The new typology of causativization in Korean: the case of covert generic causatives

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Abstract

When we consider (in)directness of causation as a parameter for causative marking, lexical causatives are argued to give rise to direct causation, whereas periphrastic causatives are compatible with indirect causation. In Korean, morphological causatives are also attested as well as lexical and periphrastic causatives, which give rise to either direct or sociative causation. This paper has two main goals. First, I revisit morphological causativization in Korean, and propose that differences in the behavioral profiles of causativizing strategies can be attributed to the property *uniqueness of paricipants* (Krifka 1998). Specifically, the added causer is blocked from participating as an agent, if there is already an agent in the meaing of an input, thus added as a sociative causer. Second, I introduce a previously unattested type of causatives in Korean, covert generic causatives, and discuss how it fits into the general causativization process. Despite the non-causative form of a verb, the construction consists of a sole causer argument, and gives rise to a causative reading in which a dispositional property of the causer brings about a result state described by the verb. Contra previous research that analyses the relation between the causer and the non-causative event described by the verb as purely pragmatic, I argue that the predicate grammatically licenses the causer subject. I analyze covert generic causatives in line with canonical morphological causativization, and further propose that they are rather a rescue strategy for the verb to take non-agentive causer subjects to avoid the agentivity constraints that causatives in Korean impose on their subjects. Thus, the verb takes an alternative form other than a causative form, which is realized as a non-causative change-of-state verb in covert generic causatives. Moreover, I adopt a dispositional ascription analysis, initially proposed for dispostional middles (Lekakou 2004), to account for this rescue strategy that the verb of covert generic causatives takes. Given the shared common properties between the two constructions, including their intransitivity and generic implications, I argue that they are functionally similar, yet are different in that covert generic causatives focus on causers whereas dispositional middles focus on patients.

Keywords causativization, non-agentivity, dispositional ascription, argument realization, lexical semantics, Korean

Contents

1. Introduction

Different types of causatives have been widely assumed to give rise to different semantic inferences, specifically regarding the directness of causation (Fodor 1970, p.430). This is illustrated for English in (1). Lexical causative refers to a verb which describes a causative event (e.g., *kill*); periphrastic causative refers to a complex structure that consists of a verb (e.g., *die*) embedded under a main verb *cause*.

(1) a. John killed Mary. (lexical)
b. John caused Mary to die. (periphrastic)

Lexical causatives always give rise to an inference of direct causation, whereas periphrastic causatives are compatible with either direct or indirect causation. Direct causation cannot include an intermediate cause, which contrasts with indirect causation, which is compatible with an intermediate cause (Bittner 1999; Kratzer 2005).

In Korean, causatives can also be morphologically derived using a causativizing morpheme, e.g., *-ly* in (2b), in addition to lexical causatives and periphrastic causatives. Periphrastic causatives are syntactically derived in which a verb (e.g., *cwuk-* 'die') is embedded under a main verb *-ha* 'do/cause'. The three types of causatives are illustrated in (2)[1].

(2) a. *sala-ka* *changmwun-ul pwusw-ess-e*.
Sarah-NOM window-ACC break-PST-DECL
'Sarah broke the window.' (lexical)
b. *sala-ka* *elum-ul* *el-**ly**-ess-e*.
Sarah-NOM ice-ACC be.frozen-CAUS-PST-DECL
'Sarah froze the ice.' (morphological)
c. *sala-ka* *yucin{-i/-ul}* *cwuk-**key** **ha**-yss-e*.
Sarah-NOM Eugene-NOM/-ACC die-COMP do-PST-DECL
'Sarah caused Eugene to die.' (periphrastic)

Similar to English, lexical causatives give rise to an inference of direct causation, whereas periphrastic causatives are compatible with indirect causation. In general, morphological causatives pattern like lexical causatives in that they give rise to an inference of direct causation. However, some of them have been argued to give rise to sociative causation (e.g., (3)), which falls in between the direct and indirect causation (Shibatani & Chung 2002, p.114).

(3) *sensayngnim-i* *haksayngtul-ul yek-kkaci kel-**ly**-ess-ta*.
teacher.HON-NOM students-ACC station-to walk-CAUS-PST-IND
'The teacher walked (marched) the students to the station.' (sociative causation)

The causer subject referents, in sociative causation, are more directly involved in the event than causers in an event of an indirect causation; they also differ from causer subjects in an event of a direct causation in that they are not a direct participant of the main event.

The novel contribution of this paper is to provide evidence for a hitherto unattested type of causatives, which I refer to as "covert generic causatives"; examples are shown in (4).

[1]Note that in the Korean romanization system, *i* alternates with *y*.

(4) a. *khal-un* ***tachy-****e*.
knife-TOP become.hurt-DECL
'Knives hurt (people).' (= cause to become hurt)

b. *swul-un* ***ppalka-ycy-****e*.
alcohol-TOP red-become-DECL
'Alcohol reddens (people).' (= cause to become red)

Covert generic causative sentences contain a main verb which in the surface form is a non-causative change-of-state verb, and a sole causer subject. Although the form of the verb is non-causative, the expression gives rise to a causative reading in which it describes a dispositional property of the causer subject that brings about a result state. Contra previous research that analyzes the relation between the causer subject and the non-causative verb as purely pragmatic (Bak 1981; Ahn, Kim & Lee 1992), I argue that the predicate grammatically licenses the causer subject.

Covert generic causatives furthermore seem to pattern like lexical or, at least, some morphological causatives in that they give rise to an inference of direct causation. However, one notable property of covert generic causatives is that the verb obligatorily takes a non-agentive causer subject (e.g., natural force, instrument, etc.). This contrasts with lexical and morphological causatives, which require their causer subject to be agentive, strictly limiting the occurence of causer subjects which are non-agentive, as in (5a). Compare this to English, where some causatives do not specify the type of causers they can take, e.g., *break* takes either agentive and non-agentive causers as its subject, as in (5b).

(5) a. * *palam-i* *changmun-ul pwusw-ess-e*.
wind-NOM window-ACC break-PST-DECL
Intended: 'The wind broke the window.'

b. The wind broke the window.

I propose that in covert generic causatives, the verb takes a rescue strategy for taking non-agentive causer subjects to avoid the agentivity constraint imposed on causatives; specifically, it uses an alternative form other than a causative form, i.e., a non-causative form, since causatives do not take non-agentive causer subjects. Thus, I argue that the verb of a covert generic causative is indeed a type of causative.

Moreover, I adopt a dispositional ascription analysis, proposed for dispositional middles (Lekakou 2004), to account for the rescue strategy that the verb of a covert generic causative takes. This connection is based on the observation that covert generic causatives share a lot of common properties with dispositional middles, including their intransitivity and generic implications. Thus, I argue that they are functionally similar; the differences are that covert generic causatives take causers as their arguments whereas dispositional middles take patients. Nonetheless, I acknowledge the fact that they are two separate types of constructions, given their apparent structural differences.

In section 2, I outline some basic properties of morphological causatives in Korean. In section 3 I introduce covert generic causatives, mainly arguing for a grammatical relation between the causer subject and the non-caus verb, which is non-causative. In section 4 I revisit morphological causativization, and show that covert generic causatives patten like lexical and some morphological causatives, giving rise to direct causation. In section 5 I first propose different behaviors of causativization with respect to the property *uniqueness of participants* (Krifka 1998), and further

argue that covert generic causatives are a rescue strategy for a causative to take non-agentive causer subjects, to avoid the agentivity requirement that causatives impose on their subject. In section 6 I analyze covert generic causatives via dispositional ascription analysis, given their common properties with dispositional middles. In section 7 I conclude.

2. Morphological causatives in Korean

In Korean, causatives can be morphologically derived using a set of causativizing allomorphs *-i/hi/li/ki/wu/kwu/chwu*[2] (e.g., (2b), repeated in (6b)) as well as lexical causatives (e.g., (2a)) and periphrastic causatives which are syntactically derived using *-key ha-* (e.g., (2c)). This section gives a brief syntactic overview of morphological causatives in Korean. Their semantics will be discussed in section 4.

(6) a. *elum-i el-ess-e*.
ice-NOM be.frozen-PST-DECL
'The ice froze.'

b. *sala-ka elum-ul el-**ly**-ess-e*.
Sarah-NOM ice-ACC be.frozen-CAUS-PST-DECL
'Sarah froze the ice.' (causativized)

The causativizing morpheme, e.g., *-ly*, adds an argument (e.g., Sarah), a causer subject, while demoting the patient subject of an input predicate to an object (e.g., *elum* 'ice') (Sohn 2001; Jeong 2018; Ko et al. 2019; Jo 2021).

In addition to statives and inchoatives which are frequently observed to be involved in causative alternation, a notable property of causativization in Korean is that it also takes activity verbs and causatives as its input. The causativized form of an activity verb is shown in (7).[3].

(7) a. *ai-ka wus-ess-e*.
child-NOM laugh-PST-DECL
'The child laughed.' (activity)

b. *emma-ka ai-lul wus-**ky**-ess-e*.
mother-NOM child-ACC laugh-CAUS-PST-DECL
'Mother made the child laugh.'

Similar to (6), the agent subject of an input verb (e.g., *ai* 'child') is demoted to an object when causativized. (8) shows the case of causativization of a causative input.

(8) a. *yucin-i sakwa-lul kkakk-ass-e*.
Eugene-NOM apple-ACC peel-PST-DECL
'Eugene peeled the apple.'

[2] *-i/hi/li/ki/wu/kwu/chwu* are allomorphs of the causativizing morpheme. The different morphological realizations are phonologically conditioned (Park 1994; Son 2006).

[3] An implication that a causativized verb gives rise to is translated as 'make someone or something to *input*'. This contrasts to an implication that arises from periphrastic causatives which is translated as 'cause someone or something to *input*'. The detailed causative implications will be further discussed in section 4

b. *sala-ka yucin{-ul/-eykey} sakwa-lul kkak**-y**-ess-e.*
Sarah-NOM Eugene-ACC-DAT apple-ACC peel-CAUS-PST-DECL
'Sarah made Eugene peel the apple.'

Again, the causer subject of an input verb (e.g., Eugene) is demoted to an object when causativized.

Nonetheless, not all causatives can be morphologically causativized. Unlike underived causatives (e.g., (8a)), the output of morphological causativization (e.g., (6b)) cannot provide the input, as in (9a); i.e., the process is not recursive, when the original input has already been causativized. Derived causatives can only be syntactically causativized, resulting in a periphrastic causative, as in (9b).[4]

(9) a. * *yucin-i sala-eykey elum-ul el-ly{**-i/.../chwu**}-ess-e.*
Eugene-NOM Sarah-DAT ice-ACC be.frozen-CAUS-CAUS-PST-DECL
Intended: Eugene made Sarah freeze the ice.'

b. *yucin-i sala-{-ka/-lul/-eykey} elum-ul el-ly**-key** **ha**-yss-e.*
Eugene-NOM Sarah-NOM/-ACC/-DAT ice-ACC be.frozen-CAUS-COMP do-PST-DECL
Eugene caused Sarah to freeze the ice.'

(9a) describes a hypothetical causativization process in which the second causativizing morpheme is attached to the first one, *-ly*. It shows the ungrammatical formation of two sets of causativizing morphemes, in which, specifically the second morpheme follows the first morpheme, but it is ungrammatical either way. Yet, derived intransitives can be morphologically causativized, as in (10).[5]

(10) a. *changmwun-i kkay**-cy**-ess-e.*
window-NOM break-become-PST-DECL
'The window broke/was broken.'

b. *yucin-i changmwun-ul kkay-cy**-key** **ha**-yss-e.*
Eugene-NOM window-ACC break-become-COMP do-PST-DECL
'Eugene caused the window to break/be broken.'

It seems like there is a blocking effect that any causativization process, not other processes like detransitivization, restricts another process of morphological causativization. The case of the blocking of a periphrastic causative is shown in (11).

(11) * *sala-ka yucin-eykey elum-ul el-key ha{**-i/.../chwu**}-ess-e.*
Sarah-NOM Eugene-DAT ice-ACC be.frozen-COMP do-CAUS-PST-DECL
Intended: Sarah made Eugene to cause the ice to be frozen.'

The input cannot be morphologically causativized when it has already undergone causativization, either mophologically (e.g., (9a)) or syntactically (e.g., (11)). Thus, unlike morphological causativization, syntactic causativization is a recursive application, as in (12).

[4]The different case markings on the demoted subject of an input (e.g., Sarah), a nominative *-ka*, accusative *-lul* and dative *-eykey*, may relate to different syntactic properties, but the details are not relevant in this paper.

[5]Morpheme *-cy*, with allomorphs *-eci/-aci/-ici*, carries a meaning of 'become' and derives a non-causative change-of-state verbs.

(12) a. *sala-ka yucin{-i/-ul/-eykey} elum-ul el-key* ***ha-key***
Sarah-NOM Eugene-NOM/-ACC/-DAT ice-ACC be.frozen-COMP do-COMP
ha*-yss-e*.
do-PST-DECL
'Sarah caused Eugene to cause the ice to be frozen.'

b. *cwun-i sala-ka yucin{-i/-ul/-eykey} elum-ul el-key ha-key*
June-NOM Sarah-NOM Eugene-NOM/-ACC/-DAT ice-ACC be.frozen-COMP do-COMP
*ha-****key*** ***ha****-yss-e*.
do-COMP do-PST-DECL
'June caused Sarah to cause Eugene to cause the ice to be frozen.'

In (12a), we see the syntactic causativization strategy applied twice, while in (12b), it is applied thrice. Thus, in simple terms, morphological causativization seems to be only applied once in a causativization process. At a glance, this seems like a purely morphological and syntactic constraint. Nonetheless, there may be some semantic issues relevant to this pattern of various blocking effects, given that different types of causatives give rise to different types of causation. These types of causation will be further discussed in section 4.

Before moving on to the discussion of covert generic causatives, I make a brief note on another set of morphemes included in causative alternations, the detransitivizing morpheme *-i/hi/li/ki*;[6] this set of morphemes removes a causer argument, as in (13b) (Sohn 2001; Ko et al. 2019).

(13) a. *sala-ka mwun-ul yel-ess-ta*.
Sarah-NOM door-ACC open-PST-DECL
'Suji opened the door.'

b. *mwun-i yel-****ly****-ess-ta*.
door-NOM open-DTR-PST-DECL
'The door opened.' (detransitivized)

Some previous research has argued for a unified analysis of the two morphemes, causativizing *-i/hi/li/ki/wu/kwu/chwu* and detransitivizating *-i/hi/li/ki*, given that they share a subset of allomorphs, i.e., *-i/hi/li/ki*. This paper will follow a general view that the two semantic processes, causativization and detransitivization, are only compatible with each morphemes, respectively (Son 2006; Ko et al. 2019).[7]

[6] In this paper, I will gloss the morpheme *-i/hi/li/ki*, as DTR for detransitivzation to be neutral. This paper does not prefer either of two previous approach, i.e., passivization (Yeon 2015; Ko et al. 2019) or inchoativization (Kim 2009; Jeong 2018). The detailed theoretical issues are beyond the scope of this paper.

[7] Jeong (2018) has argued that the fact that the part of inchoativizing morphemes and causativizing morphemes overlaps shows that they are syntactically and semantically identical, and different functions simply arise pragmatically. However, even though they share similar set of allomorphs, there are clear cases where some of them are only used for causativization (i.e., *-wu/kwu/chwu*). Moreover, there are clear cases where the causative form and decausativized form are marked differently for the same root (e.g., *mek-i-* 'cause to eat' vs *mek-hi-* 'be eaten'). Thus, I assume that there are two individual semantic processes, causativization and detransitivization, in Korean regardless of their morphological similarity.

3. Syntactic properties of covert generic causatives

Covert generic causatives, illustrated in (14), consist of a verb, which expresses a result state, and a causer argument, which refers to a kind. The puzzle is that the expressed argument does not refer to the patient of a causing event, i.e., the one that is affected or undergoes the change.

(14) a. *chong-un cwuk-e*.
gun-TOP die-DECL
'Guns kill.' (cause to become dead)

b. *swul-un ppalka-ycy-e*.
alcohol-TOP red-become-DECL
'Alcohol reddens' (cause to become red)

c. *i yelsoy-nun cal yel{-ly/-ecy}-e*.
this key-TOP well open-DTR/-become-DECL
'This key opens well.' (cause to become open)

Although there is not any explicit marker of causation, covert generic causatives give rise to a causative reading in which the dispositional property of the causer (e.g., *chong* 'gun') brings about the result state expressed by the verb (e.g., *cwuk* 'die').

Note that in general, non-causative change-of-state verbs (e.g., *cwuk-* 'die') exclusively take patient, not causer, subjects, as in (15a), and thus do not appear in canonical causative constructions. For instance, as in (15b), only a causative (e.g., *cwuk-y-* 'kill') can take a causer subject, giving rise to a causative reading.

(15) a. *salam-tul-un cwuk-e*.
person-PL-TOP die-DECL
'People die.'

b. *holangi-nun salam-tul-ul {cwuk-**y**-e/*cwuk-e}*.
tiger-TOP person-PL-ACC die-CAUS-DECL/die-DECL
'Tigers kill people.'

This sentence is grammatical only when the verb appears as a causative form, and not as a non-causative form. These generic sentences can have unexpressed arguments, but appear to have only one argument, a causer subject, as in (16).

(16) a. *holangi-nun* (*sal-ki wihay*) *cwuk-**y**-e*.
tiger-TOP live-NMLZ in.order.to die-CAUS-DECL
'Tigers kill to live.'

b. *chong-un {cwuk-e/*cwuk-**y**-e}*.
gun-TOP die-DECL/die-CAUS-DECL
'Guns kill.'

There are similarities in these generic sentences and covert generic causatives, in that they both take a sole causer subject, giving rise to a causative reading. Nonetheless, the verb in covert generic causatives cannot instead be expressed with a causative counterpart (e.g., *cwuk-y-* 'kill'), and is

only acceptable with a non-causative form. Again, although the form of the verb (e.g., *cwuk-* 'die') is non-causative, the sentence in (16b) gives rise to a causative generalization, e.g, guns cause (people) to die.

The main focus of this section is to discuss the syntactic properties of covert generic causatives, specifically the non-canonical grammatical relation between the causer DP and the verb whose form does not overtly encode a causative meaning. The following sections will then aim to determine how the causative meaning arises. The tables in (17) show three verb forms that allow covert generic causatives and their examples: a basic underived form, or a form derived either from a stative root or a causative verb root. The verbs in (17b-c) are derived using either the detransitivizing morpheme *-i/hi/li/ki* or *-eci, -aci, -ici* 'become'.

(17) a. Underived non-causative cos verbs

Become root	
tachi-	'become hurt'
cwuk-	'die (become dead)'
hwana-	'become irritated'
sinna-	'become excited.'

b. Derived non-causative cos verbs (stative root)

Root		Become	
ppalkah-	'red'	***ppalka-yci-***	'become red'
napcakha-	'flat'	***napcakha-yci-***	'become flat'
nelp-	'wide'	***nelp-eci-***	'become wide'
ppalu-	'fast'	***ppall-aci-***	'become fast'

c. Derived non-causative cos verbs (causative cos root)

Become		Causative root	
***yel*{*-li-/-eci-*}**	'become open'	*yel-*	'open
***ttak*{*-i-/-aci-*}**	'become cleaned'	*takk-*	'clean'
***call*{*-i-/-aci-*}**	'become cut'	*calu-*	'cut'
pwus-eci-	'become broken'	*pwusi-*	'break'

There has been little prior work on this construction. Few prior studies have discussed similar constructions, as in (18) (Bak 1981; Ahn, Kim & Lee 1992). The first DP has been analyzed as an "extrinsic topic" that does not hold any grammatical relation to the rest of the sentence.

(18) a. *khephi-nun cam-i an w-a.*
coffee-TOP sleep-NOM NEG come-DECL
'Coffee causes people not to fall into sleep easily.'

b. *cihachel-un ccacung-i na-n-ta.*
subway-TOP irritation-NOM arise-PRS-DECL
'Subway causes people to get irritated.'

I address two issues regarding the analysis and provide my explanation on these issues. First, the only grammatical relation that exists in the expression is argued to hold between the subject which is marked with a nominative case (e.g., *cam* 'sleep') and the verb (e.g., *o-* 'come'). Contra this argument, I analyze such a composition of a subject and a verb as a noun incorporation (see Wechsler & Noh 2001 for a noun incorporation in Korean resultatives). The noun and the verb

form a single word (e.g., *cam-o-* 'be sleepy', *ccacung-na-* 'get irritated') and take a grammatical subject.

(19) a. *sala-ka ccacungna-ss-ta.*
subway-NOM be.irritated-PST-DECL
'Sarah is irritated.'

b. *cihachel-un ccacungna-n-ta.*
subway-TOP be.irritated-PRS-DECL
'Subway causes people to get irritated.'

The verb, which itself expresses a result state, can take a patient subject as expected (e.g., (19a)), and also can take a causer subject behaving like a covert generic causative (e.g., (19b)). Examples of these noun-incorporated verbs include *mok-aphu-* 'be hoarse (throat-sick-)', *ttam-na-* 'be sweaty (sweat-arise-)', *swum-cha-* 'be breathless (breath-full-)' and more (Wechsler & Noh 2001).

Second, the link between the initial argument and the remainder of the sentence is explained as purely pragmatic, which follows from the assumption that the verb e.g., *na-* 'arise' only licenses the subject e.g., *ccacung* 'irritation'. I argue that given the assumption of noun incorporation as well as further sets of evidence provided below, the complex verb (e.g., *ccacung-i na-*) licenses the initial argument as its grammatical subject.

This section aims to show that the verb of a covert generic causative is indeed syntactically intransitive, and licenses a sole causer subject. First, I argue against a possible analysis, i.e., a *pro*-drop analysis in which a patient is simply *pro*-dropped. Then, I argue for the subjecthood of the causer argument based on three converging lines of evidence: evidence from honorification, adverbial modification and subject-control phrases. These data clearly indicate that the patient argument in covert generic causatives cannot be analyzed as being *pro*-dropped.

3.1. Against a *pro*-drop analysis

Korean is known to allow null arguments (i.e., *pro*-drop) relatively freely, which is illustrated in (20). The verb (e.g., *tachy-* 'get hurt') can be used naturally with or without a patient subject (e.g., *na* 'I').

(20) A: What happened to you?

B: (*na*) *tachy-ss-e.*
1.SG get.hurt-PST-DECL

'I got hurt.'

Pro-drop is not limited to first person subjects, but is also allowed for other arguments (e.g., second/third person subjects, objects, etc.) in the right discourse context. Any argument can be optional without impairing the acceptability of a sentence.

(21) a. Context: the speaker sees a band-aid on the addressee's arm.
A: (*ne*) *tachy-ss-e*?
2.SG get.hurt-PST-DECL
'Did you get hurt?'

b. A: Did Sarah bring her book?
B: *e*, (*kyay*) (*chayk*) *kacye-wa-ss-e*.
yes that.person book bring-come-PST-DECL
'Yes, she brought the book.'

This *pro*-drop analysis opens up the possibility that covert generic causatives involve a *pro*-dropped argument, which fills in the gap between the causer argument and the non-causative verb.

Similarly, Wechsler & Noh (2001) have raised the possibility that result phrases in Korean resultatives involve a *pro*-dropped argument. This *pro*-drop analysis has been argued against based on the constraint on *pro* that it cannot be preceded by its antecedent. Examples in (22) show that the clause with a *pro* cannot be scrambled to the initial position, before its antecedent (e.g., Chelswu).

(22) a. *Chelswu-ka*$_i$ [*pro*$_i$ *UFO-lul po-ass-ta-ko*] *cwucangha-yess-ta*.
Chelswu-NOM UFO-ACC see-PST-DECL-COMP claim-PST-DECL

b. * [*pro*$_i$ *UFO-lul po-ass-ta-ko*] *Chelswu-ka*$_i$ *cwucangha-yess-ta*.
UFO-ACC see-PST-DECL-COMP Chelswu-NOM claim-PST-DECL
'Chelswu claimed that he (Chelswu) saw a UFO.'

As for covert generic causatives, if it were a case of *pro*-drop, we would also expect ungrammaticality with fronting. (23a) shows a hypothetical analysis of a sentence that involves a covert generic causative as an embedded clause; the generic patient of the embedded clause (e.g., knives hurt people) appears as a possible antecedent in the matrix clause. Nonetheless, as in (23b), the embedded clause can be fronted, before the possible antecedent.

(23) a. Possible *pro*-analysis
salam-tul-i$_i$ [*khal-un pro*$_i$ *tachi-n-ta-ko*] *cwucangha-n-ta*.
person-PL-NOM knife-TOP get.hurt-PRS-DECL-COMP claim-PRS-DECL
'People claim that, as for knives, they get hurt.'

b. [*khal-un tachi-n-ta-ko*] *salam-tul-i cwucangha-n-ta*.
knife-TOP get.hurt-PRS-DECL-COMP person-PL-NOM claim-PRS-DECL
'People claim that knives hurt people.'

The grammaticality of (23b) suggests that a covert generic causative does not include an unexpressed patient which is *pro*-dropped.

I argue against this *pro*-drop analysis in more detail based on two possible candidates of *pro*, a patient object and a patient subject. First, given that covert generic causatives give rise to a causative reading, we can hypothesize that their verb, despite its non-causative form, is a causative that takes two arguments, a causer subject and a *pro*-dropped patient object. Nonetheless, (24) shows that unlike other causatives, the sentence is ungrammatical when it involves a patient object, marked with an accusative marker *-ul*.

(24) * *chong-un salam-tul-**ul** cwuk-e*.
gun-TOP person-PL-ACC die-DECL
Intended: 'Guns kill people.'

This shows, at least, that the verb of a covert generic sentence is syntactically intransitive. Second, given that the verb of a covert generic causative is non-causative, we can hypothesize that it grammatically licenses a patient subject, marked with a nominative *-i*; the patient subject is simply *pro*-dropped, and the expressed argument, a causer, is the topic of a sentence. This hypothesis seems plausible in that an expression like this is superficially possible, as in (25), and the causer argument is marked with a so-called topic marker *-nun*.

(25) a. *khal-**un*** *salam-tul-**i*** *tachy-e*.
knife-TOP person-PL-NOM get.hurt-DECL
Intended: 'As for knives, people get hurt.'

b. *swul-**un*** *salam-tul-**i*** *ppalka-ycy-e*.
alcohol-TOP person-PL-NOM red-become-DECL
Intended: 'As for alcohol, people become red.'

Thus, if we are to maintain that covert generic causatives do not involve *pro*-drop then it is important to prove there are actual syntactic differences between sentences with an expressed patient subject, like (25), and covert generic causatives. Since covert generic causatives are generic expressions, I will compare them with generic sentences with an expressed patient subject (e.g., (25)).

In the following subsections, I provide three pieces of evidence against a *pro*-drop analysis, by demonstrating different syntactic patterns of covert generic causatives and sentences with overtly expressed patients. This shows a clear syntactic relation between the causer argument and the verb of a covert generic causative, and thus, further supports the anlaysis that the causer is the sole subject grammatically licensed by the verb.

3.2. Argument 1: honorification

Referent honorifics *-si* (i.e., HON.REF) are marked on predicates and show an honorific agreement with subjects that requires an honorific marking (i.e., HON). Thus, the referent honorific agreement pattern is a good way to test whether in a covert generic causative, a causer or an unexpressed patient argument is the subject of the verb. Below, I show the verb of a covert generic causative shows a referent honorific agreement with the causer, and not with the unexpressed patient; this agreement pattern supports that the causer is a grammatical subject of the verb.

The general pattern of a referent honorific subject-predicate agreement is illustrated in (26) (Brown 2015; see Yoon 1996 for the subjecthood tests for non-nominative subjects).

(26) a. *emeni-**kkeyse*** *cip-ey* *o-**sy**-ess-e*.
mother.HON-NOM.HON house-LOC come-HON.REF-PST-DECL
'Mother came home.' (eventive)

b. *pothong* *emeni-tul-**kkeyse**-nun* *chincelha-**sy**-e*.
generally mother.HON-PL-NOM.HON-TOP kind-HON.REF-DECL
'Generally, mothers are kind.' (generic)

The referent *emeni* 'mother' agrees with the predicate, which is shown by the use of a nominative honorific marker, *-kkeyse*, on the subject and *-sy* on the predicate. This agreement pattern appears both in eventive (e.g, (26a)) and generic contexts (e.g., (26b)). As in (27), the referent honorific subject-predicate agreement is obligatory even when the subject (HON) is *pro*-dropped.

(27) a. A: Did mother (HON) come home?
B: *ung*, *PRO cip-ey o*(**-sy**)-ess-e*.
yes house-LOC come-HON.REF-PST-DECL
'Yes, she (HON) came home.' (eventive)

b. A: How are mothers (HON) at your kindergarden?
B: *pothong PRO chincelha*(**-sy**)-e*.
generally kind-HON.REF-DECL
'Generally, they (HON) are kind.' (generic)

It is unacceptable to drop the referent honorific marker *-si*, if the *pro*-dropped subject requires an honorific marking.

A *pro*-drop analysis predicts that the verb will show the same referent honorific agreement pattern in both constructions, covert generic causatives and sentences with an expressed patient. Again, in this analysis, covert generic causatives are assumed to share the same syntactic structure with sentences with an expressed patient, in which a patient is *pro*-dropped. In sentences with an expressed patient, as in (28a), the referent honorific marker *-si* agrees with the patient. This agreement pattern suggests that the patient is the grammatical subject of the verb.

(28) a. *khal-un pothong elusin-tul**-kkeyse** manhi tachi*(**-sy**)-e*.
knife-TOP generally elder.HON-PL-NOM.HON a.lot get.hurt-HON.REF-DECL
'As for knives, generally, elders (HON) get hurt a lot.'

b. Context: Sarah has a belief that elders are clumsy and have a general tendency to hurt children a lot. She says:
*elusin-tul**-kkeyse**-nun pothong ai-tul-i manhi*
elder.HON-PL-NOM.HON-TOP generally child-PL-NOM a.lot
tachi(-sy)-e*.
get.hurt-HON.REF-DECL
'As for elders (HON), generally, children get hurt a lot.'

In (28b), referent honorific agreement does not appear, since the patient does not require honorific marking. This further supports that referent honorific marking is not simply sensitive to any argument that requires honorific marking, e.g., *elusin-tul* 'elders' in (28b), but is tied to particular arguments, i.e., subjects. Thus, similar to (28a), it supports that in sentences with expressed patient, the causer is not the grammatical subject of the verb.

The assumption of a *pro*-drop analysis is contradicted by the referent honorific agreement pattern in covert generic causatives. (29) intends to describe a general property of knives in which they cause, e.g., elder people (HON), to get hurt.

(29) * *khal-un tachi**-sy**-e*.
knife-TOP get.hurt-HON.REF-DECL
Intended: 'Knives get people (HON) hurt.'

A *pro*-drop analysis incorrectly predicts that the verb will show an honorific agreement with the unexpressed patient. The unacceptability of (29) suggests that the unrealized patient is not the grammatical subject of the verb, but rather, the causer may be.

In order to argue for the analysis that the causer is the grammatical subject, we need evidence in which the verb shows a referent agreement with the causer; this includes a clear assumption that the patient does not require honorific marking. Nonetheless, such a construction appears to be ungrammatical, as in (30). The example intends to describe a general property of elders in which they cause e.g., children, to get hurt, assuming the same context in (28b).

(30) * *elusin-tul-un* *tachi(**-sy**)-e*.
elder.HON-PL-TOP get.hurt-HON.REF-DECL
Intended: 'Elders (HON) get people hurt.'

(30) is still ungrammatical even without the referent honorific marker *-si*; the sentence would have been acceptable if the patient was the subject. (30) seems to suggest that neither the causer nor the patient is the right candidate for the subject of the verb. However, I argue that the ungrammaticality is due to the animacy of the causer argument, and not related to its subjecthood; this relates to the observation that covert generic causatives seems to allow only inanimate causers, and the fact that inanimate denoting expressions never receive honorific marking. This will be discussed in detail in section 5 with respect to the agentivity of causers. Thus, a test example should consist of a causer which requies honorific marking and is also non-agentive, which is nearly impossible.

In sum, the referent honorific agreement pattern does not provide us direct evidence to support the subjecthood of the causer, but is still sufficient to conclude that the patient is not the subject of the verb. It furthermore shows that the two constructions, covert generic causatives and sentences with an expressed patient, are structurally different.

3.3. Argument 2: adverbial modification

The distribution of adverbs is another way to examine the relation of a verb with respect to its subject. Different adverbs behave differently with respect to what they can modify. There are finer distinctions by which to categorize adverbs (see Pylkkänen 2008 for more discussion), but this paper will follow a rough distinction based on whether they can modify a causing event or a caused event. This distinction is also referred to as event scope and process scope (Cinque 2004, Ernst 2007).

Sentential adverbs such as subject-oriented adverbs and aspectual adverbs (e.g., *carefully*, *clumsily*) can modify a causing event (e.g., John's spilling of the beans, in (31)) and can occur in both VP-level position, e.g., (31a), and sentence-initial position, e.g., (31b) (Jackendoff 1972, p. 57). They can scope over both the causing and caused event (e.g., the beans being spilt).

(31) a. John spilled the beans clumsily.
b. Clumsily, John spilled the beans.

Verb phrase-level adverbs such as manner, degree or time adverbs (e.g., *infrequently*, *completely*) only modify a caused event (e.g., the beans being spilt). They can only occur in VP-level position, e.g., (32a), and cannot occur in sentence-initial position, e.g., (32b) (Tenny 2000). They can only scope over the caused event.

(32) a. John spilled the beans completely.
b. *Completely, John spilled the beans.

The distinction between sentential adverbs and verb phrase-level adverbs is also observed in Korean. Aspectual adverbs like *kapcaki* 'suddenly' and degree adverbs like *wancenhi* 'completely' can both occur in VP-level position, scoping over a caused event.

(33) a. *swuci-ka kapcaki salccy-ess-e.*
Suji-NOM suddenly become.fat-PST-DECL
'Suji became suddenly fat.'

b. *swuci-ka wancenhi salccy-ess-e.*
Suji-NOM completely become.fat-PST-DECL
'Suji became completely fat.'

In contrast, only an aspectual adverb, *kapcaki* 'suddenly', can also occur in sentence-initial position. A degree adverb, *wancenhi* 'completely', cannot occur in a position where it scopes over a causing event.

(34) a. *kapcaki swuci-ka salccy-ess-e.*
suddenly Suji-NOM become.fat-PST-DECL
'Suddenly, Suji became fat.'

b. * *wancenhi swuci-ka salccy-ess-e.*
Completely Suji-NOM become.fat-PST-DECL
'*Completely, Suji became fat.'

The different behavior of these two types of adverbs makes a similar prediction for covert generic causatives: adverbs that are oriented towards the subject argument (i.e., adverbs that modify properties of the subject) will be able to scope over the causing event while those that are not will only be able to scope over the caused event. There are in principle two possible subjects, a causer and an unexpressed patient. For instance, (35) exemplifies two adverbs that are oriented toward these two possible subjects.

(35) a. *ppang-un hwahakcekulo salccy-e.*
bread-TOP chemically become.fat-DECL
'Bread makes, e.g., people, to become chemically fat.'

b. *ppang-un kepwukhakey salccy-e.*
bread-TOP uncomfortably become.fat-DECL
'Bread makes, e.g., people, to become uncomfortably fat.'

The adverb *hwahakcekulo* 'chemically' is oriented toward the causer *ppang* 'bread' (e.g., (35a)), and *kepwukhakey* 'uncomfortably' is oriented toward the unexpressed patient, e.g., people (e.g., (35b)). Both adverbs can occur in the VP-level position, scoping over the caused event (e.g., becoming fat).

Here, we can expect one of two possible scenarios with respect to which adverbs occur sentence-initially: (i) a causer-oriented adverb, supporting that the causer is the subject; (ii) a patient-oriented adverb, supporting that the patient is the subject. (36) shows that only the adverb that is oriented toward a causer, not a patient, can occur sentence-initially.

(36) a. *hwahakcekulo ppang-un salccy-e.*
chemically bread-TOP become.fat-DECL
'Chemically, bread makes, e.g., people, to become fat.'

b. * *kepwukhakey ppang-un salccy-e.*
uncomfortably bread-TOP become.fat-DECL
Intended: 'Uncomfortably, bread makes, e.g., people, to become fat.'

The causer-oriented adverb *hwahakcekulo* can occur sentence-initially, scoping over the causing event (e.g., causing people to get fat). In contrast, the patient-oriented adverb *kepwukhakey* 'uncomfortably' cannot occur sentence-initially. These grammatical patterns in (36) supports not only that the causer is the subject of the predicate, but also that the patient is not. If the patient is grammatically present, but simply not expressed, we would expect a different pattern in which a patient-oriented adverb is allowed in a sentence-initial position.

In contrast, the two types of adverbs show the opposite distribution for sentences with an expressed patient (e.g., (37)); only a patient-oriented adverb, e.g., *kepwukhakey* 'uncomfortably', can occur sentence-initially.

(37) a. *ppang-un ai-tul-i kepwukhakey/hwahakcekulo salccy-e.*
bread-TOP child-PL-NOM uncomfortably/chemically become.fat-DECL
'As for bread, children become uncomfortably/chemically fat.'

b. *kepwukhakey/*hwahakcekulo ppang-un ai-tul-i salccy-e.*
uncomfortably/chemically bread-TOP child-PL-NOM become.fat-DECL
'Uncomfortably/*Chemically, as for bread, children become fat.'

(37a) describes VP-level modification whereas (37b) describes sentence-initial modification. This suggests that in sentences with an expressed patient, patient arguments, not causers, are the subject of a verb. This further suggests that covert generic causatives are structurally different from sentences with an expressed patient.

Thus, the distribution of adverbs shows that in covert generic causatives, the verb grammatically licenses only the causer, not the patient, as its subject, and that the construction does not involve a *pro*-dropped patient argument.

3.4. Argument 3: subject control

Reflexives and subject-controlled adjunct clauses have been argued to be typically oriented toward subjects. Thus, they are a good way to identify the subject of a sentence. In Korean, the tests have been previously used to test the subjecthood of non-nominative subjects. Specifically, the tests consider subject-oriented properties of an argument with respect to the reflexive pronoun *casin/caki* 'self' and adjunct clauses such as *-myenseto* 'though'-clause, as in (38) (Yoon 2004, p. 2).

(38) a. *Cheli$_i$-eykey-nun* [***casin***$_{\{i/*j\}}$*-uy chinkwutul*]*-i mwusep-ta.*
Cheli-DAT-TOP self-GEN friends-NOM fearsome-DECL
'Cheli$_i$ is afraid of his$_{\{i/*j\}}$ friends.'

b. [*PRO*$_{\{i/*j\}}$ *tayhakwensayng-i-**myenseto***] *Cheli*$_i$*-eykey-nun sillyek-i*
graduate.student-COP-COMP Cheli-DAT-TOP ability-NOM
eps-ta.
not.exist-DECL
'Though he$_{\{i/*j\}}$ is a graduate student, Cheli$_i$'s academic abilities are marginal.'

The examples are acceptable only when the reflexive pronoun *casin* 'self' and the *pro* in a *-myenseto* 'though'-clause refer to Cheli. This suggests that the argument Cheli, despite its dative case marking, is the subject in the sentence, i.e., non-nominative subjects.

In a canonical use of non-causative change-of-state verbs, as in (39), the patient argument displays subject-oriented propeties, showing that it is the subject of the verb.

(39) a. *yucin*$_i$*-i* *sala*$_j$*-ey* *uyhay* ***caki***$_{i/*j}$ *pang-eyse* *cwuk-ess-e*.
Eugene-NOM Sarah-COMP by self room-LOC die-PST-DECL
'Eugene$_i$ died/was killed by Sarah$_j$ in self's$_{i/*j}$ room.'

b. *yucin*$_i$*-i* *sala*$_j$*-ey* *uyhay* [*PRO*$_{i/*j}$ *hakkyo-lul* *ka-nun* ***tonganey***]
Eugene-NOM Sarah-COMP by school-ACC go-COMP while
cwuk-ess-e.
die-PST-DECL
'Eugene$_i$ died/was killed by Sarah$_j$ while PRO$_{i/*j}$ going to school.'

The reflexive pronoun *caki* 'self' and the *pro* in a *-tonganey* 'while'-clause can only refer to the patient (e.g., Eugene), and not to the causer (e.g., Sarah). This shows that a patient argument is the only grammatical subject of non-causative change-of-state verbs. A rationale clause, *-wihay* 'in.order.to'-clause, is another type of subject-oriented adjuncts, which shows a subject control of a *pro*, as in (40).

(40) *yucin*$_i$*-i* *sala*$_j$*-ey* *uyhay* [*PRO*$_{i/*j}$ *chinkwu-lul* *sal-li-ki* ***wihay***]
Eugene-NOM Sarah-COMP by friend-ACC live-CAUS-NMLZ in.order.to
cwuk-ess-e.
die-PST-DECL
'Eugene$_i$ died/was killed by Sarah$_j$ to PRO$_{i/*j}$ save her friend.'

The example is only acceptable when the *pro* in a *-tonganey* 'while'-clause refers to the patient (e.g., Eugene), supporting that the patient, and not the causer, is the grammatical subject of the non-causative change-of-state verb.

A *pro*-drop analysis predicts that one would see subject-oriented properties with respect to the unexpressed patient, and not the causer, in covert generic causatives. (41) tests the subjecthood of the unexpressed patient with respect to the reflexive pronoun *caki* 'self' and two subject-oriented adjuncts discussed above, i.e., *-ttay* 'when'-clause and a rational clause.

(41) a. * *swul*$_i$*-un* ***caki***$_j$ *cip-eyse* *masi-myen* *ppalka-ycy-e*.
alcohol-TOP self house-LOC drink-if red-become-DECL
Intended: 'Alcohol$_i$ reddens (e.g., people$_j$) if they drink at self's$_j$ house.'

b. * *swul$_i$-un* [*PRO$_j$ manhi masi-l* ***ttay***] *ppalka-ycy-e*.
alcohol-TOP much drink-COM when red-become-DECL
Intended: 'Alcohol$_i$ reddens (e.g., people$_j$) when PRO$_j$ drinking a lot.'

c. * *swul$_i$-un* [*PRO$_j$ chwiha-ki* ***wihay***] *ppalka-ycy-e*.
alcohol-TOP become.drunk-NMLZ in.order.to red-become-DECL
Intended: 'Alcohol$_i$ reddens (e.g., people$_j$) to PRO$_j$ become drunk.'

In contrast to canonical non-causative change-of-state verbs, it is unacceptable when *caki* 'self' or a *pro* in a subject-controlled adjuncts is controlled by the unexpressed patient (e.g., people). This suggests that the patient cannot be the subject of the verb. In contrast, when tested with respect to the causer, as in (42), a *pro* in a subject-controlled adjuncts, e.g., *-ttay* 'when'-clause, grammatically refers to the causer, and not to the unexpressed patient.

(42) *ppang$_i$-un* [*PRO$_i$ sinsenha-l* ***ttay***] *salccy-e*.
bread-TOP fresh-COMP when become.fat-DECL
'Bread$_i$ fattens when PRO$_i$ fresh.'

The grammaticality of (42) supports that the causer (e.g., *ppang* 'bread') is the only grammatical subject of the verb. Ideally, this result for the subjecthood of the causer should be further supported by the other two tests shown above. Nonetheless, it seems impossible to construct causer-controlled sentences with with respect to *caki* 'self' and a rationale clause. Similar to the discussion in section 3.2, I argue that this relates to an inanimacy condition seemingly imposed on causers in covert generic causatives; again, this will be later argued, in section 5, with respect to the agentivity of causers. In contrast, in order to control the reflexive *caki* 'self' and a rationale clause, it seems natural to require the subject to be agentive, as in (43).

(43) a. *koyangi$_i$-ka/*hwapwun$_i$-i* ***caki$_i$*** *pang-ey iss-e*.
cat-NOM/flower.pot-NOM self room-LOC exist-DECL
'The cat$_i$/The flower pot$_i$ is in self$_i$'s room.'

b. *koyangi$_i$-ka/*hwapwun$_i$-i* [*PRO$_i$ hayspich-ul pat-ki* ***wihay***] *pang-ey iss-e*.
cat-NOM/flower.pot-NOM sunlight-ACC receive-NMLZ in.order.to room-LOC exist-DECL
'The cat/The flower pot is in the room to receive sunlight.'

But the degree to which modifiers with PRO subjects are possible, they point to the causer as the subject.

Moreover, the subjecthood of the causer is indirectly supported by testing subject-oriented properties in sentences with an expressed patient. As in (44), sentences with an expressed patient show the subject-oriented properties controlled by the patient argument.

(44) a. *swul$_i$-un salam$_j$-tul-i* ***caki$_j$*** *cip-eyse masi-myen ppalka-ycy-e*.
alcohol-TOP person-PL-NOM self house-LOC drink-if red-become-DECL
'As for alcohol$_i$, people$_j$ become red if they drink at self's$_j$ house.'

b. *swul*$_i$*-un* *salam*$_j$*-tul-i* [*PRO*$_j$ *manhi masi-l* ***ttay***] *ppalka-ycy-e*.
alcohol-TOP person-PL-NOM much drink-COM when red-become-DECL
'As for alcohol$_i$, people$_j$ become red when PRO$_j$ drinking a lot.'

This clearly contrasts with (41). Note that it seems impossible to construct a sentence with a rationale clause in which a *pro* is controlled by a patient; it is contradictory to assume the patient to actively undergo certain change for a purpose.[8]

In sum, the subject-oriented properties show that in covert generic causatives, the causer, not the patient, is the subject grammatically licensed by the verb.

3.5. Interim summary

In this section, I have argued that the verb of a covert generic causatives is indeed syntactically intransitive, and grammatically licenses the causer subject, not the unexpressed patient, based on three converging lines of evidence: (i) the verb shows subject-verb referent honorific agreement with the causer; (ii) only adverbs that are oriented toward the causer appear sentence-initially; (iii) the reflexive pronoun *caki* 'self' or subject-oriented adjuncts show subject-oriented properties with respect to the causer. These three pieces of evidence not only support that the causer is the only subject of verb, but also show that the patient argument is not syntactically present, and thus is not *pro*-dropped. Therefore, it supports that covert generic causatives are structurally distinct from sentences with an unexpressed patient.

Covert generic causatives are clearly a type of causative, giving rise to a causative reading. The remaining puzzle is that the causer subject is licensed by a non-causative verb. First, in the next section, I explore the semantics of covert generic causatives with respect to directness of causation, and categorize the construction as one of the causatives in Korean based on its semantics. Then, in section 5 I explain the apparent discrepency between the subject and the verb via a rescue strategy triggered by the agentivity constraint imposed on causatives. Finally, in section 6 I further account for the properties of covert generic causatives adopting a dispositional ascription analysis (Lekakou 2004).

4. Identifying the type of causation

In this section, I compare the semantic implications to which covert generic causatives give rise, to other types of causatives in Korean. Prior to the discussion on covert generic causatives, I revisit previous analyses that have been proposed for causativization processes in Korean. The final version of causativization will be later proposed in section 5.

4.1. Directness of causation

The distinction between lexical causatives (e.g., *kill*) and periphrastic causatives (e.g., *cause to die*) dates back to Fodor (1970). It has been observed that lexical causatives are not directly paraphrasable by periphrastic causatives, as in (45); thus, the causative meanings that arise from the two types of causatives are not identical (Dowty 1979).

[8]Given the discussion in (42) and (44), the reflexive pronoun *caki* 'self' requires its antecedent to be at least animate, and a rationale clauses further require their antecedents to be agentive.

(45) a. A change in molecular structure caused the window to break.
b. *A change in molecular structure broke the window.

Semantically, lexical causatives have been argued to give rise to direct causation, whereas periphrastic causatives have been argued to give rise to indirect causation. Directness of causation has been defined with respect to whether any intermediate causes are semantically allowed (Bittner 1999). We can observe this by testing whether the event of causing and the causing of a caused event can take different temporal modification, suggesting that if they do, there is a good chance that there has been an intermediate cause inbetween (Fodor 1970, p.433).

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

We can also observe directness of causation by testing whether the complex causing event with a contextually-established intermediate cause can be expressed with lexical or periphrastic causatives. The context in (47) describes a situation involving indirect causation which contrasts with a context where someone drank the tea directly out of the pot. The contrast in grammaticality shows that a context of indirect causation is only compatible with periphrastic causatives, and not with resultatives (Kratzer 2005, p.196).

(47) The context of indirect causation: Suppose my drinking all the water in the well causes your teapot to be dry. The reason is that, without any water left, there just isn't any more tea to be had.
a. I caused your teapot to be dry by drinking all the water in the well.
b. #I drank your teapot dry.

Like English, Korean lexical and morphological causatives have been analyzed as giving rise to direct causation, and periphrastic causatives are compatible with indirect causation (Shibatani 1973). The examples of periphrastic and morphological causatives are given in (48).

(48) a. *sala-ka os-ul malu**-key** **ha**-yss-e.*
Sarah-NOM clothes-ACC dry-COMP do-PST-DECL
'Sarah caused (e.g., her) clothes to dry.' (periphrastic)
b. *sala-ka os-ul mal**-ly**-ess-e.*
Sarah-NOM clothes-ACC dry-CAUS-PST-DECL
'Sarah dried (e.g., her) clothes.' (morphological)

Semantic differences between the two sets of Korean causatives are supported by the two tests illustrated above. As in (49a), the event of causing (e.g., drying the clothes) can be temporally separated from the causing of a caused event (e.g., hanging the clothes on the drying rack), only when the event is described by periphrastic causatives. In contrast, (49b) shows that morphological causatives cannot describe the same context involving temporal separation between the two events.

(49) a. *sala-ka os-ul thoyoil-ey kencotay-ey nele-se ilyoil-ey malu**-key***
Sarah-NOM clothes-ACC saturday-at drying.rack-LOC hang-by sunday-at dry-COMP
***ha**-yss-e.*
do-PST-DECL

'Sarah caused (e.g., her) clothes to dry on Sunday by hanging them on the drying rack on Saturday.'

b. * *sala-ka os-ul thoyoil-ey kencotay-ey nele-se ilyoil-ey mal-**ly**-ess-e*.
Sarah-NOM clothes-ACC saturday-at drying.rack-LOC hang-by sunday-at dry-CAUS-PST-DECL

'Sarah dried (e.g., her) clothes on Sunday by hanging them on the drying rack on Saturday.'

Moreoever, only periphrastic causatives (e.g., (50a)), not morphological causatives (e.g., (50b)), are compatible with a context with a contextually-established intermediate cause.

(50) The context of indirect causation: Suppose Eugene left his shirt on the chair, which got wet by the heavy rain. He was collecting other clothes to take them and his shirt to the laundry, while Sarah turned on the fan to cool herself down. Eugene's shirt, which happened to be in front of the fan, fully dried before Eugene collected it for laundry.

a. *sala-ka yucin-uy syechu-lul malu-**key** **ha**-yss-e*.
Sarah-NOM Eugene-GEN shirt-ACC dry-COMP do-PST-DECL
'Suji caused Eugene's shirt to dry.'

b. # *sala-ka yucin-uy syechu-lul mal-**ly**-ess-e*.
Sarah-NOM Eugene-GEN shirt-ACC dry-CAUS-PST-DECL
'Sarah dried Eugene's shirt.'

The indirect context in (50) contrasts with a direct context, e.g., Sarah intentionally used the fan as an instrument to dry Eugene's shirt. This difference between the two contexts may seem subtle; however, in (50) the event of Sarah turning the fan on is clearly not involved in the event of Eugene's shirt being dried, whereas in the direct context, the event of Sarah turning the fan is indeed involved in the event of drying Eugene's shirt.

The different compatability with an indirect causation is further supported by the case like (51) whose context involves indirect causation and describes an event involving breaking which can be expressed by a lexical causative (e.g, *pwusw-* 'break').

(51) The context of indirect causation: Sarah left her car parked, with the brakes off, in front of the house. The car rolled toward the house and broke the window.

a. # *sala-ka changmwun-ul pwusw-ess-e*.
Sarah-NOM window-ACC break-PST-DECL
'Sarah broke the window.'

b. *sala-ka changmwun-ul pwus-**eci-key** **ha**-yss-e*.
Sarah-NOM window-ACC break-become-COMP do-PST-DECL
'Sarah caused the window to be broken.'

As expected, a lexical causative, as in (51a), cannot be used to describe indirect causation. Instead, as in (51b), their non-causative forms (e.g., *pwus-eci* 'become broken') are first derived and then syntactically causativized (e.g., *pwus-eci-key ha-* 'cause to be broken'). This case of syntactic causativization of a lexical causative provides evidence that periphrastic causatives encode a

different type of causation compared to lexical or morphological causatives. Moreover, semantic differences explain the various combinations of causatives discussed in section 2. The examples are repeated in (52).

(52) a. *sala-ka yucin-eykey elum-ul el-**ly-key** **ha**-yss-e.*
Sarah-NOM Eugene-DAT ice-ACC be.frozen-CAUS-COMP do-PST-DECL
'Sarah caused Eugene to freeze the ice.'

b. *sala-ka yucin-eykey elum-ul el-**key** **ha-key** **ha**-yss-e.*
Sarah-NOM Eugene-DAT ice-ACC be.frozen-COMP do-COMP do-PST-DECL
'Sarah caused Eugene to cause the ice to be frozen.'

(52a) is compatible with a context in which Sarah indirectly caused Eugene to directly cause the ice to be frozen (i.e., freeze the ice). In contrast, (52b) is compatible with a context in which Sarah indirectly caused Eugene to indirectly cause the ice to be frozen. Thus, this shows that two causativization processes, morphological and syntactic, give rise to different types of causation. Thus, the various combinations of these processes are compatible with contexts describing different layers of direct or indirect causation.

Given that this section focuses on morphological causatives, the contrasting acceptability of the two tests have been shown with respect to morphological and periphrastic causatives. Nonetheless, lexical causatives pattern like morphological causatives in that they are not compatible with a context involving temporally separated events nor with a context involving an intermediate cause. Thus, so far, we can conclude that both lexical and morphological causatives give rise to direct causation whereas periphratic causatives are compatible with indirect causation. The next section revists the semantic implications that morphological causatives give rise to with respect to their verb classes.

4.2. Revisiting morphological causativization

Morphological causatives in Korean are attested across four semantic verb classes. This is illustrated in (53).

(53) a. Statives

nelp-	'be wide'	*nelp-**hi-***	'cause to become wide'
nuc-	'be late'	*nuc-**chwu-***	'cause to become late'

b. Non-causative change-of-state verbs

el-	'become frozen'	*el-**li-***	'cause to become frozen'
ssek-	'rot'	*ssek-**hi-***	'cause to become rotten'

c. Activities

ket-	'walk'	*kel-**li-***	'cause to walk'
mek-	'eat'	*mek-**i-***	'cause to eat'

d. Causatives

kkakk-	'peel'	*kkakk-**i-***	'cause to peel'
takk-	'clean'	*takk-**i-***	'cause to clean'

Most previous research on Korean causativization has analyzed causativization as a simple semantic process that adds a causer, without specifically identifying the properties of its input verbs. One

crucial limitation of this analysis is that it presupposes that the process uniformly applies to all semantic verb classes. A modified version of Pylkkänen's (2008) universal CAUSE is represented in (54), proposed by Jo (2021, p. 147). $Cause$ takes either an event or a state to capture the fact that all verb classes above can be causativized.

(54) $[\![Caus]\!] = \lambda P \lambda e \exists v [P(v)\ \&\ cause(e, v)]$ (where v indicates e 'event' or s 'state')

This predicts that every morphological causative should be semantically identical regardless of the verb class of the input, and it should thus have the same semantics as lexical causatives. Nonetheless, this contradicts the empirical fact that some morphological causatives give rise to sociative causation.

Sociative causation, described in (55), has been argued to fall inbetween direct and indirect causation (Shibatani & Pardeshi 2002; see Shibatani & Chung (2002) for Korean). It involves a causer of a sociative causing event (e.g., *sensayngnim* 'teacher'), generally animate, and an agent or a causer of a main event (e.g., *haksayngtul* 'students'). The two types of causers are now specified with respect to their semantic implications: the causer of an event that gives rise to sociative causation is referred to as 'sociative causer', while the causer of an event that gives rise to direct causation is referred to as 'direct causer'.

(55) a. *sensayngnim-i haksayngtul-ul yek-kkaci kel-**ly**-ess-e*.
teacher.HON-NOM students-ACC station-to walk-CAUS-PST-IND
'The teacher walked the students/directed the students to walk to the station.'

b. *sensayngnim-i haksayngtul-ul/-eykey changmwun-ul takk-**y**-ess-e*.
teacher.HON-NOM students-ACC/-DAT window-ACC clean-CAUS-PST-DECL
'The teacher made the students to clean the window.' (sociative)

In sociative causation, the sociative causer plays a less direct role in the event than in direct causation, in that they are not the agent or the direct causer of the main event. (55a) is compatible with the reading in which the teacher supervised the students walking to the station but did not necessarily walk with them; similarly, (55b) is compatible with the reading in which the teacher supervised the students cleaning the window but did not necessarily help them directly. Compared to indirect causation, sociative causation is more direct in that the sociative causer is more involved in the event in some sense, and frequently is the one that has initiated the action. The sociative causer can be involved either by helping with the action or keeping the agent or the direct causer under their supervision when performing the action; (55) is compatible with either reading. When a context further specifies that the causer, e.g., *Sarah*, is clearly not involved in the event in any way (e.g., Sarah cannot be at home and walk Eugene to school at the same time), the causing event can only be described with periphrastic causatives which are compatable with indirect causation, as in (56) (Shibatani & Pardeshi (2002)).

(56) *sala$_i$-ka* [*caki$_i$-ka cip-eyse yoliha-nun tonganey*] *yucin-ul hakkyo-kkaci*
Sarah-NOM self-NOM home-LOC cook-COMP while Eugene-ACC school-upto
{*ket-**key** **ha**-yss-e/*kel-**ly**-ess-e*}.
walk-COMP-do-PST-DECL/walk-CAUS-PST-DECL
'Sarah$_i$ made Eugene walk to school while she$_i$ cooked at home.'

The distribution of causative semantic inferences given Korean causativization strategies, is as in table (57), modified from Shibatani & Chung (2002, p. 116). Unlike the analysis that assumes a single causativiation process for morphological causatives (Jo 2021), the one in (57) captures the empirical pattern that different semantic effects arise from morphological causativization, direct and sociative causation.

(57)

Direct	Sociative	Indirect
-i/hi/li/ki/wu/kwu/chwu		*-key ha-*

One limitation of this anlaysis is that every morphological causative is assumed to be compatible either with direct or sociative causation. This does not fully capture the pattern of causativization process, which shows the effect of semantic verb classes in determining which type of causation arises. I show that different verb classes give rise to different types of causation. The four verb classes (i.e., statives, non-causative change-of-state verbs, activities, causatives) behave differently in two ways, when morphologically causativized. I argue that the two different behaviors relate to the type of subjects they take; specifically, statives and non-causative change-of-state verbs share in common taking a patient subject (e.g., (58)), while activities and causatives take non-patient subjects, an agent or a direct causer subject respectively (e.g., (59)). The former group is referred to as patient-subject verbs, and the latter group as agent/causer-subject verbs. Specifically, I show that when causativized, patient-subject verbs give rise to direct causation, whereas agent/causer-subject verbs give rise to sociative causation.

(58) a. *kil-i* *nelp-e*.
road-NOM wide-DECL
'The road is wide.' (stative)

b. *elum-i* *el-ess-e*.
ice-NOM be.frozen-PST-DECL
'The ice froze/is frozen.' (non-causative change-of-state verb)

(59) a. *ai-ka* *wus-ess-e*.
child-NOM laugh-PST-DECL
'The child laughed.' (activity)

b. *ai-ka* *sakwa-lul* *kkakk-ass-e*.
child-NOM apple-ACC peel-PST-DECL
'The child peeled the apple.' (causative)

First, when the input verb takes a patient subject (e.g., (58)), causativization adds a causer which gives rise to direct causation like lexical causatives, i.e., a direct causer, as in (60).

(60) a. *emma-ka* *kil-ul* *nelp**-hy**-ess-e*.
mother-NOM road-ACC wide-CAUS-PST-DECL
'Mother widened the road.'

b. *emma-ka* *elum-ul* *el**-ly**-ess-e*.
mother-NOM ice-ACC be.frozen-CAUS-PST-DECL
'Mother froze the ice.'

The causer argument of the causative form (e.g., *emma* mother) is understood as the direct causer of the event (e.g., widening and freezing). In contrast, when the input verb takes either an agent or a direct causer subject (e.g., (59)), causativization adds a causer which gives rise to sociative causation, i.e., a sociative causer, as in (61).

(61) a. *emma-ka ai-lul wus-**ky**-ess-e*.
mother-NOM child-ACC laugh-CAUS-PST-DECL
'Mother made the child laugh.'

b. *emma-ka ai-lul/eykey sakwa-lul kkakk-**y**-ess-e*.
mother-NOM child-ACC/DAT apple-ACC peel-CAUS-PST-DECL
'Mother made the child peel the apple.'

The added sociative causer (e.g., *emma* 'mother') is neither the agent nor the direct causer of the main event (e.g., laughing and peeling the apple). The subject of an input verb (e.g., *ai* 'child') is still the agent or the direct causer of the main event, even being demoted to object position after causativization.

In sum, causativization process behaves differently as to whether an input verb is a patient-subject verb or an agent/causer-subject verb. If it takes a patient subject, its morphologically derived causative form gives rise to direct causation; if it takes an agent or a direct causer subject, its morphologically derived causative form gives rise to sociative causation.

4.3. First pass of causativization: preliminary observations

So far, causativization has been argued to show two distinct outputs that separately give rise to either direct causation or sociative causation. Some prelimiary observations on causativization can be noted: (i) statives and non-causative change-of-state verbs, when causativized, always give rise to direct causation; (ii) lexical causatives, which give rise to direct causation, can be causativized giving rise to sociative causation. Thus, at first glance, there seems to be some hierarchical order between two types of causatives: causatives that give rise to direct causation, and causatives that give rise to sociative causation. This is illustrated in (62).

(62) Preliminary observations:

inchoatives/statives	→	causatives (direct causation)	→	causatives (sociative causation)

Nontheless, this observation is quickly falsified. (62) cannot capture the apparent case in which activities (e.g., *mek-* 'eat'), which do not involve causative event structure, can also be causativized giving rise to sociative causation. Note that the two distinct outputs do not have any relation to the transitivity of an input verb: intransitive activities (e.g., *ket-* 'walk'), when causativized, give rise to sociative causation. Thus, it is very clear that directness of causation depends on the subject type of an input verb, following the discussion about patient-subject verbs and agent/causer-subject verbs in the previous section.

Therefore, we need an analysis that not only accounts for these two different behaviors of causaitivzation, but also explains morphological causatives derived from all four types of input verbs. The best generalization that can be made so far is that the two groups differ as to whether they take a patient subject or not. This does not give us a sufficient explanation as to why the

causativization of these two groups gives rise to different types of causation. In section 5 I will propose an analysis for causativization that fully accounts for the empirical patterns by bridging the two inputs that give rise to sociative cauastion (i.e., activities and causatives). Prior to that, I will show how covert generic causatives fit in the paradigm of causatives with respect to their semantic implications.

4.4. Categorizing covert generic causatives

In this section, I compare the verb of a covert generic causative to lexical, morphological and periphrastic causatives with respect to the type of causation they give rise to (i.e., direct, sociative, and indirect causation). Specifically, I show that covert generic causatives give rise to only direct causation, and never to sociative or indirect causation. This supports that the verb of a covert generic causative behaves like lexical causatives or some morphological causatives (i.e., those that take patient-subject verbs as their input).

Directness of causation is shown using the two tests introduced above in section 4.1. A covert generic causative is illustrated in (63);[9] a causer subject (e.g., *sansengpi* 'acid rain') appears with a non-causative change-of-state verb (e.g., *pwusik-toy-* 'become rusty').

(63) *sansengpi-nun pwusik-**toy**-e*.
acid.rain-TOP rust-become-DECL
'Acid rain rusts.' (cause to become rusty)

First, example (64) shows that in covert generic causatives, the event of causing (e.g., raining) and the causing of a caused event (e.g., some generic patient to become rusty) cannot be temporally separated.

(64) * *sansengpi-nun cennal nayli-m-ulosse*, *ku taumnal pwusik-toy-e*.
acid.rain-TOP before.day fall-NMLZ-by that next.day rust-become-DECL
Intended: 'Acid rain rusts the next day by raining the day before.'

This shows that the verb of a covert generic causative behaves more like lexical or morphological causatives with a patient-subject verb input, than periphrastic causatives. Compare (64) to a periphrastic causative in (65).

(65) *sanseng-pi-nun cen-nal nayli-m-ulosse*, *ku taum-nal mwun-ul pwusik-toy-**key***
acid-rain-TOP before-day fall-NMLZ-by that next-day door-ACC rust-become-COMP
***ha**-y*.
do-DECL
'Acid rain causes doors to become rusty the next day by raining the day before.'

The grammaticality of (65) shows that the two events, the event of causing and the causing of a caused event, can be located at distinct times, as the temporal modifiers show. Second, example (66) shows that covert generic causatives disallow any intermediate causes, implying direct causation.

(66) The context of indirect causation: There is a solar panel which is the only source of electricity in the house. Clothes are naturally dried in the house, unless there is enough energy saved by the sun to turn on the fan. And the fan facilitates the clothes to dry faster.

[9]Morpheme *-toy* carries the meaning of 'become' and derives a non-causative change-of-state verb.

a. # *hayspich-un cal mall-a*.
sunlight-TOP well dry-DECL
Intended: 'Sunlight dries well.'

b. *hayspich-un os-ul cal malu-**key** **ha**-y*.
sunlight-TOP clothes-ACC well dry-COMP do-DECL
'Sunlight causes the clothes to dry well.'

Again, the infelicity of a covert generic causative in (66a), compared to the felicitous use of a periphrastic causative in (66b), shows that the verb of a covert generic causative behaves more like lexical or morphological causatives with a patient-subject verb input, than periphrastic causatives.

Thus, it seems quite clear that covert generic causatives give rise to direct causation. This becomes clearer when the sentence is constructed with a causer which can only imply indirect causation of the result state, due to some inherent property of the causer. For instance, it is hard to imagine a context in which laziness directly causes a patient to become fat, as in (67). It naturally involves a context in which laziness leads someone to behave in a way such that they reduce any physical activity, which would in turn potentially make them gain weight.

(67) Context: If you are lazy, you are highly likely to stay indoors. As a result, you may gain weight.

* *keyulum-un salccy-e*.
laziness-TOP become.fat-DECL

Intended: 'Laziness fattens.'

Similar cases are observed, in which a causer describes some bevarioral (e.g., (67)) or emotional (e.g., (68a)) characteristics, or an inherent property of a patient (e.g., (68b)), which triggers the causation.

(68) a. Context: If you are embarrassed, you are highly likely to trigger your face to flush with blood. As a result, you may become red.
* *pwukkulewum-un ppalka-ycy-e*.
embarrassment-TOP red-become-DECL
Intended: 'Embarrassment reddens.'

b. Context: Assume that if an object is soft, it is more likely to dry well.
* *pwutulewum-un cal mall-a*.
softness-TOP well dry-DECL
Intended: 'Softness dries well.'

Compare (67) and (68) to examples of covert generic causatives which consist of the same verb but with a direct causer, as in (69).

(69) a. *ppang-un salccy-e*.
bread-TOP become.fat-DECL
'Bread fattens.' (cause to become fat)

b. *swul-un ppalka-ycy-e.*
alcohol-TOP red-become-DECL
'Alcohol reddens.' (cause to become red)

c. *hayspich-un cal mall-a.*
sunlight-TOP well dry-DECL
'Sunlight dries well.' (cause to become dried)

Alternatively, when the contexts for (67) and (68) are assumed to be in some video game-setting, in which e.g., a character would gain weight directly from its property of laziness as written in its character specifications, those examples are acceptable.

Thus, covert generic causatives give rise to direct causation, showing similarities with lexical or morhpological causatives with patient-subject verb input, not with periphrastic causatives. Given that other morphological causatives give rise to sociative causation, it is worth considering whether a covert generic causative is compatible with contexts of sociative causation. (70a) not only shows that covert generic causatives are incompatible with contexts that describe sociative causation, but also shows that the construction itself is ungrammatical. It is also impossible to construct a sentence with a causative verb – the other verb form that canonically does not give rise to sociative causation – as in (70b).

(70) The context of sociative causation: Sarah is good at directing or helping how to peel fruits.

a. * *sala-nun cal kkakk-acy-e.*
Sarah-TOP well peel-become-DECL

b. * *sala-nun cal kkak-a.*
Sarah-TOP well peel-DECL
'Intended: 'Sarah directs/helps someone well to peel e.g., fruits.'

Following the discussion above in section 3, the ungrammaticality of (70) may be due to the empirical fact that covert generic causatives normally appear with inanimate causers: a conflict arises in that sociative causers are generally animate. It is conceptually impossible to have an inanimate causer and an animate sociative at the same time. The discussion of the possible inanimacy requirement on causer subjects in a covert generic causative will be discussed in the following section with respect to (non-)agentivity. Furthermore, this discussion will further account for the fact that covert generic causatives are not compatible with contexts of indirect causation (e.g., (66)).

In sum, covert generic causatives always give rise to direct causation. The next question is whether the verb in such constructions is in fact exactly like lexical or morphological causatives with patient-subject verb inputs, and whether they differ from other causatives in any way. One apparent difference is that lexical or morphlogical causatives that give rise to direct causation are transitive, while verbs in covert generic causatives are intransitive; they syntactically do not license any patient argument. In the next section, I will argue that the verb of a covert generic causative is in fact not like other lexical or morphological causatives in another way.

5. Non-causative verbs as a type of causative

So far, I have argued that the causer subject is the one and only grammatical argument licensed by an intransitive verb, in covert generic causatives, which in turn gives rise to direct causation.

In this section, I show that the condition that triggers this non-canonical licensing of arguments depends on the agentivity of causer subjects. Specifically, covert generic causatives are used as a rescue strategy for non-agentive causers to express their dispositional properties.

5.1. Agentivity constraints on causer subjects

Prior work on causatives has suggested that there are two major sorts of causers. The definition of agentive and non-agentive causation in (71) follows Beavers & Zubair (2013, p. 33). The scope of this paper remains within the range of making a distinction between agentive and non-agentive causers with respect to their empirical patterns, without addressing further theoretical discussions.

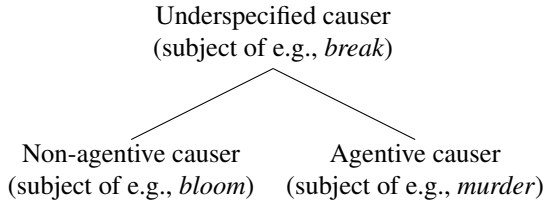
(71) a. Agentive causation: "causation by the subject's action/volition"
b. Non-agentive causation: causation by "some stative property or disposition of the subject"

English causatives have been observed to take either an underspecified causer or an agentive causer. The underspecified causer is used as a cover term that refers to both non-agentive and agentive causers; it has also been referred to as 'effectors' (Van Valin & Wilkins 1996). As in (72), English shows the different conditions imposed by the verb *break* and *murder* on their causers.

(72) a. John/The hammer/The wind/John's stupidity broke the vase. (underspecified)
b. John/*The hammer/*The wind/*John's stupidity murdered Mary. (agentive)

Non-agentive causers, such as instruments, natural forces or personal charateristics, can only appear as the subject of a verb like *break* and not of verb like *murder*. This distribution contrasts with agentive causers (e.g., John) which can be licensed by both verbs. Thus, the verb *murder* imposes a more specific condition that the causer be strictly agentive, compared to *break* which allows both agentive and non-agentive causers. The rough paradigm of causers in English is represented in (73).

(73) Rough paradigm of causers in English



In contrast to verbs like *murder*, some verbs strictly require their causer subjects to be non-agentive, such as *bloom*, e.g., *My rose bush bloomed in May*.

Causatives in Korean have been observed to show stricter restrictions, in that their subjects are exclusively restricted to agentive causers, as in (74) (Yeon 2008; Wolff, Jeon & Li 2009; Jo 2020).[10]

[10]Beavers & Lee (2020) argue that Korean causatives do allow non-agentive causers as their subjects. I note that despite the different judgements on the agentivity of causers, the fact that there is some speaker variation supports that there are some kinds of constraints on causer subjects. Furthermore, speakers seem to agree that covert causative constructions allow non-agentive causers.

(74) a. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i kkochpyeng-ul*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM vase-ACC
pwusw-ess-e.
break-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity broke the vase.'

b. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i yucin-lul*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM Eugene-ACC
salhayha-yss-e.
murder-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity murdered Eugene.'

Both verbs *pwusw-* 'break' and *salhayha-* 'murder' cannot take a non-agentive causer as their subject. Non-agentive causers are instead expressed as adjuncts, as in (75).

(75) a. *kkochpyeng-i palam**-ey*** *pwusw-eci-ess-e*.
vase-NOM wind-with break-become-PST-DECL
'The vase broke/was broken by the wind.'

b. *sala-ka* *mangchi**-ey*** *salhay-toy-ss-e*.
Sarah-NOM hammer-with murder-become-PST-DECL
'Sarah was murdered with the hammer.'

This constraint on agentive causers not only holds for lexical causatives, but also holds for all four types of morphological causatives.

(76) a. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i kil-ul*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM road-ACC
*nelp**-hy**-ess-ta*.
wide-CAUS-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity widened the road.'

b. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i elum-ul*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM ice-ACC
*el**-ly**-ess-ta*.
froze-CAUS-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity froze the ice.'

c. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i ai-lul*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM child-ACC
*wus**-ky**-ess-ta*.
laugh-CAUS-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity made the child laugh.'

d. *sala-ka/*mangchi-ka/*palam-i/*sala-uy* *mengchengham-i ai-lul/eykey*
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM child-ACC/DAT
sakwa-lul *kkakk**-y**-ess-ta*.
apple-ACC peel-CAUS-PST-DECL
Intended: 'Sarah/The hammer/The wind/Sarah's stupidity made the child peel the apple.'

Furthermore, despite both types of verbs requiring agentive causers, verbs like *salhayha-* 'murder' require stricter conditions on their subjects than verbs like *kkay-* 'break'. Consider (77), which shows that the sentence predicated by *salhayha-* 'murder' is unacceptable when a context specifies that the agentive causer acted unintentionally. This contrasts to *kkay-* 'break' that allows any agentive causers whether they have acted with or without intentions.

(77) a. *sala-ka kkochpyeng-ul silswu-lo kkay-ss-e.*
Sarah-NOM vase-ACC mistake-with break-PST-DECL
'Sarah accidently broke the vase.'

b. * *sala-ka yucin-lul silswu-lo salhayha-yss-e.*
Sarah-NOM Eugene-ACC mistake-with murder-PST-DECL
Intended: 'Sarah accidently murdered Eugene.'

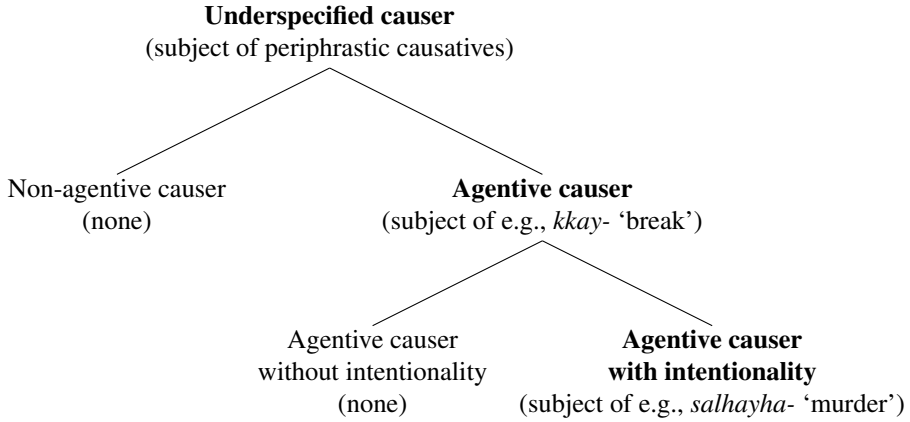
This difference suggests that verbs like *salhayha-* 'murder' impose an even stronger condition on their causers since they require intentionality on part of the agent participant. I adopt the analysis proposed by Ausensi, Yu & Smith (2021) that verbs of murder (e.g., *murder*, *slay*, *slaughter*, *massacre*, *assassinate*) entail both agentivity and intentionality.[11] Thus, verbs of murder require an additional condition of intentionality compared to other lexical or morphological causatives that do not require intentionality on part of the agent.

In contrast to lexical and morphological causatives, periphrastic causatives allow both agentive and non-agentive causers, and thus take an underspecified causer unless contextually specified. They are compatible with contexts of either direct or indirect causation.

(78) *sala-ka/mangchi-ka/palam-i/sala-uy mengchengham-i elum-ul el-**key***
Sarah-NOM/hammer-NOM/wind-NOM/Sarah-GEN stupidity-NOM ice-ACC froze-COMP
***ha-**yss-e.*
do-PST-DECL
'Sarah/The hammer/The wind/Sarah's stupidity caused the ice to be frozen.'

Given these conditions, the preliminary sketch of the paradigm of causers in Korean is represented in (79).

(79) Paradigm of causers in Korean (to be revised)



[11] This contrasts with verbs of forced taking verbs, such as *confiscate*, *snatch* and *seize*, which can entail intentionality without agents (Ausensi, Yu & Smith 2021). The detailed anlaysis will not be discussed in this paper.

In sum, lexical and morphological causatives require their causer subject to be strictly agentive, disallowing non-agentive causer subjects. The preliminary sketch of the causer paradigm, in (79), will be later revised based on the evidence from covert generic causatives, which show clear cases of causatives with a non-agentive causer subject.

5.2. Final proposal of causativization: uniqueness of participants

As discussed in section 4.3, the morphological causativization process behaves differently in two ways, giving rise to two different semantic implications: derived causatives that take patient-subject verbs as their input give rise to direct causation, whereas those that take agent/causer-subject verbs give rise to sociative causation. These two processes are summarized in (80) with an additional specification that causers are agentive.

(80) Causativization: directness of causation
   a. Patient-subject verb (i.e., stative, inchoative) inputs: give rise to direct causation
   b. Agent/causer-subject verb (i.e., activity, causative) inputs: give rise to sociative causation, in which **subjects, including causers, are agentive**

Given the above discussion that the subject of a causative is always agentive, we can identify that activities and causatives have the following property in common: both require agent subjects. This gives clearer explanation about why causativization behaves differently for patient-subject verbs and agent/causer-subject verbs. I argue that the presence of agents in agent/causer-subject verbs, or agent-subject verbs, triggers a sociative reading in the causativization process.

I assume the previous view that causativization is indeed a simple process, which by default adds a causer to the meaning, repeated in (81).

(81) $[\![Caus]\!] = \lambda P \lambda e \exists v [P(v)\ \&\ cause(e, v)]$ (where v indicates e 'event' or s 'state')
(Jo 2021, p. 147)

I make a specification that the causer added by the causativization process is always agentive, which accounts for the agentivity constraint imposed in causatives. I further adopt the *uniqueness of participants*, proposed by Krifka (1998), in order to account for the effect of agents in input verbs. The formalization assumes the event semantics of Davidson (1967). I mainly consider the relation between an agent and a verbal predicate without addressing further theoretical issues. The property *uniqueness of paticipants* imposes a restriction such that a participant cannot be added when a participant of the same thematic role already exists in the meaning. The adaptation of *uniqueness of participants* to causativization in Korean is described in (82).

(82) Uniqueness of participants, adopted to causativization in Korean:

Input verbs:	Patient-subject verbs	Agent-subject verbs
	⇓	
Causativization: (adds **agentive** causer)	agentive (direct) causer [Default outcome]	agentive sociative causer [*Uniqueness of participants*]

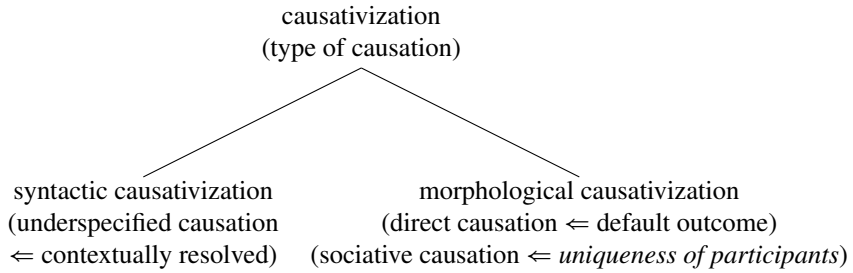
If an agent is absent in the meaning (i.e., patient-subject verbs), causativization by default adds a direct causer (i.e., agent of an event), giving rise to direct causation. If an agent is present in the meaning (i.e., agent-subject verbs), causativization adds a causer that is not the direct agent of an

event due to *uniqueness of participants*, i.e., a sociative causer, giving rise to sociative causation. This assumption explains how a causativized verb gives rise to either direct or sociative causation with respect to their verb classes. Moreover, *uniqueness of participants* accounts for all four cases of morphological causatives, by further capturing how activity verbs fit into the larger process of causativization.

I further argue that syntactic causativization adds an underspecified causer; they can be indirect causers as well as direct or sociative causers. Since the added causers are underspecified, the role of the causer may be contextually resolved; it may also stay unresolved until the context further provides the information. If the context provides that the causer is an agentive causer that is quite directly involved in the main event, it looks for an agent in the meaning. If there is one, the existing agent triggers the property *uniqueness of participants*, giving rise to sociative causation. If not, the absence of an agent does not trigger the property *uniqueness of participants*, giving rise to direct causation. If the context provides that the causer is the indirect causer, the property *uniqueness of participants* is never triggered, giving rise to indirect causation. Thus, this explains that periphrastic causatives are compatible with direct, sociative and indirect causation, whereas morphological causatives strictly depend on the verb class of an input verb.

An illustration of the types of causativization is shown in (83).

(83) Illustration of types of causativization



In the next section, the verb of a covert generic causative licenses its causer without impairing the analysis proposed above.

5.3. A rescue strategy for licensing non-agentive causer subjects

I show that covert generic causatives not only allow but require non-agentive causer subjects, as in (84a). As discussed above, this contrasts with lexical and morphological causatives which require agentive causer subjects, strictly disallowing non-agentive causer subjects, as in (84b).

(84) a. *chong-un cwuk-e*.
gun-TOP die-DECL
'Guns kill.'

b. *holangi-nun/*chong-un ppalukey cwuk-**y**-e*.
tiger-TOP/gun-TOP fast die-CAUS-DECL
'Tigers/Guns kill fast.'

Note that when attemping to construct a covert generic causative with an agentive causer, as in (85), the sentence is no longer compatible with a causative reading. It only gives rise to a canonical

reading in which a patient subject undergoes a change, *Tigers die*.[12]

(85) # *holangi-nun cwuk-e*.
tiger-TOP die-DECL
Intended: 'Tigers kill.'

Theoretically, the sentence is ambiguous when the subject can either be interpreted as a causer and a patient. (86) is compatible with both causative and non-causative reading.

(86) *namwu mangchi-nun cal pwus-ecy-e*.
wood hammer-TOP well break-become-DECL
'Wooden hammers break well.' ('cause to become broken', or 'become broken')

Nonetheless, in general, the reading is resolved contextually based on the properties of the subject. The subject in (87a) is clearly a non-agentive causer and the sentence gives rise to a causative reading. In contrast, the subject in (87b) shows strong agentivity if considered as a causer; this forces it to give rise to a canonical non-causative reading, *Doctors get sick easily*.

(87) a. *swuswul-un aph-a*.
surgery-TOP feel.hurt-DECL
'Surgeries hurt.'
b. # *uysa-nun* (*cal*) *aph-a*.
doctor-TOP well feel.hurt-DECL
Intended: 'Doctors hurt.'

I propose that covert generic causatives are a "rescue" strategy dedicated to making generic claims about non-agentive causers to avoid the agentive causer requirement imposed on causatives, since there is no other way to express dispositional properties of non-agentive causers. Specifically, I argue that a causative shifts its form to an alternative form to take a non-agentive causer since causative forms, both lexical and morphological, are tied to a strong agentivity constraint.

(88) Rescue strategy for non-agentive causers, i.e., covert generic causatives
a. Agentive (direct) causer ⇒ **non-agentive** (direct) causer
b. Agentive sociative causer ⇒ ***non-agentive** sociative causer (conceptually impossible)

This provides a clearer explanation as to why a sociative causer does not appear in covert generic causatives, enriching the discussion in section 4.4. In principle, a causative can use a rescue strategy to take non-agentive causers, either direct or sociative, as described in (88). Nonetheless, sociative causation is not attested in covert generic causatives since it is conceptually impossible for a non-agentive causer to be sociative at the same time. This very type of causer is precluded with respect to the natural property of sociative causer to be agentive.

The assumption of a rescue strategy makes further prediction about why covert generic causatives do not give rise to indirect causation. I argue that the rescue strategy is not activated since there is a

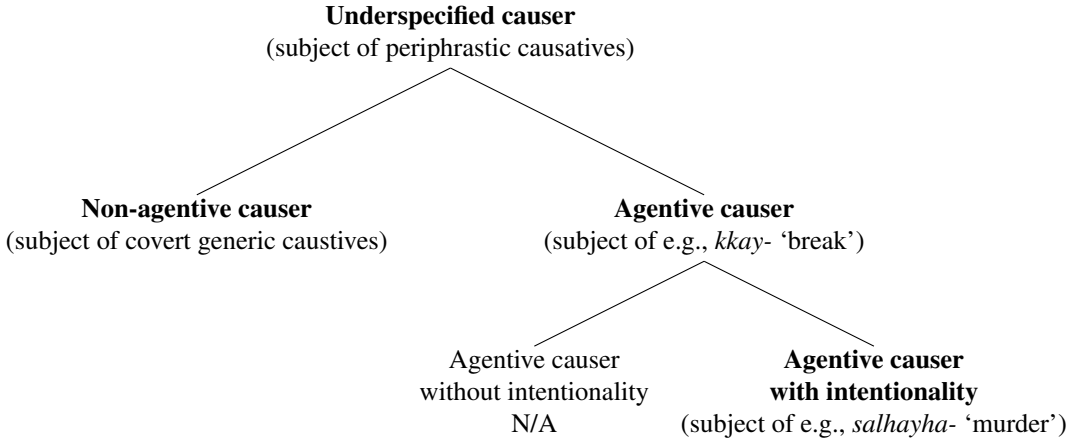
[12]Sentences like (85) can give rise to a causative reading, but this is acceptable only in a very specific context in which an animate causer is clearly non-agentive, e.g., the patient holds clear responsibility for the event or e.g., the causer merely exists without actively causing an event. Thus, this also supports that a causer subject of a covert generic causative is strictly non-agentive.

way to describe contexts of indirect causation which involves non-agentive causers; non-agentive causers can appear as a subject of periphrastive causatives, which are compatible with indirect causation. Compare (89) to (84b).

(89) *chong-un salam-tul-ul ppalukey cwuk-**key** **ha**-y.*
gun-TOP person-PL-ACC fast die-COMP do-DECL
'Guns cause people to die fast.'

A revised paradigm of causers in Korean is represented in (90). It incoporates the case of covert generic causatives which impose a strict non-agentivity requirement on their causer subjects.

(90) Paradigm of causers in Korean (revised)



Thus, I have shown how a causer subject is licensed by a non-causative verb, and have further accounted for why covert generic causatives exclusively give rise to direct causation.

5.4. Further predictions on derived intransitives

This section discusses further aspects of the behavior of derived intransitives in covert generic causatives that are predicted by the analysis. They involve other morphemes, *-i/hi/li/ki* and *-eci/-toy* 'become', included in causative alternations in Korean; this is shown in (91).[13]

(91) a. *sala-ka mwun-ul yel-ess-ta.*
Sarah-NOM door-ACC open-PST-DECL
'Sarah opened the door.' (causative)

b. *mwun-i yel-**ly**-ess-ta.*
door-NOM open-DTR-PST-DECL
'The door opened.' (non-causative change-of-state verb)

I show that the kinds of derived intransitives that are allowed in covert generic causatives support the claim that this construction is a rescue strategy for a causative to circumvent the agentivity constraint tied to its causative form. Since the strategy is primarily to introduce non-agentive causer subjects, I predict that a verb that has a syntactically active causer argument will not be allowed

[13] See the discussion in section 2 on *-i/hi/li/ki*.

for two reasons: (i) the verb will still be tied to the agentivity constraint due to the presence of the causer; (ii) since the causer is syntactically active, the verb will not be able to take another causer argument, due to the property *uniqueness of participants*.

Specifically, I show whether a syntactic causer is present by testing whether a derived intransitive is compatable with an inchoative or a passive reading. I follow the observation that inchoatives do not have syntactically active causer arguments, whereas passives of a causative are still causative in that their unexpressed causer argument is syntactically present and can be expressed as an adjunct. Thus, I predict that verbs that are compatible with an inchoative reading will be allowed in covert generic causatives, whereas verbs that give rise to a passive reading will not be allowed. Inchoatives and passives in Korean look alike morphologically in some cases, but they are distinct. In appendix 1 I give four diagnostics to demonstrate this but will not go through them here. Crucially, when you create a form that is potentially an inchoative or passive from an non-agent subject lexical causative it can have an inchoative reading, but if the form is from an intentional agent-subject lexical causative or from a morphologically causativized verb it has to be a passive. See appendix 1 for more. For instance, (92) shows that a lexical inchoative, e.g., *el-* 'be frozen', is indeed allowed in covert generic causatives.

(92) *nayngcangko-nun el-e*.
refrigerator-TOP be.frozen-DECL
'Refrigerators freeze.' (cause to become frozen)

First, I consider two types of causatives, e.g., *yel-* 'open' and *salhayha-* 'murder'. As discussed in section 5.1, both types of causatives strictly require their causer subject to be agentive. Nonetheless, the four tests show the derived intransitive of *yel-* 'open' is compatible with an inchoative reading, whereas the derived intransitive of *salhayha-* 'murder' gives rise to a passive reading; see Appendix 2 for the test results. Thus, as in (93), we can predict that only the derived intransitive of *yel-* 'open' will be allowed in covert generic causatives. By contrast, the derive instransitive of *salhay-* 'murder' will not.

(93)

input	derived form	covert generic causatives
e.g., *yel-* 'open'	*yel-**li/-eci*** 'become open'	✓
e.g., *salhayha-* 'murder'	*salhay-**toy*** 'become murdered'	X

This prediction is supported by (94) which shows that only the derived intransitive of *yel-* 'open' can take a non-agentive causer, giving rise to a causative reading; thus it is a covert generic causative. By contrast, the derived intransitive of *salhay-* 'murder' cannot take a non-agentive causer subject.

(94) a. *i yelsoy-nun cal yel{**-ly/-ecy**}-e*.
this key-NUN well open-PASS/-become-DECL
'This key opens well.' (cause to become open)

b. * *i chong-un cal salhay-**toy**-e*.
this gun-NUN well murder-become-DECL
Intended: 'This gun murders well.' (cause to become murdered)

Next, I consider two types of derived intransitives that are derived from the same stative root, e.g., *nelp-* 'wide', but involve different derivation processes. The first derived intransitive, e.g.,

nelp-eci- 'become wide', does not involve a causativization process; rather, it is derived using *eci-* 'become'. The second derived intransitive, e.g., *nelp-hy-eci-* 'become widened', involves two processes in which the stative is causativized first before being derived as an intransitive using *eci-* 'become'. This is illustrated in (95).

(95) Two verb forms involving different derivation process:

stative	non-causative verb	causative
nelp- 'wide'	*nelp-**eci-*** 'become wide'	
	*nelp-**hy-eci-*** 'become widened'	*nelp-hi-* 'widen'

The four tests show that the first form is compatible with an inchoative reading, where as the second form gives rise to a passive reading; see Appendix 3 for the test results. Thus, as in (96), we can predict that only the first form, *nelp-eci-* 'become wide', will be allowed in covert generic casuatives; in contrast, the second form, *nelp-hy-eci-* 'become widened' will not.

(96)

input	derived form	covert generic causatives
e.g., *nelp-* 'wide'	*nelp-eci-* 'become wide'	✓
e.g., *nelp-**hi-*** 'widen'	*nelp-**hy**-eci-* 'become widened'	X

This prediction is supported by (97) which shows that only the derived form that does not involve a causativization process can take a non-agentive causer, thereby giving rise to a causative reading; thus, it is a covert generic causative. In contrast, the derived form that involves causativization cannot take a non-agentive causer subject.

(97) a. *i mangchi-nun cal nelp-ecy-e.*
this hammer-TOP well wide-become-DECL
'This hammer widens well.' (cause to become wide')

b. * *i mangchi-nun cal nelp-**hy**-ecy-e.*
this hammer-TOP well wide-CAUS-become-DECL
Intended: 'This hammer widens well.' (cause to become widened')

In sum, I argue that only verbs that are compatible with an inchoative reading are allowed in covert generic causatives, and verbs that involve syntactically active causers, including both active causatives and passive causatives, cannot function as an alternative verb form that a causative takes to license a non-agentive causer. This further supports the analysis of covert generic causatives as a rescue strategy.

6. Analyzing covert generic causatives

This section aims to give some basic insights on what category covert generic causatives fit into in the literature. So far, covert generic causatives have been argued to be a type of causative that takes a non-agentive causer subject. The starting point can be the observation that the causal link between the causer subject and the verb is seemingly missing given that the verbs is non-causative. This suggests that covert generic causatives might be a type of concealed causative. Concealed causatives refer to those causative constructions in which the causal relation is not apparent on the surface, e.g., English resultatives like *John shot the robber dead*. This definition follows Concealed Causative Semantics, i.e., (98), proposed by Bittner (1999).

(98) Concealed Causative Semantics:
If a causal relation is syntactically concealed (only its arguments are overtly expressed), then it is semantically direct (no intermediate causes).

Likewise, covert generic causatives exhibit concealed causative semantics in that the causal relation is concealed in the syntax, and they also give rise to direct causation. Nonetheless, there are some apparent additional properties that suggest more specific ways to analyze the construction; covert generic causatives are syntactically intransitive and give rise to a generic dispositional reading about the causer subject. Thus, it is reasonable to address their syntactically concealed causal relation, but this analysis only partly address other properties that covert generic causatives show.

Again, covert generic causatives are syntactically intransitive, involving an unexpressed patient argument, and they give rise to a dispositonal reading. These properties share the main properties of dispositional middles: both constructions are syntactically intransitive and generic. Given these main common properties, I argue that the two constructions are functionally similar. Despite their formal similarities, the two constructions show a paradigmatic contrast in that covert generic causatives are about patients, whereas dispositional middles are about agents. The similarities and contrasts are summarized in (99).

(99) Covert generic causatives vs. dispositional middles
   a. Both constructions involve causative semantics.
   b. They give rise to a generic dispositional reading of the subject (causer vs. patient).
   c. They clearly involve an unexpressed argument (patient vs. causer) in their meaning.

The two constructions show clear functional similarities. Nonetheless, covert generic causatives express a disposition of what causes the general change, involving an unexpressed patient argument. By contrast, dispositional middles express a disposition of what undergoes the general change, involving an unexpressed causer argument.

In this section, I compare covert generic causatives to dispositional middles, and further analyze the construction as dispositional ascription, originally proposed for dispositional middles by Lekakou (2004).

6.1. Core semantics of covert generic causatives

Dispositional middles, also known as middle constructions (e.g., (100a)), are defined as syntactically intransitive and also give rise to a generic reading (Condoravdi 1989, Ackema & Schoorlemmer 1994, Ackema & Schoorlemmer 2017). While taking a patient subject, dispositional middles still semantically imply an unexpressed agent; yet, the unexpressed agent cannot be syntactically realized.

(100) a. This glass breaks easily.
   b. *This bread cuts easily by John. (Condoravdi 1989, p.16)

The core semantic properties of middles are given in (101). The core semantic components follow those of the middle interpretation proposed for personal middles, i.e., dispositional middles, by Lekakou (2004); these core semantics were further extended to impersonal middles (Lekakou & Pitteroff 2018).

(101) The core components of the middle interpretation: (Lekakou 2004, p.183)

a. The internal argument (the understood or notional object) is the subject of the sentence.

b. The reading is non-eventive; middles do not make reference to an actual event having taken place, they rather report a property of the grammatical subject. The otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.

c. The agent is syntactically suppressed and receives an arbitrary interpretation.

Compared to the semantics of middle interpretation, the core semantics of covert generic causatives can be illustrated as in (102).

(102) a. The external argument, the **causer**, is ascribed a dispositional property.

b. An otherwise eventive verb becomes a derived stative and, more precisely, receives a generic interpretation.

c. The **patient** receives an arbitrary, free choice interpretation.

The following final sections will connect how the dispositional reading to which covert generic causatives give rise relates to the arbitrary interpretation, and also relates to why a rescue strategy is triggered. This further explains the obligatory topic marking on non-agentive causer subjects in covert generic causatives.

6.2. A dispositional ascription analysis of the rescue strategy

Dispositional middles have been argued to be dispositional ascriptions to the internal argument (i.e., Middle Interpretation), contra previous research that analyzes them as a specific type of syntactic construction. Middle Interpretation, proposed by (Lekakou 2004, p.184) is given in (103).

(103) Middle Interpretation = the ascription of a dispositional property to the understood object.

The analysis of dispositional middles follows the analysis of dispositional *will* (Brennan 1993), specifically adopting dispositional ascription analysis by Fara (2001). On this analysis, the dispositional description of an argument addresses an intrinsic property of that argument, beyond addressing a general fact about it; this is illustrated in (104).

(104) a. 'N is disposed to M when C' is true iff N has an instrinsic property in virtue of which it Ms when C.

b. Sugar is disposed to dissolve when put in water. (Fara 2001)

Dispositional ascriptions are argued to be subject-oriented, since they mainly describe a dispositional property of the subject, as in (105). This property also relates to the accessibility relation (Brennan 1993).

(105) Context: Midas has a special ability that turns everything he touches into gold.
?? Bread is disposed to turn into gold when touched by Midas.

(105) intends to describe a general fact which depends on the special ability of *Midas* that he turns everything he touches into gold. Since this general fact relies on an intrinsic property of *Midas*, not bread, (105) is relatively unacceptable because it falsely gives rise to a generic reading oriented toward its subject, *bread*.

Dispositional ascriptions and their subject-oriented property support the anlaysis of covert generic causatives as a rescue strategy. Again, in episodic sentences, non-agentive causers alternatively appear as an adjunct due to the agentivity constraint imposed on causatives (e.g., (106a)). (106b) attempts to describe the dispositional property of guns, similarly taking the non-agentive argument, e.g., *chong* 'gun', as an adjunct. The sentence does not give rise to a dispositional reading oriented toward the gun but rather toward the subject, *Sarah*. Thus, I argue that due to the subject-oriented property of dispositional sentences, the only way to describe a dispositional property of non-agentive causers is to take them as a subject (e.g., (106c)); this consecutively triggers the agentivity constraint and a rescue strategy for a causative.

(106) a. *sala-ka yucin-ul chong-ulo cwuk-y-ess-e*.
Sarah-NOM Eugene-ACC gun-with die-CAUS-PST-DECL
'Sarah killed Eugene with a gun.'

b. Context: the guns have dispositional property of killing an object at once, when used.
sala-nun chong-ul ssol-ttay han peney cwuk-y-e.
Sarah-TOP gun-ACC shoot-when at.once die-CAUS-DECL
#'Sarah kills (has a tendency to kill) at once when shooting a gun.'

c. *chong-un cwuk-e*.
gun-TOP die-DECL
'Guns kill.'

Moreover, dispositional middles impose a restriction on their patient subject such that it be held responsible for the action (Condoravdi 1989). The responsibility of the subject is illustrated by the *sell-buy* contrast, as in (107) (Ackema & Schoorlemmer 2017, p.30).

(107) a. The new Saramago sells like water in a desert.
b. *The new Saramago buys with great difficulty, the distribution is so bad.

(107a) shows the description of an intrinsic property of the patient subject that makes selling easy. By contrast, it is impossible to describe a context in which an intrinsic property of the patient subject makes buying difficult, as in (107b). This contrast is also explained via responsibility condition (Van Oosten 1977; Ackema & Schoorlemmer 2017).

(108) Responsibility condition (Ackema & Schoorlemmer 2017, p.30)
The grammatical subject of a middle (if present) must have properties such that it can be understood to be responsible for the action expressed by the predicate.

The contrast between (109) and (110) shows that the subject of a dispositional sentence holds responsibility due to an intrinsic property of that subject (e.g., (Van Oosten 1977, p.460)).

(109) The clothes wash with no trouble because...
a. ... they're machine-washable.

b. * ... I have lots of time.

(110) It's no trouble to wash the clothes because...
   a. ... they're machine-washable.
   b. ... I have lots of time.

Likewise, the responsibility condition holds for dispositional middles, as in (111) and (112) (Dowty 2001, p.181-182). (112) further shows that the responsibility condition is not only oriented toward the subject, but also must be oriented toward an intrinsic property thereof, e.g., having pale skin and blue eyes.

(111) This car drives well...
   a. ... because the suspension is engineered well.
   b. ?? ... because we're driving on smooth pavement.

(112) I sunburn easily...
   a. ... because I have pale skin and blue eyes.
   b. ??... because I spend a lot of time outside in the sun.

Similarly, despite its non-agentivity, the subject of a covert generic causative also shows responsibility oriented toward its intrinsic property, e.g., having a sharp blade.

(113) *khal-un tachy-e*...
   knife-TOP become.hurt-DECL
   'Knives hurt (people).'
   a. ... because the blade is very sharp.
   b. ??...because people do not pay attention when they use it.

Thus, I have shown that a dispositional ascription analysis not only explains the motivation for a rescue strategy, but also shows that covert generic causatives pattern like other dispositional sentences with respect to the responsibility condition oriented toward intrinsic properties of the subject.

6.3. Further similarities: ability reading and topic marking

As mentioned above, dispositional middles, following Condoravdi (1989) are assumed to be a targeted interpretation of genericity which is realized in different ways across languages depending on how they encode this genericity (e.g., unergative verbs in English/Dutch vs. (reflexive) passives in Greek/French) (Lekakou 2004). Some early work has analyzed dispositional middles as generic sentences (Condoravdi 1989). Generic passives (e.g., *These glasses are easily cleaned*) and dispositional middles (e.g., *These glasses clean easily*) have been "claimed to be semantically indistinguishable" (Lekakou 2002, p.402). The representation of (114a) is analyzed like other generic sentences, as in (114b).

(114) a. This book reads easily.
   b. Gen [e: book(x), read(e), Patient (e,x)] [easy(e)]

The dispositional property reading has been argued to be pragmatic. Nonetheless, generic passives and dispositional middles show a clear contrast in modality, suggesting that the dispositional property reading is part of the semantics of middles (Lekakou 2002). As in (115), dispositional middles have a covert modality in them whereas generic passives do not since an overt ability modal *can* can be added to a generic passive but not to a dispositional middle.

(115) a. These glasses can be (easily) cleaned (easily). (generic passives)
b. ?? These glasses can clean easily. (dispositional middles)

This contrasts supports that the ability reading is semantically encoded in dispositional middles, whereas it appears pragmatically in generic passives. The unacceptability of (116) supports that covert generic causatives function like dispositional middles in that they also include the ability reading in their semantics.

(116) a. ?? *khal-un tachi**-l swu iss**-e*.
knife-TOP become.hurt-be.able.to-DECL
Intended: 'Knives can hurt (people).'
b. ?? *swul-un ppalka-yci**-l swu iss**-e*.
alcohol-TOP red-become-be.able.to-DECL
Intended: 'Alcohol can redden (people).'

(116) shows that covert generic causatives cannot take the overt ability modal *-l swu iss-* 'can'.

Moreover, the patient subject of a dispositional middle has been argued to show topichood (Lekakou 2002); the patient that ascribes a dispositonal property appears in topic position. Specifically, in Greek, a VSO language that generally allows free word order, dispositional middles always appear as SVO with a topicalized subject. Similarly, in covert generic causatives, non-agentive causer subjects are obligatorily marked with a so-called topic marker *-(n)un*.[14]

(117) a. *khal*(**-un**) tachy-e*.
knife-TOP become.hurt-DECL
'Knives hurt (people).'
b. *swul*(**-un**) ppalka-ycy-e*.
alcohol-TOP red-become-DECL
'Alcohol reddens (people).'

Therefore, I have argued that covert generic causatives and dispositional middles have several formal features in common, mainly coming from their dispositionality. Nonetheless, they clearly show a paradigmatic contrast in that covert generic causatives emphasize a causer with a suppressed patient, whereas dispositional middles emphasize a patient with a suppressed agent. While acknowledging that they are still different constructions, I have provided an explanation for why a rescue strategy is triggered for covert generic causatives, based on a dispositional ascriptions analysis proposed for dispositional middles.

[14]The so-called topic marker *-(n)un* has been argued to obligatorily mark subjects of a generic sentence. The assumption about the topichood of dispositional arguments may provide an explanation to why subjects of a generic sentence in Korean are always marked with a topic marker. This assumption about the possible connection between a topic marker and generic sentences seems to align with the claim made by Lee (1996).

7. Conclusion

This paper has explored a phenomenon in Korean, referred to as a covert generic causative, which has been previously analyzed as involving a pragmatic relation between the sole causer argument and the non-causative change-of-state verb. I have argued for the subjecthood of the causer argument. Furthermore, I have argued that covert generic causatives are a rescue strategy for a causative to take non-agentive causers to circumvent the agentivity constraint on causatives. This further extends the paradigm of causers in Korean to include non-agentive causers. Given the functional similarities between covert generic causatives and dispositional middles, I have adopted a dispositional ascriptions analysis to explain the motivation for the rescue strategy.

Appendix 1: The basics of the four diagnostics

The four diagnostics considered in this paper are adopted from a set of tests which has been used to identify inchoative, including lexical inchoatives and anticausatives, reflexives, dispositional middles and passives (Koontz-Garboden 2009; Beavers & Zubair 2013; Beavers & Udayana 2023). Two syntactic, i.e., (i) and (ii), and two semantic tests, (iii) and (iv), are considered: (i) whether the causer can be expressed as a *by*-phrase; (ii) whether the predicate can take rationale modifiers (i.e, PRO-binding); (iii) whether the predicate can take *by itself* modification; (iv) whether the predicate entails an unexpressed causer. The tests and the expected results are summarized in (118).

(118) Tests: inchoative vs passive reading

	passives	inchoatives
(i) *by*-phrase	✓	X
(ii) rationale modification (i.e., PRO-binding)	✓	X
(iii) *by itself* modification	X	✓
(iv) Entailment of an unexpressed causer	✓	X

Test (i) and (ii) are syntactic test to probe whether any unexpressed causer in the meaning of the verb is syntactically represented in such a way that modifiers that require it to be so are licensed. Test (iii) is a semantic test that checks whether it is possible, by virtue of tying responsibility back to the surface subject of a passive/inchoative (via a reflexive form), to eliminate the possibility of a separate, unexpressed causer. Test (iv) is a semantic test to probe for whether, semantically, there an expressed causer is necessarily part of the event by virtue of the verb's lexical entailments.

(119) shows the application of these four tests to lexical inchoatives. The test results show that a lexical inchoative, e.g., *el-* 'be frozen', is compatible with an inchoative reading.

(119) a. * *elum-i swuci-ey uyhay el-ess-e.*
ice-NOM Suji-COMP by be.frozen-PST-DECL
Intended: 'The ice froze by Suji.'

b. Context: Assume you can be frozen for a few hundred years to travel space to a different planet.
* *swuci$_i$-ka* [*PRO*$_{*i/j}$ *wucwu-yehayng-ul ha-ki wihay*] *el-ess-e.*
Suji-NOM space-travel-ACC do-NMLZ in.order.to be.frozen-PST-DECL
Intended: 'Suji froze to travel space.'

c. *elum-i cecello el-ess-e.*
ice-NOM by.itself be.frozen-PST-DECL
'The ice froze by itself.'

d. *elum-i el-ess-ciman amwuto el-li-ci anh-ass-e.*
ice-NOM be.frozen-PST-but anyone be.frozen-CAUS-COMP NEG-PST-DECL
'The ice froze but nobody froze it.'

Now consider passives, as in (120).

(120) a. *saca-ka thokki-lul mek-ess-ta.*
lion-NOM rabbit-ACC eat-PST-DECL
'The lion ate the rabbit.'

b. *thokki-ka* (*saca-ey uyhay*) *mek-**hy**-ess-ta.*
rabbit-NOM lion-COMP by eat-PASS-PST-DECL
'The rabbit was eaten (by the lion).' (passive)

(121) shows the application of the tests to passives. The test results show that a passive, e.g., *mek-hy-* 'be eaten', gives rise to a passive reading.

(121) a. *thokki-ka saca-ey uyhay mek-hy-ess-e.*
rabbit-NOM lion-COMP by eat-PASS-PST-DECL
'The rabbit was eaten by the lion.'

b. *thokki$_i$-ka* [*PRO$_{*i/j}$ pay-lul chay-wu-ki wihay*] *mek-hy-ess-e.*
rabbit-NOM stomach-ACC full-CAUS-NMLZ in.order.to eat-PASS-PST-DECL
'The rabbit was eaten in order to fill up the stomach.'

c. * *thokki-ka cecello mek-hy-ess-e.*
rabbit-NOM by.itself eat-PASS-PST-DECL
Intended: 'The rabbit was eaten by itself.'

d. * *thokki-ka mek-hy-ess-ciman amwuto mek-ci anh-ass-e.*
rabbit-NOM eat-PASS-PST-but anyone eat-COMP NEG-PST-DECL
Intended: 'The rabbit was eaten but nobody ate it.'

Appendix 2: Test results for case 1

This appendix shows two sets of test results including two types of causatives, the derived intransitive of e.g., *yel-* 'open' and the derived intransitivce of e.g., *salhay-* 'murder'

First, (122) shows the application of the tests to the derived intransitive of e.g., *yel-* 'open'. The test results show the mixed properties that suggests the verb's compatibility with both an inchoative and passive reading. But importantly, it is compatible with an inchoative reading.

(122) a. *changmwun-i swuci-ey uyhay yel-**ly**-ess-e.*
window-NOM Suji-COMP by open-DTR-PST-DECL
'The window was opened by Suji.'

b. Context: Assume a self-operating robot which kept a bird inside its body.
lopos$_i$-i [*PRO$_{*i/j}$ say-lul nayponay-ki wihay*] *yel-**ly**-ess-e*.
robot-NOM bird-ACC let.out-NMLZ in.order.to open-DTR-PST-DECL
'The robot was opened to let the bird out.'

c. *changmwun-i cecello yel-**ly**-ess-e*.
window-NOM by.itself open-DTR-PST-DECL
'The window opened by itself.'

d. *changmwun-i yel-**ly**-ess-ciman amwuto yel-ci anh-ass-e*.
window-NOM open-DTR-PST-but anyone open-COMP NEG-PST-DECL
'The window opened but nobody opened it.'

Second, (123) shows the application of the tests to the derived intransitive of e.g., *salhay-* 'murder'. The test results clearly show that the verb gives rise to a passive reading.

(123) a. *yucin-i sala-ey uyhay salhay-toy-ess-e*.
Eugene-NOM Sarah-COMP by murder-become-PST-DECL
'Eugene was murdered by Sarah.'

b. *yucin$_i$-i* [*PRO$_{*i/j}$ ton-ul pel-ki wihay*]
Eugene-NOM money-ACC earn-NMLZ in.order.to
salhay-toy-ess-e.
murder-become-PST-DECL
'Eugene was murdered to earn money.'

c. * *yucin-i cecello salhay-toy-ess-e*.
Eugene-NOM by.itself murder-become-PST-DECL
Intended: 'Eugene was murdered by himself.'

d. * *yucin-i salhay-toy-ess-ciman amwuto salhayha-ci anh-ass-e*.
Eugene-NOM murder-become-PST-but anyone murder-COMP NEG-PST-DECL
'Eugene was murdered but nobody murdered him.'

Appendix 3: Test results for case 2

This appendix shows two sets of test results including two types of intransitives that are derived from the same stative root, e.g., *nelp-* 'wide', involving different derivation processes.

First, (124) shows the application of the tests to the derived intransitive that does not involve causativization, e.g., *nelp-eci-* 'become wide'. The test results show that the verb is compatible with an inchoative reading.

(124) a. * *kang-i swuci-ey uyhay nelp-**ecy**-ess-e*.
river-NOM Suji-COMP by wide-become-PST-DECL
Intended: 'The river was widened by Suji.'

b. Assume a self-operating robot that is placed at a dam to control flood. Its body can be widened to make it function better.

* *lopos$_i$-i* [*PRO$_{i/j}$ nemchi-nun kang-ul mak-ki wihay*]
robot-NOM overflow-REL river-ACC block-NMLZ in.order.to
*nelp-**ecy**-ess-e*.
wide-become-PST-DECL

Intended: 'The robot was widened to block the overflowing river.'

c. *kang-i cecello nelp-**ecy**-ess-e*.
river-NOM by.itself wide-become-PST-DECL
'The river widened by itself.'

d. *kang-i nelp-**ecy**-ess-ciman amwuto nelp-hi-ci anh-ass-e*.
river-NOM wide-become-PST-but anyone wide-CAUS-COMP NEG-PST-DECL
'The river widened but nobody widened the river.'

Second, (125) shows the application of the tests to the derived intransitive that involves causativization, e.g., *nelp-hy-eci-* 'become widened'. The test results show that the verb gives rise to a passive reading.

(125) a. *kang-i swuci-ey uyhay nelp-**hy-ecy**-ess-e*.
river-NOM Suji-COMP by wide-CAUS-become-PST-DECL
'The river was widened by Suji.'

b. Assume a self-operating robot that is placed at a dam to control flood. Its body can be widened to make it function better.
lopos$_i$-i [*PRO$_{*i/j}$ nemchi-nun kang-ul mak-ki wihay*]
robot-NOM overflow-REL river-ACC block-NMLZ in.order.to
*nelp-**hy-ecy**-ess-e*.
wide-CAUS-become-PST-DECL
'The robot was widened to block the overflowing river.'

c. **kang-i cecello nelp-**hy-ecy**-ess-e*.
river-NOM by.itself wide-CAUS-become-PST-DECL
Intended: 'The river widened by itself.'

d. **kang-i nelp-**hy-ecy**-ess-ciman amwuto nelp-hy-ci anh-ass-e*.
river-NOM wide-CAUS-become-PST-but anyone wide-CAUS-COMP NEG-PST-DECL
Intended: 'The river widened but nobody widened the river.'

Abbreviations

1 = first person, 2 = second person, ACC = accusative, CAUS = causative, COM = comitative, COMP = complementizer, COP = copula, DAT = dative, DECL = declarative, DTR = detransitivization, GEN = genitive, HON = honorifics, IND = indicative, LOC = locative, NEG = negative, NMLZ = nominalizer, NOM = nominative, NUN = -(n)un, PASS = passive, PL = plural, PRS = present, PST = past, REF = referent (honorifics), REL = relative, SG = singular, TOP = topic.

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