

Two Types of Inchoatives in Korean*

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The paper analyzes two different types of inchoatives in Korean, the I-inchoative and the zero inchoative, by examining their interaction with adjunct phrases as well as their morphological differences. I argue that the two types of inchoatives are similar in that they have the same event head V_{INCHO} . This syntactic similarity explains the compatibility of a cause phrase and the locution ‘by itself’ with the two inchoatives. The two inchoatives also present syntactic differences. I-inchoatives have a defective Voice head (as do passives) while zero inchoatives do not have one. This difference explains the grammaticality of instrument phrases in I-inchoatives but not in zero inchoatives. The presence of the Voice head in I-inchoatives but the absence of one in zero inchoatives also accounts for the morphological difference between the two inchoatives.

Keywords: inchoative, instrument phrase, agent, cause, by itself, passive, Korean

1. Introduction

This paper examines inchoatives, which refer to an intransitive use of change of state verbs (Levin 1993). In particular, this paper examines two types of inchoatives in Korean that are distinguished by their verbal morphology (K Kim 2009b). This is exemplified in (1).

- (1) a. namwuskaci-ka kkek-i-ess-ta.
tree.branch-NOM snap-INCHO-PAST-DEC
‘The tree branch broke.’
- b. elum-i nok-(*-i)-ass-ta.
ice-NOM melt-(INCHO)-PAST-DEC
‘The ice melted.’
- (Knoob 2002)

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Inchoative (1a) is marked by the morpheme *-i* (henceforth, I-inchoative), which is the same morpheme that marks morphological passives (hereafter, passives) and surfaces variously as *-i*, *-hi*, *-li*, *-ki* (S-C Lee 1986, K-D Lee 1987, J-W Park 1994, J-H Yeon 2003, H-S Kim 2005).¹ The other type of inchoative (1b) is marked by a zero morpheme (henceforth, zero inchoative), and it cannot be marked by the I-morpheme, as indicated in (1b).²

In their cross-linguistic studies on inchoatives, Alexiadou (2006) and Alexiadou and Schäfer (A&S) (2006) propose two different inchoative structures that can each correspond to the inchoatives in (1), based on the distribution of various adjunct phrases (i.e., agents, cause, the locution 'by itself', and instrument phrases) in inchoative as well as a morphological relation between inchoatives and passives. Under their proposals, (1a) bears an eventive *v* as well as a Voice head while (1b) bears only an eventive *v* (see section 3.1). In particular, it is argued that all the adjunct phrases in inchoatives, except agent phrases, are licensed by *v*. However, as will be shown in the paper, this fails to capture the distribution of instrument phrases in (1a) and (1b). Moreover, as will be discussed later, it cannot capture the complementary distribution of agent phrases, on the one hand, and cause phrases and 'by itself', on the other, in inchoatives.

As for the distribution of an instrument phrase in inchoatives, I argue that the instrument phrase is adjoined to VoiceP, and VoiceP is present only in I-inchoatives as with passives. The relevant Voice head is a defective Voice head that lacks the ability to introduce an external argument (of the type argued for by Embick 1997, 1998, 2004). Crucially, I assume that the defective Voice head also represents the transitivity alternating nature of the verbs. Under this view, only I-inchoatives that show transitive use bear a defective Voice head. On the other hand, zero inchoatives that show no such use do not have one. I further argue that the two types of inchoatives are represented by the same eventive

¹ This morpheme marks morphological passives as well as causatives. The nature of this morpheme is controversial in the literature (e.g., J-W Park 1994, M-Y Kang 1997, K Kim 2009): whether there are two distinct morphemes or one morpheme that marks the different structures. For the purpose of the paper, I remain neutral to this issue. In particular, the choice of the underlying form of this morpheme as *-I* does not bear on any aspect of this issue.

² In Korean, there is another class of inchoative marked with *ci-* (J-H Yeon 2003, S-D Park 2005); for example, *kkay-ci* 'break', *ttelci-ci* 'fall', *neme-ci* 'fall down', *ppaci-ci* 'fall into', and so on. As pointed out by an anonymous reviewer, *ci-*inchoatives pattern differently from I-inchoatives. For instance, the former does not allow an instrument phrase although it allows the construction 'by itself'. Nevertheless, both types of inchoatives are similar in that they show transitivity alternation and can be used as passive morphemes. If an additional morpheme indicates more structure as in the case of *-I* inchoatives (see the discussion in section 6), it is predicted that like *-I* inchoatives *ci-*inchoatives should have more structure than zero inchoatives. Importantly, however, this prediction does not necessarily imply that *ci-*inchoatives would have the same structure as *-I* inchoatives. They do not pattern the same with respect to an instrumental phrase. I will leave the detailed structure of *ci-*inchoatives for future research.

head v_{INCHO} that is modified by both a cause phrase and ‘by itself.’ Thus, an agent phrase that modifies v_{DO} is not allowed in both types of inchoatives.

The paper is organized as follows. Section 2 surveys the distribution of the adjunct phrases in Korean inchoatives as well as passives. Section 3 presents the cross-linguistic studies of inchoatives from Alexiadou (2006) and A&S (2006), and discusses them with regard to the licensing of an instrument phrase. Section 4 examines whether the studies can account for the distribution of adjunct phrases in the Korean inchoative, and discusses some problems that arise in the course of examination. As a first step to the direction of solving the problems, section 5 provides essential assumptions taken in the paper. Section 6 proposes new structures for the two types of inchoatives in Korean. Section 7 concludes the paper.

2. The Distribution of Adjunct Phrases in Korean Inchoatives and Passives

As mentioned previously, I-inchoatives are marked by one of the allomorphs *-i*, *-hi*, *-li*, *-ki*, which are the same allomorphs that mark passives, as illustrated below:³

- (2) a. haswukwu-ka mak-hi-ess-ta.
 drainage-NOM block-INCHO-PAST-DEC
 ‘The drainage blocked.’
- b. totwuk-i (swunkyung-ey uyhay) cap-hi-ess-ta.
 thief-NOM policeman-BY catch-PASS-PAST-DEC
 ‘The thief was caught by the policeman.’⁴
- c. elum-i nok-ass-ta.
 ice-NOM melt-PAST-DEC
 ‘The ice melted.’

The I-inchoative (2a) is marked by the allomorph *-hi* and the passive in (2b) is

³ The allomorphs are mainly conditioned phonologically (cf. J-H Yeon 1991)

⁴ Some passives do not allow an agent phrase marked by *-ey uyhay* (i):

- (i) cwi-ka koyangi-eykey /*-ey uyhay mek-hi-ess-ta.
 mouse-NOM cat-DAT/BY eat-PASS-PAST-DEC
 ‘The mouse was eaten by the cat.’

In fact, in Korean passives, a dative marker *-eykey* is preferable to the agent *by* phrase marker *-ey uyhay*. For the purpose of the paper, I do not discuss the type of a passive like (i), and discuss the data that are compatible with the agent *by* phrase marker.

marked by the allomorph *-hi*. In contrast, the zero inchoative in (2c) is not marked by any explicit morpheme. Another difference between the two inchoatives is that the verbs in the former are alternating verbs but the ones in the latter are not, as exemplified in (3):

- (3) a. inho-ka haswukwu-lul mak-ass-ta.
 Inho-NOM drainage-ACC block-PAST-DEC
 ‘Inho blocked the drainage.’
- b. * inho-ka elum-lul nok-ass-ta.
 Inho-NOM ice-ACC melt-PAST-DEC
 ‘Inho melted the ice.’

The verb *mak-* ‘block’ in I-inchoative (2a) can be used transitively as shown in (3a). However, the verb *nok-* ‘melt’ in zero inchoative (2c) cannot be used transitively as in (3b).⁵ The verbs in passives pattern with those of I-inchoatives, as illustrated below:

- (4) swunkyung-i totwuk-lul cap-ass-ta.
 policeman-NOM thief-ACC catch-PAST-DEC
 ‘The policeman caught the thief.’

The verb *cap-* ‘catch’ in passive (2) is an alternating verb as it can appear in transitive clause (4).

Let us now turn to how the two different inchoatives presented above interact with various adjunct phrases. Four different types of adjunct phrases are examined: agent phrases, instrument phrases, cause phrases, and the construction meaning ‘by itself’. With regard to the first three adjunct phrases, the two types of inchoatives show the same pattern:

- (5) a. * haswukwu-ka inho-ey uyhay mak-hi-ess-ta.
 draniage-NOM inho-BY block-INCHO-PAST-DEC
 ‘The drainage blocked by Inho.’
- b. * elum-i inho-ey uyhay nok-ass-ta.
 ice-NOM inho-BY melt-PAST-DEC
 ‘The ice melted by Inho.’
- (6) a. haswuku-ka hongswu-ey mak-hi-ess-ta.
 drainage-NOM flood-DAT block-INCHO-PAST-DEC
 ‘The drainage blocked by flood.’

⁵ In order to be used transitively, the verbs in the latter class need a causative morpheme.

- b. elum-i hayspyeth-ey nok-ass-ta.
ice-NOM sunshine-DAT melt-PAST-DEC
'The ice melted by the sunshine.'

- (7) a. haswuku-ka cecello mak-hi-ess-ta.
drainage-NOM by itself block-INCHO-PAST-DEC
'The drainage blocked by itself.'

- b. elum-i cecello nok-ass-ta.
ice-NOM by itself melt-PAST-DEC
'The ice melted by itself.'

As illustrated in (5), neither type of inchoative allows the agent phrase *inho-ey uyhay* 'by Inho'.⁶ However, they do co-occur with cause phrases and the locution 'by itself', as shown in (6) and (7), respectively. In (6a), the cause phrase *hongswu-ey* 'by flood' is used and the sentence is grammatical. In (6b), the cause phrase *hayspyeth-ey* 'by the sunshine' can appear and the sentence is grammatical. As for *cecello* 'by itself', both allow the phrase, as shown in (7). By contrast, passives show the opposite pattern, as shown in (8):

- (8) totwuk-i swunkyeng-ey uyhay/ *hwacay-ey/*cecello
thief-NOM policeman-BY /the fire-DAT /by itself

cap-hi-ess-ta.
catch-PASS-PAST-DEC

'The thief was caught by the policeman/*by the fire/*by itself.'

The passive in (8) does co-occur with agent phrases, but not with the cause phrase *hwacay-ey* 'by the fire' and *cecello* 'by itself'.⁷

⁶ As anonymous reviewers suggest, some verbs that appear in I-inchoatives are ambiguous between inchoative and passive. For example, the agent phrase in (5a) is grammatical when the sentence has a passive (i.e., agentive) meaning. The verbs like *yel-* 'open' and *tat-* 'close' are additional examples that show ambiguity. As will be shown shortly (cf. (11)), however, an instrument phrase that occurs with some I-inchoatives are not compatible with an agent phrase. I take this fact as a diagnostic to distinguish an inchoative reading from a passive reading (see the discussion below for details).

⁷ Some passives seem to be able to appear with a cause-phrase (i):

- (i) phosuthe-ka simhan-n pipalam-ey (cecello) kalkikalki
poster-NOM extreme-ADNOM rain.bearing.wind-DAT (by itself) into.pieces

ccic-ki-ess-ta.
tear-PASS-PAST-DEC

'The poster was torn into pieces by the extreme rain-bearing wind.'

However, (i) appears to have an inchoative reading, not a passive reading, as the grammaticality

Lastly, with respect to an instrument phrase, the two types of inchoatives show a different pattern.⁸

- (9) a. haswukwu-ka ssuleyki-lo mak-hi-ess-ta.
 drainage-NOM garbage-with block-INCHO-PAST-DEC
 'The drainage blocked with garbage.'
- b. ttang-i tol-lo pa-i-ess-ta.
 ground-NOM stone-with dig-INCHO-PAST-DEC
 'The ground dug with a stone.'
- c. path-i mwul-lo cam-ki-ess-ta.
 field-NOM water-with fill-INCHO-PAST-DEC
 'The field was filled with water.'
- d. san-i nwun-ulo tep-i-ess-ta.
 mountain-NOM snow-with cover-INCHO-PAST-DEC
 'The mountain was covered with snow.'
- e. i seycey-ka ku mwul-lo pul-li-ess-ta.
 this detergent-NOM that water-with dissolve-INCHO-PAST-DEC
 'This detergent dissolved with that water.'
- (10) a. * elum-i motakpwul-lo nok-ass-ta.
 ice-NOM bonfire-with melt-PAST-DEC
 'The ice melted with the bonfire.'
- b. * koki-ka motakpwul-lo ik-ess-ta.
 meat-NOM bonfire-with cook-PAST-DEC
 'The meat cooked with the bonfire.'
- c. * naympi-ka ku pwul-lo ta-ss-ta.
 pot-NOM that fire-with burn-PAST-DEC
 'The pot burnt with the fire.'
- d. * kkoch-i ku pwul-lo situl-ess-ta.
 flower-NOM that fire-with wither-PAST-DEC
 'The flower withered with the fire.'

of the phrase 'by itself' in (i) indicates. Thus, I assume that sentences like (i) belong to inchoatives, not passives. As discussed below (cf. (13) and (14)), it is shown that in inchoatives cause and 'by itself' phrases are possible, contrary to an agent phrase.

⁸ The verbs that belong to I-inchoatives are *kam-ki-* 'wind around', *kkek-i* 'break', *ccis-ki* 'tear', and *kal-li* 'grind' and so on. The verbs that belong to zero inchoatives are as follows: *cwul-* 'decrease', *el-* 'freeze', *ttu-* 'float/fly', and *mwut-* 'be stained with' and so on.

- e. * *cong-i-ka ku pwul-lo mal-ass-ta.*
 paper-NOM that fire-with dry-PAST-DEC
 ‘The paper dried with the fire.’

The I-inchoatives in (9) accept an instrument phrase; for example, in (9a), *ssuleyki-lo* ‘with garbage’ can appear. On the other hand, the zero inchoatives in (10) do not allow an instrument phrase; for instance, in (10a), *motakpwul-lo* ‘with the bonfire’ cannot appear. Recall that some verbs that appear in I-inchoatives are ambiguous having a passive reading (fn.6). Thus, it is important to show that examples like in (9) are not passives but inchoatives. Consider the following example:

- (11) *haswukwu-ka ssuleyki-lo (*incho-ey uyhay) mak-hi-ess-ta*
 drainage-NOM garbage-with Incho-BY block-INCHO-PAST-DEC
 ‘The drainage blocked with garbage (*by Incho).’

The sentence (11) is ungrammatical when the agent phrase ‘by Incho’ appears.⁹ That is, I-inchoatives with some instrument phrases cannot co-occur with an agent phrase. I take this fact as a diagnostic that can distinguish an inchoative reading from a passive reading. Passives are agentive as widely assumed across literature, but inchoatives are not agentive (e.g., Levin 1993, Cuervo 2003, A&S 2006).¹⁰ As for an inchoative verb that is ambiguous, I assume that it is inchoative when it is interpreted as being non-agentive; in this case, it is incompatible with an agent phrase but compatible with an instrument phrase as in (11).¹¹ On the other hand, a clause is passive when it is interpreted as being

⁹ Among the speakers that I consulted, only a few speakers marginally accepted (11). On the other hand, (12) is perfectly grammatical for them. Since the contrast between (11) and (12) is clear for those speakers, I assume that (11) is ungrammatical in the relevant sense. For those who accept (11), it appears that (11) has a passive reading similar to (12), not an inchoative reading.

¹⁰ Under this view, the sentences as in (i) are passives, not inchoatives, as the presence of an agent phrase indicates.

- (i) a. *iphak-uy mwun-i cengpwu-ey uyhay yel-li-ess-ta.*
 admission-GEN door-NOM government-BY open-I-PAST-DEC
 ‘The door of admission was opened by the government.’
 b. *chilyo-uy kil-i uysa-ey uyhay yel-li-ess-ta.*
 treatment-GEN way-NOM doctor-BY open-I-PAST-DEC
 ‘The way of treatment was opened by the doctor.’

¹¹ (11) can be agentive, and thus allows both an instrument and agent phrase, as illustrated in (i):

- (i) *haswukwu-ka sap-ulo incho-ey uyhay mak-hi-ess-ta.*
 drainage-NOM shovel-with Incho-BY block-INCHO-PAST-DEC
 ‘The drainage was blocked with a shovel by Incho.’

The difference in grammaticality between (11) and (i) may be due to a difference between in-

agentive. Hence, agentive passive (12) is compatible with an instrument phrase:

- (12) totwuk-i chong-ulo swunkying-ey uyhay cap-hi-ess-ta.
 thief-NOM gun-with policeman-BY catch-PASS-PAST-DEC
 ‘The thief was caught by the policeman with the gun.’

In (12), both an agent phrase ‘by the policeman’ and an instrument phrase ‘with the gun’ can appear. Thus, (12) belongs to passive, not inchoative.¹² A closely related issue to the present discussion is incompatibility of cause and locution phrase with an agent phrase in I-inchoatives:¹³

- (13) a. haswukwu-ka hongswu-ey (*incho-ey uyhay)
 drainage-NOM flood-DAT Incho-BY
 mak-hi-ess-ta.
 block-INCHO-PAST-DEC
 ‘The drainage blocked by flood (*by Incho).’
- b. haswukwu-ka cecello (*incho-ey uyhay)
 drainage-NOM by itself Incho-by
 mak-hi-ess-ta.
 block-INCHO-PAST-DEC
 ‘The drainage blocked by itself (*by Incho).’

The fact shown in (13) indicates that cause and locution phrases pattern the same with an instrument phrase, as discussed earlier with respect to example (11): those phrases are in complementary distribution with an agent phrase.

struments in each example. That is, ‘a shovel’ in (i) is more auxiliary to the action of an agent than ‘the garbage’ in (11). As discussed later (see section 4.1), however, this sort of semantic difference seem to be blurred in certain contexts. In any case, inchoatives and passives can be distinguished in terms of agentivity, which I assume throughout this paper.

¹² Another criterion to distinguish a passive from an inchoative comes from the semantics of the verb. As assumed in this paper, inchoative verbs denote a change of state but there is no such restriction for passives. The semantics of the verb in (12) also suggests that the clause is not inchoative. Thus, the verbs like *cap-hi* ‘be caught’ and *mek-hi-* ‘be eaten’ have a passive meaning only but no inchoative meaning.

¹³ This is also true with zero inchoatives:

- (i) a. *elum-i hayspyeth-ey (*incho-ey uyhay) nok-ass-ta.
 ice-NOM sunshine-DAT Incho-by melt-PAST-DEC
 ‘The ice melted by sunshine (*by Incho).’
- b. *elum-i cecello (*incho-ey uyhay) nok-ass-ta.
 ice-NOM by itself Incho-by melt-PAST-DEC
 ‘The ice melted by itself (*by Incho).’

Turning to the interaction among the non-agentive phrases in I-inchoatives, cause and locution phrases can co-occur (14), while an instrument phrase cannot co-occur with either a cause (15a) or locution phrase (15b).

- (14) haswukwu-ka hongswu-ey cecello mak-hi-ess-ta.
 drainage-NOM flood-DAT by itself block-INCHO-PAST-DEC
 ‘The drainage blocked by flood by itself.’
- (15) a. *haswukwu-ka ssuleyki-lo hongswu-ey mak-hi-ess-ta.
 drainage-NOM garbage-with flood-DAT block-INCHO-PAST-DEC
 ‘The drainage blocked with garbage by flood.’
- b. *haswukwu-ka ssuleyki-lo cecello mak-hi-ess-ta.
 drainage-NOM garbage-with by itself block-INCHO-PAST-DEC
 ‘The drainage blocked with garbage by itself.’

Like I-inchoatives, zero inchoatives allow a cause phrase and locution phrase to co-occur (16).

- (16) a. elum-i hayspyeth-ey cecello nok-ass-ta.
 ice-NOM sunshine-DAT by itself melt-PAST-DEC
 ‘The ice melted by sunshine by itself.’
- b. koki-ka tewi-ey cecello ik-ess-ta.
 ice-NOM hot weather-DAT by itself cook-PAST-DEC
 ‘The meat cooked by hot weather by itself.’

The distribution of the four different types of adjunct phrases across contexts and the morphological realization of each context are summarized in Table 1:

Table 1. The Distribution of the Different Types of Adjuncts and Morphology

	I-inchoatives	Zero inchoatives	Passives
Agent phrase	No	No	Yes
Cause phrase	Yes	Yes	No ¹⁴
‘by itself’	Yes	Yes	No ¹⁵
Instrument phrase	Yes	No	Yes
Co-occurrence of agent and instrument phrase	No (e.g., (11))	—	Yes (e.g., (12))
Co-occurrence of agent and cause/by itself	No (e.g., (13))	No (cf. fn. 13)	— (cf. fn. 14 and 15)
Co-occurrence of cause/by itself and instrument phrase	No (e.g., (15))	—	—
Co-occurrence of cause and by itself	Yes (e.g., (14))	Yes (e.g., (16))	—
Morphology	-I	∅	-I

The two inchoatives show the same pattern with agent phrases, cause phrases, and the locution ‘by itself’, but passives show the opposite pattern. In particular, in both types of inchoatives, the non-agentive phrases are in complementary distribution with an agent phrase. In passives, on the other hand, an agent phrase is allowed, and certain instrument phrases are too. Both cause and ‘by itself’ phrase can co-occur in both types of inchoatives, but neither of them is allowed in passives. The two types of inchoatives differ in that I-inchoatives allow instrument phrases, as do passives, but zero inchoatives do not. In terms of morphology, I-inchoatives and passives are marked by the same morpheme -I, but zero inchoatives are not marked by any particular morpheme.

3. Cross Linguistic Studies on Inchoatives¹⁶

In this section, I present the inchoative structures proposed by Alexiadou

¹⁴ An anonymous reviewer points out that passives are compatible with a cause phrase (i), as illustrated below:

- (i) a. totwuk-i phowimang/hamceng-ey cap-hi-ess-ta.
 thief-NOM besiegement/trap-DAT catch-I-PASS-DEC
 ‘The thief was caught by a tight besiegement/a trap.’
- b. koki-ka kumwul-ey cap-hi-ess-ta.
 fish-NOM net-DAT catch-I-PAST-DEC
 ‘A fish was caught by a net.’

It seems that the cause phrases in (i) indicate a location rather than a cause. In fact, the dative marker -ey in Korean is well known for having various meanings (e.g., Ahn and Lee 1994). Moreover, those phrases are compatible with an agent phrase *Inho-eyuyhay* ‘by Inho’ (ib) or can be modified by an agent phrase *Inho-ka mantul-e nohun hamceng-ey* ‘a trap that Inho made’ (ia). These possibilities may indicate that the dative phrases in (i) is not a true cause phrase. Thus, I assume that the relevant phrases in (i) are not cause phrases, and continue to assume that passives do not allow cause phrases.

¹⁵ It is pointed out to me by an anonymous reviewer that passives may allow the phrase ‘by itself.’ This is exemplified in (i):

- (i) a. totwuk-i cecello cap-hi-ess-ta.
 thief-NOM by itself catch-I-PAST-DEC
 ‘A thief was caught by itself.’
- b. mwulkoki-ka cecello cap-hi-ess-ta.
 fish-NOM by itself catch-I-PAST-DEC
 ‘A fish was caught by itself.’

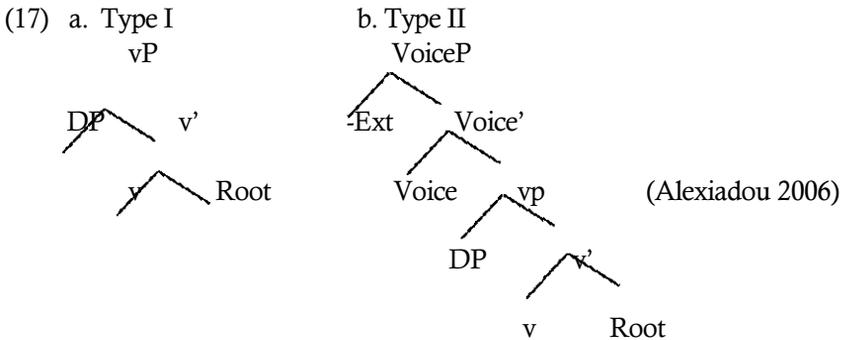
It is clear that the examples in (i) cannot co-occur with an agent phrase, e.g., *Inho-eyuyhay* ‘by Inho’. This fact indicates that they do not belong to passives. However, (i) does not belong to inchoatives either, as the meaning of the verb indicates. That is, the verb does not indicate the meaning of change of state. I assume that (i) belongs to neither passives nor inchoatives, and leave the structure of (i) type sentences for future research.

¹⁶ Inchoatives in Korean have been studied extensively (S-C Lee 1986, K-D Lee 1987, J-W Park 1994, K Kim 2009a, among others). For the purpose of the paper, I do not discuss these studies.

(2006) and A&S (2006), which are based on the interaction between inchoatives with the adjunct phrases examined in the previous section as well as the morphological relation between inchoatives and passives. I also discuss some problems presented by their proposals with respect to the licensing of instrument phrases in inchoatives.

3.1. Two Inchoative Structures

Alexiadou (2006) and A&S (2006) propose two possible inchoative structures, as illustrated below:



Before discussing the structures in (17), a discussion of the general assumptions underlying them is in order. Following Kratzer (1996), a Voice head is taken to introduce external arguments. The head *v* is assumed to represent a simple activity/eventive *v* as in Marantz (2005). It is also posited that Voice may denote two different kinds of relations between a DP and an event: an agent and a causer. When there is an agent relation, a Voice head hosts [+AG] feature. When the relation is one of cause, however, a Voice head does not host a CAUSE feature, rather it bears [-AG]. In this case, causative semantics is derived from the combination of activity *v* and its stative complement. In this manner, CAUSE is argued to be represented by *v*.

Given these assumptions, let us examine how the adjunct phrases shown in the Korean data are licensed in each inchoative structure. According to Alexiadou (2006), neither of the structures in (17) allows an agent phrase since they do not possess an agent feature. In (17a), the Voice head that hosts an agentive feature is entirely absent. In (17b), on the other hand, there is a Voice head but it is marked by [-AG]. As for cause phrases and 'by itself,' both (17a) and (17b) allow them under the view that those phrases modify *v*. According to Alexiadou (2006), cause phrases in inchoatives indicate an implicit causer argument, and thus it modifies the *v* that represents CAUSE. On the other hand, 'by itself' indicates that there is no external argument responsible for a given

event. In this sense, Alexiadou (2006) argues that the phrase also modifies *v* in inchoatives.¹⁷ Lastly, both structures allow instrument phrases, since they are also viewed as modifying *v*. A crucial idea underlying this proposal is that instrument phrases in inchoatives are causers, to which I will return in more detail in the next section. The structures in (17) are supposed to predict that CAUSE and AG are in complementary distribution in inchoatives.¹⁸ That is, CAUSE can be licensed in (17) but AG is not. Moreover, the structure in (17b) has a VoiceP without an external argument as -Ext in (17b) indicates; however, structure (17a) does not have VoiceP. According to Alexiadou (2006), (17b) is the structure of inchoatives that share the same verbal morphology as passives. In this case, the same morpheme marks the absence of an external argument, and this is represented structurally by a Voice head that lacks an external argument.¹⁹ (17a), on the other hand, has no special morphology on the verb, and thus it does not have a Voice head.

3.2. Pure Instruments Versus Instrument Causers

In the previous section, it was mentioned that instrument phrases are causers in inchoative structures, and thus are licensed by *v*. However, it is not the case that instruments are always permitted in inchoatives, as shown in Korean zero inchoatives (cf. (10)). This fact is also noted in Alexiadou (2006) and A&S (2006), and they propose that only instrument causers are allowed in inchoatives. Pure instruments are, on the other hand, not allowed in inchoatives. Before discussing their proposal, a discussion of each type of instrument and their syntactic properties are in order.

Following Kamp and Rosseutscher (1994), it is assumed that instrument causers are instruments that can be conceived as acting on their own, once the agent has applied or introduced them, as exemplified in the following German example:

- (18) Der arzt heilte den patienten mit kamille
 the doctor cured the patient with chamomile
 ‘The doctor cured the patient with chamomile.’ (A&S 2006)

¹⁷ The connection between the role of ‘by itself’ and *v* is not clearly articulated. No explanation is given for the lack of causative semantics when ‘by itself’ modifies *v* (or as to why ‘by itself’ modifies the same *v* as a cause phrase even though it does not have causative semantics).

¹⁸ The complementary distribution does not seem to follow from the structures in (17). This problem will be discussed in detail later.

¹⁹ It seems that the statement is only partially correct or it needs a further elaboration. Both types of inchoatives lack an external argument in different ways, and this needs to be reflected by the presence/absence of a Voice head in each type of an inchoative. I will discuss this issue in more detail later.

The instrument *kamille* ‘chamomile’ in (18) is an instrument causer which acts on its own after it is applied by the agent *der arzt* ‘the doctor’. On the other hand, pure instruments are instruments that are conceived as strictly auxiliary to the action of the agent by whom they are being employed, as in (19):

- (19) Der arzt heite den patienten mit dem skalpell
 the doctor cured the patient with his scalpel
 ‘The doctor cured the patient with his scalpel.’ (A&S 2006)

In (19), the instrument *dem skalpell* ‘the scalpel’ is used by the agent *der arzt* ‘the doctor’, but it cannot act on its own. With respect to the syntactic properties of each type of instrument, consider the following example:

- (20) Die kamille /*skalpell heilte den patienten
 the chamomile/scalpel cured the patient
 ‘The chamomile/*scalpel cured the patient.’ (A&S 2006)

In (20), the instrument causer ‘the chamomile’ from example (18) appears in subject position and the sentence is grammatical. Conversely, the pure instrument ‘the scalpel’ cannot appear in subject position. The point here is that pure instruments cannot appear in subject position while instrument causers can appear in subject position. Rather, pure instruments can only appear in the adjunct position with an agent in subject position as in (19). This fact is taken to indicate that pure instruments are licensed by Voice, which hosts [+AG]. On the other hand, an instrument causer in subject position (20) is argued to be introduced by a Voice head, but they receive a causer interpretation through the combination of *v* and root.

Given the distinction between pure instruments and instrument causers, let us examine how instruments are licensed in inchoatives through a contrast between Greek and German inchoatives. Consider the following Greek and German inchoatives:

- (21) To pani skistike me to psalidi/*apo tin komotria/apo mono tu
 The cloth tore-Nact with the scissors/ by the hairdresser/by alone-SG its
 ‘The clothes tore with the scissors/*by the hairdresser/by itself.’
- (22) Die vase zerbrach *mit dem Hammer/*von Peter/von slebst
 the vase broke with the hammer /by Peter/by itself
 ‘The vase broke *with the hammer/*by Peter/ by itself.’ (A&S 2006)

The two languages display the same pattern, with the exception of instrument phrases: inchoatives cannot co-occur with agent phrases, indicating that they

are not agentive, and thus lack an the agentive feature, but do co-occur with the phrase ‘by itself’, indicating that they do have a *v*.²⁰ Only Greek, however, allows the inchoative to co-occur with the instrument phrase *me to psalidi* ‘with the scissors’, while this combination is ungrammatical in German. A question naturally arises: Why does only the Greek inchoative allow an instrument phrase? The answer provided by Alexiadou (2006) and A&S (2006) is that the instrument is a pure instrument in the German case, but an instrument causer in the Greek inchoative. Recall that pure instruments are licensed by Voice, which hosts [+AG]. On the other hand, instrument causers in subject position are introduced by Voice without the feature [+AG] and its causer interpretation derives from the combination of *v* and a root. In inchoative sentences, instrument causers are licensed by the same *v* as their transitive counterparts, receiving the same causer interpretation from *v* and a root as in transitives. That is, it is the same *v* that is relevant to the causer interpretation of the instrument in both inchoatives and transitives. Now, the contrast between German and Greek can be explained. In German inchoatives, the instruments are associated with pure instrument role, and thus they cannot appear in inchoatives that lack [+AG]. In Greek inchoative, on the other hand, the instrument is associated with the instrument causer role, and thus it can appear in inchoatives that have *v*.

3.3. Discussion: Availability of Instruments in Subject Position

Licensing of instrument phrases in inchoatives as presented above predicts that instrument causers occurring in inchoatives can appear in subject position of their transitive counterparts. This is because it is the same *v* that licenses instruments in both inchoatives and transitives, and this *v* is relevant to a causer interpretation. On the other hand, it is also predicted that instruments not allowed in inchoatives cannot appear in subject position of the transitive equivalent. This is because the incompatibility with inchoatives indicates that the instrument must be licensed by Voice [+AG]. In other words, it must appear with an agent in subject position but cannot itself appear in subject position, as mentioned earlier. The latter part of the prediction seems to be correct, as the following German example illustrates:

- (23) *Der hammer zerbrach die vase
 the hammer broke the vase
 ‘The hammer broke the vase.’ (Alexiadou 2006)

The pure instrument ‘hammer’ is not allowed in inchoatives (cf. (22)), and as

²⁰ Both languages also take cause phrases (Alexiadou 2006).

predicted, it is also not allowed in subject position of a transitive sentence (23). However, the first part of the prediction does not seem to be borne out, as shown by the Greek data. The instrument causer *psalidi* ‘scissors’ in the inchoative sentence in (21) cannot occur in subject position of a transitive sentence (24):²¹

- (24) * To psalidi eskis-e to pani
 the scissor tear-3ACT the cloth
 ‘The scissors tore the clothes.’

That is, it is proposed that instruments in inchoatives are causers. If this is correct, then the instrument must be able to appear in subject position in its transitive counterpart. However, this does not seem to be true, as shown in (24). Rather, it seems that the instrument ‘scissors’ must be used with an agent, as the following grammatical sentence suggests:

- (25) I Maria eskis-e to pani me to psalidi
 the Maria tear-3ACT the cloth with the scissors
 ‘Maria tore the clothes with the scissors.’

The facts shown in (24) and (25) indicate that the instrument ‘scissors’ is a pure instrument that must be licensed by Voice with [+AG]. However, the fact that it can appear in the inchoative (21) indicates that it cannot be licensed by Voice with [+AG], since inchoatives are [-AG]. In other words, the Greek facts contradict the inchoative structures proposed in Alexiadou (2006) and A&S (2006).

The contradiction found with Greek is also found with Korean inchoatives, as will be shown in the following section. In what follows, I first examine to what extent the proposals of Alexiadou (2006) and A&S (2006) explain the interaction between the Korean inchoatives and adjuncts phrases, and then discuss problems that arise with Korean.

4. Licensing of Instruments in Korean Inchoatives

This section considers how the distribution of adjunct phrases in Korean inchoatives can be explained under the structures proposed by Alexiadou (2006) and A&S (2006). Recall that in both types of inchoatives in Korean (cf. Table

²¹ Alexiadou (2006) does not provide data indicating whether instruments can appear in subject position of the transitive counterparts of Greek inchoatives. The Greek examples in (24) and (25) are provided by Maria Kyriakaki (p.c.).

1), the distribution of agent and cause phrases shows the same pattern. More specifically, agent and cause phrases are in complementary distribution, as Alexiadou (2006) and A&S (2006) predict. This indicates that both kinds of inchoatives are non-agentive but rather causatives having an eventive *v*. The presence of an eventive *v* in both clauses also accounts for the availability of the phrase ‘by itself’ to them. Putting aside for the moment the opposing distribution of instruments in each inchoative, let us consider the morphological difference between the two inchoatives. I-inchoatives are realized by the same morpheme as passives, as mentioned earlier. Zero inchoatives, for their part, have no explicit morphology to share with passives. According to Alexiadou (2006), the fact that I-inchoatives and passives are marked by the same morpheme indicates that inchoatives have a Voice head. In particular, the Voice head must bear [-AG]. On the other hand, zero inchoatives do not have a Voice head, since they do not share special morphology with passives. Overall, the facts described in terms of Alexiadou (2006) and A&S (2006) predict that I-inchoatives would have the structure of type II (17b) but zero inchoatives would have the structure of type I (17a). As will be shown below, however, this prediction does not account for the distribution of instrument phrases in Korean inchoatives.

4.1. Licensing of Instrument Phrases

In the previous section, we concluded that I-inchoatives and zero inchoatives have an eventive *v* but only the former has a Voice head. Alexiadou’s (2006) proposal that instrument causers, but not pure instruments, are licensed by *v* in inchoatives predicts that instrument causers are permitted in both types of inchoatives but pure instruments are not. However, as shown previously, instruments are allowed only in I-inchoatives (26) but not in zero inchoatives (27):²²

- | | | | | |
|------|----|--------------------------------------|--------------|----------------------|
| (26) | a. | haswukwu-ka | ssuleyki-lo | mak-hi-ess-ta. |
| | | drainage-NOM | garbage-with | block-INCHO-PAST-DEC |
| | | ‘The drainage blocked with garbage.’ | | |
| | b. | mwun-i | pyetol-lo | yel-li-ess-ta. |
| | | door-NOM | brick-with | open-INCHO-PAST-DEC |
| | | ‘The door opened with the brick.’ | | |

²² As noted earlier, the verb *yel* ‘open’ in (26b) is ambiguous between an inchoative and passives reading. For the purpose of this section, I assume that (26b) bears an inchoative reading only.

- (27) a. * elum-i motakpwul-lo nok-ass-ta.
 ice-NOM bonfire-with melt-PAST-DEC
 ‘The ice melted with the bonfire.’
- b. * koki-ka motakpwul-lo ik-ess-ta.
 meat-NOM bonfire-with cook-PAST-DEC
 ‘The meat cooked with the bonfire.’

For instance, in (26a), the instrument *ssuleyki-lo* ‘with the garbage’ occurs, and this fact seems to indicate that the instrument is an instrument causer. In contrast, the instrument *motakpwul-lo* ‘with bonfire’ cannot appear in the zero inchoative as in (27a) which suggests that this instrument is a pure instrument. An instrument causer can be conceived of as acting on its own, and can thus appear in subject position. A pure instrument is considered strictly auxiliary to the action of an agent and cannot appear in subject position. However, the suggested semantic and syntactic properties of the two types of instruments are not predicted to be right in Korean. The instruments in (26) and (27) are conceived of as being auxiliaries to the action of the agent ‘Inho’.²³ This is illustrated in (28) with the examples (26b) and (27b):

- (28) a. inho-ka pyetol -lo mwun-lul yel-ess-ta.
 Inho-NOM brick-with door-ACC open-PAST-DEC
 ‘Inho opened the door with the brick.’
- b. inho-ka motakpwul-lo koki-lul ik-hi-ess-ta.
 Inho-NOM bonfire-with meat-ACC cook-CAUSE-PAST-DEC
 ‘Inho cooked the meat with the bonfire.’

Regarding the syntactic property, neither instrument can appear in subject position. The instruments ‘the brick’ and ‘the bonfire’ cannot appear in subject position, as shown in (29).²⁴

²³ The instruments in (27) can also have an instrument causer role, depending on the context. For example, ‘the bonfire’ can be viewed as acting on its own after the agent applies it. As this possibility indicates, semantic notions are not absolute criteria in determining types of instruments.

²⁴ An anonymous reviewer points out that the sentence (29b) is grammatical for some speakers. Moreover, it is suggested that the ungrammaticality of (29a) may be due to the property of the instrument. For example, the sentence is better if the instrument *pyektol* ‘the brick’ is replaced with *swutkalak* ‘the spoon’ :

- (i) swutkalak-i mwun-lul yel-ess-ta.
 spoon-NOM door-ACC open-PAST-DEC
 ‘The spoon opened the door.’

For those speakers who allow an instrument in the subject position, it may be the case that they can merge an inanimate argument in the subject position (i.e., in spec of VoiceP). That is, for those speakers, the feature capacity of Voice is more flexible to introduce an inanimate argument than those who do not allow (i) type sentences.

- (29) a. * pyetol-i mwun-lul yel-ess-ta.
 brick-NOM door-ACC open-PAST-DEC
 ‘The brick opened the door.’
- b. * motakpwul-i koki-lul ik-i-ess-ta.
 bonfire-NOM meat-ACC cook-CAUSE-PAST-DEC
 ‘The bonfire cooked the meat.’

The examined semantic and syntactic properties illustrated in (28) and (29) suggest that both instruments with I- and zero inchoative verbs are pure instruments licensed by a Voice *with* [+AG]. However, an instrument phrase is allowed in I-inchoatives (26), indicating that it is an instrument causer that is licensed by the Voice *without* [+AG]. This result appears to conflict with the proposal in Alexiadou (2006) and A&S (2006).

Recall, moreover, that I had pointed out the same problem in the Greek data in the previous section. Given these facts of Korean and Greek, I conclude that the availability of an instrument in inchoatives does not correlate with its availability in subject position. This indicates that instrument phrases in inchoatives are not tied to a causer role as in transitives, and thus are not licensed by the same *v* as in transitives. Therefore, we cannot follow the proposal in Alexiadou (2006) and A&S (2006).

In order to solve this problem, I propose that instruments are adjoined to VoiceP. Before outlining my proposal, I discuss some conceptual problems with the structures proposed in Alexiadou (2006), which constitute further reasons not to adopt them.

4.2. Conceptual Problems: Licensing AG and CAUSE

In the system of Alexiadou (2006) and A&S (2006), a Voice head introduces an external argument. The Voice head has two possible relations with the DP that merges in spec of VoiceP as an external argument: either AG or CAUSE. However, these two relations do not seem to be equal with respect to the heads that license them, although they represent a relation with a DP merged in the same position.

For AG, a Voice head bears a [+AG] or [-AG] feature in a relevant context. As for CAUSE, it is not directly encoded in *v* but derived from the combination of *v* and its stative complement. AG and CAUSE thus seem to be of a different nature. More specifically, they differ on three counts. First, the element that licenses each relation is different: Voice versus *v*+root. Second, they differ in the way they are expressed: AG is assumed to be a binary feature while CAUSE is not. Third, they differ in their manner of derivation: AG is not a derived feature but rather simply hosted by a Voice head, while CAUSE

is a derived relation represented by *v*. AG and CAUSE are suggested to be in complementary distribution but this does not fall out of their proposed structures, which makes difficult to maintain the structures proposed in Alexiadou (2006) and A&S (2006).

I propose a slightly different structure from the one in Alexiadou and A&S (2006) to address these problems. As a first step in this direction, I discuss Parson's semantic study on instruments, next, Embick's (1997, 2004) defective external argument introducing head. Finally, I discuss a verbalizing head *v* (Marantz 1997), which is distinct from an external argument introducing head Voice (e.g., Pyllkänen 2002, 2008). I also discuss the pattern of cause phrases and the locution 'by itself' in both types of inchoatives with regard to the event that they modify.

5. Towards an Analysis: Assumptions

5.1. Enhancements of an Instrument Role

Earlier, based on the conflict between Greek/Korean facts and the proposal of Alexiadou (2006) and A&S (2006), we concluded that the availability of an instrument in inchoatives does not necessarily indicate its availability in subject position. This indicates that instruments in inchoatives are not necessarily causers, and thus not licensed by *v*, contra Alexiadou (2006) and A&S (2006). What role, then, do instruments play in inchoatives, if they are not causers?

In studying of semantic roles of instruments, Parsons (1990) argued that instruments can have a performer role, in addition to an instrument role. Consider the following examples:

- (30) a. *The hammer* hit the nail.
 b. *The knife* cut his leg.
 c. *The brick* hit the window and bounced off. (Parsons 1990)

In (30), all the subjects are instruments. In particular, they are neither agents nor experiencers, and thus receive an instrumental role. However, an instrumental role implies that there is an agent who uses the instrument. That is, in (30a), if Mary hit the nail with the hammer, then the hammer would be an instrument. An agent is, however, sometimes nowhere to be found. For example, the hammer could drop from a higher level and hit the nail. Parson argues that, in these cases, an instrument role is not adequate for the instrument. Instead, he proposes a performer role for the instrument when there is no agency implied.

Adopting this insight I assume that instruments in I-inchoatives receive a

performer role.²⁵ In passives, however, they receive an instrumental role, since agency is inherently implied in passives.

5.2. Event Introducers and an Argument Introducer

Following current works on argument structure (Pylkkänen 2002, 2008; Cuervo 2003), I assume that Voice (Kratzer 1996) and *v* is not the same. That is, Voice is an external argument introducer, and *v* is a verbalizing head by combining with a lexical root (Marantz 1997). Following Cuervo (2003), I further assume that *vs* introduce an event of the predicate;²⁶ in other words, a root and *v* combine syntactically to build event predicates. In particular, in Korean, there are two types of *vs* that correspond one-to-one to two basic types of events, namely v_{DO} and v_{INCHO} (e.g., M-J Son 2006). v_{DO} corresponds to an event type of an activity, and v_{INCHO} corresponds to an event type of change of state. Thus, an argument merged in spec of VoiceP that combines with v_{DO} will be interpreted as an agent.²⁷

5.3. Defective VoiceP

I assume that an external argument introducing head (i.e., Voice) is present in unaccusatives and passives, following Embick (1997, 1998, 2004). This Voice is a defective functional head since it lacks the property of introducing an external argument syntactically.²⁸ In passives, the external argument theta role is present while in unaccusatives it is not present. In the former, the theta role cannot be assigned to the external argument since it is not merged in the external argument position. Crucially I assume that Voice in unaccusatives and passives can also indicate the alternating nature of verbs. That is, passives and unaccusatives share the structural property of lacking an external argument that is suppressed by undergoing passivization and intransitivization, respectively. Under this view, only I-inchoatives have a defective VoiceP while

²⁵ Although Parson discusses the cases where an instrument is in subject position, the extension of Parson's insight to inchoatives does not pose any substantial problems. Parson mentions that the thematic roles discussed do not necessarily play a role in the syntax, but are still useful in the semantics. In this sense, the fact that instruments in I-inchoatives cannot appear in subject position does not necessarily indicate that they cannot have a performer role.

²⁶ A similar view of *v* is proposed in Folli and Harley (2005); however, in their proposal, *v* has another function, namely introducing an external argument.

²⁷ As mentioned earlier, some inchoative verbs are ambiguous between passive and inchoative reading. v_{DO} would be projected above a root when those verbs have a passive reading, as passives do not allow cause and 'by itself' phrases (see section 2). However, a question remains why v_{INCHO} is not projected given the semantics of the verbs as change of state. As this issue is beyond the scope of the paper, I do not discuss it further.

²⁸ Voice is also defective since it cannot assign accusative Case.

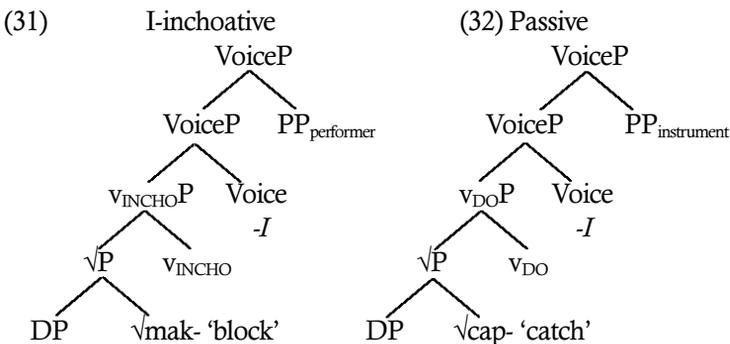
zero inchoatives do not have one. I-inchoatives alternate, just as passives do, but zero inchoatives do not, as shown earlier (cf. (3)-(4)).

5.4. Cause Phrases and ‘by itself’

As illustrated throughout this paper, cause phrases and the locution ‘by itself’ are allowed in both types of inchoatives. Moreover, they are in the complementary distribution with agent phrases in inchoatives. Given these empirical facts, I argue that cause phrases and ‘by itself’ modify the same event, namely, v_{INCHO} . The co-occurrence of both types of phrases (cf. (14) and (16)) further supports that they modify the same event. The point to be stressed is that the cause phrase is not assumed to carry causative semantics. Rather, it is treated with ‘by itself’ in the same way in that it is in complementary distribution with an agent. In other words, they negate the presence of an agent.²⁹ Both a cause phrase and ‘by itself’ indicate that an event occurs without an agent; however, they do not necessarily indicate that the event is causative. In this sense, I treat a cause phrase and ‘by itself’ in a similar fashion: they modify the same event.

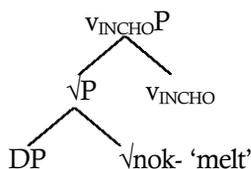
6. The Proposal and Explanation of the Data

Under assumptions presented above, I propose structure (31) for I-inchoatives and (33) for zero inchoatives. The structure of passives (32) is also presented for comparison.



²⁹ An instrument phrase in I-inchoatives is also incompatible with an agent phrase, as shown earlier. However, it is also the case that an instrument is compatible with neither a cause nor ‘by itself’ phrase. This fact suggests that an instrument phrase cannot modify v_{INCHO} that a cause and ‘by itself’ modify.

(33) Zero Inchoative



As shown earlier, the verbs in I-inchoatives and passives are alternating verbs but the ones in zero inchoatives are not. For this reason, a defective VoiceP is present in I-inchoative (31) and in passive (32) but not in zero inchoative (33). However, both types of inchoatives can be represented by the same verbalizing event head, v_{INCHO} , given the fact that in both cases the verbs are change of state verbs. On the other hand, the passive (32) is represented by v_{DO} because it implies an agent phrase. As mentioned earlier, agentive interpretation in (32) is possible due to the combination of Voice and v_{DO} .

Let us consider how the proposed structures in (31)-(33) capture the differences and similarities in the distribution of the adjunct phrases between the two inchoatives as well as their morphological relationship with the passive.

Recall the interaction between the two inchoatives and the passive with respect to the adjunct phrases (cf. Table 1). Two types of inchoatives are similar in that they allow both a cause phrase and ‘by itself’ phrase. In this respect, passives are different from the inchoatives in not allowing those phrases. The two inchoatives are also similar in that they do not allow an agent phrase, unlike passives. However, they diverge with respect to instrument phrases. I-inchoatives allow them, as do passives, but zero inchoatives do not. Regarding morphology, I-inchoatives are expressed by the same morpheme as passives, but zero inchoatives manifest no overt morphology.

The compatibility of cause phrases and ‘by itself’ with both types of inchoatives can be explained by the presence of v_{INCHO} .³⁰ That is, those phrases modify the same event head v_{INCHO} ; therefore, it is present in both inchoatives (31) and (33). The co-occurrence of both phrases can also be ac-

³⁰ An anonymous reviewer pointed out that in some zero inchoatives the instrumental marker *-ulo* can mark a cause phrase, while the cause marker *-ey* cannot mark the cause phrase :

- | | | |
|-----------|-------------------------------|--------------|
| (i) ai-ka | paykhyelpyeng-ulo/*ey | cwuk-ess-ta. |
| child-NOM | leukemia-with/DAT | die-PAST-DEC |
| | ‘The child died of leukemia.’ | |

In (i), *-ulo* marks a disease-related cause phrase, ‘leukemia’, unlike *-ey*. A question regarding data like (i) is whether this cause phrase modifies v_{INCHO} or VoiceP. As (i) is a zero inchoative that does not project VoiceP, the cause phrase should modify v_{INCHO} . As its distribution is restricted to a disease-related cause phrase, the marker, *-ulo*, may be a special kind of a cause marker unlike a usual cause marker *-ey*. Based on its function as a cause phrase semantically, I assume that it modifies v_{INCHO} despite its morphological identity to an instrumental marker. I will leave more detailed analysis for this morpheme in the context like (i) for future research.

counted for by v_{INCHO} . In passives, on the other hand, both cause and ‘by itself’ cannot occur as v_{INCHO} is absent. The non-compatibility of an agent phrase with the two inchoatives is also explained under the same structures. Because neither bears v_{DO} , they cannot co-occur with agent phrases. Conversely, passives, which bear v_{DO} , do co-occur with agent phrases (32). As for instrument phrases, they are adjoined to a defective VoiceP. Since zero inchoatives do not project the VoiceP as in (33), they are incompatible with instrument phrases. Passives and I-inchoatives, for their part, do project VoiceP and thus, they allow instruments as illustrated in (32) and (31) respectively. However, as mentioned earlier, the interpretation of instruments in each clause is different. In passives, they are interpreted as an instrument manipulated by an agent while in inchoatives, they are interpreted as an agentless performer.³¹ This difference is explained as follows. When an instrument is adjoined to a passive as in (32), it modifies the structure whose event is v_{DO} . That is, agency is implied. Therefore, the instrument adjunct is interpreted as an instrument, as discussed previously. When it is adjoined to an inchoative as in (31), it modifies the structure whose event is v_{INCHO} : there is no agency implied. Therefore, a performer interpretation is derived. Lastly, the morphological difference between the two inchoatives is reduced to the presence and absence of VoiceP. As illustrated in (31), in I-inchoatives, the morpheme is realized under Voice head. In zero inchoative (33), there is no Voice head; therefore, the morpheme cannot be realized. In the same way, passives have the same verbal morphology as I-inchoatives due to the presence of a Voice head.

7. Conclusion

This paper examined two different types of inchoatives in Korean focusing on 1) their interaction with adjunct phrases and 2) their morphological difference. I argued that the two types of inchoatives are similar in that they have the same event head v_{INCHO} . This syntactic similarity explains the compatibility of a cause phrase and ‘by itself’ with the two inchoatives. I also argue that the two inchoatives are syntactically different on another count. I-inchoatives have a defective Voice head as do passives while zero inchoatives do not have one. This difference explains the availability of an instrument phrase in I-inchoatives but non-availability of one in zero inchoatives. The presence of the Voice head in I-inchoatives but the absence of one in zero inchoatives also

³¹ An anonymous reviewer questions why a performer instrument in Korean cannot appear in subject position unlike the English one. The feature capacity of Voice in Korean may be less flexible than that of English by introducing an animate argument only (cf. fn. 24 for a similar view). Thus, Voice in Korean may disallow a performer instrument (i.e., an inanimate argument) in the subject position.

accounts for the morphological difference between the two types of inchoatives.

It follows, from the structures I proposed, that the morphological congruence of I-inchoatives and passives is due to the presence of a defective Voice head, suggesting that I-inchoatives and passives share the lack of an external argument to be suppressed.

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