possible sources for (19):

(20) a. *Taroo ga otooto o tomar-ase-ru to, Ziroo mo otooto o tomar-ase-ta.*
'When Taro made his brother stop, Jiro made his brother stop, too.'
b. *Taroo ga otooto o tomar-ase-ru to, Ziroo mo tomat-ta.*
'When Taro made his brother stop, Jiro stopped, too.

The fact that the *soo suru* phrase in (19) allows the reading corresponding to (20b) presents evidence that the productive causative form *tomar-ase-* 'cause to stop' comes from a structure that contains the main verb, i.e., *tomar-* 'stop', as an independent verb. In other words, a sentence like *Taroo ga otooto o tomar-ase-ru* 'Taro makes his brother stop' comes from a structure like the one given in (5), in which there is an independent clause, *otooto ga tomar-u* 'the brother stops', beneath the structure that has the causative verb *sase* separately.

The lexical causative sentence behaves quite differently from its corresponding productive causative sentence with respect to the *soo suru* rule. Unlike the productive causative sentence, the *soo suru* phrase is in no way ambiguous when it occurs in the lexical causative sentence, as observed in (21):

(21) *Taroo ga otooto o tome-ru to Ziroo mo **soo si-ta**.*
'When Taro stopped his brother Jiro did so, too.'

The *soo suru* phrase in (21) unambiguously says that Jiro stopped his brother, too, and one cannot get the reading from it that Jiro also stopped. In other words, (22) is not a possible source for (21), which means that the underlying structure of a sentence such as *Taroo ga otooto o tome-ru* 'Taro stops his brother' does not contain the clause *otooto ga tomar-u*, which is contained in the productive counterpart:

(22) *Taroo ga otooto o tome-ru to Ziroo mo tomat-ta.*
'When Taro stopped his brother, Jiro stopped, too.'

Here again, the lexical and productive causatives show different syntactic behavior.

Sentence Pronominalization

As in English, Japanese allows a sentence to undergo pronominalization. Sentence pronominalization may apply to the entire sentence or just to the embedded sentence of a complex sentence structure. For example, in (23b), the pronoun *sore* 'it' can be interpreted as referring to the entire sentence of (23a), while in (23c), *sore* has replaced only what is identical with the embedded sentence *Taroo ga atarasii setu o hakken si-ta* 'Taro discovered a new theory':

(23) a. *Taroo wa atarasii setu o hakken si-ta to syutyoo si-ta ga*
'Taro claimed that he had discovered a new theory, but'
b. *daremo* ***sore*** *o kini kakenakat-ta.*
'no one paid any attention to it.'
c. *Dare mo* ***sore*** *o sinzinakat-ta.*
'no one believed it.'

This fact indicates that when the pronoun refers back to a complex sentence structure, it is potentially ambiguous as to whether it refers to the entire sentence or just to an embedded sentence. In fact, such ambiguity is observed in the productive causative sentence, as in (24):

(24) a. *Zensin huzui no Taroo ga tiisana otooto ni huku o hitori de ki-sase-ta to syutyoo si-ta ga*
'Totally paralyzed Taro claimed that he made his small brother put on the clothes alone, but'
b. *minna wa* ***sore*** *wa hukanoo da to omot-ta.*
'everyone thought that it was impossible.'

Here, the pronoun *sore* in (24b) is ambiguous in that it may be referring to the whole causative sentence in (24a) or just to the embedded sentence *tiisana otooto ga huku o hitori de kiru* 'the small brother puts the clothes on alone.' The phenomenon of sentence pronominalization, thus, argues again for the presence of the independent embedded sentence in the productive causative structure.

A sentence with a lexical causative, on the other hand, does not present any ambiguity when the pronoun refers to it. For example, the lexical causative sentence (25a), corresponding to the productive causative sentence (24a), does not present any ambiguity for the pronoun *sore* in (25b); the pronoun has a unique antecedent, namely, the whole causative sentence in (25a):

(25) a. *Zensin huzui no Taroo ga tiisana otooto ni huku o hitori de kise-ta to syutyoo si-ta ga*
'Totally paralyzed Taro claimed that he put the clothes on his small brother alone, but'
b. *minna wa* ***sore*** *wa hukanoo da to omot-ta.*
'everyone thought it was impossible.'

The four phenomena just examined should suffice to show that there is a considerable amount of evidence to support the claims made in the analysis presented earlier. I turn now to semantic properties of the Japanese causative expression.

3. SEMANTICS

We have so far studied morphological and syntactic properties of causative forms. In this section we will be dealing with semantic properties of causative expressions.

Coercive versus Noncoercive Causation

In a situation in which both causer and causee are human, there is a wide range of activity that the causer can perform in effecting the caused event: He may force the causee, he may persuade the causee, or he may gently suggest that the causee perform an act that constitutes the caused event. Causative verbs, particularly productive forms, tend to be abstract in not specifying what the causer did to get something done. English sentence (26), for example, may be describing a situation in which the speaker just suggested that John go and he went, etc.:

(26) *I caused John to go.*

The range of activity the causer performs in a causative situation can be qualified or delimited by a phrase that describes the causer's activity, as in (27):

(27) a. *I caused John to go by suggesting that he do so.*
b. *I caused John to go by forcing him to do so.*
etc.

A similar observation appears to obtain in Japanese, since (28) can describe a wide range of situations as far as the activity on the part of the causer is concerned:

(28) *Taroo wa Hanako ni hon o yom-ase-ta.*
'Taro caused Hanako to read the book.'

Though both the English causative verb *cause* and the Japanese verb *sase* are quite abstract as to what kind of causation act the causer performs, both languages have a way to indicate at least the extent of coerciveness involved in the causation act. Thus, English sentence (26) may be translated as either (29a) or (29b), depending on whether coercion is involved or not:

(29) a. *Boku wa Zyon **ni** ik-ase-ta.*
b. *Boku wa Zyon **o** ik-ase-ta.*

The situation expressed by (27a) can be more appropriately expressed by (29a) than by (29b), while the situation expressed by (27b) corresponds to what (29b) expresses. This correlation can be observed by the naturalness and unnaturalness of the following sentences:

(30) a. *Boku wa yasasiku iikikasete Zyon **ni** ik-ase-ta.*
'I caused John to go by gently persuading him.'
b. ?*Boku wa tikarazuku de Zyon **ni** ik-ase-ta.*
'I caused John to go forcibly.'
c. *Boku wa tikarazuku de Zyon **o** ik-ase-ta.*
'I caused John to go forcibly.'
d. ?*Boku wa yasasiku iikikase te Zyon **o** ik-ase-ta.*
'I caused John to go by gently suggesting him.'

The adverbial phrase that expresses noncoercive manner goes naturally with the *ni* causative form only, while the phrase expressing coercive manner goes well only with the *o* causative form. Thus, in Japanese, noncoercive causation is expressed by the *ni* causative and the coercive causation by the *o* causative. Since these different particles on the causee are assigned on the basis of the difference in underlying structure (see Section 2), Japanese expresses the coercive–noncoercive distinction by syntactic means. We have already discussed that in a sentence like (28), which contains a transitive structure expressing the caused event, the structural difference distinguishing the coercive–noncoercive distinction is lost at the surface level.

While Japanese expresses the coercive–noncoercive distinction by syntactic means, some languages express such a distinction by lexical means. English, for example, has *make*, which can be used to express coercive causation. Forms like *have* and *get*, on the other hand, typically express noncoercive causation. Sentence (31a), being noncoercive, is quite natural in an ordinary situation, while (31b) is appropriate only in describing a situation in which John resorted to coercive action, e.g., twisting the doctor's arm:

(31) a. *John had the doctor come.*

b. *John made the doctor come.*

As in (30), the factor being considered here is apparently relevant to the selection of adverbial phrases; adverbial phrases that convey coercive meaning go well only with the coercive causative forms.

(32) a. *I forcibly made the doctor come.*
b. *I made the doctor come by twisting his arm.*
c. **I forcibly had the doctor come.*
d. **I had the doctor come by twisting his arm.*

Although the discussion so far has been concerned with the causative situation from the causer's perspective, the notion of coercive–noncoercive causation can be studied from the causee's perspective, as well. In particular, there is a close correlation between the extent of coerciveness involved in the causing event and the amount of resistance associated with the caused event. Coercive causation is applied when the causer encounters a strong resistance in effecting the caused event, while if the caused event can be effected without encountering resistance, coercive causation need not be applied. It is, thus, the resistance that the causer must overcome that calls for coercive causation.

The above-mentioned correlation between the coercion and the resistance seems to be reflected in the following pairs of sentences:

(33) a. *Taroo **o** tukai ni ik-ase-ru noni zyuppun kakat-ta.*
'It took (me) ten minutes to make Taro go on an errand.'
b. *Taroo **ni** tukai ni ik-ase-ru noni zyuppun kakat-ta.*
'It took (me) ten minutes to send Taro on an errand.'

As for my intuition, which is shared by a number of native speakers, it is the case that in (33a) ten minutes were spent in overcoming Taro's resistance to go on an errand; i.e., ten minutes were spent in persuading or threatening reluctant Taro. In (33b), on the other hand, ten minutes were likely to have been spent in giving directions, dressing Taro, etc., rather than in overcoming Taro's resistance.

To sum up, the notion of coercion in the causative situation can be viewed from two different points of view. From the causer's perspective, it relates to the amount of coerciveness involved in the causation act; from the causee's perspective, it relates to the extent of the causee's concurrence. The nature of human interaction is such that the extent of coerciveness in the causation act is most often correlated with the extent of the concurrence on the part of the causee: If the causer assumes that the causee would concur with his intention, no coercive causation act is exercised; if, on the other hand, the causer expects resistance, he resorts to a coercive causation act.

Permissive Causation

Japanese is one of those languages that allow the use of the causative morpheme to express 'permissive causation'. There appear to be, altogether, four types of permissive causation. The two most prevalent types are (a) a situation in which the causer forbears (or omits) prevention (or intervention), as a result of which the caused event takes place successfully, and (b) a situation in which the causer actively gives permission to the causee to do something. This second type can be understood as a type of forbearance, too; namely, the causer forbears withholding permission. The two less prevalent types are (c) a case in which the causer attempts but fails to prevent something from happening and (d) a situation in which the causer gives up and does not intervene with the caused event, knowing that his intervention would not succeed anyway.

Types (a), (c), and (d) are closely related in that prevention has not taken place, and as a result, the caused event has been realized; however, some aspects of presuppositions involved in each type may be different. All of these types involve the assertion that nonoccurrence of prevention (or forbearance of intervention), $\sim E_1$, which constitutes the causing event, has led to (or permitted) the occurrence of the caused event, E_2.

In the case of type (b), the causing event, E_1, is identified with withholding permission, and this type asserts that not withholding or giving permission $\sim E_1$, has led to the realization of the caused event, E_2. Thus, in all four types of permissive causation, the assertion takes the form '$\sim E_1$ leads to E_2.'

As far as the presuppositions are concerned, the prevalent types, (a) and (b) as well as (c), share the presupposition that if E_1 (prevention or withholding of permission) had been successful, E_2 would not have happened. That is, E_1 leads to $\sim E_2$. In the case of type (c), there should be some additional presupposition expressing that the causer attempts to prevent the caused event from occurring. Type (d), on the other hand, does not seem to share the presupposition that E_1 leads to $\sim E_2$. But what appears to be involved is the notion that, even if the causer attempted to prevent the caused event, he would not have been successful, and it would have occurred anyway.

Leaving aside for now the discussion of the formal properties of permissive causation, I turn now to the Japanese forms that express permissive causation. Since permissive causation holds only in the situation in which the caused event has a propensity to occur, the *ni* causative form, which typically expresses noncoercive causation, is the prevalent permissive causative form. Thus, of the following pair, (34a) can be much more readily interpreted in the permissive sense than (34b):

(34) a. *Taroo* ***ni*** *eiga e ik-ase-ta.*
'(I) had/let Taro go to the movies.'

b. *Taroo* ***o*** *eiga e ik-ase-ta.*
'(I) made Taro go to the movies.'

However, there are *o* causative sentences that express permissive causation, as observed in the following sentences from Kitagawa (1974):

(35) a. *Kawaisoo datta ga, yaru miruku mo nakatta no de sono mama akanboo o nak-ase-ta.*
'I felt bad, but since I did not have even milk to give it, I just let the baby cry.'

b. *Moo uma o turete kaeru zikan datta ga, amari yukaisoo ni kakoi no naka o hasitte iru no de Taroo wa sono mama moo sibaraku uma o hasir-ase-ta.*
'The time had come for Taro to take the horse back, but, because the horse was running so joyously in the corral, Taro let the horse run for a little while more.'

In addition to the sentences in (35), the causee takes the particle *o* if it is a nonvolitional entity, regardless of whether the situation involves permissive causation or ordinary causation:

(36) a. *Reizooko ni irezu ni hotte oite, yasai o/*ni kusar-ase-ta.*
'(I) let the vegetable rot without putting it in the refrigerator.'

b. *Omoiyari no aru isya wa konsuizyootai ni ari tasukaru mikomi no nai byoonin o/*ni sin-ase-ta.*
'The sympathetic doctor let the patient, who was in a coma and had no hope of survival, die.'

Sentences of this type give a certain clue as to the difference between the permissive causative forms expressed by the *o* causative and those expressed by the *ni* causative. In the case of the situations expressed by the *o* causative, it appears that the causer either fails to prevent the caused event from happening or does not actively give permission to the causee, but merely forbears his interfering act so that the ongoing event will persist or the imminent event will occur. In other words, the *o* causative forms express permissive causation of types (a), (c), and (d). In contrast, the situations expressed by the *ni* causative form involve the causer as an active participant; in particular, he would be actively giving (often oral) permission to the causee. That is, the *ni* causative expresses the type (b) permissive situation. The contrast can be observed in the following sentences:

(37) a. *Iede o siyoo to site iru musume o/?ni me o tubutte ik-ase-ta.*
'Pretending not to see, (I) let the daughter go who was trying to run away from home.'

b. *Tatoe tomete mo mudananode hotte oite masuko o/?ni ik-ase-ta.*

'Since stopping is no use, (I) let the son go without doing anything.'

c. *'Aa iiyo' to itte kodomo ni/?o motto asob-ase-ta.*
'(I) let the children play more by saying "Oh, OK."'

d. *'Ittemo iiyo' to kyoka o ataete musuko ni/?o ik-ase-ta.*
'(I) let the son go by giving a permission "OK, you can go."'

Undoubtedly, the fact that only *o* causative forms can express permissive causation if the causee is a nonvolitional entity is due to the situational difference discussed earlier. The essential difference between the permissive causative situation expressed by the *ni* causative form and the one expressed by the *o* causative form is that, in the former situation, the causer actively concurs with or enhances the causee's volition while, in the latter situation, there is no such active concurrence or enhancement given to the causee's volition. Thus, only a volitional entity can be the causee of the former situation, while there is no such restriction in the latter situation.

It is interesting to note here that in the case of the nonvolitional causee, if the causer actively participates or attempts to enhance the process, the situation cannot be interpreted as permissive causation; such a situation can be interpreted only as an ordinary causative situation. For example, in contrast to the sentences in (36), the following can be understood only as ordinary causative sentences:

(38) a. *Reizooko kara toridasite yasai o kusar-ase-ta.*
'(I) made the vegetable rot by taking it out from the refrigerator.'

b. *Omiyarino aru isya wa karyoo no kusuri o ataete konsuizyootai ni ari tasukaru mikomi no nai byoonin o sin-ase-ta.*
'By giving an overdose of medicine, the sympathetic doctor caused the patient to die who was in a coma and had no hope of survival.'

One other point to be noted here is that in the permissive causative situation expressed by the *o* causative form and involving the nonvolitional entity as the causee, the process must be such that it must have either inherent or programed potentiality to take place. The following sentences are, thus, not normally acceptable as permissive causative sentences:

(39) a. **Taroo wa yasai o nie-sase-ta.*
'Taro let the vegetable cook.'

b. **Taroo wa isu o taore-sase-ta.*
'Taro let the chair fall down.'

Sentence (39b), however, can be correctly interpreted in the situation in which someone knocked over the chair and it was slowly falling down, but

Taro, who could have prevented the chair from falling down, just let it fall down. Notice, however, that this type of permissive causation holds only in a situation in which the causer has a capacity to prevent the occurrence of the caused event. Thus, if Taro could have prevented the chair from falling down but did not, one can accuse Taro by saying (39b), but if Taro was in one corner of the room and therefore could not help when someone knocked over the chair in another corner of the room, no one can describe the situation or accuse Taro by saying (39b).

While the most permissive causative cases are expressed by the use of the productive causative form, there are certain cases in which lexical causative forms may be used for permissive causation. Typical cases involve natural forces such as gravity that add propensity to the caused event. For example, (40a) may be interpreted as ordinary causation if Taro intentionally dropped the books, but in the situation in which Taro was pulling a certain book from a high shelf, and, though he attempted to prevent it, he dropped a few neighboring books, the sentence may be interpreted as expressing permissive causation:

(40) a. *Taroo wa hon o otos-i-(te-simat-)ta.*
'Taro dropped the books.'

b. *Taroo wa mokei no hune o sizume-(te-simat-)ta.*
'Taro sank the model ship.'

When one carefully compares the situations appropriate for these sentences with those appropriate for the following productive forms, one will notice that an essential difference is involved:

(41) a. *Taroo wa hon o oti-sase-ta.*
'Taro let the books drop/fall.'

b. *Taroo wa mokei no hune o sizum-ase-ta.*
'Taro let the model ship sink.'

Sentences (41a) and (41b) are appropriate for situations in which Taro was an onlooker and could prevent the books from falling from the shelf or the ship from sinking, but he did not do anything and let the happenings take place. These situations, however, cannot be described by (40a) and (40b). On the other hand, (41a) and (41b) are inappropriate for situations in which Taro was directly involved in the events, e.g., he touched the books or he broke the model ship, and could not prevent the occurrence of the caused events. These situations are most appropriately expressed by (40a) and (40b). In other words, lexical causative forms are appropriate for situations in which the causer manipulates (or directly acts on) the causee, while productive forms are used for situations in which no manipulation of the causee is involved. This notion of manipulation is an important one, for it is inherent in the meaning of lexical causative forms, to be discussed.

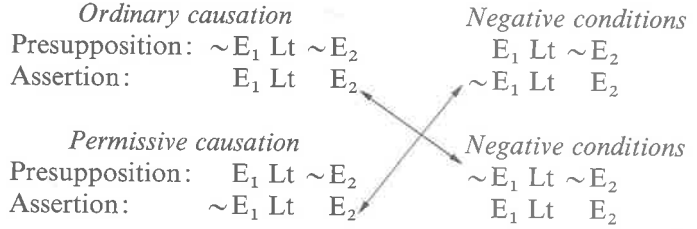
The Relation between Ordinary and Permissive Causation

We have seen that Japanese is one of those languages that allow the use of the causative morpheme to express permissive causation. The fact that so many languages, e.g., French (*faire*), German (*lassen*), Korean (*ha-ta*), Turkish (e.g., *-dur-*), and Quechua (*-či-*), share this property indicates that there must be some deep-seated semantic relation between ordinary and permissive causation. In fact, a detailed semantic analysis of the two types of causation reveals that ordinary causation and permissive causation involve the same set of presuppositions, assertions, and negative conditions, but with different functions.

As is clear from the informal, expository characterization of the causative situation given in the introduction, the ordinary causative sentence asserts that the realization of the causing event, E_1, has led to the realization of the caused event, E_2. Let us formally express this relation as 'E_1 Lt E_2', where *Lt* stands for 'leads to'. The presupposition associated with the ordinary causative sentence is that if E_1 had not taken place, then E_2 would not have taken place. Using our notation, this presupposition would be expressed as '$\sim E_1$ Lt $\sim E_2$'. From this assertion and presupposition we can derive negative conditions under which an ordinary causative situation does not hold. They are '$\sim E_1$ Lt E_2' and 'E_1 Lt $\sim E_2$'. That is, no causal relation holds between E_1 and E_2 when the nonoccurrence of E_1 has led to the occurrence of E_2, or when the occurrence of E_1 has led to the nonoccurrence of E_2.

As discussed earlier, in the case of a permissive causative situation, prevention constitutes E_1, and what is asserted is that the nonoccurrence (or forbearance) of prevention, i.e., $\sim E_1$, has led to the realization of the caused event, E_2, i.e., $\sim E_1$ Lt E_2. The presupposition involved in the prevalent types of permissive causation is that if E_1 (prevention) had occurred, then E_2 would not have occurred, i.e., E_1 Lt $\sim E_2$. This presupposition holds crucially in permissive causation, since a permissive causative situation does not hold when (a) E_2 occurs even if the forbearance of prevention is **not** exercised, and when (b) E_2 does not occur even though the forbearance of prevention occurs. In other words, the assertion and the presupposition associated with permissive causation express the following negative conditions for a permissive causative situation: E_1 Lt E_2 and $\sim E_1$ Lt $\sim E_2$.

A careful reader may have noticed the systematic relation that exists between ordinary causation and permissive causation. The negative conditions for ordinary causation function as the presupposition and the assertion for permissive causation, and the presupposition and the assertion of ordinary causation correspond to the negative causations for permissive causation, and vice versa. Schematically, the situation can be summarized as follows:



Since the set of negative conditions and the presupposition and the assertion of one type of causation function in completely reverse roles in the other type, the situational difference between ordinary causation and permissive causation is maximal. Thus, even if the same morpheme were to be used for the two situations, there should not arise any confusion. That is, when one uses the morpheme *x* in the ordinary causative sense, he is both presupposing and asserting what constitutes the negative conditions for the other permissive sense; hence, as long as the hearer understands the assertion and shares the presupposition correctly, there is no way he can misunderstand *x* as being used for the permissive sense. Exactly the reverse holds when *x* is used for the permissive sense.

Directive versus Manipulative Causation

The caused event can be effected in a number of different ways. Depending on whether the causee functions as a volitional entity or not, there arise two modes of causation. In a situation in which the causee functions as a volitional entity, giving a direction to the causee is the basic action associated with the causer. On the other hand, in a situation in which the volition of the causee is absent, the causer must physically manipulate the causee in effecting the caused event. The former case is henceforth referred to as 'directive causation', the latter 'manipulative causation'.

The fact that the nonvolitional entity does not very often function as the causee in the productive causative sentence shows that the productive form typically expresses a directive causative situation. Observe:

(42)
a. **Boku wa isu o/ni heya ni hair-ase-ta.*
'I *made/*had the chair enter the room.'
b. **Boku wa hon o/ni tat-ase-ta.*
'I made/*had the book stand up.'
c. *Boku wa Taroo ni/o heya ni hair-ase-ta.*
'I made/had Taro enter the room.'

d. *Boku wa Hanako o/ni taore-sase-ta.*
'I made/had Hanako fall down.'

The lexical causative form, on the other hand, allows both a volitional and a nonvolitional entity to occur as the causee:

(43)
a. *Boku wa isu o heya ni ire-ta.*
'I put the chair in the room.'
b. *Boku wa hon o tate-ta.*
'I stood the book up.'
c. *Boku wa Taroo o heya ni ire-ta.*
'I put Taro in the room.'
d. *Boku wa Hanako o taos-i-ta.*
'I threw Hanako down.'

If one compares a situation expressed by a lexical causative sentence, e.g., (43d), and that expressed by a productive causative sentence, e.g., (42d), he will notice that there is a basic difference in the mode of causation involved in each case. In (42d), the situation involves the speaker's giving a directive in such a way that Hanako fell down. (One might imagine a situation involving the speaker as a movie director and Hanako as an actress.) It is also the case that if the situation were to involve any physical manipulation of the causee on the part of the causer, e.g., the speaker's physically throwing down Hanako, (42d) would not be appropriate. In contrast to the situation involved in (42d), the situation expressed by (43d) involves physical manipulation, and (43d) is appropriate for the second situation but not for the first. What is being discussed here is in line with the fact that the nonvolitional entity cannot be a causee of the productive causative form: One cannot give a direction to the nonvolitional entity; therefore, the latter cannot participate in directive causation, and since the productive form typically expresses a directive causative situation, the nonvolitional entity cannot occur as the causee in the productive causative sentence.

What is observed is the division of semantic function between the two types of causative forms: The productive causative primarily expresses the meaning of directive causation, and the lexical causative manipulative causation. Thus, one major semantic difference between the productive and lexical causatives lies in the dimension of the directive–manipulative distinction.

Productive Causatives Expressing Manipulative Causation

While what has been said in the preceding section about the directive–manipulative distinction generally holds true, there are certain cases in which productive forms express manipulative causation. Certain noncausative verbs may lack the corresponding lexical causatives, or even if they have the corresponding lexical causatives, the causative forms may impose

a severe selectional restriction on the choice of the causee. The English verb *run* in the sense of 'to move rapidly by springing steps' illustrates the first case for not having the corresponding lexical causative form, and English *fall* illustrates the second case, since the lexical counterpart *fell* is restricted to situations involving a tree or a large animal as the causee.

To a large extent, each language has its own idiosyncracies with respect to this type of "lexical gap". Thus, Korean has the lexical causative form *talli-ta* for the noncausative verb *talli-ta* 'run' (both having the same phonological shape). In Japanese, the lexical causative form *taos-u* for the verb *taore-ru* 'fall down' is not confined to situations involving a tree or a large animal as the causee. On the other hand, unlike the English causative verb *stand up*, the corresponding Japanese verb *tate-ru* is confined to the situation involving an inanimate causee.

When the verbs lack their corresponding lexical forms or when the lexical causatives permit only a limited type of causee, languages in general allow the productive forms to be used to express the situation involving manipulative causation. Japanese shares this property. As noted earlier, the Japanese lexical causative verb *tate-ru* 'stand up' admits only an inanimate causee, while its noncausative counterpart *tat-u* 'stand (up)' admits both animate and inanimate subjects. Observe:

(44)
a. *Boo ga tat-te-i-ta.*
'There was a stick standing.'
b. *Kodomo ga tat-ta.*
'A child stood up.'
c. *Boku wa boo o tate-ta.*
'I stood the stick up.'
d. **Boku wa kodomo o tate-ta.*
'I stood the child up.'

The only well-formed sentence that can be used in place of (44d) is the following, with the productive causative form *tat-ase-ru*:

(45) *Boku wa kodomo o tat-ase-ta.*
'I made the child stand up./I stood the child up.'

As the English translation indicates, the sentence is ambiguous; the sentence may be used for a situation in which the speaker directed the child to stand up or one in which the speaker physically stood the child up. The point being made here becomes clearer if (45) is contrasted with a sentence with the productive form that has the corresponding lexical causative form. Unlike (45), (46a), for example, does not allow the manipulative causative reading, as this reading is expressed by the corresponding lexical causative sentence in (46b):

(46) a. *Boku wa kodomo o taore-sase-ta.*
'I made the child fall down.'
b. *Boku wa kodomo o taos-i-ta.*
'I threw down the child.'

One other point to note here is that it is only the *o* causative form that allows the manipulative reading. In contrast to (45), the following *ni* causative sentence gives only the directive reading:

(47) *Boku wa kodomo ni tat-ase-ta.*
'I had the child stand up.' ≠ 'I stood the child up.'

This situation has to do with the fact that the particle *ni* marks only the volitional causee, while the particle *o* may mark both volitional and nonvolitional causees. As discussed previously, in the manipulative situation the causee functions as an inanimate entity; hence, only the *o* causative form allows the manipulative reading. Also compare the following:

(48) a. *Boku wa sissin site iru kodomo o tat-ase-ta.*
'I stood the fainted child up.'
b. **Boku wa sissin site iru kodomo ni tat-ase-ta.*

Sentence (48b) is ungrammatical because while the sentence structure calls for a directive causative situation, the causee involved is nonvolitional. Furthermore, (48a) has only the manipulative reading, in spite of the fact that structurally comparable (45) gives both manipulative and directive readings. Further discussion on the relation of the volitional causee and the particles is given in a subsequent discussion.

To summarize here, the productive causative form may express the manipulative situation in case there is no corresponding lexical causative form, or in case the causee is something not permitted by the lexical form. This fact is significant because it indicates that the entire range of meaning of the productive causative form is not predictable by just looking at the form alone; one has to find out whether or not the language has the corresponding lexical form and whether or not the existing lexical form permits the entity in question as a causee. If there are both productive and lexical forms, and if the latter permits the causee in question, then the productive form expresses the directive meaning, and the lexical form the manipulative meaning. If, on the other hand, only the productive form is available, it expresses both directive and manipulative meanings.

Lexical Causatives Expressing Directive Causation

As there are certain cases in which productive causative forms express situations involving manipulative causation, there are certain lexical causative forms that are used in expressing directive causation. The verb *ire-ru* 'put in' in the following sentence is one such example:

(49) *Boku wa Taroo o heya ni ire-ta.*
'I put Taro in the room./I had Taro enter the room.'

Sentence (49) is ambiguous. In one reading the verb *ire-ru* has its literal meaning of 'put in', involving manipulative causation, but the sentence also allows the reading of the speaker's telling Taro to go into the room. Some other verbs that allow such ambiguous readings are seen in the following:

(50) a. *Boku wa tuukoonin o tome-ta.*
'I stopped a passer-by.'
b. *Hahaoya wa kodomo o nikai e age-ta.*
'The mother sent the child upstairs.'
c. *Hahaoya wa kodomo o gakkoo no mae de oros-i-ta.*
'The mother dropped off the child in front of the school.'

Some lexical causatives, however, never allow the directive reading, as seen in (51):

(51) a. *Hahaoya wa Taroo ni huku o kise-ta.*
'The mother put the clothes on Taro.'
≠'The mother had Taro put on the clothes.'
b. *Boku wa Taroo o ugokas-i-ta.*
'I moved Taro.'
≠'I had Taro move (over).'
c. *Hahaoya wa kodomo o nekas-i-ta.*
'The mother put the child to sleep.'
≠'The mother had the child go to sleep.'

The questions taken up here are: (a) What kind of semantic difference is there between the directive use of lexical causative forms and the corresponding productive causatives used in (52)?; and (b) Why do some verbs allow and some verbs, such as those in (51), not allow the directive reading? The questions raised here are closely related, and the answer to the first gives a clue to the answer for the second:

(52) a. *Boku wa tuukoonin o tomar-ase-ta.*
'I had a passer-by stop.'
b. *Hahaoya wa kodomo o nikai e agar-ase-ta.*
'The mother had the child go upstairs.'
c. *Hahaoya wa kodomo o gakkoo no mae de ori-sase-ta.*
'The mother had the child get out of (the car) in front of the school.'

The basic difference between (50) and (52) has to do with the purpose the causer has in mind in bringing about the caused event. In (50), the causer's purposes are not simply to see that a passer-by stops, the child goes upstairs,

or the child gets out of the car. On the other hand, in (52), the causer's interest lies in the caused events themselves. In other words, when lexical causatives are used in the directive sense, they convey that the causer's interest lies in the ultimate purposes associated with the causative situations rather than the causative situations themselves, while there is no such implication in the case of the productive forms.

In sentence (50a), for example, the speaker's stopping a passer-by is an accidental event rather than the ultimate purpose of his action, the ultimate purpose being to ask for a light or for directions. In (52a), on the other hand, to see that a passer-by stops is the speaker's central concern. This difference is reflected in the unnaturalness of (53b):

(53) a. *Miti o kiku no ni tuukoonin o tome-ta.*
'In order to ask for directions, I stopped a passer-by.'
b. ?*Miti o kiku no ni tuukoonin o tomar-ase-ta.*
'In order to ask for directions, I had a passer-by stop.'

One other dimension of meaning that contributes to the oddness of (53b) is that while all productive causative forms express the causer's authority over the causee, lexical causative forms, including those used in (50), do not express such authority.

The fact that the productive form is called for in case the causer's interest lies in the caused event itself can be seen in the following pair:

(54) a. *Moo kaidan ga noboreru ka miyoo to akanboo o nikai e agar-ase-te mi-ta.*
'In order to see if he could climb the stairs, (I) made the baby go upstairs.'
b. **Moo kaidan ga noboreru ka miyoo to akanboo o nikai e age-te mi-ta.*

When one compares these sentences with the following, it becomes clear that the association of the purpose and the causative situation alone is not a sufficient condition for the directive use of the lexical causative form:

(55) a. *Hahaoya wa kodomo o tukue ni age-ta.*
'The mother lifted the child up onto the desk.'
b. *Boku wa Taroo o hako ni ire-ta.*
'I put Taro into the box.'

The sentences in (55), though the same lexical causatives are used in them as in (50), do not allow the directive reading. What makes the sentences in (50) different from those in (55) appears to be correlated with whether or not the purpose associated with the causative situation is conventionalized or well-defined. While sending a child upstairs and letting someone into the

room have conventionalized purposes associated with them, e.g., sending a child to sleep and meeting with a person, respectively, getting a child onto the desk and putting someone into a box do not have any conventionalized purpose associated with them. That is, while in the cases of the sentences in (50), one can infer or narrow down sufficiently the range of purposes associated with the situations, this is not the case with the sentences in (55).

Now, in the light of the preceding distinction, compare (50c) and (52c). Sentence (50c), when read with the directive sense, definitely brings forth the conventionalized purpose associated with the sentence, namely, that the mother took the child to school, where he attended class. In contrast to (50c), (52c) does not readily bring forth the conveyed meaning. The sentence even gives the impression that it was a sheer accident that the mother made the son get out of the car in front of the school; e.g., it was because of a flat tire.

These observations point out that whether a particular lexical causative can be interpreted in the directive sense or not depends not only on the lexical item itself but also on whether or not the sentence as a whole expresses a situation that has a conventionalized purpose associated with it. This point suggests an answer to our second question, namely, that the reason that some lexical forms, e.g., *kise-ru* 'dress', *ugokas-u* 'move', never allow the directive interpretation is that these verbs do not occur in environments associated with conventionalized purposes.

There is an interesting phenomenon related to the present discussion. A lexical causative, which by itself has only the basic, literal sense, takes on additional meaning when it occurs in an environment associated with a conventionalized purpose. The Japanese lexical causative verb *ire-ru* by itself means 'put something/someone into something'. The productive counterpart *hair-ase-ru* means 'make/have someone enter into something'. However, when the former occurs in an appropriate environment, it takes on a unique meaning derived from the conventionalized purpose associated with the sentence. Thus, when *ire-ru* 'put in' occurs in the environment of a movie house, as in *eigakan ni ire-ru* (literally, 'put into a movie house'), it means 'to admit'; when it occurs in the environment of a school, as in *daigaku ni ire-ru* (literally, 'put into a university'), it means 'to enroll'; when it occurs in the environment of a mental institution, it means 'to commit'; and when it occurs in the environment of a prison, it means 'to imprison'. But the productive form in the same environments does not necessarily have the same meaning. Thus, if I actually want to see the movie, and if I happen to know the ticket puncher, I would say *Ire-te kudasai* 'Please admit me to the movie' rather than *Hair-ase-te kudasai* 'Please let me in'. But if I just want to buy cigarettes or use the rest room, I would use the latter rather than the former. In other words, *ire-ru* (a lexical form) in the environment

of a movie house means 'to let someone in and let him see the movie', while the productive form *hair-ase-ru* in the same environment maintains the literal meaning of 'let someone in' without any implication of letting him see the movie. Similarly, *rooya ni ire-ru* (literally, 'put into the jail') means 'to imprison', and the corresponding productive form *rooya ni hair-ase-ru* means 'make/let someone go into the prison'. Thus, if I have committed a crime and want myself to be imprisoned, I must say *Rooya ni ire-te kudasai* 'Please imprison me'. But if I just want to see someone who is an inmate, I cannot use that expression; in this case I must say *Rooya ni hair-ase-te kudasai* 'Please let me go into the prison'.

To summarize, then, the lexical causative may be used to express a situation involving directive causation if the association of a well-defined purpose with the causative event is conventionalized, and when the causer's concern is centered on this well-defined purpose rather than on the actual causative event itself. The lexical causative, moreover, manifests a dimension of meaning derived from this well-defined purpose, while supressing its literal meaning. In the case of a productive causative, however, the literal meaning is retained strongly even in the same environment in which the preceding phenomenon occurs.

Before we move on let us take up the question of whether the directive meaning derivable from the lexical causative sentence under the condition studied earlier has any syntactic reflections. As studied in Section 2, the productive causative forms show syntactic behavior different from that of the lexical causative sentences. One may naturally ask whether the lexical causative forms that express the directive meaning, which is typically expressed by the productive forms, share syntactic patterns with the productive forms. Examinations of the manner of adverbial modification, *soo suru* replacement, and reflexivization reveal that the directive use of the lexical causative form does not permit the sentence to behave similarly to the productive form, and that it retains the properties of the regular lexical causative sentence. Thus, in the following examples the productive causative (a) sentences show ambiguity, while the lexical causative (b) sentences that permit the directive reading do not share the ambiguity that the corresponding (a) sentences show:

(56) a. *Taroo wa Hanako o yeha ni sankai hair-ase-ta.*
(i) 'For three times, Taro made Hanako enter the room.'
(ii) 'Taro instructed Hanako in such a way that she entered the room three times.'
b. *Taroo wa Hanako o heya ni sankai ire-ta.*
(Only the first reading, (i), is possible.)

(57) a. *Hahaoya ga Taroo o nikai e agar-ase-ru to, titioya mo soo si-ta.*
(i) 'When the mother made Taro go upstairs, the father also made him go upstairs.'
(ii) 'When the mother made Taro go upstairs, the father also went upstairs.'
b. *Hahaoya ga Taroo o nikai e age-ru to, titioya mo soo si-ta.*
(Only the first reading is possible.)

(58) a. *Taroo wa Hanako o zibun no kuruma kara ori-sase-ta.*
(i) 'Taro$_i$ made Hanako$_j$ get out of self's$_i$ car.'
(ii) 'Taro$_i$ made Hanako$_j$ get out of self's$_j$ car.'
b. *Taroo wa Hanako o zibun no kuruma kara oros-i-ta.*
(Only the first reading is possible.)

Direct versus Indirect Causation

In both directive and manipulative causation, the causer acts directly on the causee, whether it is done orally or physically. There are causative situations in which the causer's directly acting on the causee is either impossible or simply has not taken place. For example, normally one cannot manipulate someone else's psychological state. What the causer can do in bringing about a change in someone's psychological state is to do something indirect as a result of which a change is brought about. For example, in making someone happy, the causer can neither tell the causee to be happy nor physically manipulate the causee's mentality. But the causer can do something indirect, e.g., buy the causee an ice-cream cone, which brings about a change in the causee's psychological state. This manner of causation, thus, differs from both directive and manipulative causation. I will henceforth refer to the former as 'indirect causation', as opposed to the latter two types, which can be collectively termed 'direct causation'.

Since lexical causatives are typically correlated with manipulative, i.e., direct, causation, one seldom finds lexical causatives that express indirect causation.[7] Thus, Japanese does not have lexical forms for *kanasim-u* 'feel sad', *yorokob-u* 'be happy', *sabisigar-u* 'feel lonesome', etc. In other words, indirect causation is normally expressed by the productive form, as in (59):

(59) a. *Taroo wa Hanako o kanasim-ase-ta.*
'Taro made Hanako sad.'
b. *Taroo wa Hanako o yorokob-ase-ta.*
'Taro made Hanako happy.'

[7]One notable exception to this generalization is the metaphorical use of certain lexical causative forms, such as *oiyar-u* 'drive away', as in:

(1) *Sono ziken wa Taroo o kyuuti ni oiyat-ta.*
'That event drove Taro away into a difficult position.'

Cf. the chapter by Noriko McCawley in this volume on the properties of this type of expression.

Also, a sentence of the following type, which contains a sentence or inanimate object as its subject, typically express indirect causation:

(60) a. *Taroo ga okurimono o kaiwasure-ta koto ga Hanako o kanasim-ase-ta.*
'Taro's forgetting to buy a present made Hanako sad.'
b. *Taroo no syusse ga Hanako o yorokob-ase-ta.*
'Taro's success made Hanako happy.'

An indirect causative situation involving an active event as the caused event is also expressed by this type of construction, as seen in (61):

(61) a. *Taroo ga kyuuni kaettekita koto ga Hanako o isoide kaimono ni ik-ase-ta.*
'Taro's returning suddenly made Hanako go shopping in a hurry.'
b. *Teppoo no oto ga kodomotati o issei ni hasir-ase-ta.*
'The sound of the gun made the children run all at once.'
c. *Sono inu no sonzai ga kodomotati ni mawari-miti o s-ase-ta.*
'The presence of the dog made the children take a detour.'

In English, an inanimate object may occur as the causee of indirect causation. For example, the following sentences possibly can be used in describing a situation in which the causer indirectly moved the chair, e.g., by pulling a string attached to the chair, or indirectly opened the door, e.g., by banging against the wall:

(62) a. *John made the chair move.*
b. *John made the door open.*

In Japanese, however, an inanimate object is not usually permitted as the causee of an indirect causative sentence. The following sentences, for example, are not quite so grammatical as the English sentences in (62), even if the same situations are imagined:

(63) a. **Zyon wa isu o ugok-ase-ta.*
b. **Zyon wa doa o hirak-ase-ta.*

The only conceivable situations in which (63) may be used are those in which John, by using magic, could communicate with the chair and the door and could give them a direction, i.e., directive causative situations. Similarly, although sentences with sentential subjects and inanimate causees are possible in English, the corresponding Japanese sentences are not:

(64) a. *John's pulling the string made the chair move.*
b. *John's banging against the wall made the door open.*

(65) a. **Zyon ga himo o hipparu koto ga isu o ugok-ase-ta.*
b. **Zyon ga kabe ni butukaru koto ga doa o hirak-ase-ta.*

It thus appears that indirect causative sentences are possible only when the corresponding sentential subject forms are possible.

One notable exception to the generalization that an inanimate object cannot function as the causee in an indirect causative sentence that has been brought to my attention is the following sentence from J. McCawley (1972a):

(66) *Taroo ga enzin o tomar-ase-ta.*
'Taro made the engine stop.'

The lexical causative form *tome-ru* 'stop' must be used if Taro had stopped the engine by using a key in a normal manner, and this sentence is not appropriate for such a normal situation. Sentence (66), however, is not ungrammatical like those in (63), and it is appropriate in describing a situation like the one in which Taro's stopping the engine involves an unusual means such as putting sand and rocks in the engine or hammering the engine so that it jams up and comes to a halt. The fact that an engine is a piece of machinery conceivable as having its own force seems to differentiate it from other purely inanimate objects such as a chair and a wall. If what is involved is an automatic door, one can think up a situation appropriate for even a sentence like (63b).

Volition of the Causee and the Case Marking

In Shibatani (1973a), it was argued that 'case marking cannot be successfully done unless the rules take semantic considerations into account [p. 341]', and the following rules were proposed:

(67) a. x
$N \longrightarrow \overbrace{N \quad ga}/\#\#$ ——
where x = any argument type
b. agent
$N \longrightarrow \overbrace{N \quad ni}/X$ ——
where $X \neq \#\#$
c. patient
$N \longrightarrow \overbrace{N \quad o}/X$ ——
where $X \neq \#\#$

Rule (67a) assigns *ga* to the sentence-initial noun regardless of its argument type. Rules (67b) and (67c) assign *ni* to the agentive noun and *o* to the patient noun, respectively, when they occur sentence internally.

The rules assign correct case particles to both coercive and noncoercive causative structures whose underlying structures are as follows:

(68) a. Noncoercive causative structure
(Taroo (Hanako aruk-) sase-ta)
Taroo ga Hanako ni aruk-ase-ta.
'Taro had Hanako walk.'

b. Coercive causative structure
(Taroo Hanako (Hanako aruk-) sase-ta)
Taroo ga Hanako o aruk-ase-ta.
'Taro made Hanako walk.'

In (68a), the agentive noun *Hanako* moves into the matrix sentence following verb raising and tree pruning, and it receives *ni* by Rule (67b). In (68b), on the other hand, the agentive noun *Hanako* of the embedded sentence is deleted by equi-NP deletion; what is left is the patient noun *Hanako* that originates in the matrix sentence, and it receives *o* by Rule (67c).

The preceding analysis accounts for the particle *o* and the nonoccurrence of *ni* in a permissive causative sentence like (36b):

(36b) *Omoiyari no aru isya ga konsuizyootai ni ari*
*tasukaru mikomi no nai byoonin o/*ni sin-ase-ta.*

Since in this case there is no semantic motivation to posit the patient noun *byoonin* 'patient' in the matrix sentence, the underlying structure takes a form similar to the noncoercive structure (cf. 68a)—namely, the following:

(69) *(isya (byoonin sin-) sase-ta)*

The case marking rules in (67) most naturally account for the difference in case particles that the causees in (68a) and (69) receive: In the case of (68a), the causee *Hanako* functions as an agent, while in (69) the causee *byoonin* functions as a patient.

Now, it appears that, in the case of sentences (68a) and (36b), the argument types 'agent' and 'patient' correspond well to the presence and absence of the volition on the part of the causee. In (68a), Taro appeals to Hanako's volition, and Hanako VOLITIONALLY instigates an event of walking. In (39b), on the other hand, the doctor does not appeal to the patient, nor does the patient instigate any event; the latter simply undergoes (nonvolitionally) a process of dying. There are, however, certain cases in which the correspondence of the argument types and the presence and absence of the causee's volition does not hold completely. Consider the following sentences:

(70) a. *Taroo ga Hanako* ***ni*** *waraw-ase-ta.*
'Taro had Hanako laugh.'
b. *Taroo ga Hanako* ***o*** *waraw-ase-ta.*
'Taro made Hanako laugh.'

Sentence (70a) is a clear case of Hanako's laughing volitionally. (Again, imagine a situation in which Taro is a movie director and Hanako an actress.) Sentence (70b) has the same reading as (70a), the only difference being the extent of coerciveness. Sentence (70b), however, has another reading in which Hanako laughed nonvolitionally. This second reading usually involves some kind of indirect causation; a typical situation involves Taro's telling or doing something that induces laughter. The crucial difference between (70a) and the first reading of (70b), on the one hand, and the second reading of (70b), on the other, is that, in the former situations, Hanako, being instructed by Taro, laughs at her own volition while, in the latter case, Hanako's laughing is not accompanied by her volition. In other words, in the two former cases, Hanako plays a role as a volitional entity while, in the latter, she functions as a nonvolitional entity.

The problem here is that in both these situations Hanako appears to be functioning as an agent, since she instigates an event of laughing. If both volitional Hanako and nonvolitional Hanako in (70a) and (70b) function as agents, the case-marking rules in (67) cannot assign the correct particle *o* to the causee in the case of (70b), namely, when it expresses an indirect causative situation. Since, in the case of indirect causative sentences, there does not seem to be any evidence suggesting the presence of the causee in the matrix sentence, (70a) and the indirect causative case of (70b) have the same underlying structure. Furthermore, since in both cases Hanako functions as an agent, there is no way to account for the presence of *o* in the indirect causative case of (70b).

There are two ways to deal with this situation. One is to modify Rules (67b) and (67c) in such a way that they say 'attach *ni* to the volitional noun' and 'attach *o* to the nonvolitional noun', respectively, under the condition that the nouns in question do not occur sentence initially. The other way is to redefine the argument types 'agent' and 'patient'. My feeling at the moment leans toward the second solution. First, it appears that the definition of 'agent' as 'the instigator of the event' (Fillmore, 1971a:376) is too loose. In fact, when one laughs impulsively, it is not entirely clear that the one is really an instigator of laughing. Perhaps the term AGENT should be redefined as an entity that VOLITIONALLY instigates or engages in an event. Also, the term PATIENT should take in an entity that is engaged in an event nonvolitionally. In fact, this redefinition of the term AGENT seems in order, since the entities that appear to be playing the same agentive role in the earlier definition involve different semantic notions and different syntactic consequences, as observed earlier in Japanese.

Ballistic Causation

There is one class of verbs that behave differently from other causative expressions. This class includes the verb *okur-u* 'send' and a host of verb compounds that contain *okur-* as the first member, e.g., *okur-i-das-u* 'send out'. The verbs belonging to this class are causative verbs, since they assert that some kind of caused event follows after the realization of the causing event. Observe the contradiction involved in the following sentences:

(71) a. **Taroo wa hon o okut-ta ga, sono hon wa mada Taroo no moto ni atta.*
'Taro sent the book, but the book was still with him.'
b. **Hahaoya wa Taroo o gakkoo e okuridas-i-ta ga, Taroo wa mada ie ni ir-u.*
'The mother sent Taro out to school, but Taro is still at home.'

One general characteristic of causative expressions is that when the place or time adverb occurs sentence initially, the adverb designates the place or the time of both causing and caused event. Thus, (72a–b) assert that both Taro's giving a direction or doing something, i.e., the causing event, and Hanako's going into the room or Hanako's dying, i.e., the caused event, took place at the designated time or place. This is further confirmed by the contradictory nature of (72c–d):

(72) a. *Sanzi ni Taroo wa Hanako o heya ni hair-ase-ta.*
'At three o'clock, Taro made Hanako enter the room.'
b. *Sono heya de Taroo wa Hanako o koros-i-ta.*
'In that room, Taro killed Hanako.'
c. **Sanzi ni Taroo wa Hanako o heya ni hair-ase-ta ga, Hanako wa yozi made heya ni hair-anakat-ta.*
'*At three o'clock, Taro made Hanako enter the room, but Hanako did not enter the room until four o'clock.'
d. **Sono heya de Taroo wa Hanako o koros-i-ta ga, Hanako wa tonari no heya de sin-da.*
'*In that room, Taro killed Hanako, but Hanako died in the next room.'

The verb *okur-u* 'send', however, does not share this property, since the following sentences, unlike (72c–d), do not involve any contradiction:

(73) a. *Hatigatu-tuitati ni Taroo wa genkoo o syuppansya ni okut-ta ga, genkoo wa hatigatu tooka made tukanakat-ta.*
'On August 1, Taro sent the manuscript to the publisher, but the manuscript did not arrive at the publisher until August 10.'
b. *Rosanzerusu de Taroo wa nihon ni iru Hanako ni tegami o okut-ta.*
'In Los Angeles, Taro sent a letter to Hanako, who is in Japan.'

The verb *okur-u*, thus, appears to be asserting only that the caused event has begun to take place, rather than the completion of the caused event that other causative verbs assert. Observe the contrast:

(74) a. **Taroo wa Hanako o heya ni ire-ta ga Hanako wa heya ni hairanakat-ta.*
'Taro made Hanako enter the room, but Hanako didn't enter the room.'
b. **Taroo wa Hanako o koros-i-ta ga Hanako wa sinanakat-ta.*
'Taro killed Hanako, but Hanako didn't die.'
c. *Taroo wa genkoo o syuppansya ni okut-ta ga, genkoo wa syuppansya ni tukanakat-ta.*
'Taro sent the manuscript to the publisher, but it didn't reach the publisher.'
d. *Hahaoya wa Taroo o gakkoo e okuridas-i-ta ga, Taroo wa gakkoo ni ikazu ni eiga o mini it-ta.*
'The mother sent Taro out to school, but Taro went to see the movies instead of going to school.'

The type of causation expressed by the verb *okur-u* 'send' may be termed 'ballistic causation'. The preceding discussion of ballistic causation concludes our investigation of the semantic properties of various types of causative expressions.

4. INTEGRATION OF SYNTAX AND SEMANTICS

Several approaches toward integrating syntax and semantics have been developed in the past decade. The most notable ones are Fillmore's case grammar; interpretive semantics, developed primarily by Chomsky and Jackendoff; and generative semantics, developed primarily by G. Lakoff, J. McCawley, and Postal.[8] Because of the lack of space and also owing to the fact that the most comprehensive analysis of the causative construction has been done in the framework of generative semantics, the following discussion will focus on the generative semantic approach.

Generative Semantics and the Causative Construction

It is by no means an exaggeration to say that the theory of generative semantics has developed along with or in the process of the analysis of the causative construction. The causative construction, in other words, has provided the generative semanticist with the most rewarding field of investigation. The original treatment of causative sentences in an early phase of the development of generative semantics appeared in G. Lakoff's 1965 dissertation, subsequently published as G. Lakoff (1970a). A more generalized but still an earlier version of the generative semantic treatment of the subject was

[8]Cf., for example, Fillmore (1968), Chomsky (1971), Jackendoff (1972), G. Lakoff (1970b), J. McCawley (1973), and Postal (1970b).

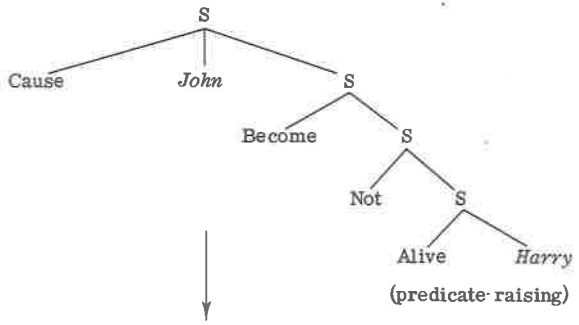
proposed in J. McCawley (1968b). For all the sentences in (75), McCawley proposed the underlying (or semantic) representation given in (76a):

(75)
a. *John killed Harry.*
b. *John caused Harry to die.*
c. *John caused Harry to become dead.*
d. *John caused Harry to become not alive.*

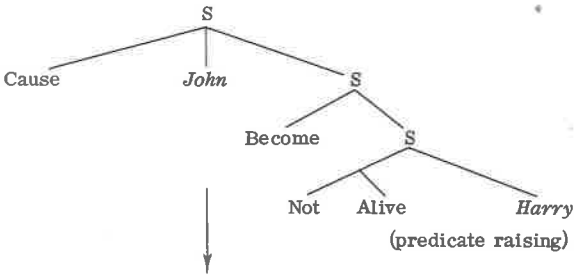
The predicates in the structure in (76a) are thought to be semantic 'primitives', and they do not necessarily coincide with real morphemes such as *cause*, *become*, etc., although undoubtedly these morphemes contain as part of their meaning the semantic components expressed by those primitives:

(76)

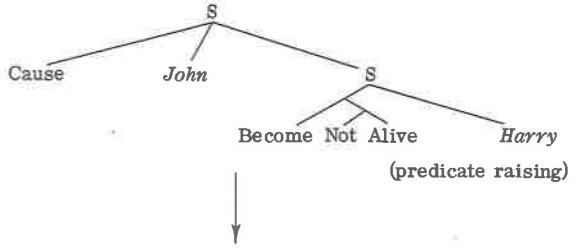
(a)



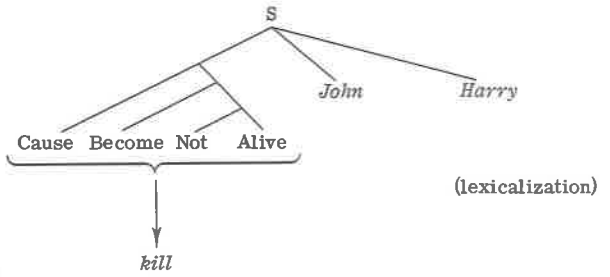
(b)



(c)



(d)

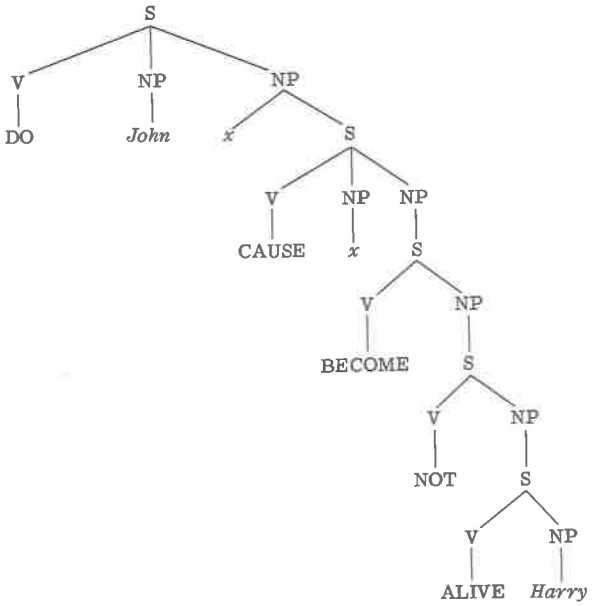


(e) *kill*

Within McCawley's model, (75a) was derived in the manner shown in (76b–e). The last structure, (76e), further undergoes the rule of subject formation that brings the subject to sentence-initial position in the case of English. The other sentences in (75) were considered mere surface variants of (75a) and were accounted for in terms of the optional rule of predicate raising. That is, lexical insertion may take place at any of the intermediate stages of the derivation, since there exist lexical entries matching the various constituents that appear during the derivation.

In a more recent publication, J. McCawley (1973) revised the structure of a causative sentence as in (77):

(77)



The most prominent characteristic of the generative semantic treatment is that both lexical and productive causative sentences are derived from the

identical underlying representation. Before turning to the motivations behind such an analysis, let me note at this point that the generative semantic approach just outlined has been espoused for the analysis of the causative constructions in a number of languages, including Hindi (Kachru, 1966), Korean (Yang, 1972), and Japanese (Soga, 1970).[9]

Motivations for the Generative Semantic Treatment

The most fundamental motivation for the generative semantic treatment comes from the desire to account for the synonymy or paraphrase relations observed in (75). The sentences in (75) all appear to share the same truth value. There also exist entailment relations among the sentences in (75). Sentence (75c) entails (75d), (75b), (75c), and (75a) entails (75b). The relations here are transitive; therefore, (75a) entails (75c–d) as well, as does (75b). Again, these entailment relations are easily derivable within the generative semantic model. When viewed historically, the generative semantic approach to the causative construction follows most closely the tradition of transformational grammar: Sentences that are in a paraphrase relation are given the same underlying representation, the surface variations being accounted for in terms of transformations.

The fact that both lexical and productive causatives share the same semantic properties is another semantic motivation for the generative semantic approach. If both lexical and productive sentences are thought to involve the predicate CAUSE that relates the causing and the caused events, one need only give a semantic characterization for the construction S_1 CAUSE S_2 in accounting for the fact that lexical and productive causatives involve the same assertion and presupposition. For example, the fact that (78a) and (78b) are anomalous while (79a) and (79b) are not can be accounted for by first setting off the former sentences from the latter in terms of the presence and absence of the predicate CAUSE (the former contain it and the latter do not) and then defining the structure S_1 CAUSE S_2 common to (78a) and (78b), as in (80) (see the Introduction and Section 3 for discussion of the presupposition and assertion associated with the causative expression):

(78) a. **John opened the door, but it did not open.*
b. **John caused the door to open, but it did not open.*

(79) a. *John pushed the door, but it did not open.*
b. *John banged against the door to open it, but it did not open.*

(80) S_1 CAUSE S_2: $\begin{bmatrix} \text{Presupposition:} & \sim S_1 \text{ Lt } \sim S_2 \\ \text{Assertion:} & S_1 \text{ Lt } S_2 \end{bmatrix}$

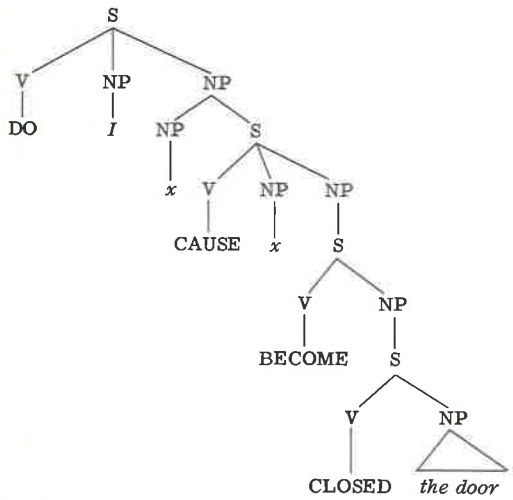
[9]Cf. Kachru (1975) and Shibatani (1973c) for further developments on Hindi causatives and Korean causatives, respectively.

In addition to the purely semantic motivations just given, there has been some syntax-oriented evidence for the generative semantic approach. One type of evidence has to do with a certain type of adverbial modification. In (81), the adverbs *for ten minutes* and *again* may modify a constituent that is not part of the surface structure:

(81) a. *I closed the door for ten minutes.*
b. *The door opened, and then I closed it again.*

That is, as discussed by J. McCawley (1971a), in addition to the reading in which the adverbs are interpreted as modifying the whole structure of *I closed the door*, the sentences in (81) give the reading in which the adverbs are interpreted as modifying the constituent *the door is closed*, which does not surface. If the sentence *I closed the door* is analyzed in the generative semantic fashion, i.e., as in (82), the second reading can be accounted for by attributing the adverbs to the bottom-most S:

(82)



A similar observation holds in Japanese. Thus, the sentences in (83) are ambiguous in the same way as those in (81):

(83) a. *Boku wa doa o zyuppun-kan sime-ta.*
'I closed the door for ten minutes.'
b. *Doa ga aita node, mata sime-ta.*
'Since the door opened, I closed it again.'

Sentence (83a) may be interpreted as saying that for ten minutes the speaker repeatedly closed the door or that the speaker closed the door in such a way that the door remained closed for ten minutes. Similarly, in (83b), the adverb

mata 'again' may be understood to modify the activity of the closing of the door or just to modify the state of the door's being closed.

Another type of evidence brought up in support of the generative semantic approach has to do with the sentence like the following, discovered by Lakoff:

(84) *The physicist finally hardened the metal, but it took him six months to bring* ***it*** *about.*

It is claimed that the second *it* refers to 'the metal's becoming hard', and that it indicates the presence of the constituent (BECOME (HARD *the metal*)) beneath CAUSE in the underlying representation.

One final argument in favor of the generative semantic approach taken up here has to do with the notion of 'possible lexical item'. As extensively discussed in phonology, a native speaker possesses an intuition as to whether a given nonsense word is a phonologically possible or impossible word in his language. It has been said that a native speaker of English feels that the actually nonoccurring 'word' *blik* is possible but that *ftik* is not. J. McCawley (1973c) notes that, in the generative semantic approach, it is possible to make this distinction of semantically possible-but-non-occurring words versus impossible words. He says that although it is conceivable that there may exist a verb that expresses the meaning 'cause to cease to be left-handed', it is inconceivable that we would ever admit in the English dictionary the verb **thork* meaning 'give to one's uncle and' or the verb **blirf* meaning 'to kiss a girl who is allergic to' as in (85):

(85) a. **John thorked Harry 5000 yen.* (paraphrasable as 'John gave his uncle and Harry 5000 yen')
b. **John blirfed eggs.* (paraphrasable as 'John kissed a girl who was allergic to eggs')

McCawley argues that in his approach one can explain why such a distinction holds. Specifically, he points out that in the case of the verb meaning 'cause to cease to be left-handed' the process of amalgamating semantic elements for the purpose of lexical insertion involves no violation of known constraints on transformations, while in the case of the verbs **thork* and **blirf* Ross' coordinate structure constraint and complex NP constraint would be violated (cf. Ross, 1967).

Syntactically oriented evidence like the one discussed above has been often used to underscore the generative semanticist's hypothesis that 'syntactic structure and semantic structure are the same general type', e.g., both involve a labeled tree (McCawley, 1973c:261), that what have been called syntactic transformations apply directly to the semantic structure, i.e., prelexically, and therefore, that one cannot maintain the syntax/semantics and

transformation/semantic interpretation rule dichotomies. Thus, research into the causative construction has provided the linguist with a considerable amount of evidence for the tenets of generative semantics.

Problems with the Generative Semantic Approach

While the generative semantic approach to the causative construction has been hailed by many researchers and has been adopted in the analysis of a number of languages, as noted earlier, it is not free of problems. Some of the problems demand a certain amount of modification in the semantic structure originally proposed, some point up the need for closer semantic specifications, and others present devastating evidence against the generative semantic approach and challenge the tenets of generative semantics. I will first discuss syntactically oriented problems and then take up problems centering on semantics.

Syntactically based arguments against the generative semantic analysis of lexical causatives in English have been presented by Fodor (1970). Fodor gives three types of evidence that militate against the generative analysis. The first evidence is based on the *do-so* transformation (corresponding to the Japanese *soo suru* replacement discussed in Section 2) that replaces the verb phrase under certain identity conditions. By first showing that the productive causative form of the type given in (86a) produces two 'do so' phrases, (86b) and (86c), Fodor argues that if the corresponding lexical causative sentence in (87a) were to derive from the same structure as that underlying (86a), we would expect to find the two grammatical 'do so' phrases:

(86) a. *John caused Mary to die.*
b. *John caused Mary to die and it surprised me that he did so.*
c. *John caused Mary to die and it surprised me that she did so.*

(87) a. *John killed Mary.*
b. *John killed Mary and it surprised me that he did so.*
c. **John killed Mary and it surprised me that she did so.*

As seen in (87c), the lexical causative sentence fails to produce the two expected 'do so' phrases; hence, the derivation of such a sentence from the structure that underlies the productive form poses a problem.

Fodor's second argument is based on the fact that the productive causative sentence allows an adverbial phrase containing a time adverb that is different from the one that modifies the caused event. Thus, the underlying structure (88a) gives rise to a well-formed surface sentence, (88b):

(88) a. *(Floyd (caused (the glass to melt on Sunday)) (by (heating it on Saturday)))*
b. *Floyd caused the glass to melt on Sunday by heating it on Saturday.*

However, the lexical counterpart does not admit the same type of adverbial phrase, as observed in (89):

(89) **Floyd melted the glass on Sunday by heating it on Saturday.*

The same observation holds for other lexical-productive pairs such as *kill/cause to die*:

(90) a. *John caused Bill to die on Sunday by stabbing him on Saturday.*
b. **John killed Bill on Sunday by stabbing him on Saturday.*

The last argument offered by Fodor is concerned with the case that an instrumental adverb shares deep structure subjects. First, observe that while (91a), which contains only one subject, involves no ambiguity as to who uses the telephone, (91b) does involve ambiguity. This is because (91b), having two deep subjects, allows both (92a) and (92b), while (91a), with only one deep subject, allows only one version:

(91) a. *John contacted Mary by using the telephone.*
b. *Mary intimidated John into cutting the meat by using a knife.*

(92) a. *(Mary intimidate John (John cut the meat) (by (Mary use a knife)))*
b. *(Mary intimidate John ((John cut the meat) (by (John use a knife))))*

(92′) a. *(John contact Mary by (John use the telephone))*
b. **(John contact Mary by (Mary use the telephone))*

Now, in the case of productive causative sentences, ambiguity arises paralleling sentence (91b), for they clearly involve two deep subjects. Observe:

(93) *John caused Bill to die by swallowing his tongue.*
(i) *John swallowed Bill's tongue.*
(ii) *Bill swallowed his own tongue.*

Fodor argues that if *kill* comes from the structure underlying *cause to die* that contains the clause *(Bill) die*, then the same observation should hold. However, since this is not the case [as seen in (94)], Fodor concludes that this is evidence against the generative semantic analysis of the lexical causative form:

(94) *John killed Bill by swallowing his tongue.*
(i) *John swallowed Bill's tongue.*
(ii) **Bill swallowed his own tongue.*

I turn now to a discussion of the Japanese case. However, before I take up arguments against the generative semantic approach it is necessary to clarify the position taken up by the advocate of the generative treatment of Japanese causative forms. As mentioned earlier, Soga (1970) approaches the Japanese causative construction in the framework of generative semantics. Soga suggests that:

> We may be able to say that transitive [lexical causative] forms such as *hikkome* 'to draw (something) in', *ire* 'to put (something) in', and others, which are formally different from causative forms [productive causatives], are simply morphophonemic variants of the causative forms of their intransitive counterparts, and this consideration seems justifiable from the semantic point of view, too [p. 273].

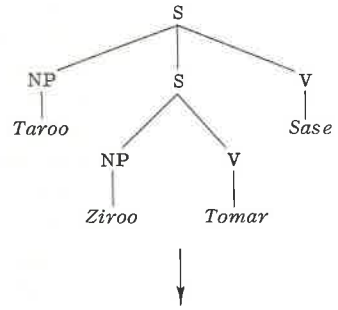
and then goes on to conclude that:

> Thus, on the basis of semantic and grammatical evidence, we may now be able to say that many transitive verbs in Japanese become transitive [lexical causative] verbs by way of causativization, and this characteristic is the same as that of English [i.e. the transitive verb *harden* in *John hardened the metal* is also said to be derived from the underlying structure *(John cause (it (for the metal to harden)))*] [ibid., pp. 273–274].

According to Soga, then, sentences like (95a) and (95b) will be given a single semantic structure like (96), and the surface difference is to be accounted for in terms of what he calls a morphophonemic rule and what J. McCawley calls a lexicalization rule:

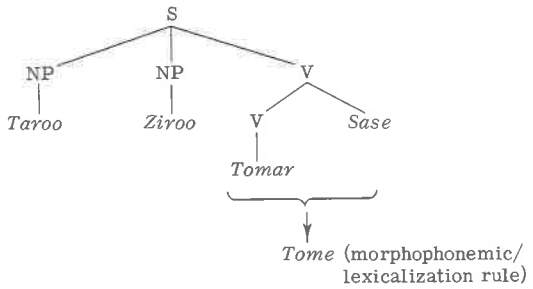
(95) a. *Taroo ga Ziroo o tomar-ase-ta.*
'Tato made Jiro stop.'
b. *Taroo ga Ziroo o tome-ta.*
'Taro stopped Jiro.'

(96) a.



(predicate raising)

b.



For the reader of this chapter, it is not necessary for me to repeat the kinds of argument against this analysis presented in Shibatani (1972a) and (1973a). It is only necessary to refer to the various syntactic differences between the lexical causatives and the productive counterparts discussed in Section 2. All of the evidence presented in that section argues against the putative embedding structure, e.g., (96a), posited for lexical causative forms. Nevertheless, it seems in order to briefly note that a theoretical device such as rule ordering does not help resolve the conflicts between the analysis presented in (96) and the phenomena discussed in Section 2. One might, for example, argue that the rules of reflexivization, *soo suru* replacement, and sentence pronominalization apply after the lexicalization (or Soga's morphophonemic) rule, and that since the structure resulting from lexicalization no longer contains an embedded clause, all of the rules referring to the embedded clause do not apply. The differences observed in Section 2 are, thus, due to at what point lexicalization applies; in the case of lexical causatives, lexicalization applies prior to the above-mentioned rules, and in the case of productive causatives, no lexicalization applies.

After a moment of reflection it is clear that an argument of this type does not hold water. One must realize that predicate raising must apply before lexicalization. Within the conception of generative semantics, semantic elements must be amalgamated by rules such as predicate raising before lexicalization inserts a lexical item. That is, the lexical item *tome-* 'stop' cannot be inserted in (96a) directly; predicate raising must bring the two predicates together under a single node, as in (96b), before lexicalization may take place.

Furthermore, the rules of reflexivization, *soo suru* replacement, and sentence pronominalization must apply before predicate raising. This is because predicate raising must apply in both lexical and productive form before it destroys the embedded structure. As briefly discussed in Section 2, predicate raising brings the lower verb to the position immediately before the higher verb so that the surface configuration of *V-sase* would result as one verb. This process, together with the tree pruning that follows it, wipes out the embedded structure. Since reflexivization, *soo suru* replacement, and sentence pronominalization must, respectively, refer to the subject of the embedded sentence, the verb of the embedded sentence, and the embedded sentence itself, they must apply before the predicate raising that destroys the embedded sentence. The required order of application calls for the rules of reflexivization, *soo suru* replacement, and sentence pronominalization prior to predicate raising. Otherwise, one cannot account for the ambiguities involved in the productive causative forms. Now, if the rules of reflexivization, *soo suru* replacement, and sentence pronominalization must apply prior to predicate raising, and if predicate raising must apply before lexicalization, then it cannot be the case that lexicalization applies before reflexivization, *soo suru* replacement, and sentence pronominalization.

I turn now to the semantically oriented arguments against the generative semantic treatment. As pointed out earlier, and as is obvious in the quotations from Soga, the basic motivation for the generative semantic analysis was the synonymy or paraphrase relation found, for example, between (75a) and (75b), repeated here for convenience:

(75) a. *John killed Harry.*
b. *John caused Harry to die.*

Naturally, the discussion has centered on the validity of the observation that sentences of this type are synonymous. Many people who are against the generative semantic treatment seem to have concentrated on finding an environment in which either the lexical or the productive form can be used, but not both. On the other hand, very little has actually been done in explicating precise semantic differences that may exist between the lexical and the productive form. Jackendoff (1972:28), for example, points out that the lexical–productive pair does not involve true synonymy, for, as seen in the pair of sentences in (97), there are situations in which one is grammatical while the other is not:

(97) a. **Floyd dropped the glass to the floor by tickling Sally, who was holding it.*
b. *Floyd caused the glass to drop to the floor by tickling Sally, who was holding it.*

Jackendoff, however, merely notes that while the verb *drop* requires a situation involving direct causation, the *cause* form does not, without offering any definition of the term DIRECT CAUSATION, which has been used very vaguely by many. As far as I know, Shibatani (1973d) is the only work that has seriously attempted to explicate more systematically the differences involved in the pair like (97). It has been shown that in English, while lexical causatives and the productive forms with *make*, *have*, and *get* are associated with specific semantic notions such as manipulative, directive, coercive causation, and others discussed in Section 3, the verb *cause* is

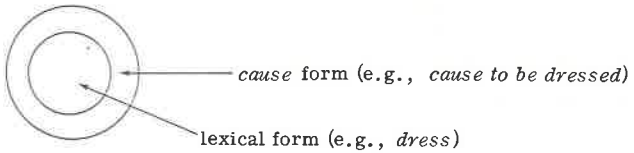
noncommital to these specifications. That is, the productive form with *cause* is semantically the most general causative expression in English. Thus, while on the one hand the *cause* form can be used for various causative situations, the actual use of the form, on the other hand, is fairly limited owing to lack of specifics. Thus, the sentences in (97) show a case in which the lexical form is ruled out because of the conflict in semantic specification. That is, the lexical causative form *drop* is associated with manipulative causation (see Section 3), but since the *by* clause in (97a) specifies that the situation did not involve manipulative causation, the two specifications come into conflict. The productive form with *cause*, on the other hand, does not specifically call for a manipulative situation, hence the acceptability of (97b).

Since the relation between the causative sentence with *cause* and the lexical causative is as we have discussed, the more general expression with *cause* can be used to express the specific situation expressible by the lexical causative form, but not vice versa.[10] One can, thus, use (98b) in describing the situation expressed by (98a), but (98a) cannot be used to express all the possible situations that (98b) can express:

(98) a. *I dressed the child.*
b. *I caused the child to be dressed.*

The relation, in other words, is that of inclusion; the more general *cause* form includes the more specific lexical form. Schematically represented, the relation looks like the following:

(99) Inclusion relation.



Thus, while (98a) implies (98b), (98b) does not imply (98a), since the expression with specifics implies the more general expression, but the reverse does not hold.[11]

The asymmetrical relation between the *cause* form and the lexical form is manifested in the following pairs of sentences:

(100) a. *I didn't dress the child, but I merely caused him to be dressed.*
b. **I didn't cause the child to be dressed, but I merely dressed the child.*

[10]Of course, if the general *cause* form were used, the specificity would be lost.
[11]For example, *I drove to school* implies *I went to school*, but not vice versa.

(101) a. *You shouldn't dress the child, but you may cause him to be dressed.*
b. **You shouldn't cause the child to be dressed, but you may dress him.*

Once one negates a more general statement [the larger circle in (97)] that includes a more specific statement [the smaller circle in (97)], he cannot assert the specific statement, whereas negating the specific statement does not prohibit assertion of the general statement.[12] Referring back to (99), one can see the relation more clearly: Negating the larger circle automatically leads to negating what is included in it, but negating the smaller circle does not lead to negating the larger circle, for the larger circle still has some area not covered by the smaller circle. Thus, both (100b) and (101b) involve contradiction, while (100a) and (101a) do not.

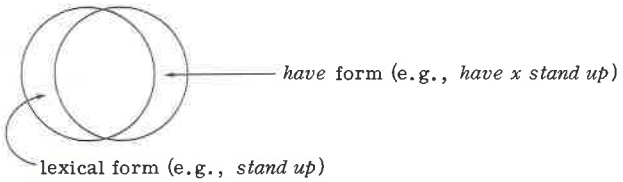
The same inclusion relation holds between the *cause* form and other productive forms with *make*, *have*, etc.; the following sentences parallel (100) and (101):

(102) a. *I didn't have the child stand up, but I caused the child to stand up.*
b. **I didn't cause the child to stand up, but I had the child stand up.*

(103) a. *You shouldn't have the child stand up, but you may cause the child to stand up.*
b. **You shouldn't cause the child to stand up, but you may have the child stand up.*

However, the relation between the *have* form and the lexical form is not that of inclusion; rather, they involve the intersecting relation. The intersecting relation can be schematically represented as follows:

(104) Intersecting relation.



[12]Also compare:

(i) a. *I didn't drive to school, but I went to school today.*
b. **I didn't go to school, but I drove to school today.*
(ii) a. *You shouldn't drive to school, but you may go to school today.*
b. **You shouldn't go to school, but you may drive to school today.*

In the case of the intersecting relation, neither form implies the other, and negating one does not entail the negation of the other. In other words, the symmetrical pattern would be exhibited. Thus, unlike the cases in (100)–(101) and (102)–(103), the sentences in the following pairs are all well-formed:

(105) a. *I didn't stand the child up, but I had him stand up.*
b. *I didn't have the child stand up, but I stood him up.*

(106) a. *You shouldn't stand up the child, but you may have him stand up.*
b. *You shouldn't have the child stand up, but you may stand him up.*

Turning now to the question of the synonymy in the Japanese lexical and productive causative pair, one discovers that in Japanese only the intersecting relation holds. As discussed in Section 3, members of the Japanese lexical and productive causative pair involve fairly distinct semantic properties. The most salient feature that holds between the lexical form and the productive form is the manipulative–directive distinction (see Section 3). Since Japanese lacks a causative form as abstract as the English verb *cause*, there is no case involving the inclusion relation [see (99)]. The prevailing relation is the intersecting relation, and we find the same kind of situation that is observed in the pair of the English lexical causative and the *have* form [see (105) and (106)]. Observe the following:

(107) a. *Sono kodomo ni huku o kise-ta no de wa naku, ki-sase-ta no da.*
'It is not the case that I dressed the child, but it is the case that I had him get dressed.'
b. *Sono kodomo ni huku o ki-sase-ta no de wa naku, kise-ta no da.*
'It is not the case that I had the child get dressed, but it is the case that I dressed him.'

(108) a. *Sono kodomo ni wa huku o kise-nai de ki-sase-te kudasai.*
'As for that child, please don't dress him, but have him get dressed.'
b. *Sono kodomo ni wa huku o ki-sase-nai de kise-te kudasai.*
'As for that child, please don't have him get dressed, but dress him.'

(109) a. *Sono kodomo o tukue no ue ni age-ta no de wa naku, agar-ase-ta no da.*
'It is not the case that I lifted the child up onto the desk, but I had him get up there.'

b. *Sono kodomo o tukue no ue ni agar-ase-ta no de wa naku, age-ta no da.*
'It is not the case that I had the child get up onto the desk, but I lifted him up there.'

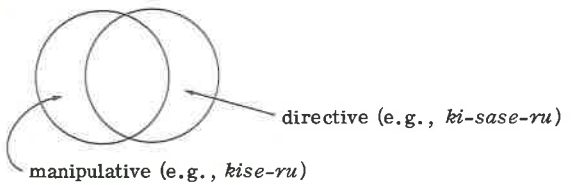
(110) a. *Sono kodomo wa tukue no ue ni age-nai de, agar-ase-te kudasai.*
'As for that child, please don't lift him up onto the desk, but have him get up there.'
b. *Sono kodomo wa tukue no ue ni agar-ase-nai de, age-te kudasai.*
'As for that child, please don't have him get up onto the desk, but lift him up there.'

Even though the relation between coercive and noncoercive causation is intersecting, the nonintersecting part is so small that the distinction does not show up as clearly as the case involving the manipulative–directive distinction. It is not entirely clear, therefore, whether the following are indeed well-formed:

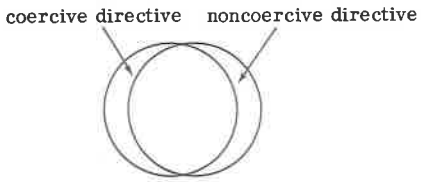
(111) a. ?*Sono kodomo* ***o*** *hasir-ase-ta no de wa naku, sono kodomo* ***ni*** *hasir-ase-ta no da.*
'It is not the case I made the child$_i$ run, but I had him$_i$ run.'
b. ?*Sono kodomo* ***ni*** *hasir-ase-ta no de wa naku, sono kodomo* ***o*** *hasir-ase-ta no da.*
'It is not the case that I had the child$_i$ run, but I made him$_i$ run.'

This difference can be schematically shown as follows:

(112) (a)



(b)



Thus, although some pairs of causative expressions may be close to true synonymy, the pair involving the lexical and productive forms has a fairly

distinct meaning difference. In the case of Japanese, which does not have an abstract form comparable to English *cause*, it is particularly hard to maintain, in the light of well-formed expressions like (107)–(110), that the lexical causative form and the corresponding productive form are synonymous. What the generative semantic analysis has captured is the intersection of the semantic fields that is shared by the two types of causative expressions [see (112a)]. It has, however, left the semantic aspects unique to each type unaccounted for. In other words, deriving a sentence pair like (95) from the identical underlying structure captures what is common, but it entirely ignores what is not common between the sentences of the pair.[13]

How to Deal with the Problems

I have discussed both motivations for and problems associated with the generative semantic treatment of causative forms. The discussion has centered on the validity of the proposed uniform treatment of the lexical and productive causative forms. I will now discuss how some of these problems have been and can possibly be resolved within the framework of generative semantics.

In his reply to Shibatani (1972a), J. McCawley (1972a) has offered the following solution. He first notes that the analysis that attempts to derive a lexical causative form from the corresponding intransitive form by way of a causativization rule is wrong. That is, an analysis of the sort suggested by Soga (1970) that posits the intransitive embedded sentence to derive the corresponding lexical causative [see (95) and (96)] is wrong, since 'clauses containing *nokos-* ["leave behind"], *ire-* ["put in"], and *oros-* ["bring down"] [are derived] from structures containing "*x* be in *y*" or "*x* not be in *y*" ... [p. 144].' In this proposal the lexical expression *x ga y o z ni nokos-u* '*x* leaves *y* behind at *z*' does not come from the structure (*x* (*y ga z ni nokor-*) CAUSE) where the intransitive expression '*y* remains at *z*' is included, but rather, the expression originates from a structure like (*x* ((*y ga z ni* BE) BECOME)CAUSE), where only one agent is involved. On the other hand, the productive form *x ga y o z ni nokor-ase-ru* '*x* makes *y* remain at *z*' comes from a structure that contains two agents, the causer and the causee, which are subjects of the verbs *sase* and *nokor-*, respectively. McCawley goes on to say that the reason the *soo suru* replacement does not bring about ambiguity in the lexical causative expression (see Section 2) is that the phrase *soo suru* replaces only action verbs: Since the lexical causative contains only one action verb, namely, CAUSE (or perhaps DO), there is a unique antecedent for *soo suru*. In the productive expression, however, there may be two

[13]For a much more comprehensive overview of the controversy over the causative construction, see Shibatani (1975a).

action verbs, one that gives rise to *sase* and one that turns into an intransitive verb, hence two possible antecedents for the *soo suru* phrase.

McCawley's observation that the causee in the lexical causative expression does not function as an agent seems to be correct. The mere fact that the causee of a lexical causative never surfaces with the particle *ni* gives a clue to this, and the fact that the situations expressible by lexical causative sentences involve the causee as a nonvolitional participant (except in the conventionalized usage discussed in Section 3) corroborates the observation. McCawley's revision also accounts for the problems brought up by Fodor (see pages 279–281). The asymmetry observed in (113) can be explained by saying that *kill* is analyzed as (CAUSE(BECOME(NOT ALIVE))) involving only one agent, and that the *do so* phrase replaces only action verbs:[14]

(113) a. *John caused Mary to die, and it surprised me that he did so.*
b. *John caused Mary to die, and it surprised me that she did so.*
c. *John killed Mary, and it surprised me that he did so.*
d. **John killed Mary, and it surprised me that she did so.*

Also, the fact that the instrumental phrase does not bring about ambiguity in the lexical causative expression (e.g., 114b) can be accounted for similarly:

(114) a. *John caused Bill to die by swallowing his tongue.*
b. *John killed Bill by swallowing his tongue.*

Only an agent can be associated with an instrumental clause. Since the lexical causative expression contains only one agent, there is a unique agent that can be associated with an instrumental phrase.

While McCawley's revised model for the lexical causative structure accounts for a few problems brought up against the original conception of the generative semantic treatment, it involves the serious problem of underspecification of semantic contents involved in lexical causative forms. For example, McCawley says, as quoted previously, that lexical causatives such as *nokos-u* 'leave behind', *ire-ru* 'put in', and *oros-u* 'bring down' are derived from structures containing '*x* be in *y*' or '*x* not be in *y*'. The structures expressing these ideas are presumably embedded beneath the predicates BECOME and CAUSE, as well as DO. The obvious problem here is that the amalgamation of '*x* be in *y*', BECOME, CAUSE, and DO, or that of '*x* not be in *y*', BECOME, CAUSE, and DO, does not represent what the real verbs *nokos-u*, *ire-ru*, and *oros-u* mean. For example, if a chicken produces

[14]This leads us to the conclusion that the English verb *die* functions both as an action verb and as a process verb.

an egg in the room, thereby 'causing it to become that an egg is in the room', one should be able to say either *Niwatori ga tamago o heya ni nokos-u* 'A chicken leaves an egg behind in the room' or *Niwatori ga tamago o heya ni ire-ru* 'A chicken puts an egg into the room.' Similarly, if one smokes cigarettes in the car, thereby 'causing them not to be in the car', one should be able to say *Kare ga tabako o oros-i-ta* 'He took the cigarettes out (of the car).' But apparently these expressions do not express correctly what is really taking place.

What should be specified in place of '*x* be in *y*' or '*x* not be in *y*' is, perhaps, something representing the idea of *x ga nokotte-iru* '*x* is in the state of remaining' in the case of *nokos-u* 'leave behind', and *x ga orite-iru* '*x* is in the state of having gotton off' in the case of *oros-u* 'bring down'. Both *nokotte-iru* and *orite-iru* are noncommittal as to whether the events that entailed these states have involved *nokor-u* 'remain' or *nokos-u* 'leave behind' or *ori-ru* 'get down' or *oros-u* 'bring down'. But the real question is whether one can represent the meaning of *nokotte-iru* without making reference to either *nokor-u* or *nokos-u*. If one had to refer to either of them, then such an analysis would involve circularity and would be unable to analyze these verbs; one cannot say, in analyzing the verbs *nokor-u* or *nokos-u*, that the verb comes from the structure containing *nokotte-iru*, which expresses the resultative state of either *nokor-u* or *nokos-u*. McCawley's attempt to analyze the lexical causative does not refer to the form being analyzed, but his analysis, as shown earlier, patently fails to represent what the item really means.

In addition to this problem, McCawley's revision still leaves phenomena of reflexivization, sentence pronominalization, and adverbial modification involving time and place adverbs unaccounted for (cf. Section 2).

First, we have noted that, in English, the phenomenon of sentence pronominalization was used in support of the generative semantic arguments. However, even in English it is not entirely clear whether the phenomenon really supports the generative treatment. For example, it is the case that the second *it* in (115) cannot be correctly understood as referring to 'Mary's dying', contrary to the alleged possible interpretation of *it* involved in (84), which is repeated here for convenience:

(115) **John killed Mary, but it took him one hour to bring* ***it*** *about.*

(84) *The physicist finally hardened the metal, but it took him six months to bring* ***it*** *about.*

Lakoff and Ross (1972) have attempted to give possible reasons for these phenomena, but I have argued in Shibatani (1972c) that their reasons do not hold well even in English, and that the evidence drawn from (84) is

highly questionable. In the case of Japanese, it is clear, as seen in Section 2, that the pronoun *sore* 'it' cannot refer to anything but the whole sentence when it refers back to the lexical causative sentence. Thus, one of the original motivations for the generative treatment is in fact in conflict with it.

The case of reflexivization also argues against the generative treatment, in which even the causee of a lexical causative sentence functions as the subject of one of the embedded sentences. Reflexivization is different from the *soo suru* or *do so* case in that it is not restricted to the case involving action verbs. That is, both agentive and patient subject can function as an antecedent in reflexivization. For example, the subjects in the following sentences are not agents, but they still function as an antecedent of the reflexive pronoun:

(116) a. *Taroo wa zibun no ani yori se ga takai.*
'Taro is taller than his own brother.'
b. *Taroo wa zibun o tuyoku aisite iru.*
'Taro loves himself strongly.'
c. *Taroo wa zibun no kuruma kara orite iru.*
'Taro is in the state of having gotten out of his own car.'

Thus, even if one adopts J. McCawley's revision, discussed earlier, the phenomena of reflexivization and sentence pronominalization cannot be adequately accounted for.

The phenomena of reflexivization and sentence pronominalization in Japanese, thus, strongly challenge the generative semantic treatment of the lexical causative form.[15] One way to deal with the problem within the framework of generative semantics is to say that the rules of reflexivization and sentence pronominalization apply only to the structure that contains real morphemes, and that they do not apply to the semantic structure that contains semantic elements directly. A solution of this type, however, is diametrically opposed to the very tenets of generative semantics—namely, that there is no separation of syntax and semantics and that syntactic rules apply prelexically, i.e., directly to the semantic structure, as well.

The adverbial modification of time and place adverbs must be treated in conjunction with the notion of 'event'. The fact that time or place adverbs must be interpreted as modifying the whole causative event in the case of a lexical form indicates that the causative situation is conceived as one cohesive event. In the case of the productive form, however, the causative

[15]This fact is ironical when viewed in light of Noriko McCawley's analysis of reflexivization (in this volume), in which reflexivization is used to support what appears to be an extreme practice of the generative semantic doctrine. Incidentally, N. McCawley has not offered any solution to the phenomenon discussed here.

situation is conceived of as comprising two distinct events that can be separately modified by a time or place adverb. In the generative semantic treatment that breaks up even a lexical causative expression into several distinct events in the semantic representation, it is not clear how a distinction of the sort discussed here can be made.

Finally, I turn to the problem of representing semantic properties such as the notions of directive causation, manipulative causation, coercive causation, and the others discussed in Section 3. Within the framework of generative semantics, it appears possible to divide semantic properties into two groups, one including pragmatic constraints and the other the 'basic' semantic elements, representable in terms of finite, universal semantic 'primitives' such as CAUSE and BECOME (cf. Lakoff, 1974). If this is really possible, then one can assume that while the 'core' causative meaning is represented directly in the semantic representation, those properties discussed in Section 3 are treated as pragmatic constraints.[16] Furthermore, if the separation of the 'core' meaning and pragmatic constraints is possible, one can account for the difference between the productive form and the lexical form in terms of the applicability of predicate raising. That is, by assuming that the applicability of predicate raising depends on pragmatic constraints, one can say, for example, that the insertion of *raise* takes place only when predicate raising brings semantic elements together under one node. But since predicate raising is made sensitive to the pragmatic constraints, it applies only when all the necessary constraints hold. If the pragmatic constraints do not hold, then no predicate raising applies, and as a result, lexical insertion inserts lexical items into each independent node, yielding the productive form *cause to rise*. The idea of making predicate raising sensitive to pragmatic constraints is obviously an extension of the idea discussed in Postal (1974), in which it is shown that presuppositions are affected depending on whether raising applies or not. By turning things around, Postal suggests that such a case is to be handled by making the applicability of raising sensitive to presuppositions. That is, if a certain presupposition holds, then raising applies; otherwise, it does not.

Now, this treatment does not call for the complication of the semantic structure of causative constructions itself, and the similarity between the lexical causative and the productive form can be maximally represented; but there is a problem, particularly in Japanese. In addition to the difficulty associated with differentiating the 'core' meaning from the so-called pragmatic constraints, the treatment suggested turns out to be in conflict with

[16]It is not entirely clear what this 'core' meaning would be. It is presumably something that is shared by all types of causative expressions.

the tenets of generative semantics. One will recall that, in Japanese, even the productive form involves predicate raising. Since the productive causative form and the lexical causative form involve a different set of pragmatic constraints, some provision must be made in order to avoid the confusion. One can allow either two types of predicate raising or require two separate types of pragmatic constraints. The first choice seems not very felicitous, since it essentially involves the recognition of 'semantic predicate raising' that raises semantic elements and 'syntactic predicate raising' that raises real morphemes. (The former is to apply in the lexical causative case, and the latter in the productive case.) The second solution, however, is no better than the first. It must say that one type of pragmatic constraints applies to predicate raising when what is raised are semantic elements, and the other type to raising when what is raised are real morphemes. This, in effect, is saying that a process dealing with semantic elements is sensitive to certain constraints that are different from those involved in a process dealing with morphemes. This is tantamount to saying that semantic processes and syntactic processes (or prelexical and postlexical processes) are different in nature, which is contradictory to the tenet of generative semantics that the syntax/semantics dichotomy does not hold.

This problem and the one associated with reflexivization and sentence pronominalization prompted me (Shibatani, 1973d) to explore a new model of semantic representation that allows one to include much more semantic information than is permitted in the generative semantic model. Also, the possibility of not involving predicate raising of semantic elements is explored. If one allows insertion of lexical items directly into the semantic structure, also allowing replacement of semantic elements that are not under one node by one lexical item, one cannot use McCawley's explanation of 'possible lexical items' (see page 278). However, it is still not entirely clear that one cannot discover a more general and self-explanatory condition on lexical insertion. One will notice that McCawley's, and for that matter Ross', accounts do not explain why constraints such as the coordinate structure constraint and the complex NP constraint hold in language.

5. CONCLUDING REMARKS

We have studied at length Japanese causative constructions from three dimensions—morphological, syntactic, and semantic. The study of causative constructions has proved to be worthwhile, since it relates not only to a number of other syntactic phenomena but also, in a very significant way, to grammatical theory. We have looked in detail at how the theory of

generative semantics, one of the most promising current grammatical theories, can handle many intricate syntactic and semantic properties that causative constructions display. Though a complete formal analysis has not been achieved, the facts and problems have been fully explicated. Research on causative constructions in Japanese, English, and other languages continues, and the relevance of such research to the development of grammatical theory has been amply demonstrated in this chapter. Some of the recent achievements in this area are presented in Shibatani (1975b).

RELATIVIZATION[1]

JAMES D. McCAWLEY

INTRODUCTION

Within the past couple of years, so much really first-rate work on Japar relative clauses has been produced that there is little left for me to do here yond summarizing the observations of Kuno (1970, 1973), Teramura (197 and Muraki (1970) and commenting on the conclusions of those work

In Japanese, a relative clause, whether restrictive or nonrestrictive, c sists of a truncated sentence (specifically, a sentence that lacks the NP t is relativized over and any case markers that go with that NP). The rela clause precedes the NP that it modifies. For example:

(1) a. *Yamada-san ga sáru o*
Mr. NOMINATIVE monkey ACCUSATIVE
kát-te i-ru
keep-PARTICIPLE be-PRESENT
'Mr. Yamada keeps a monkey.'

b. [*Yamada-san ga kátte iru*] *sáru*
'the monkey which Mr. Yamada keeps'

c. [*Sáru o kátte iru*] *Yamada-san*
'Mr. Yamada, who keeps a monkey'
or
'the Mr. Yamada who keeps a monkey'

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