

On the relationship between middles and passives

A polyfunctional analysis of *-eci* in Contemporary Korean

Mikyung Ahn and Foong Ha Yap

Hankuk University of Foreign Studies | Chinese University of Hong
Kong

Previous studies using diachronic data from the *Sejong* Historical Corpus have traced the semantic extension of voice marker *-eci* from middle to passive uses (e.g. Ahn & Yap 2017). In this study, based on data from the *Sejong* Contemporary Spoken Corpus, we further examine the relationship between middle and passive uses of *-eci* constructions, with special attention to the neutralization of adversative readings that give rise to generalized (in addition to adversative) middle and passive *-eci* constructions. Our analysis reveals that judgments about adversative readings in Contemporary Korean are not emergent solely from the semantics of the verb or adjective preceding *-eci* but additionally are emergent and grounded in the interaction between discourse participants. The distributional characteristics of *-eci* also show a strong interaction between voice and tense-aspect-mood (TAM). There is also some interaction effects from register and text type/genre, particularly in the usage frequency distribution of spontaneous and passive *-eci* constructions. In addition, contrary to the traditional notion that *-eci* is essentially a passive marker, in real usage, *-eci* is still far more frequently used as a middle marker than a passive marker.

Keywords: middle voice, spontaneous, inchoative, facilitative, subjectification, tense-aspect-mood, adversative semantics

1. Introduction

Previous studies have shown that some languages deploy the same grammatical markers for the expression of both middle voice and passive voice constructions (e.g. Shibatani 1985 on Japanese *-rare*; Kemmer 1993 on Latin *-r*; König & Moysse-Faurie 2009 on Italian *si*). Korean voice marker *-eci* can also express both middle

and passive voice. In terms of middle marking, *-eci* is used in spontaneous middles, inchoative middles, and facilitative middles, as illustrated in (1a–c). Its passive use is exemplified in (1d).

- (1) a. *yuli-ka kkay-(e)cy-ess-ta.* (Spontaneous middle)
 glass-NOM break-MM-PST-DEC
 ‘The glass broke.’
- b. *kunyeuy elkwul-i ppalkay-(e)cy-ess-ta.* (Inchoative middle)
 her face-NOM be.red-MM-PST-DEC
 ‘Her face turned red.’
- c. *i khal-i cal ssel-eci-n-ta.* (Facilitative middle)
 this knife-NOM well cut-MM-PRES-DEC
 ‘This knife cuts well.’
- d. *mwumyeng-hwaka-tul-ey uyhay minhwa-ka* (Passive)
 anonymous-painter-PL-DAT by folk.painting-NOM
kuly-ecy-ess-ta.
 paint-PASS-PST-DEC
 ‘The (Korean) folk-painting was painted by anonymous painters.’

However, there have been a number of debates on whether Korean *-eci* constructions are passive or middle. Many studies have identified *-eci* constructions as passive constructions (e.g. Seng 1976; Kim 1980; Park 1984; Bae 1986, 1988; Jeong 2002, 2006). In contrast, some studies have focused solely on the functions of *-eci* as a marker of middle constructions; for example, *-eci* has been identified as a marker of “spontaneity” (Nam 2011), “inchoativity” (Woo 1997), “potentiality” (Yeon 1994; Bak 2007), and “unintentionality” (Bak 2007). Recent findings from a diachronic study (Ahn & Yap 2017) have in fact shown that voice marker *-eci* is used to form both middle and passive constructions, via semantic extensions of *-eci* from intransitive middle to transitive passive predicates, essentially through a process of valence increment. In this study, we shall review the full range of functions of *-eci* as a voice marker based on contemporary spoken data, with particular attention to the similarities and differences between its middle and passive voice marking uses.

Ahn & Yap (2017) identified two grammaticalization pathways in the diachronic development of voice marker *-eci*, namely, (i) spontaneous middle > inchoative middle > facilitative middle (primary grammaticalization), and (ii) spontaneous and inchoative middles > passive (secondary grammaticalization). This diachronic study on Korean *-eci* also noted that the inherent semantics of the lexical source *-ti* ‘fall’ contributed to the adversative meaning typically associated with *-eci* constructions in Middle and Modern Korean. However, the details of how *-eci* has extended its range of use from adversative contexts to non-

adversative ones as well, as it extends from middle to passive uses, remain to be expounded. Hence, in this study, we shall investigate how the expansion of *-eci* constructions within the middle voice domain (i.e. spontaneous > inchoative > facilitative uses), as well as the extension of *-eci* constructions from the middle domain to the passive domain, was accompanied by gradual relaxations of the adversity constraint, such that *-eci* constructions could gradually express not only adversative semantics but also non-adversative ones.

Ahn & Yap (2017) also showed that the semantic extensions of *-eci* within the voice domain were facilitated by the relaxation of the telicity constraint. Since Middle Korean, *-eci* has undergone semantic generalization in which *-eci* extended its domains of use to constructions that included not only telic features but also atelic ones: [+telic, +punctual/instantaneous] > [+/-telic, +/-punctual/instantaneous]. In this study, we shall extend this line of investigation to examine whether a related temporal characteristic, namely grammatical tense (i.e. past, present, and future marking), combines with *-eci* to influence its voice functions. An interesting hypothesis worth further exploring is whether tense-voice interactions correlate strongly with text-type and genre. To address this question, we shall examine the usage frequency of *-eci* constructions in Contemporary Korean, with special attention to the distribution of grammatical tense and voice functions across text-type/genre.

The objective of this paper then is two-fold: (1) to examine the extent to which Korean voice marker *-eci* has expanded from adversative contexts to non-adversative ones, within both the middle and passive voice domains; and (2) to examine whether grammatical tense interacts with the voice marking functions of *-eci*. We adopt a usage frequency analysis, based on data from the *Sejong* Contemporary Spoken Corpus.

The rest of this paper is organized as follows. § 2 discusses the full range of functions of the voice marker *-eci*, based on contemporary data, with particular attention to the similarities and differences between its middle and passive voice marking uses. § 3 investigates how the expansion of *-eci* constructions within the middle voice domain and from the middle domain to the passive domain was accompanied by gradual relaxations of the adversity constraint. § 4 focuses on the usage frequency of *-eci* in present-day Korean to determine whether there is a correlation between tense marking and voice functions (§ 4.1) and whether there are distinct interactional patterns across different text types/genres (§ 4.2). § 5 concludes.

2. Middle and passive uses of Korean *-eci*

2.1 Korean middle marker *-eci*

The term “middle voice” has been widely applied to denote a linguistic category whose function is to indicate that “the action or state [being described] affects the subject of the verb or his interests” (Lyons 1968:373). This action or state is typically instantiated by an entity that is himself/herself/itself the affected patient or theme (Kemmer 1993; Calude 2005), as in the case of reflexives such as (2). Middle constructions are thus often single-participant constructions (i.e. intransitive), although some multiple-participant scenarios can be construed as alternations and iterations of single-participant actions and qualify as middles, as with reciprocals such as (3).

(2) *They washed themselves.* (Reflexive middle)

(3) *They quarreled.* (Reciprocal middle)

As shown in (4), some languages like Modern Icelandic and French have morphological indicators of middle constructions (*-st* and *-se* respectively), whereas some languages such as English do not have formal morphological markers. Crucially, although the formal morphological indicators are varied, there is a clear semantic core of the middle voice, that is, “subject affectedness” (Lyons 1968; Klaiman 1982, 1988; Kemmer 1993). This semantic property of “subject affectedness” in middle voice constructions can also be described in terms of “low participant distinguishability” (Kemmer 1993:27). Essentially, as Kemmer elaborates, middle voice constructions tend to exhibit lower participant distinguishability because the Initiating entity (i.e. the controller or conceived source of action) is the same as the Endpoint entity (i.e. the affected participant), and hence the Initiator is in effect the affectee as well.

(4) Modern Icelandic: *Hannklæddi-st* ‘He got dressed’
 French: *Ce papier se recycle* ‘This paper is recyclable’
 English: The book sells well; the door opened (Kemmer 1993:1–2)

Following Kemmer (1993), in this paper the formal marker used in the expression of middle voice will be termed as middle marker (or MM). Crosslinguistically, the middle construction is often divided into a variety of situation types, along dimensions such as body action, change in body posture, reflexives, naturally reciprocal events, spontaneous events, inchoative events, facilitative constructions, etc. (Valfells 1970; Faltz 1977; Kemmer 1993). The class of body action verbs typically includes washing and getting dressed, as seen in (5a), while verbs of change in body posture include verbs of lying down and standing up, as in (5b). The

class of naturally reciprocal events includes verbs of greeting, embracing, fighting, and meeting, as in (5c), while the verbs of spontaneous events include the verbs of growing, rotting, drying out, falling apart, opening/closing, and disappearing, as in (5d) (Kemmer 1993:16–19). Inchoative events involve verbs derived from adjectives, as in (5e), while facilitative constructions are associated with the expression of intrinsic ability or quality of an object to undergo a particular process, as in (5f).

- (5) a. Body action type: Bahasa Indonesia *ber-dandan* ‘get dressed’
 b. Change in body posture: Rumanian *se ridica* ‘arise’
 c. Naturally reciprocal events: Latin *amplecto-r* ‘embrace’
 d. Spontaneous events: French *se dissoudres* ‘dissolve’
 e. Inchoative: Turkish *hastal-an* ‘get sick’
 f. Facilitative: Kanuri *t-ai* ‘it is potable’
 (see Valfells 1970; Faltz 1977; Kemmer 1993: 16–19 (a–d), 147 (f), 239 (e))

Of the various types of middle constructions shown in (5) above, Korean *-eci* can be used to express spontaneous, inchoative, and facilitative events (i.e. 5d–f). As seen in (6) and (7), spontaneous middle *-eci* constructions represent events construed as taking place of their own accord – in these two cases, ‘the computer turning on and off’ and ‘the shoelace coming undone’. The affected entities – such as *khemphyuthe* ‘computer’ in (6) and *i sinpalkkun* ‘this shoelace’ in (7) – are conceived as both Initiator and Endpoint. However, no volition is involved in the initiation of the event (see Kemmer 1993); rather the event is construed as occurring autonomously, as is the case with *khye-(e)cy* ‘turn on’ and *kk(u)-eci* ‘turn off’ in (6) and *phwul-ecy* ‘become untied’ in (7).

- (6) *khemphyuthe-ka catongulo khye-(e)cy-ess-ta kk(u)-eci-nun*
 computer-NOM automatically turn.on-MM-DEC turn.off-MM-PRES:ATTR
cungsang-i cacwu palsayngha-pnita.
 problem-NOM frequently occur-DEC
 ‘The computer frequently turned on and off automatically.’¹

- (7) *ai kwu i sinpalkkun-i way phwul-ecy-ess-na?*
 DM this shoelace-NOM why untie-MM-PST-Q
 ‘Oops, how come this shoelace got untied?’

[*Sejong ContemporaryWritten Corpus #3B100005*]

Spontaneous middles also represent change-of-states. In Examples (6) and (7) above, the middle marker *-eci* forms spontaneous middle constructions in which the computer in (6) repeatedly changed from a state of being ‘turned on’ to being

1. (6) is extracted from the blog *Khemchichothal* (<http://mycom.kr/951>).

‘turned off’ again and again without human intervention, and the shoelace in (7) has – frustratingly enough – changed from being ‘tied’ to being ‘untied’.

The middle marker *-eci* can also be combined with adjectives to form inchoative intransitive verbs, i.e. verbs that specifically focus on the entry-point or initial phase of a newly-changed state, as seen in (8) and (9). The inchoative middle often indicates a progressive change of state, as in the case of *kanuleci-* (Adj. *kanul-* + MM *-eci*) in (8) which conveys an incremental sense of ‘getting thinner’, and *caymisseci-* (Adj. *caymiss-* + MM *-eci*) in (9) which conveys an escalating sense of ‘getting more interesting.’ From an inherent lexical aspect (or *aktionsart*) perspective, both the inchoative middle and the spontaneous middle share in common a telicity (‘End-point’) feature involving a change-of-state.

(8) *o moksoli-ka te kanul-ecy-e-yo?*

INTJ voice-NOM more be.thin-MM-LNK-POL

‘Oh, does the voice get thinner?’

[*Sejong* Contemporary Spoken Corpus #7CM00008]

(9) A: *kulaytwu yosay tul-ese wuli-nala yenghwa manhi*

at.any.rate these.days enter-as 1PL-country film a.lot

caymiss-ecy-ess-ci?

be.interesting-MM-PST-SFP

‘At any rate, these days, have the films in our country got more interesting?’

B: *ung.*

yes

‘Yes.’

[*Sejong* Contemporary Spoken Corpus #4CM00011]

Along with spontaneous and inchoative middles, *-eci* is also used in the expression of facilitative middles, which as noted in Kemmer (1993; see also Faltz 1977) include expressions indicating ease or difficulty of occurrence of an activity, as in (10), expressions involving quality judgments, as in (11), and expressions of intrinsic ability of an object to undergo a particular event or process, as in (12).

(10) *ku::~ hwacangsil-eyse cakkwu mwulki-ka iss-nun tey-se*

INTJ restroom-LOC repeatedly moisture-NOM exist-PRES:ATTR place-LOC

cal nem-eci-n-tanun-kecyo.

easily go.over-MM-PRES-EVID-SFP

‘In restrooms, over and over again, in the damp places, it is said that people fall down easily.’

[*Sejong* Contemporary Spoken Corpus #8CM00002]

(11) A: *i polpheyn aysse saw-ass-te-ni Cayhak-oppa-ka mwe*
 this ballpoint.pen carefully buy-PST-RETRO-as PN-elder.brother-NOM what
lakule-nun-ci a(l)-nya, ya weynmanha-myen hana
 say-PRES:ATTR-NMLZ know-Q INTJ be.possible-if one
cangmanhay-la.

buy-IMP

'As I chose and bought this ballpoint pen most carefully, do you know what Cayhak said? "Hey, if it's possible, buy a (good) one."'

B: *mac-e ce-key cincca ttak cektangha-ci anh-nya?*

be.right-SFP that.thing really right be.suitable-NMLZ NEG-Q

'(You are) right, the ballpoint pen (you bought) is really good, isn't it?'

A: *cal ss(u)-ecy-e.*

well write-MM-SFP

'It writes well.'

[*Sejong Contemporary Spoken Corpus #4CM00005*]

(12) A: *hwullahwuphu-to payk-pen tolli-kwu.*

hula hoop-also hundred-times spin-and

'I (usually) spin the hula hoop a hundred times.'

B: *um kuntey cal ha-tay toykey.*

yes DM well do-SFP extremely

'Yes, you do extremely well.'

A: *nay-ka kumantwu-ki cenkkaci-nun an ttel-eci-canha.*

1SG-NOM stop-NMLZ until-TOP NEG drop-MM-SFP

'Until I stop (spinning the hoop), the hoop never falls (below my waist).'

B: *oo i casinkam.*

INTJ this self-confidence

'Oh, such self-confidence!'

[*Sejong Contemporary Spoken Corpus #8CM00007*]

In (10), the middle marker *-eci* in combination with the verb *nemp-* 'go over' and the adverb *cal* 'easily' contributes to a facilitative middle construction that expresses the ease of occurrence of an action (*cal nem-eci-* 'falls down easily'). In (11), the facilitative middle construction *cal ssecye*, derived from a combination of the adverb *cal* 'well' + *ssecye* (*ssu-* 'write' + MM *-eci* + SFP *-e*), is associated with the speaker's expression of a quality judgment, in this particular instance referring to a ballpoint pen that 'writes well'. The facilitative middle construction in (12) involves the expression of intrinsic ability of the speaker to swirl the hoola hoop such that 'the hoop never falls [below the speaker's waist]'. Worth noting is that similar to other languages such as English (O'Grady 1980), a facilitative interpretation for Korean *-eci* constructions typically requires the presence of an adverbial modifier (e.g. *cal* 'easily, well').

2.2 Korean passive marker *-eci*

As noted in § 2.1, Korean suffix *-eci* is employed to form a middle construction where (i) the subject is the affected entity, and (ii) the initiator of the event or process is the same as the affected participant or the end-point. As shown in (13) and (14), the suffix *-eci* is also used in the formation of passive constructions, where an affected entity is likewise the subject. However, in contrast with middle constructions, the Initiator and the Endpoint in passive constructions are distinct entities. In (13), the affected entity or the Patient is *choycho-uy yuniksi* ‘the first UNIX’, while the initiator of the event or the Agent is *peyl-yenkwuso-eyse khemphyuthe kwahakca-i-n Ken Thompson* ‘Ken Thompson, who is the computer scientist at Bell Labs.’ Likewise, in (14), the affected entity or the Theme, *twu nwun-uy nophi-lul kyocengha-nun swuswul* ‘the surgery to correct the height of both eyes’, is not the initiator of the event. The initiator or the Agent is not overtly presented in (14) but can be understood and restored in the context.

- (13) *choycho-uy yuniksi-nun peyl-yenkwuso-eyse khemphyuthe*
 the.first-GEN UNIX-TOP Bell-Labs-LOC computer
kwahakca-i-n Ken Thompson-eyuyhay mantul-ecy-ess-ta.
 scientist-COP-PST:ATTR Ken Thompson-by make-PASS-PST-DEC
 ‘The first UNIX was made by the computer scientist Ken Thompson at Bell
 Labs.’ [Sejong Contemporary Written Corpus #2BH9961]
- (14) *kwuknay-eyse cheumulo twu nwun-uy nophi-lul kyocengha-nun*
 domestic-LOC for.the.first.time two eye-POSS height-ACC correct-PRES:ATTR
swuswul-i hayngha-y(e)cy-ess-ta.
 surgery-NOM do-PASS-PST-DEC
 ‘The surgery to correct the height of both eyes was done domestically for the
 first time.’ [Sejong Contemporary Written Corpus #2BA93A24]

Another important difference is that, unlike its passive counterpart, middle *-eci* constructions do not express any Agent, whether explicitly or implicitly. As shown in Examples (10) to (12) earlier, there is no external Agent in the middle construction. On the other hand, there exists an Agent in the passive, regardless of whether it is expressed overtly or not (Keenan 1985), as seen in (13) and (14). In (13), the external Agent (*Ken Thompson*) appears overtly, whereas in (14), there is no overt Agent but the implicit Agent is understood to exist in the construction. Whereas the initiator of the event in the middle construction is at the same time the affected participant or endpoint (e.g. *the hoop* in (12)), the initiator of the event in the passive construction (e.g. *the scientist Ken Thompson* in (13) and *the doctor* in (14)) is not the same as the endpoint of the event, i.e. the affected participants *UNIX* in (13) and *the surgery* in (14) respectively.

Yet another difference is that passive *-eci* constructions frequently focus on the event or process that brings about the result state, which is not surprising given that passive constructions encode an Agent, as shown in (13) and (14), whereas middle *-eci* constructions often express a result state that holds after some event or process, as in (15). In addition, facilitative middles which encode some intrinsic ability or quality share similarities with generic sentences, as shown in (16). This is consistent with Keyser & Roeper's (1984: 384) and Condoravdi's (1989: 17) general observation that middles are sometimes generic sentences. Hence, the facilitative middles are restricted to the simple present tense like generic sentences, or more often to bare forms unaccompanied by tense markers (see Table 1 and more detailed discussion in § 4.1).

(15) *kwutwukkun-i ecello phwul-ecy-ess-ta*.²
 shoelace-NOM by.itself loosen-MM-PST-DEC
 'The shoelace loosened by itself.'

(16) *sonthop-i cal pwus(u)-ecy-e-yo!*³
 nail-NOM easily break-MM-LNK-POL
 '(Finger) nails break easily!'

In this section, we have identified the voice marking functions of Korean suffix *-eci*, focusing on the three situation types associated with middle *-eci* constructions (namely, spontaneous, inchoative and facilitative) and differentiating between the middle and passive constructions.

3. Development of voice marker *-eci* from adversative to non-adversative contexts

Crosslinguistically, it has been noted that passive morphology sometimes develop out of middle morphology, especially out of 'anticausative' (or spontaneous) middle voice markers (see Haspelmath 1987; Klaiman 1988; Heine & Kuteva 2002). This is the case with Korean, with suffix *-eci* already attested as a middle voice marker in Hangul texts from the 15th century (Middle Korean), and its passive use emerging later in the 18th century (Early Modern Korean) (see Ahn & Yap 2017 for a detailed diachronic account). Below we summarize previous findings

2. (15) is extracted from *onlain kanata* (online Q & A of Korean provided by National Institute of Korean language (https://www.korean.go.kr/front/onlineQna/onlineQnaView.do?mn_id=216&qna_seq=175528)).

3. (16) is extracted from Pyengsam Lee's youtube channel (<https://www.youtube.com/watch?v=IskUNr63bDA>).

on the diachronic development of *-eci* as a middle and passive marker, and at the same time elaborate on the increasing neutralization of the adversative semantics in both middle and passive *-eci* constructions over time.

In brief review, the etymology of *-eci* has been traced to an intransitive verb *ti-* meaning ‘fall, collapse, disappear’ (Ko 1997; Lee 2001; Jeong 2006). As noted in Ahn & Yap (2017), this unaccusative verb *ti-* often combines with other verbs to form V_1 -*e-ti* serial verb constructions, with infinitival suffix *-e* as the linking element between the verbs, and unaccusative verb *ti-* frequently inducing an adversative and resultative reading.⁴ These V_1 -*e-ti* serial verb constructions paved the way for the rise of spontaneous middle *-eci* constructions, with tokens attested as early as the 15th century. The reanalysis of the V_1 -*e-ti* serial verb construction into a V_1 -*eti* ~ V_1 -*eci* spontaneous middle construction was facilitated by the semantics of spontaneity (and often adversity) strongly associated with unaccusative verbs such as *ti-* ‘fall, collapse, disappear’. Both *ti-* predicates and spontaneous *-eci* constructions are intransitive and involve a subject-affectedness plus sudden change-of-state reading. This is illustrated in (17), where both serial verb construction *sot-a-ti-* (pour-LNK-fall) and spontaneous middle *sot-ati-* (pour-MM) yield the same interpretation: ‘(the water of the ponds) has all poured away’.

- (17) *ilcel kangha-i-mye nayh-i-mye wumul-i-mye mos-i ta*
 all river-LNK-CONN stream-LNK-CONN well-LNK-CONN pond-NOM all
sot-a-ti-ye/sot-ati-ye mul-i ta yewi-o.
 pour-LNK-fall-LNK/pour-MM-LNK water-NOM all be.dry-CONN
 ‘All the rivers, streams, wells, and ponds are dry.’
 (Lit. ‘The water of all the rivers, streams, wells, and ponds has poured away
 and they are (now) all dry.’)
 (1447, *Seokposangcel* 23.txt (19); cited in Ahn & Yap 2017: 445)

Through extended use (via affixation to a wider range of verb types, e.g. extending beyond unaccusative verbs such as ‘fall’ to unergative ones such as ‘jump’) and through subsequent “semantic bleaching”, a process by which more abstract grammatical meanings arise (see Hopper & Traugott 2003; Eckardt 2006; *inter alia*), *-ti* (as well as its phonological variant *-ci*) in *-ati* ~ *-aci* / *-ety* ~ *-eci* constructions loses the adversative sense of ‘fall, collapse, disappear’ in some contexts and acquires a more generalized ‘change of state’ interpretation, as seen in unergative intransitive verbs with non-adversative readings such as *ptuyyena(li)-* ‘jump out’ in (18).

4. The linking element *-e* is sometimes realized as *-a*.

- (18) *elAm-i muntuk phul-ety-e koki is-ye ptuyyena(li)-kenal.*
 ice-NOM suddenly undo-MM-because fish exist-LNK jump-CONN
 ‘Since the ice suddenly melted (< ‘Since the surface of the ice suddenly broke’),
 fish jumped out of the water.’
 (1617, *Tongkwuksinsoksamkanghayngsilto*; cited in Ahn & Yap 2017: 446)

This development from an adversative marker to a generalized neutral voice marker is also found in other languages. In Thai, for example, the adversative passive marker *thiuk* has undergone meaning changes along the cline ‘to touch, hit on the point’ > ‘to undergo (an unfavourable experience)’ > adversative passive > non-adversative passive (Narrog & Heine 2011: 538). The change from adversative to non-adversative passive in Thai is accompanied by phonological and morphosyntactic tightening: there is no intervening element between *thiuk* and the modified verb (Prasithratsint 2006; see also Narrog & Heine 2011). A tightening process can also be seen in the *sot-a-ti* > *sot-ati* development for Korean voice marker *-eci*.

Among the three types of middle constructions (spontaneous, inchoative, and facilitative), it is the spontaneous *-eci* constructions that are more prone to retaining the adversative semantics of the source lexeme *ti*- ‘fall, collapse, disappear’. This is not surprising, given that the spontaneous middle is the first extended use of the V_1 -*e-ti* serial verb constructions. Such inheritance is also consistent with a robust “principle of persistence” commonly seen in language change, whereby “details of [a form’s] lexical history may be reflected in constraints on its grammatical distribution” (Hopper 1991: 22). Our present analysis of the *Sejong* Contemporary Spoken Corpus reveals that 88% (658 out of 748 tokens) of spontaneous middle *-eci* constructions co-occur with verbs with adversative semantics. Examples of such verbs are *ttel*-‘drop’, *ccic*-‘tear’, *hel*-‘wear out’, *kkunh*-‘cut’, *kkay*- or *kesk*-‘break’, and *thul*-‘twist’. These spontaneous constructions often involve adverse consequences for their subject, with examples attested as early as Middle Korean during the 15th century as shown in (19).

- (19) *motin pAlAm-i nil-e cip-to hAyapAli-mye⁵ namo-to*
 severe wind-NOM blow-and house-also tear.down-CONN tree-also
kesk-eti-mye.
 break-MM-CONN
 ‘As the severe wind blew, a house got torn down and a tree collapsed.’
 [1447, *Sekposangcel* 23: 22]

5. We have both *A* and *a* in Middle Korean. *A* is the older form of *a*, and both were used in Middle Korean.

Our present study based on both historical and contemporary data from the *Sejong* corpus reveals that, over time, as the use of voice marker *-eci* continues to extend to a wider range of verb/predicate types (e.g. unaccusative > unergative > adjective), the adversative meaning of the source lexeme *-ti* becomes increasingly bleached and even inchoative middle *-eci* no longer necessarily comes to coincide with adjectives referring to adversative states, or at least states perceived as unfortunate or problematic for the speaker. As seen in (20), inchoative middle *-eci* can co-occur with adjectives such as *himtul-* ‘hard, difficult’ referring to an adverse state, but as seen in (21), the inchoative middle *-eci* can also co-occur with non-adverse adjectives such as *masiss-* ‘delicious’. Example (20) refers to an adversative context, where a state of affairs (in this case, ‘it is getting more difficult to make friends’) is signaled by the speaker as problematic.⁶ On the other hand, Example (21) refers to a context where the cold noodle dish in a particular restaurant is getting more delicious than before – a consequence which would be considered far from adversative, and in fact rather beneficial and highly desirable to the speaker.

- (20) *nai tul-myense cemcem salam sakwi-ki-ka himtul-ecy-e.*
 age get-as gradually man make.friends-NMLZ-NOM be.difficult-MM-IE
 ‘As we get older, it gets more difficult to make friends.’
 [*Sejong* Contemporary Spoken Corpus #4CM00089]

- (21) *yeki nayngmyen te masiss-ecy-ess-ta yeysnal-pota.*
 here cold.noodle more be.delicious-MM-ANT-DEC old.time-than
 ‘Cold noodle (in this restaurant) has got more delicious than before.’
 [*Sejong* Contemporary Spoken Corpus #6CM00057]

Passive uses of *-eci* emerged later in the 18th century (Early Modern Korean) as *-eci* constructions extended from intransitive predicates to transitive ones, as seen with the transitive verb *kkunh-* ‘cut’ in (22). As noted in Ahn & Yap (2017), there are also some semantic links between middle and passive *-eci* constructions: both constructions lack a volitional subject, and inchoative middles in particular often share with passives a resultative interpretation, which allows for *-eci* to extend from inchoative to passive uses.⁷ This development is also consistent with a robust typological tendency in which resultatives frequently develop passive functions (see Talmy 1985: 92; Nedjalkov & Jaxontov 1988: 49; Bybee et al. 1994: 68; Fleisher 2006: 229).

6. This is similar to the English adversative *get*-passive (see Chappell 1980; Carter & McCarthy 1999).

7. As noted in § 2, inchoative middle and passive differ slightly in that the inchoative construction focuses on a result state that holds after a change-of-state event or process, whereas the passive construction highlights the event or process that brings about the result state.

- (22) *cyokha-uy kantyang-i ecey nal-uy moncyes*
 nephew-DAT liver.bowels-DAT yesterday day-LOC first
kkunh-ecy-es⁸-nAncila.
 cut-PASS-PST-SFP

‘Yesterday, my nephew felt the arrows of heartbreak first.’

(*Lit.* ‘Yesterday, the liver and bowels of my nephew were cut first (by the arrows of heartbreak).’)

(18th century, *ulpyengyenhaynglok8.txt*(76); cited in Ahn & Yap 2017: 452)

By the 20th century, *-eci* also made further extensions within the middle voice domain, giving rise to facilitative uses, as seen in (23). As noted in earlier works (e.g. Kemmer 1993), the rise of facilitatives is typically dependent on a process of ‘subjectification’, whereby the speaker encodes meanings into his/her utterances that express his/her attitudes and beliefs (see Traugott 1989; 1995). As seen in contemporary usage such as (23a) and (23b), the former reproduced from (16) in § 2, the speaker’s qualitative judgment of spontaneous and inchoative events is frequently expressed by adding adverbials, such as *cal*, which can mean ‘easily’ or ‘well’, with the absence of tense marking inducing a generic interpretation that is compatible with potential and abilitative readings. Whereas (23a) expresses a negative evaluation, (23b) expresses a positive one. Both negative and positive evaluations are possible because *-eci* sometimes still retains, but is generally no longer bound by the adversative semantics of its source lexeme *ti-* ‘fall’.

- (23) a. *sonthop-i cal pwus(u)-ecy-e-yo!* (=16)
 nail-NOM easily break-MM-LNK-POL
 ‘(Finger) nails break easily!’
- b. *i neyil pholliswi limwupe-ka cal ciw-ecy-e-yo!*
 this nail polish remover-NOM well remove-MM-LNK-POL
 ‘This nail polish remover works well!’

Both the passive and facilitative uses of *-eci* have also undergone semantic generalization, and their usage is not confined to adversative contexts, as shown in (24) and (25). In (24), passive *-eci* co-occurs with the verb *ilwu-* ‘make’, which does not signify adversative semantics, nor is the context of use adversative in nature. The example refers to a context where the state of affairs (namely, the presentation and discussion being conducted on the development of various types of teaching materials as well as a forthcoming learners’ dictionary) is not signaled by the speaker as adversative or problematic. As shown in (25), the facilitative middle *-eci* can likewise coincide with a non-adversative context, where *-eci* implies the

8. The past tense marker was spelled as *-es* instead of *-ess* prior to the announcement of the Proposal for Unified Korean Orthography in 1933.

inherent benefit of the habit of walking side-by-side holding hands, namely, that one would then not easily stumble and fall.

- (24) *ecey chesc cay-nal-ey-nun, e~ chespenccay sseysyen-ulo, e~ kicho-yenkwu*
 yesterday first-day-LOC-TOP FIL first session-as FIL basic-research
pwunkwa-eyse e~ hyencay ilwu-eci-koiss-nun kakcong
 subcommittee-DAT FIL present make-PASS-PROG-ATTR all.sorts.of
kyocay kaypal-kwa kutaumey haksupsacen
 teaching.materials development-with next learners.dictionary
kaypal-uy hyenhwang-eytayhayse, e~ palphyo-wa kuliko
 development-GEN situation-about FIL presentation-with and
cinciha-kwu hwalpalha-n tholon-i ilwu-ecy-ess-supnita.
 be.serious-and be.active-PST:ATTR discussion-NOM make-PASS-PST-SFP
 ‘Yesterday, on the first day, uh...as the first session, uh...concerning the presen-
 tation being made...uh...by the basic research committee, on the development
 of all sorts of teaching materials along with the situation about an upcoming
 learners’ dictionary, uh...a presentation and a serious and active discussion
 was made.’ [Sejong Contemporary Spoken Corpus #4CM00116]

- (25) *ce-nun-yo ceyil cohaha-nun key mwe-nya-myen-yo*
 ISG (< DEM.DIST)-TOP-POL best like-PRES:ATTR NMLZ what-PRT-if-POL
son-cap-ko phyenghayngulo ka-nun ke-eyyo phyenghayngulo
 hand-hold-and in.parallel.with go-PRES:ATTR NMLZ-POL in.parallel.with
eti-lul ka-tun-ciyo, son-cap-ko ka-nun salam-un-yo,
 where-ACC go-may-POL hand-hold-and go-PRES:ATTR man-TOP-POL
nem-eci-ci anh-supnita.
 go.over-MM-NMLZ NEG-SFP.POL
 ‘As for me, what I like most, if I may say so, is to walk side-by-side holding
 hands. Whenever one walks in parallel (with others), the one who walks hold-
 ing hands (with others) does not fall.’ [Sejong Contemporary Spoken Corpus #5CM00072]

Earlier diachronic analysis in Ahn & Yap (2017) has identified a semantic extension from middle to passive uses of voice marker *-eci*, with extensions within the middle marking domain progressing from spontaneous to inchoative to facilitative uses. Our present follow-up analysis, based on *-eci* tokens from both historical and contemporary texts in the *Sejong* corpus, reveals that initially *-eci* constructions were often associated with adversative readings (with 50 out of 54 *-eci* tokens in Middle Korean yielding an adversative interpretation), but over time the adversity constraint was relaxed and the use of *-eci* middles and passives was extended to verbs without any inherent adversative reading (e.g. *masiss-* ‘be delicious’ in (21)). Extensions of *-eci* to transitive verbs such as *ilwu-eci* ‘gets achieved/done’ in (24), which are neither intransitivized nor adversative, further paved the way for

the emergence of *-eci* as a semantically bleached and increasingly prolific ‘general’ passive marker, which explains to some extent why the passive use was the first function of *-eci* to have caught the eye of earlier researchers (e.g. Choi 1961[1937]; Kim 1980; Bae 1986; Jeong 2002).⁹ The availability of non-adversative uses of *-eci* spontaneous and inchoative middles in Modern Korean helped to pave the way for facilitative middles in Contemporary Korean, with potentiality and ability readings often expressing beneficial rather than adversative outcomes.

Judgments about adversative readings in Contemporary Korean are not emergent solely from the semantics of the verbs or adjectives preceding *-eci* but are also emergent and grounded in the interaction. (26) below is a clear instance of this, where the speaker’s approval or disapproval of the evaluation system of a non-profit organization can be gauged from the context, and not just from the verb *ilwu-* ‘make, achieve’ followed by *-eci*. As we can see in (26), the verb *ilwu-* ‘make, achieve’ does not have inherent adversative semantics, but the adversative reading of the passive *-eci* construction emerges from the context where, in this particular instance, the evaluation of achievements in the said non-profit organization gets done by rule of thumb, which is construed by the speaker as inappropriate, problematic, undesirable, and unfortunate, and hence in clear need of revision.

- (26) P1: *kiep-kathun kyengwu-ey-nun kulen maynyuel-ina,*
 corporation-like case-LOC-TOP such manual-or
sengkwa-lul ku, phyengka-halswuis-nun pangpep-tul ta
 accomplishment-ACC FIL evaluate-can-PRES:ATTR way-PL-NOM all
iss-canha.
 exist-SFP
 ‘In the case of corporations, there are some manuals or ways to evaluate
 accomplishments.’
- P2: *e,*
 yes
 ‘Right.’
- P1: *kuntey piyengli-tanchey-kathun kyengwu-ey-nun, kukey*
 by.the.way nonprofit-organization-like case-LOC-TOP that.thing
nemwu cwumekkwukwusik-ulo ilwu-eci-kwu,
 too rule.of thumb-by achieve-PASS-and
 ‘By the way, in the case of nonprofit organizations, it (=the evaluation)
 gets done by rule of thumb.’

9. Another possible reason is that, until fairly recently, causative and passive constructions were more extensively researched and much better understood than middle constructions, both within formal and functionalist frameworks (e.g. Shibatani 1976, 1985; Keenan 1985; Kemmer 1993).

um kulen ke-ey tayhayse, maynyuel-ina phyengka pangpep-ey
 FIL such thing-LOC about manual-or evaluation way-LOC
tayhayse komin-haypwa-yatoy-ci-anh-nya
 about care-try-should-NMLZ-NEG-IE
 ‘Um, (the nonprofit organization) should try to think about ways to evaluate (achievements), shouldn’t they?’
 [Sejong Contemporary Spoken Corpus #6CM00077]

The role of context on adversative vs. non-adversative interpretations of passive constructions can be seen in other languages as well. Consider the Japanese indirect or possessive passives, which are generally believed to encode adversative meaning (Shibatani 1994; Oshima 2003; Ono 2013). As seen in (27), the indirect passive construction has a connotation that the subject *Taroo* is adversely affected by the event denoted by the predicate, in this case *kodomo-ni nak-are-ta* ‘the crying of the child’ (Ono 2013: 313). In (28a), the subject *Taro* is adversely affected by the action or event denoted by the verbal predicate *Hanako-ni kami-o kir-are* ‘had (his) hair cut by Hanako’, but as seen in (28b), if *Taro* had benefited from the hair-cutting, a benefactive construction with *-te morau* rather than the passive *-are* would have been used (Oshima 2006: 148).

- (27) *Taroo-ga kodomo-ni nak-are-ta*
 Taro-NOM child-DAT cry-PASS-PST
 ‘Taro was adversely affected by the child’s crying.’ (Ono 2013: 313)
- (28) a. *Taro-ga Hanako-ni kami-o kir-are-ta.*
 Taro-NOM Hanako-DAT hair-ACC cut-PASS-PST
 ‘Taro had his hair cut by Hanako.’ (Oshima 2006: 148)
- b. *Taro-ga Hanako-ni kami-o kit-te-morat-ta.*
 Taro-NOM Hanako-DAT hair-ACC cut-GER-BEN:PASS-PST
 ‘Taro had his hair cut by Hanako.’ (Oshima 2006: 148)

However, the connotation of adversity conveyed by the Japanese passive *-are* can also be easily canceled with contextual information. As seen in (29), adding the expression *sarani otokomae-ni nat-ta* ‘became more good-looking’ yields a benefactive reading in which *Taro* voluntarily had his hair cut by *Hanako* in order to look better (Oshima 2006: 149). Thus, judgments about adversative readings in Contemporary Korean and other languages (e.g. Japanese) are not emergent solely from the semantics of the verbs or adjectives preceding the voice markers but are emergent and grounded in the context and interaction as well.

- (29) *Taro-wa Hanako-ni kami-o kir-are-te sarani otokomae-ni nat-ta.*
 Taro-TOP Hanako-DAT hair-ACC cut-PASS-GER more handsome become-PST
 ‘Taro became more good-looking, having had his hair cut by Hanako.’
 (Oshima 2006: 149)

4. Usage frequency of *-eci* middle and passive constructions

In this section, we examine the usage frequency of *-eci* constructions in Contemporary Korean, with special attention to the distribution of grammatical tense and voice functions across text-type/genre. Our analysis is largely based on data from the *Sejong* Contemporary Spoken Corpus, which comprises 805,646 words. This spoken corpus consists of 200 naturally-occurring conversations collected from various settings such as college students' conversations on campus, church parishioners' gatherings, high school students' conversations, dialogues in a restaurant, telephone conversations, lectures, monologues, sermons, broadcast talks, etc.¹⁰ These discourses were transcribed as part of the 21st Century *Sejong* Project.

4.1 Distribution of tense-aspect marking and voice functions in *-eci* constructions

In terms of tense-aspect marking, *-eci* can occur in conclusive clauses with unmarked present tense, as in (30a), present tense morphemes *-n* (30b) and *-nun* (30c), and past tense or perfective aspect morpheme *-ess* (30d). In attributive clauses, it can occur with present attributive morpheme *-nun* (30e), perfective/past attributive morpheme *-n* (30f), and future attributive morpheme *-l* (30g).¹¹

- (30) a. *sal-ki-ka cemcem te himtul-eci-ko*
 live-NMLZ-NOM gradually more be.difficult-MM-and
sakmakha-y(e)cy-ess-ta.
 be.dreary-MM-PST-DEC
 'It gradually got more difficult and dreary to live.'
- b. *sal-ki-ka cemcem himtul-ecy-n-ta.*
 live-NMLZ-NOM gradually be.difficult-MM-PRES-DEC
 'It gradually gets more difficult to live.'

10. The text types vary in terms of total word counts. The word counts within the informal sub-corpus are as follows: daily conversations (201,199 words); theme-based conversations (131,428 words); telephone conversations (13,651 words); conversations in class (36,906); group studies (13,446 words); monologues in storytelling format (123,111 words); and discussions (26,229 words). Within the formal sub-corpus, the word counts are: lectures (180,440 words); presentations (25,373 words); sermons (14,062 words); sports broadcasts (13,559 words); other broadcast talks (5,649 words); and opening/closing speeches (5,179 words).

11. We wish to thank an anonymous reviewer for suggesting that we look at distinctions between tense-marking in *-eci* constructions across conclusive vs. attributive clauses. The reversed asymmetry between the tense marking in conclusive and attributive clauses for inchoative uses of *-eci* (elaborated as part of the discussion that follows in the body of the paper) was pointed out by our reviewer.

- c. *sal-ki-ka cemcem himtul-ecy-nun-kwun.*
live-NMLZ-NOM gradually be.difficult-MM-PRES-DEC
'It gradually gets more difficult to live.'
- d. *sal-ki-ka cemcem himtul-ecy-ess-ta.*
live-NMLZ-NOM gradually be.difficult-MM-PST-DEC
'It gradually got more difficult to live.'
- e. *cemcem himtul-eci-nun seysang sal-i*
gradually be.difficult-MM-PRES:ATTR life live-NMLZ
'life (lit. living a life) which gradually gets more difficult'
- f. *olay-ceney himtul-eci-n seysang sal-i*
long-ago be.difficult-MM-PST:ATTR life live-NMLZ
'life (lit. living a life) which got more difficult long ago'
- g. *te himtul-eci-l seysang sal-i*
more be.difficult-MM-FUT:ATTR life live-NMLZ
'life (lit. living a life) which will get more difficult'

The usage frequency distribution of *-eci* in terms of tense-aspect marking and voice functions in conclusive and attributive clauses is highlighted in Table 1.

As seen in Table 1, in conclusive clauses, *-eci* is most frequently used in the unmarked present tense form (544 tokens out of a total of 1,355 tokens, i.e. 40.2% of the time). This holds true for spontaneous and facilitative middle uses of *-eci*. A possible reason why *-eci* in the unmarked present tense form is found with such high frequency is that it can occur with a variety of sentence final particles such as *-ci*, *-e*, and *-ney* or linkers such as *-ko*, *-e*, and *-na*, whereas *-ecin* (*-eci* + Present tense *-n*) occurs only with the sentence final particle *-ta*, as in (30b) and *-ecinun* (*-eci* + Present tense *-nun*) can occur only with the sentence final particle *-kwun(a)/kwunyo* as in (30c).

Table 1 also shows that apart from *-eci* in the unmarked present tense form, spontaneous and inchoative middle uses of *-eci* also frequently occur with perfective/past tense marker *-ess*. However, there are significantly different patterns between spontaneous middle and inchoative middle in terms of their occurrence with tense marking. Whereas *-eci* in the unmarked present tense form is used for the spontaneous middle meaning much more frequently than *-eci* with the perfective/past tense *-ess* in the ratio of approximately 3:2 (316 vs. 193 tokens), the reverse is true for inchoative middle readings. That is, *-eci* with perfective/past tense *-ess* is used for the inchoative middle meaning far more frequently than *-eci* in the unmarked present tense form (206 vs. 132 tokens respectively). This is associated with the fact that inchoative middles express change-of-states, and the perfective/past tense in general also marks change-of-states with clear results (see Winkler & Padakannaya 2014). The semantic affinity between inchoative middle and perfective/past tense increases the likelihood of the inchoative middle marker

Table 1. The usage frequency distribution of *-eci* in accordance with their inflectional forms and functions in conclusive and attributive clauses in the *Sejong* Contemporary Spoken Corpus

	Middles			Passive	Total no. of <i>-eci</i> tokens
	Spontaneous	Inchoative	Facilitative		
Conclusive clauses:					
<i>-eci</i> (<i>-eci</i> + Unmarked Present tense)	316	132	19	77	544 (40.2%)
<i>-eci-n</i> (<i>-eci</i> + Present tense <i>-n</i>)	30	7	1	10	48 (3.5%)
<i>-eci-nun</i> (<i>-eci</i> + Present tense <i>-nun</i>)	0	2	0	0	2 (0.2%)
<i>-ecy-ess</i> (<i>-eci</i> + Perfective/Past tense <i>-ess</i>)	193	206	0	50	449 (33.1%)
Attributive clauses:					
<i>-eci-nun</i> (<i>-eci</i> + Present attributive <i>-nun</i>)	69	14	0	20	103 (7.6%)
<i>-eci-n</i> (<i>-eci</i> + Perfective/Past attributive <i>-n</i>)	54	13	0	52	119 (8.8%)
<i>-eci-l</i> (<i>-eci</i> + Future attributive <i>-l</i>)	65	22	0	3	90 (6.6%)
Total no. of <i>-eci</i> tokens	727 ¹² (53.7%)	396 (29.2%)	20 (1.5%)	212 (15.6%)	1,355 (100.0%) (100.0%)

co-occurring with perfective aspect or past tense marking. Facilitative uses of *-eci*, on the other hand, are almost always used in unmarked present tense (95% of the time; 19 out of 20 tokens), with occasional co-occurrences with present tense morpheme *-n*. This is consistent with the function of facilitative *-eci*, which is to help signal the speaker's subjective evaluation of the inherent (and hence timeless and generic-like) properties of the topic/subject NP, as in *i pheynun cal ssecinta* 'This pen writes well'.

12. In Ahn & Yap (2017), the total numbers of spontaneous middle and the inchoative middle were 748 and 399 respectively. As shown in Table 1, we have refined and revised our analysis of the diachronic data, and have now updated the number of tokens for the spontaneous middle (727 tokens) and for the inchoative middle (396 tokens). These changes in number of tokens do not affect the results of our analysis.

In the attributive constructions, *-eci* with present, perfective/past and future tense marking is used in spontaneous and inchoative middles as well as passive *-eci* constructions, but not facilitative ones. In passive constructions, *-eci* is used far more frequently with perfective/past attributive *-n* than with present attributive *-nun* or future attributive *-l* (52 vs. 20 vs. 3 respectively) as shown in Table 1. This is related to the fact that *-eci* with perfective/past attributive *-n* highlights a resultative interpretation, which is a feature frequently seen in passive constructions as well.

Contrary to the traditional notion that *-eci* is essentially a passive marker, this usage frequency distribution of *-eci* constructions in Table 1 also shows that in real usage, *-eci* is used as a middle marker far more frequently than as a passive marker (84.4% vs. 15.6%, almost 5.5 times higher). Among the three middle marking functions, *-eci* is employed in spontaneous constructions more frequently than in inchoative and facilitative constructions, in the ratio of approximately 36:19:1 (53.7% vs. 29.2% vs. 1.5%).

The usage frequency distribution of *-eci* constructions in Table 1 also synchronizes with our earlier diachronic observation that *-eci* has developed from a middle voice marker to a passive marker, more specifically from spontaneous middle (53.7%) to inchoative middle (29.2%) and then extending into passive (15.6%), before additional extensions emerged within the middle voice domain, in the form of the facilitative middle (1.5%). The first grammaticalized middle marker, i.e. spontaneous middle (15th century), is still the most frequently used (53.7%), whereas the last grammaticalized item, i.e. facilitative middle (20th century), is least frequent (1.5%). In light of the general observation in Traugott & Heine (1991: 9) that “the more grammaticalized a form is, the more frequent it is”, we can infer that the facilitative middle uses have only recently emerged. Such a grammaticalization account is also consistent with the diachronic evidence reported in Ahn & Yap (2017), where facilitative *-eci* constructions are reported to have emerged as late as the 20th century.

4.2 Distribution of voice-marking functions of *-eci* across text types

Our analysis of *-eci* tokens in the *Sejong* Contemporary Spoken Corpus indicates that the usage frequency distribution of middles and passives varies across text type. As shown in Table 2, *-eci* (with and without tense-aspect marking) is used as a middle and passive marker in both formal and informal texts (each comprising a total of 322,811 words and 482,835 words respectively), with *-eci* occurring with slightly higher frequency in the formal compared to informal register; i.e. 628 tokens/322,811 words (or 19.45 tokens per 10,000 words) in formal texts, and 727 tokens/482,835 words (or 15.06 tokens per 10,000 words) in informal texts. Worth noticing is the great variation across text types/genres within both registers, indicating that

the formal vs. non-formal distinction on its own is not a very reliable indicator of voice function.¹³

Table 2. Functional distribution of *-eci* across text types in the *Sejong* Contemporary Spoken Corpus¹⁴

	Middles			Passive
	Spontaneous	Inchoative	Facilitative	
<i>Formal texts</i>				
Lectures	96 (5.32)	228 (12.64) ¹⁵	98 (5.43)	7 (0.38)
Reports and Presentations	27 (10.64)	12 (4.73)	0	62 (24.44)
Sermons	13 (9.24)	1 (0.71)	1 (0.71)	5 (3.56)
Sports-broadcasts	25 (18.44)	12 (8.85)	0	1 (0.74)
Other broadcast talks	14 (24.78)	3 (5.31)	0	3 (5.31)
Opening/closing speeches	12 (23.17)	3 (5.79)	0	5 (9.65)
Sub-total of <i>-eci</i> tokens (N = 628 in 322,811 words or 19.45 per TThW)	319 (16.49)	129 (5.14)	8 (0.18)	172 (8.17)
<i>Informal texts</i>				
Daily conversations	192 (9.54)	112 (5.57)	4 (0.20)	3 (0.15)
Telephone conversations	6 (4.40)	12 (8.79)	2 (1.47)	5 (3.66)
Theme-based conversations	48 (3.65)	55 (4.18)	1 (0.08)	5 (0.38)
Conversations in class	32 (8.67)	22 (5.96)	2 (0.54)	7 (0.19)
Group Studies	1 (0.74)	9 (6.69)	0	1 (0.74)
Monologues (story-telling)	116 (9.42)	49 (3.98)	3 (0.24)	15 (1.22)
Discussions	13 (4.96)	8 (3.05)	0	4 (1.53)
Sub-total of <i>-eci</i> tokens (N = 727 in 482,835 words or 15.06 per TThW)	408 (5.91)	267 (5.46)	12 (0.36)	40 (1.12)
Total no. of <i>-eci</i> tokens (N = 1,355 in 805,646 words or 16.82 per TThW)	727 (11.20)	396 (5.30)	20 (0.27)	212 (4.65)

13. One of our anonymous reviewers provides the following succinct observation about the weak correlation between register (formal vs. informal texts) and voice functions (spontaneous, inchoative, facilitative, passive) for Korean *-eci* constructions: "Different individual text types manifest different functional distributions of *-eci*, which reveals that it depends on the nature of each text type rather than whether it is formal or informal."

14. The text types vary in terms of total word counts. Within the formal sub-corpus, the word counts are: lectures (180,440 words); presentations (25,373 words); sermons (14,062 words); sports-broadcasts (13,559 words); other broadcast talks (5,649 words); and opening/

Table 2 reveals that in terms of number of tokens per 10,000 words (or per TThW), *-eci* occurs most frequently as a spontaneous marker (11.20 per TThW), more often in formal texts (16.49 per TThW) than in informal ones (5.91 per TThW). The high incidence of spontaneous *-eci* constructions overall indicates that *-eci* is still most frequently used to express events occurring suddenly or unexpectedly without human intervention. In other words, *-eci* still often strongly retains much of the semantics of its lexical origin from the unaccusative verb *ti-* ‘fall’. On the other hand, facilitative *-eci*, which expresses intrinsic ability or quality of an entity, has the lowest frequency in formal texts (0.18 per TThW) as well as informal texts (0.36 per TThW). The low frequency of facilitative *-eci* constructions overall (0.27 per TThW) is consistent with its late appearance (20th century) – and still relatively new status – along the grammaticalization trajectory for *-eci* constructions in Contemporary Korean. As noted earlier in previous diachronic work (see Ahn & Yap 2017), the gradual relaxation of the telicity constraint paved the way for the extension of *-eci* constructions from spontaneous [+telic] uses to facilitative [–telic] uses. The rise of facilitative *-eci* constructions is also strongly associated with contexts-of-use that involve the speaker’s subjective evaluation or judgment about the inherent potential of an entity, which partly explains why facilitative *-eci* occurs slightly more frequently in informal texts than formal ones. Inchoative *-eci* occurs with fairly similar frequency in both formal and informal registers (5.14 and 5.46 per TThW respectively), while passive *-eci* generally occurs more frequently in formal texts (8.17 per TThW compared to 1.12 TThW for informal texts).

In terms of function across text type/genre, in formal texts, *-eci* occurs with very high frequency as a spontaneous middle marker in ‘opening or closing speeches’ (23.17 per TThW) and ‘broadcast talks’ (18.44 per TThW for sports, and 24.78 per TThW for other topics), while it is used very frequently as a passive marker in ‘reports and presentations’ (24.44 per TThW). In informal texts, on the other hand, *-eci* tends to occur within a lower frequency range across board, with *-eci* found more frequently as a spontaneous middle marker in ‘narrative story-telling monologues’ (9.42 per TThW)¹⁶ and ‘casual conversations’ (especially ‘daily conversations’ (9.54 per TThW)), and ‘conversations in class’ (8.67 per TThW)), and as an

closing speeches (5,179 words). The word counts within the informal sub-corpus are as follows: daily conversations (201,199 words); theme-based conversations (131,428 words); telephone conversations (13,651 words); conversations in class (36,906 words); group studies (13,446 words); monologues in storytelling format (123,111 words); and discussions (26,229 words).

15. The numbers are normalized based on the number of *-eci* tokens divided by the number of words for the relevant genres, then multiplied by 10,000.

16. This monologue is comprised of casual stories about films, fairy tales, love, friendship, job, etc.

inchoative marker in ‘telephone conversations’ (8.79 per TThW). These usage frequency patterns reveal a distributional bias in the functions of *-eci* that is influenced by the interaction of both register and text type/genre. More specifically, our analysis reveals that spontaneous and inchoative middle *-eci* constructions tend to occur with higher frequency in the formal register, such as sports/other broadcasts and public speeches, where omission of volitional agents help to highlight the event and/or convey a more objective stance on the part of the speaker. Passive *-eci* constructions are also favored in the formal register, particularly in reports and presentations, where objectivity and psychological distancing on the part of the speaker is more highly valued.

As seen in Table 3, the attributive forms of *-eci* (i.e. *-ecinun*, *-ecin*, and *-ecil*) occur with far lower frequency (only 3.90 per TThW compared to 16.82 per TThW for conclusive forms as seen in Table 2). The frequency of the attributive forms is slightly higher in formal than informal texts (5.61 and 2.75 per TThW respectively). This asymmetry is stronger within the spontaneous and passive voice marking domains, almost negligible within the inchoative domain, and not visible within the facilitative domain, where no attributive tokens were found within the *Sejong* corpus. Despite the small number of attributive tokens, it is worth noting that a similar pattern of stronger asymmetry for spontaneous and passive *-eci* constructions was found for the conclusive tokens as well (see Table 2), and likewise (almost) negligible asymmetry was observed for the inchoative and facilitative *-eci* constructions.

Table 3. Functional distribution of attributive *-ecinun*, *-ecin* and *-ecil* across text types in the *Sejong* Contemporary Spoken Corpus

	Middles			Passive
	Spontaneous	Inchoative	Facilitative	
<i>Formal texts</i>				
<i>-ecinun</i>	35 (1.08) ¹⁷	6 (0.19)	0	17 (0.53)
<i>-ecin</i>	22 (0.68)	2 (0.06)	0	41 (1.27)
<i>-ecil</i>	41 (1.27)	14 (0.43)	0	3 (0.09)
Sub-total of attributive <i>-eci</i> tokens (N=181 in 322,811 words or 5.61 per TThW)	98 (1.01)	22 (0.23)	0	61 (0.63)
<i>Informal texts</i>				
<i>-ecinun</i>	34 (0.70)	10 (0.21)	0	3 (0.06)
<i>-ecin</i>	32 (0.66)	11 (0.23)	0	11 (0.23)
<i>-ecil</i>	24 (0.50)	8 (0.17)	0	0
Subtotal of attributive <i>-eci</i> tokens (N=133 in 482,835 words or 2.75 per TThW)	90 (0.62)	29 (0.20)	0	14 (0.29)
Total no. of attributive <i>-eci</i> tokens words (N=314 in 805,646 or 3.90 per TThW)	188 (0.82)	51 (0.22)	0	75 (0.46)

5. Conclusion

In this paper, we addressed the question of whether *-eci* constructions serve middle or passive functions, or both. Our usage frequency analysis of data from the *Sejong* Contemporary Spoken Corpus reveals that *-eci* is used in present-day Korean not only as a passive marker but as a middle marker as well, and contrary to the traditional notion that *-eci* is essentially a passive marker, in real usage, *-eci* is far more frequently used as a middle marker than a passive marker (84.4% and 15.6% respectively based on the *Sejong* corpus, in the ratio of approximately 5.5:1).

Three types of middle functions were identified for *-eci* namely, spontaneous, inchoative, and facilitative (see also Ahn & Yap 2017). Middle *-eci* constructions differ from passive ones in terms of valence (i.e. number of core arguments). In middle constructions, the Initiator of the event or process is the same as the affected participant (also referred to as the End-point), whereas the Initiator and the End-point in passive constructions are distinct entities. In other words, middle *-eci* constructions are monovalent, while passive *-eci* constructions are bivalent, with the Initiator (or Agent) either explicitly or implicitly expressed. Another difference is that passive *-eci* constructions frequently focus on the event or process that brings about the result state, which is not surprising given that passive constructions encode an Agent (whether explicitly or implicitly), whereas middle *-eci* constructions often focus on the result state that holds after the event or process without any Initiator (or Agent) in view.

Crosslinguistically, previous studies have shown that the passive voice is often used to express adversity, and in some languages, the adversative passive markers have further developed into generalized-neutral passive markers (e.g. Thai *thuuk*). Korean middle and passive voice marker *-eci* has likewise extended its use from adversative to non-adversative contexts. The unaccusative verb *ti-* initially conveyed adversative meanings such as ‘fall’, ‘collapse’ or ‘disappear’, and the adversative semantics of this source lexeme *ti-* was often retained in the spontaneous marker *-eti*, which later was phonologically weakened to *-eci*. Over time the adversity constraint was relaxed and the uses of *-eci* middles and passives were extended to contexts without adversative reading. Our present findings reveal that judgments about adversative readings in Contemporary Korean are context-dependent. That is, the adversative readings of *-eci* constructions are not emergent solely from the semantics of the verbs or adjectives preceding *-eci* but are emergent and grounded in the interaction as well.

17. The numbers are normalized based on the numbers of *-ecinun*, *-ecin*, and *-ecil* tokens divided by the number of words for the relevant text, then multiplied by 10,000.

Adversative readings often evoke the speaker's subjective evaluation, and this frequent association has paved the way for the rise of facilitative uses of *-eci*, which essentially expresses the speaker's judgment of the quality or potential of an entity, whether it be an event (e.g. the act of doing something, as in *i sanccumiya nato ollakacinta* 'Climbing this mountain is easy for me') or a participant (e.g. instrument or means, as in *i pheynun cal ssecinta* 'This pen writes well'). The much later emergence of *-eci* as a facilitative marker is in large part due to the need for the neutralization of telicity constraints, through semantic extensions from [+telic] spontaneous situations/events to [-telic] facilitative ones. Our present analysis reveals a relatively low usage frequency for facilitative *-eci*, indicating that it is still at an early stage of grammaticalization.

As shown in Table 1 (see § 4.1), the usage frequency distribution of *-eci* in Contemporary Korean nicely reflects the sequence of development for middles and passive as reported in previous diachronic findings – that is, spontaneous middle (53.7%) > inchoative middle (29.2%) > passive (15.6%) > facilitative middle (1.5%). However, direction of grammaticalization cannot be determined solely on the basis of sequence of development. Crucially, for *-eci* constructions, facilitative uses are not derived from passive uses, but rather are extensions from their spontaneous and inchoative uses (Ahn & Yap 2017). In other words, the emergence of facilitative *-eci* is still a semantic extension phenomenon within the monovalent middle voice domain. The passive uses of *-eci*, on the other hand, emerge along a related but separate grammaticalization pathway, essentially via new contexts-of-use whereby *-eci* extends its range of use beyond monovalent predicates with spontaneous and inchoative readings to bivalent predicates with either explicit or implicit agents.

Our analysis of the distributional characteristics of *-eci* in present-day Korean also addresses the question of whether there is an interaction between voice and tense-aspect-mood (TAM) among the *-eci* constructions. In terms of tense-aspect marking, *-eci* in Contemporary Korean tends to occur much more frequently in the unmarked present tense form (40.2%) and with perfective/past tense morpheme *-ess* (33.1%). The unmarked present tense form is compatible with the general tendency for middles and passives to focus more often on the event itself, or its result or (adversative outcome), or on the inherent property of the subject NP, rather than on their temporal location. The perfective/past tense morpheme *-ess*, on the other hand, is ideal for expressing change-of-states with clear results (Winskel & Padakannaya 2014), and thus is highly compatible with spontaneous, inchoative and passive uses of *-eci* constructions, but not with facilitative uses.

Our analysis also indicates that the usage frequency of *-eci* constructions is to some extent constrained by an interaction between register (formal vs. informal texts) and text type/genre. For example, *-eci* is most frequently used as a spontaneous middle marker, and occurs more often in formal texts such as sports and

other broadcast talks than in informal texts such as casual conversations, whereas *-eci* occurs least frequently in facilitative middle constructions regardless of register. An interesting research question to further pursue is whether the apparent absence of register and text type/genre asymmetry in the case of facilitative *-eci* constructions is largely due to its fairly recent emergence. This possibility, however, can only be tested in future diachronic studies after an appreciable time period of several decades or centuries when the use of the facilitative may have become more widespread in the Korean language. On the other hand, from a crosslinguistic perspective, it would be both possible and interesting to investigate if similar usage distributions (and asymmetries) are observed in the voice systems of other languages as well.

Sources

1. *Sejong* Corpus

The *Sejong* Corpus (DVD) was the final achievement of the 21st Century *Sejong* Project, conducted by the Ministry of Culture, Sports, and Tourism and the National Institute of Korean Language. A DVD of the corpus was distributed in 2009, which includes the Contemporary Spoken Corpus, Contemporary Written Corpus and Historical Corpus.

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Abbreviations

ACC	accusative	DM	discourse marker
ANT	anterior (= perfect tense-aspect)	EVID	evidential
ATTR	attributive	FIL	filler
BEN	benefactive	FUT	future
CONN	connective	GEN	genitive
COP	copula	GER	gerund
DAT	dative	IE	informal ending
DEC	declarative	IMP	imperative

INTJ	interjection	POL	polite
LNK	linker	POSS	possessive
LOC	locative	PRES	present
MM	middle voice marker	PROG	progressive
NEG	negation	PST	past
NMLZ	nominalizer	Q	interrogative
NOM	nominative	RETRO	retrospective
NP	Noun Phrase	SFP	sentence final particle
PASS	passive	TAM	tense-aspect-mood
PL	plural	TOP	topic
PN	personal name		

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Authors' addresses

Mikyung Ahn (corresponding author)
Hankuk University of Foreign Studies
#408 Faculty Building I
107 Imun-ro, Dongdaemun-gu
Seoul 02450
Korea
mkahn@hufs.ac.kr

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