

Development of grammatical voice marking in Korean: On the causative, middle and passive uses of suffix *-i*

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Abstract

Voice-markers enable speakers to profile a situation/event in ways that reflect their perspective of 'who' or 'what' is being foregrounded as the discourse unfolds. Our diachronic study focuses on how a versatile voice marker evolves new functions as it competes for its semantic niche with other voice markers. Using Old Korean data written in *Kukyel* and Middle and Modern Korean data written in *Hankul* from the *Sejong* historical corpus, we show how Korean suffix *-i* extends from causative to middle and passive uses through reflexive causatives while competing with voice markers *-eci* and *-key ha-*. Our analysis reveals: (i) a relaxation of telicity and specificity constraints, which facilitates the extension of *-i* from a valence-increasing causative marker to a valence-reducing spontaneous and facilitative middle marker, and (ii) deployment of innovative morphosyntactic strategies (e.g. 'double causatives', 'double passives' and 'hybrid passives') to disambiguate between causative and passive uses of *-i*. The difference in directionality for *-eci* constructions (middle-to-passive development) and for *-i* constructions (causative-to-middle plus causative-to-passive developments) also has implications for our understanding of the development of voice systems in other languages.

Keywords: spontaneous middle, facilitative middle, double causative, double passive, hybrid passive

1. Introduction

Previous studies have shown that some languages deploy the same grammatical morpheme as causative and passive markers (e.g. Manchu-Tungusic *-bu/-v(u)*; Nedjalkov 1993), as in (1), while other languages use the same grammatical morpheme as middle and passive markers (e.g. Japanese *-rare*; Shibatani 1985), as in (2). The Korean language provides an interesting case study in which the same morpheme *-i* is used in the expression of all three voice functions: causative, middle, and passive, as in (3).¹

¹ Note that suffix *-i* has a number of phonological variants (e.g. *-li*, *-hi*, *-ki*, etc.), with the orthographic form *-y* replacing *-i* before a vowel sound.

(1) Manchu-Tungusic (Nedjalkov 1993: 194)

a. *i* *bata-be* *va-bu-ha*
he-NOM enemy-ACC kill-CAUS-PST
'He made (somebody) kill the enemy.'

b. *i* (*bata-de*) *va-bu-ha*
he-NOM (enemy-DAT) kill-PASS-PST
'He is/was killed (by the enemy).'

(2) Japanese (Shibatani 1985: 822-823)

a. *Taroo* *wa* *sikar-are-ta*.
(name.of.person) TOP scold-PASS-PST
'Taro was scolded.'

b. *Mukasi* *ga* *sinob-are-ru*.
old.time NOM think.about-MM- PRES
'An old time comes (spontaneously) to mind.'

(3) Korean

a. *emma-ka* *aki-eykey* *cec-ul* *mek-y-ess-ta*
mother-NOM baby-DAT breast-ACC eat-CAUS-PST-DEC
'Mother breast-fed her baby.'

b. *yocum* *i* *chayk-i* *cal* *phal-li-n-ta*
these.days this book-NOM well sell-MM-PRES-DEC
'These days this book sells well.'

c. *totwuk-i* *kyengchal-eykey* *cap-hy-ess-ta*
thief-NOM policeman-DAT catch-PASS-PST-DEC
'The thief was caught by a policeman.'

Several interesting questions arise as we see these formal syncretisms within the voice domain. Among the questions is whether these voice constructions are related etymologically. In some cases, the lexical origin is still transparent. Manchu-Tungusic *-bu/-v(u)*, for example, is believed to originate from a 'give' verb (Nedjalkov 1993), and most (if not all) Chinese languages have causative and passive constructions that are clearly derived from 'give' or related transfer verbs (Hashimoto 1988). More often than not, however, the lexical sources of the voice markers in many languages are unknown. The Japanese middle and passive *-rare* is a case in point; likewise, the causative, middle and passive *-i* in Korean.

Although the origin of many voice markers may be shrouded in mystery, written records of sufficient time depths are available in some languages, allowing us to trace the diachronic relationship(s) among their voice markers. In this paper, we will examine the historical development of the versatile morpheme *-i* in Korean, tracing

its development from the 8th century to the 20th century, i.e. from Old to Middle to Modern to Contemporary Korean, using Old Korean data written in *Kukyeŏ* and Middle, Modern and Contemporary Korean data written in *Hankul* from the *Sejong* historical corpus (UNICONC).³ This will enable us to address several more questions related to *-i* as a voice marker, among them: If there are derivational links between the voice functions of *-i*, what is their sequence of development? Was *-i* first a causative marker (CAUS), then a middle marker (MM), and subsequently a passive marker (PASS)? In other words, was the grammaticalization trajectory of *-i* a single linear pathway—for example, causative > middle > passive? Or was the trajectory multi-linear—for example, causative > middle along one pathway, and in addition causative > passive along another? Moreover, was there facilitation or competition from other voice markers (e.g. *-eci* and *-key ha-*) as suffix *-i* develops into a versatile voice marker within the Korean language? Finally, do we see robust mechanisms and pathways of change with possible implications for the development of voice markers in other languages?

To address the above questions, the rest of this paper is organized as follows. Section 2 first provides a brief review of previous studies on voice marker *-i*, many of which focus mainly on the uses of *-i* constructions in Contemporary Korean from a synchronic perspective. Section 3 then distinguishes the characteristics of voice marker *-i*, along with other Korean voice markers such as *-eci* and *-key ha-*, across the three major domains of use—causative, middle, and passive (§3.1). We further trace the diachronic development of these Korean voice markers, focusing on their facilitative and competitive effects on each other (§3.2). Special attention is drawn to two grammaticalization pathways for morphological suffix *-i*, namely, from causative to middle (§3.2.1) and from causative to passive (§3.2.2). We also examine the role of reinforced voice constructions such as the ‘double causatives’ (e.g. *-io*, *-iwu*, *-oi* and *-wui*) and the ‘double passives’ (e.g. *-hij*, *-lij*, *-nij* and *-kij*), as well as the hybrid *-i-eci* passive (formed from a combination of causative *-i* and middle *-eci*), all of which facilitate the rise of the voice marker *-i* from causative to passive uses. Section 4 concludes.

2. Previous studies on voice marker *-i*

Numerous studies have identified both causative and passive uses for voice marker *-i* in Korean (e.g. Lee 1970/1999; Y. Park 1978; J. Park 1994; Yeon 1991).⁴ Some

² *Kukyeŏ* (8th-14th century) refers to Classical Chinese scripts being annotated to be read as vernacular Old Korean.

³ The *Sejong* historical corpus was compiled by Professor Jinho Park of Seoul National University, as part of the 21st Century *Sejong* Project, funded by a grant from the National Research Foundation of Korea.

⁴ The morpheme *-i* has many functions in Korean. As a suffix that immediately follows the verb, *-i* functions as a voice marker (causative, passive and middle). Elsewhere, it can be used as a copula

studies have focused mainly on the causative uses (e.g. Shibatani 1973; Yang 1976; J. Park 1994, 2003; K. Hong 2003; S. Park 2013; Choe 2014), while others have focused on the passive uses (Choi 1937/1980; S. Lee 1970; S. Kim 1979; H. Lee 1991; H. Kim 2006; W. Kim 2007). More recent studies have begun to also examine the middle-marking functions of *-i*, for example, in terms of ‘potential passive’ (Nam 2012), ‘middle or medio passive’ (J. Kim 2013, 2014), and ‘generic passive’ (Y. Kim 2014). Most of the studies thus far have been synchronic in nature and have largely focused on Contemporary Korean. On the whole, apart from Keenan’s (1985) proposal that causative *-i* developed into passive *-i* through the reflexive permissive causative, not much research has been done on the diachronic development of suffix *-i*.

The present study will fill this gap in the literature, with a focus on the following two pathways in the semantic extension of *-i* as a voice marker, namely, from causative to middle marker, and from causative to passive marker. We will also examine the facilitative and competitive effects of other Korean voice markers such as *-eci* and *-key ha-* on the development of *-i*.

3. Diachronic development of voice marker *-i* in Middle and Modern Korean

In this section, we will identify the characteristics of voice marker *-i* in its three major domains of use: causative, middle and passive (§3.1). We will also compare the uses of *-i* with those of other types of voice markers in Korean. This will help us to situate the discourse-pragmatic niches of voice marker *-i* within the overall voice system of Korean, and to better understand how the various voice markers in the language contribute to each other’s rise and fall across time. We will also focus on the diachronic development of voice marker *-i*—in particular, how it develops from causative to middle and passive uses (§3.2). We will highlight two independent pathways, causative-to-middle (§3.2.1) and causative-to-passive (§3.2.2).

3.1. Versatile uses of voice marker *-i*

3.1.1 Causative marker *-i*

Contemporary Korean has two types of grammatical causative constructions: (i) the morphological causative, and (ii) the syntactic causative (see B. Park 1972; J. Park 2003; Choe 2014; *inter alia*). The morphological causative can be formed with verbal suffix *-i* (or its allomorphs, e.g. *-hi*, *-li*, *-ki*, etc.), as in (4a), or verbal suffix *-wu* (or its allomorphs, e.g. *-kwu* and *-chwu*), as in (4b). The syntactic causative is semantically more transparent, and as seen in the fairly productive *-key ha-*, is formed with the help of complementizer *-key* and a semantically bleached and versatile verb *ha-* ‘do,

following nominal predicates, or as a nominalizer and nominative case marker following referential entities.

make, cause, become, etc.’ as shown in (5).

- (4) a. *emma-ka* *ai-eykey* *oythwu-lul* *ip-hy-ess-ta*
mother-NOM child-DAT coat-ACC put.on-CAUS-PST-DEC
‘Mother dressed her child up in a coat.’
- b. *na-nun* *nakwi-eykey* *cim-ul* *ci-w(u)-ess-ta*
1SG-TOP donkey-DAT baggage-ACC load-CAUS-PST-DEC
‘I loaded (my) baggage on the donkey(’s back).’
- (5) *emma-ka* *ai-eykey* *oythwu-lul* *ip-key-ha-yss-ta*
Mother-NOM child-DAT coat-ACC put.on-COMP-do-PST-DEC
‘Mother had her child put on a coat.’

A number of previous studies (e.g. B. Park 1972; Song 1988; Sohn 1994; J. Park 2003; see also Shibatani 1973, 1975; Patterson 1974; Haiman 1983; Shibatani & Pardeshi 2002) have proposed that there is a semantic difference between the two causative constructions (i.e. the morphological causative and the syntactic causative) in terms of the type of causation they encode. In Contemporary Korean, the morphological causative is used to denote direct causation, which is generally associated with physical manipulation involving an affected patient (e.g. a mother dressing up her child in (4a)), and such manipulation can be extended metaphorically to social and psychological manipulation as well, whereas the syntactic causative is employed to express indirect causation, such as giving directives, with the causer and the causee effecting change on the situation or self or others (e.g. a mother ordering the child to put on a coat in (5)) (Shibatani & Pardeshi 2002). It is worth noting here that in Middle Korean, morphological causative constructions formed by suffixes *-i* and *-wu* were earlier used for both direct and indirect causation.

Causative uses of suffix *-i* have been attested in Old Korean (8th-13th century) (Jang 2006; Y. Kim 2012), with the earliest example known to us appearing in the 10th century, as seen in (6).⁵ By the 15th century, causative uses were found with a wide range of predicates, including adjectivals, intransitive verbs, and transitive verbs, as shown in (7b), (8b) and (9b) respectively. Basically, in combination with suffix *-i*, adjectivals such as *nep-* ‘to be wide’ (7a) could be transformed into causative verbs such as *nep-hi-* ‘to broaden (the range of *sutra* chanting)’ (7b). Likewise, intransitive verbs such as *olA-* ‘to go up’ (8a) could be used as causative verbs such as *ol-i-* ‘to have (a horse) climb (a wall)’ (8b), and in similar fashion, transitive verbs such as *pas-* ‘to take (something such as one’s clothes) off’ (9a) could be used as causative verbs such as *pas-ki-* ‘to have (someone such as a

⁵ In addition to example (6), Jang (2006) noted, albeit without examples, that causative uses of suffix *-i* have been attested as early as the 8th century.

young enemy soldier) take (something such as his helmet) off' (9b).

- (6) *sonakuy sekcang capanta-hAya tang-wen-cwungsayng*
 hand monk's.stick grip-and necessarily-want-people
tay-si-hoy-IAI peyphul-hA-a-kom ye-sil-to-IAI
 large-give-should-ACC give-become-good-and be.equal-reach-Tao-ACC
po-i-nAssye
 look-CAUS-SFP

'With a monk's stick in his hand, he wants people to give generously to others, (saying) if you give, you will become a good person, causing you to look as good as having reached Tao (=the Way, or the Truth).' (10th c., *hwaem* 4:17; also cited in Jang 2006: 131)

- (7) a. *yelay-s cangsim-i nep-ko khu-ko*
 Buddha-POSS heart-NOM **be.wide**-and be.large-and
telew-um eps-e
 be.dirty-NMLZ not.exist-CONN

'Buddha's heart is wide and large, not dirty.' (1461, *nungem* 1:9)

- b. *amithapwul-s pyenhwa-lo pepum-ul nep-hi-si-lssAy*
 Amitabha-POSS change-INST sutra.chanting-ACC **be.wide**-CAUS-HON-as
cap-sayk cwung-co-lal nay-si-niita
 various-color flock-bird-ACC make-HON-DEC

'As (the Buddha) broadened the range of *sutra* chanting by changing the Amitabha, he also made variously coloured flocks of birds.' (1459, *welinsekpo* 7:58)

- (8) a. *hyen-pen thwi-wu-ntAI nAm-i oIA-liiska*
 several-times jump-CAUS-although other.person-NOM **climb**-Q

'Although (we encourage) the other person to climb several times, will he climb?' (1447, *yongpiechenka* 48)

- b. (*Thayco-y*) *sekpyek-ey mAI-AI ol-i-s(i)-ya*
 (name.of.king- NOM) stone.wall-DAT horse-ACC **climb**-CAUS-HON-CONN
 'King Thayco Yi had a horse climb onto a stone wall.' (1447, *yongpiechenka* 48)

- (9) a. *Senhyey nip-e is-te-si-n nok-phi*
Senhyey wear-SEQ PROG-RETRO-HON-ADN deer- skin
os-AI pas-a
 clothes-ACC **take.off**-SEQ

'Senhyey is taking off the clothes made of deer skin which she has been wearing.' (1459, *welinsekpo* 1:16)

- b. (*Thayco-y*) *yey-wa*⁶ *ssaho-sy-a*
 (name of king-NOM) name.of.country-with fight-HON-SEQ
 (*akipathol*) *thwukwu ani* *pas-ki-si-myen*
 (teenage.enemy.soldier) helmet NEG **take.off-CAUS-HON-if**
nala-s *somin-ul* *salA-si-liiska*
 nation-POSS people-ACC save-HON-Q
 ‘King *Thayco* was fighting against the soldiers from Wa (= the old name for Japan), and if King *Thayco* did not have (the young enemy soldiers) take off their helmet (i.e. if he did not kill the young enemy soldiers), how could he save the people of his country?’ (1447, *yongpiechenka* 52)

In all the examples above, we see the causativized constructions introducing an additional argument—crucially, a causer. In other words, causative *-i* since Old Korean has been used as a valence-increasing device. In (6), the additional argument takes the form of the act of ‘giving generously’; this act functions as a causer that helps one to look as good as having reached Tao (= the Way, or the Truth). In (7b), we see a stative adjectival (1-place predicate) construction (*sutra*-chanting being rather monotonous) being re-cast through the causative *-i* construction into a dynamic transitive (2-place predicate) construction; the causer added in this case is the Buddha, who transforms *sutra*-chanting into a more interesting meditation ritual. In (8b), an intransitive (1-place predicate) construction (about a horse climbing onto a stone wall) is re-profiled as a transitive (2-place predicate) construction (with King *Thayco* as the causer responsible for bringing about the event of the horse climbing onto a stone wall). In (9b), a transitive (2-place predicate) construction (involving young enemy soldiers taking off their helmet) is transformed into a complex causative (3-place predicate) construction in which an authoritative figure (King *Thayco*) orders the captive soldiers to remove their helmet (which is a euphemism for having them killed).

In Middle Korean, double causatives (e.g. *-io*, *-iwu*, *-oi*, and *-wu*) were also attested (Na 2014), where morphological causative markers *-i*, *-o* and *-wu* were combined to express indirect causation, with the earliest example from the *Sejong* historical corpus attested in the 15th century, as in (10a). Unlike causative suffixes *-i* and *-wu*, which survive to this day as in (10b), causative suffix *-o* and its double causative variants *-o-i* and *-y-o* (< *-i-o*) were found in Middle and Modern Korean as in (10c) and (10d), but are no longer used in Contemporary Korean.

- (10) a. *i* *pwuthye ... han* *salAm-AI* *him-psu-y-wu-si-nila*
 this Buddha many people-ACC power-use-CAUS-CAUS-HON-DEC
 ‘This Buddha had many people make an effort (to become a better person)’
 (1463, *pepen* 4: 136)

⁶ *Yey* is the old name used for Japan in 15th century Korean, and it is translated into English as *Wa*.

- b. *emma-ka aki-lul ca-y-w(u)-ess-ta*
 Mother-NOM baby-ACC sleep-CAUS-CAUS-PST-DEC
 'Mother got her baby to sleep (by lulling or singing a lullaby).'
- c. (*Thayco-y*) *chen-myeng-ul molA-si-lssAy*
 (name.of.king-NOM) heaven-will-ACC not.know-HON-as
skwum-ulo al-o-y-si-ni
 dream-INST know-CAUS-CAUS-HON-SFP
 'As King Thayco does not know his fate (=heaven's will), the dream had him know it.' (1447, *yongpiechenka* 13)
- d. (*hwangtye-y*) *chinhi kyucyang-ul spuli-sy-a kwen meli-ey*
 king-NOM personally writing-ACC hand-HON-SEQ book head-LOC
ssu-y-o-si-ko
 put-CAUS-CAUS-HON-CONN
 'The king handed his writing personally to (us), and had (us) include it as the introduction of the book.' (1620, *yehwun enhay sang 6b*)

Recall our earlier observation that morphological suffixes *-i* and *-wu* could be used to express both direct and indirect causation in Middle Korean. It is worth noting here that double causative markers *-io*, *-iwu*, *-oi* and *-wui* were associated only with indirect causation. The rise of these double causative markers in Middle Korean coincided with the rise of syntactic causative *-key ha-* constructions, which were also associated with indirect causation. Eventually, by the 18th century, the *-key ha-* constructions began to gain more ground as a marker of indirect causation, as a result of which causative suffix *-i* is now predominantly used as a marker of direct causation (see J. Lee 1996).

As noted earlier in (5), reproduced below as (11), the *-key ha-* construction, is formed by a combination of complement clause marker *-key* and causative light verb *ha-* 'do, make, cause, become, etc.' An optional tense suffix (e.g. past marker *-ess*, or its orthographical variant *-yss*) often follows the causative light verb *ha-*. Unlike morphological causative marker *-i*, which emerged much earlier, the lexical origin of syntactic causative marker *-key ha-* is still semantically transparent.

- (11) *emma-ka ai-eykey oythwu-lul ip-key ha-yss-ta (=5)*
 mother-NOM child-DAT coat-ACC put.on-COMP do-PST-DEC
 'Mother had her child put on a coat.'

- (12) *pAlAm-i motAn mAzAm-Al culki-key hA-ko⁷*
 wind-NOM every heart-ACC enjoy-COMP do-and

⁷ We have both *A* and *a* in Middle Korean. *A* is the older form of *a*, and both were used in Middle Korean.

‘(The fresh) breeze made everyone happy...’
 (Lit. ‘(The fresh) breeze had every heart enjoy itself).’
 (1447, *sekposangcel* 6-24.txt(308))

From a diachronic perspective, it is important to note that in Middle Korean (14th-16th century), the morphological causative marker *-i*, which emerged in the 8th century, was more frequently used than the syntactic causative marker *-key ha-*, but by Modern Korean (17th-19th century) the latter has become more productive than the former. This development, which involves the decline of causative uses of *-i* for the expression of indirect causation, coincides with the rise of passive uses of *-i*, which we will examine in further detail in §3.2.2.

3.1.2 Middle marker *-i*

Korean has two main types of middle markers: *-i* and *-eci*. Before discussing the suffix *-i* as a middle voice marker, we will first take a look at the middle marker *-eci*. This is because the development of *-i* as a middle and passive marker is closely tied to the rise of *-eci* for similar purposes, and the development of *-eci* is more lexically transparent.

Suffix *-eci* has been used as a middle marker since the 15th century (Middle Korean), initially in its phonologically unreduced form *-ati* or *-eti* (see Ko 1997; Lee 2001; Jeong 2006; Ahn & Yap 2017). Among the various types of middle constructions identified across the languages of the world, including those related to body actions, changes in body posture, naturally reciprocal events, spontaneous events, inchoative events, and facilitative or potential states (see Valfells 1970; Faltz 1977; Kemmer 1993) as shown in (13a-f), the Korean suffix *-eci* is used to express three types of middles, namely, spontaneous, inchoative, and facilitative, as seen in (14a-c). In comparison, the Korean suffix *-i* expresses two of these types of middles, namely, spontaneous and facilitative, as seen in (15a-b).

- | | | |
|---------|------------------------------|---------------------------------------|
| (13) a. | body action: | Turkish <i>yik-an</i> ‘wash’ |
| b. | change in body posture: | Icelandic <i>liggja-st</i> ‘lie down’ |
| c. | naturally reciprocal events: | Old Norse <i>hitta-sk</i> ‘meet’ |
| d. | spontaneous events: | Lingala <i>-fungwa-na</i> ‘open’ |
| e. | inchoative: | Turkish <i>hastal-an</i> ‘get sick’ |
| f. | facilitative: | Kanuri <i>t-ai</i> ‘it is potable’ |
| | | English <i>the book sells well</i> |

(see Valfells 1970; Faltz 1977; Kemmer 1993: 16-19 (a-d), 147 (f), 239 (e))

- | | | | | |
|---------|-------------------------------|----------------|-------------------------|----------------------|
| (14) a. | TV- <i>ka</i> | <i>kapcaki</i> | <i>kk(u)-ecy-ess-ta</i> | (Spontaneous middle) |
| | TV-NOM | suddenly | turn.off-MM-PST-DEC | |
| | ‘The TV turned off suddenly.’ | | | |

- b. *kunye-uy* *elkwul-i* *pwulk-ecy-ess-ta* (Inchoative middle)
 3SG-POSS face-NOM be.red-MM-PST-DEC
 ‘Her face turned red.’
- c. *i* *pheyn-un* *cal* *ss-eci-n-ta* (Facilitative middle)
 this pen-TOP well write-MM-PRES-DEC
 ‘This pen writes well.’
- (15) a. *pang-mwun-i* *cecello* *camk-y-ess-ta* (Spontaneous middle)
 room-door-NOM of.itself lock-MM-PST-DEC
 ‘The door of (my) room locked of itself.’
- b. *i* *chayk-i* *cal* *phal-li-n-ta* (Facilitative middle)
 this book-NOM well sell-MM-PRES-DEC
 ‘This book sells well.’
 (Sohn 1994: 310; gloss and translation modified)

In many languages, middles involving body actions and changes in body posture are often identified as reflexive constructions. For example, middles such as ‘washing oneself’ and ‘lying down (< ‘laying oneself down’) in (13a) and (13b) are construed as middles derived from reflexive causatives. This opens up the possibility that reflexive constructions may have served as a bridging context for the extension of causative constructions to middle constructions. We elaborate on this development for Korean voice markers *-eci* and *-i* below (see also §3.2.1).

Among Korean middles, *-eci* initially developed into a spontaneous marker as early as the 15th century. It is used to construe events as occurring autonomously, as is the case of *kk(u)-eci* ‘turn off’ in (14a), where the affected entity (the TV) is both Initiator and Endpoint, and thus is inherently reflexive. Its inchoative use, attested since the 17th century, likewise involves an affected entity that is both Initiator and Endpoint, and hence is also inherently reflexive, but it additionally signals a ‘change of state’ and focuses on the initial phases of a newly-changed state. For example, in (14b), the inchoative construction *pwulk-ecy-* (Adj. *pwulk-* ‘be red’ + *-eci*) indicates a progressive change of state, that is, ‘getting more (and more) red.’ As seen in (14c), *-eci* is also used as a facilitative marker to represent quality judgments about the intrinsic ability of an object to undergo a particular event or process.⁸ Unlike spontaneous and inchoative *-eci*, however, facilitative *-eci* does not overtly retain a strong reflexive reading (e.g. *i pheyn-un cal ss-eci-n-ta* ‘This pen writes (*itself) well’). It is worth noting that the facilitative use of *-eci* emerged relatively late, with examples attested only recently in modern times—in effect, several centuries after *-eci* has developed spontaneous and inchoative uses.

⁸ See Faltz (1977) and Kemmer (1993) for a typological discussion of facilitative middles.

Ahn and Yap (2017) identify the following grammaticalization sequence for *-eci* middles. Suffix *-eci* emerged from a combination of postverbal suffix *-a/-e* and unaccusative verb *ti-* ‘fall, collapse, disappear’ (Ko 1997; Lee 2001; Jeong 2006; Rhee 2014), which accounts for its frequent occurrence with adjectivals and unaccusative intransitives with adversative readings in the early stages of its grammaticalization. The [+telic] and [+punctual]⁹ aspectual features inherent in unaccusative predicates facilitated the development of *-eci* into a spontaneous marker, as illustrated with the unaccusative predicates *kesk-eti* ‘break’ and *phul-ety* ‘break up’ in (16a) and (16b) from Middle and Modern Korean respectively. In Modern Korean, *-eci* began to occur not only with intransitive verbs characterized by spontaneous aspectual features, but also with (resultative) stative adjective predicates, which are inherently non-spontaneous. Relaxation of the spontaneity constraints paved the way for the use of *-eci* as an inchoative marker, as seen in (17a), and over time, as *-eci* becomes more and more semantically bleached, non-adversative readings emerged as well, as in (17b).

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

b. *eIAm-i muntuk phul-ety-e koki is-ye ptuyyena(li)-kenal*
 ice-NOM suddenly undo-MM-because fish exist-and jump-CONN
 ‘Since the surface of the ice suddenly broke, the fish jumped out of the water ...’
 (1617, *Tongkwuksinsoksamkanghayngsilto*)

(17) a. *pemyekchel tot-An kes-Al kulk-e sonthop-uy hAy-yati-ken*
 boil swell-ADN NMLZ-ACC scratch-LNK nail-GEN torn-MM-CONN
 ‘(They) scratched the swollen boils till their nails started to break ...’
 (1663, *Twuchangkyenghempang*28a.txt(318))

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

Facilitative uses of *-eci*, as in (18), involve further relaxation of the aspectual constraints, such that *-eci* could co-occur not only with telic predicates but also with

⁹ When referring to temporal features, the term ‘punctual’ refers to spontaneous, momentary and non-durative actions (see Vendler 1967; Smith 1991).

atelic ones, i.e. verbs without endpoints. The emergence of facilitative middles is characterized by a process of subjectification, which is the process whereby a speaker adds his/her evaluation or attitude to the proposition in his/her utterance (see Traugott 1989, 1995, 2010; Davidse & Heyvaert 2007; *inter alia*).¹⁰ In the case of facilitative *-eci*, the speaker's subjective stance focuses on his/her evaluation of the potentiality or facility (i.e. the ease or difficulty of occurrence) of an event, such as 'good quality lipsticks serving their cosmetic purposes well' as shown in (17) (see also Kemmer 1993; Ahn & Yap 2017).

- (18) *i lipsuthik-un cal pal(u)-aci-n-ta*
 this lipstick-TOP well wear-MM-PRES-DEC
 'This lipstick wears well.'

Diachronic evidence from the *Sejong* historical corpus (see Ahn & Yap 2017) indicates that the uses of *-eci* within the middle voice domain extended in the following chronological sequence: from spontaneous (15th century Middle Korean) to inchoative (17th century Modern Korean) to facilitative (20th century Contemporary Korean). Similar to *-eci*, versatile voice marker *-i* is also used for the expression of spontaneous middle and facilitative readings. The spontaneous use has likewise been attested in the *Sejong* historical corpus since the 15th century (Middle Korean), as shown in (19a), while the facilitative use is likewise a recent 20th century (Contemporary Korean) development (see J. Park 2007), as in (19b). Unlike *-eci*, however, *-i* is not used as an inchoative, as is clearly seen in (19c).¹¹

- (19) a. *tong-mwun-i tolo tat-hi-ko*
 east-gate-NOM again close-MM-CONN
 'The East Gate closed again.' (1459, *welinsekpo* 23:80)
- b. *i cha-ka cal phal-li-n-ta*
 this car-NOM well sell-MM-PRES-DEC
 'This car sells well.'
- c. *pang-i nelp-ecy/*-hy-ess-ta*
 room-NOM be.wide-MM-PST-DEC
 'The room got wide.'

As noted earlier (recall Kemmer 1993: 16-19), spontaneous constructions are used to represent events construed as taking place of their own accord, and include

¹⁰ Closely related to 'subjectification' is the term 'subjectivity', which in Traugottian terms is the expression of a speaker's stance toward a given proposition (see Traugott 1989, 1995, 2010).

¹¹ When suffix *-i* is added to an adjective, we obtain a causative verb, e.g. *nelp-* 'wide' → *nelp-i* 'widen'. However, *-eci* has no causative reading. When we add *-eci* to an adjective, we get an inchoative middle, e.g. *nelp-* 'wide' → *nelp-ecy* 'become wide'.

verbs of growing, rotting, drying out, falling apart, and opening/closing. Thus, in contrast to causative *-i*, which contributes to an *increase* in the number of arguments (or valence) of a construction by introducing an additional argument in the form of a causer, spontaneous *-i* does the opposite, as it combines with a transitive (or transitivized) verb to yield an intransitive construction, and hence *reduce* the valence of the construction. As seen in (19a), transitive verb *tat-* ‘close (V_{transitive})’ combines with the middle marker *-hi* (a phonological variant of *-i*) to form spontaneous construction *tathi-* ‘close (V_{intransitive})’, where the affected entity *tong-mwun* ‘East Gate’ is conceived as both Initiator and Endpoint. Crucially, consistent with spontaneous middles in general, the autonomous event of ‘gate-closing’ is construed as lacking an Agent, or at least lacking any Agent that is distinguishable from the Patient, given that the Initiator and Target/Endpoint of the spontaneous event is viewed as one and the same entity (see Kemmer 1993). In this respect, where the Agent and Patient are co-referential, and the same referent is both Initiator and Target/Endpoint, we see a strong affinity in the semantics between reflexives and spontaneous middles. This allows for the possibility of a reflexive link between causatives and middles, with constructions such as ‘(Some force caused) the East Gate to close upon itself’. Viewed from this perspective, the shift from a process of valence-increasing to valence-reducing is mediated by reflexive causatives: Causative > Reflexive Causative > Middle.

As noted in Song (1996), spontaneous middle marker *-i* continued to flourish in Modern Korean (17th-19th century), as illustrated in (20), where we see events involving ‘blocking’ (*mak-hi*), ‘closing’ (*tamul-ly*) and ‘opening’ (*yel-ni*) occurring of their own accord. These spontaneous uses continue to be productive in Contemporary Korean; however, over time, the use of spontaneous *-eci* has gradually begun to outpace spontaneous *-i*.

(20) a. *mokkwum-ki mak-hi-ko ip-i tamul-ly-e*
 throat-NOM block-MM-and mouth-NOM close-MM-CONN
 ‘The throat blocked up and the mouth closed ...’ (1680, *napyak*8)

b. *nwun-i kam-ki-ko ip-i yel-ni-ko*¹²
 eye-NOM close-MM-CONN mouth-NOM open-MM-CONN
 ‘The eyes closed and the mouth opened ...’
 (1792, *cungswumwuwenlokenhay* 3:12)

Whereas suffix *-i* has been used to form spontaneous constructions since the 15th century (Middle Korean), as seen in (19a), its facilitative use is a later development that emerged in Contemporary Korean. Similar to its *-eci* counterpart, facilitative *-i* constructions are expressions of the intrinsic quality of an object or its ability to undergo a particular process. As seen in (19b), the middle construction *cal*

¹² In Middle and Early Modern Korean, *-ni* was sometimes used as a phonological variant of *-li*.

phal-i-n-ta ‘sells well’ indicates the quality of the car. Note that the facilitative middle *-i* only combines with the present tense marker, in this case *-n*, which is compatible with the habitual or generic aspect of potentiality that is intrinsically associated with facilitative middles (cf. Jaggar 1988).

A causative link can also be reconstructed for facilitative middles with potential readings, as seen in (21), where the visibility of the ship (*pay-ka po-in-n-ta*) can be understood in terms of external forces such as favourable meteorological conditions enabling the ship to be made visible.

- (21) *pay-ka* *po-i-n-ta*
 ship- NOM see-MM-PRES-DEC
 ‘The ship is visible’ (< ‘The ship can be seen’)
 < ‘(We) can see the ship’ (< ‘(The fine weather enables) us to see the ship’)
 (Sohn 1994: 310; gloss and translation modified)

In this section, we have seen how causative uses of *-i* could be extended to middle uses, whether spontaneous or facilitative, typically mediated by omission of an external causer as in (19), (20) and (21). Although middle marker *-i* shares many characteristics in common with middle marker *-eci*, they differ in a number of ways that influence their developmental history. Unlike *-i*, *-eci* was not used to form causative constructions; this can be traced back to the origin of *-eci* from *-eti*, a verbal suffix derived from the unaccusative verb *-ti* ‘fall’ within a V_1-e-ti serial verb construction, which thus initially contributed to a ‘resultative’ (and often adversative) focus of an event. Diachronically, then, whereas there was an extension from valence-increasing causative uses to valence-reducing middle uses in the case of voice marker *-i*, this was not the case for *-eci*. There was instead an extension from middle uses of *-eci* to passive uses; this involves an extension from a valence-reducing (or intransitivizing) middle marker to a valence-increasing (or transitivity-increasing) passive marker, where a defocused Agent is introduced (sometimes implicitly). On the other hand, as we shall see later in §3.2.2, the extension of suffix *-i* from causative to passive uses involves valence-reduction from a 3-place predicate construction to a 2-place predicate construction. In the next section (§3.1.3), we will examine the passive uses of both *-i* and *-eci*, as well as their interaction effects on each other.

3.1.3 Passive marker *-i*

Korean has several different kinds of passives, including: (i) morphological passives, (ii) lexical passives, and (iii) phrasal passives (see Sohn 1994: 300-312). All three types of passive constructions highlight the Patient and defocus the Agent in some way, often by syntactic means in which the Patient is assigned to topic or subject position, often with the help of morphological strategies that replace the nominative case typically assigned to an Agent with a non-nominative case (e.g. Dative or

Instrumental *-eykey/-ey*, the former for animate agents and the latter for inanimate ones; see Sohn 1994: 301).

Morphological passives are usually formed with suffix *-i* (or its phonological variants *-hi*, *-li*, *-ki*, etc.) following the main verb, such as *capamek-hy-* ‘be eaten’ in (22).

- (22) *manhun mwulkoki-tul-i sange-eykey capamek-hy-ess-ta*
 a.lot.of fish-PL-NOM shark-DAT eat-PASS-PST-DEC
 ‘A lot of fish got eaten by the shark.’

Based on diachronic evidence from the *Sejong* historical corpus, passive use of suffix *-i* was also first attested in the 15th century (Jang 2006; Na 2014) as shown in (23). In contrast to middle *-i* constructions, passive *-i* constructions do have an Agent, either explicitly or implicitly expressed, which is distinct from the affected entity, or Patient. For example, in (23) and (24), the passive construction has an overt Agent (*motin cyungsAyg* ‘brutal beast’ and *tocek* ‘bandit’ respectively), while in (25) the Agent (an executioner) does not appear overtly, but this elided Agent can still be retrieved and restored into the discourse on the basis of shared or common knowledge. If the Agent is expressed overtly, it is often marked by a non-nominative case marker to signal the defocused status of the Agent, as seen in (24), where dative case marker *-uykey* follows the defocused agent *tocek* ‘bandit’, but as seen in (23), the use of non-nominative case marking is optional. The highlighted Patient is typically assigned either topic or nominative marking (i.e. *-nun* or *-i*, or their phonological variants), in keeping with its salient and privileged status in the ongoing discourse.

- (23) *yuceng-tAl-hi motin cyungsAyg mul-y-e*
 every.person-PL-NOM brutal beast bite-PASS-SEQ
hoyngsaha-l ssi-o
 die.accidental.death-ADN NMLZ-CONN
 ‘Every person was bitten by the brutal beast, and died an accidental death’
 (1459, *welinsekpo* 9: 58)

- (24) *Hathyung-i syeng-ulo nemenata-ka tocek-uykey cap-hi-ye*
Hathyung-NOM castle-to come.in.then.out-SEQ bandit-DAT catch-PASS-SEQ
 ‘As Hathyung was coming out of the castle, he was caught by a bandit.’
 (1581, *soksamkanghayngsilto* txt(55))

- (25) *cham-hyeng-un mok pey-hi-si-m-i-la*
 cruel.punishment-TOP neck cut-PASS-HON-NMLZ-COP-DEC
 ‘Cruel punishment is that the neck is cut.’
 Lit. ‘Cruel punishment is one where the neck is cut.’
 (1562, *cangswumyelcoyhoceytongcatalanikyeng*.txt(1179))

Incipient uses of double passive constructions *-ii* and *-hii* (derived from *-i/-hi + -i*) were attested in Middle Korean (Yu 1994; Na 2014), with double passive constructions *-ii*, *-hii*, *-lii* and *-kii* (derived from *-i/-hi/-li/-ki + -i*) being widely found in Modern Korean (Yu 1994), as in (26).

- (26) *yekcek-uy pilmuy piloso kkek-ki-i-ko*
 rebel-poss excuse (or reason) finally damp-PASS-PASS-CONN
 ‘The excuse of the rebel was finally rejected (< ‘was cut off’).’
 (1776, *myenguylok* 2:21a)

The emergence of ‘double-marked’ passive and causative markers indicated a frequent need to emphasize and reinforce the respective passive and causative readings (Han 1984), and in this way also disambiguate between the causative and passive uses of suffix *-i* (S. Lee 1970; Kwak 1980; J. Han 1985; Yu 1994). At the same time, these double-marked constructions also helped to disambiguate causative and passive *-i* constructions from their middle counterparts.

Interestingly, whereas the ‘double causative’ markers involve the combination of suffix *-i* with other morphological causative suffixes (namely, *-o* and *-wu*) to produce causative markers *-io*, *-iwu*, *-oy* and *-wui* (as discussed in §3.1.1 above), the ‘double passive’ markers opt instead for the doubling of the *-i* morpheme itself, yielding passive markers such as *-hii*, *-lii*, *-nii* and *-kii* (see Han 1984; Song 1996). Most conveniently, this strategy produces a vowel lengthening effect. In this way, Korean speakers can now opt to use /i:/ vowel lengthening to disambiguate between a passive vs. causative interpretation of voice marker *-i*.

In contrast to morphological passives formed by suffix *-i*, whose lexical origin is unknown, lexical passives on the other hand are formed around a semantically transparent verb with passive-like meaning, such as *tangha-* ‘suffer’ or *toy-* ‘get, become’, as shown in (27) and (28) respectively (see O’Grady 1991: 50; Cho 1998: 178).¹³

- (27) *kunye-nun/i [chinkwu-tul-eykey mwusi-(lul)] tangha-yss-ta*
 3SG-TOP/NOM friend-PL-DAT neglect-ACC suffer-PST-DEC
 (i) ‘As for her, (she) suffered [being ignored by her friends].’
 (ii) ‘She suffered [being ignored by her friends].’
 (iii) ‘She was ignored by her friends.’

- (28) a. [*ku pemin-i swunkyeng-eykey cheypho-ka*] *toy-ess-ta*
 DEM.DIST criminal-NOM police- DAT arrest-NOM become-PST-DEC
 (i) ‘(It)_i came to be [that the criminal was arrested by the police]_i.’

¹³ Lexical passive verb *toy* (‘get, become’) occurs mostly with Sino-Korean verbal nouns, such as *mwusi* ‘neglect’ and *cheypho* ‘arrest’, in (30a) and (30b) respectively. As verbal nouns, the former is optionally marked by accusative case marker *-lul* or nominative case marker *-i*.

(ii) 'The criminal was arrested by the police.'

b. *ku* *pemin-i* (*swunkyeng-eykey*) *cheypho-toy-ess-ta*
DEM.DIST criminal-NOM police- DAT arrest-PASS-PST-DEC
'The criminal was arrested (by the police).'

In the lexical passive construction in (27), the optional presence of accusative case marker *-lul* following the object complement clause *chinkwu-tul-eykey mwusi-* '(her) friends neglecting (her)' affirms the lexical status of the passive-like verb *tangha-* 'suffer'. At the same time, the use of dative case *-eykey* for the defocused agent *chinkwu-tul* '(her) friends' highlights the non-finite and nominal status of the object complement clause that is optionally marked by accusative marker *-lul*. Worth noting here is that such nominal(ized) complements tend to have stative semantics, which is highly compatible with a passive interpretation.

In (28a), the complement clause preceding the change-of-state verb *toy* 'become' is also optionally marked by a case marker. Interestingly, this case marker could be a nominative marker such as *-ka*, which suggests that the complement clause [*ku pemin-i swunkyeng -eykey cheypho*]-*ka* '[(the) the criminal was arrested by the police]' is being used as a subject complement clause in a 'become'-type construction: '(It_i) came to be [that the criminal was arrested by the police].'

As seen in (28b), omission of the nominative case marker *-ka* has the effect of defocusing the nominal status of the complement clause, such that the complement verb *cheypho* 'arrest' can combine with the passive-like verb *toy-* 'become' to form the passivized verb *cheypho-toy* 'be arrested', with past tense suffix *-ess* and declarative sentence ender *-ta* in tow. This facilitates a reanalysis of the complement clause into a finite passive structure, with or without the defocused agent, as indicated by the optional use of *swunkyeng-eykey* ('by the police') in (28b) above.

In other words, in the absence of an intervening case marker such as *-ka*, lexical passives can structurally resemble morphological passives, particularly when semantically bleached passive-like verbs such as *toy-* 'get to be, become' are involved, as in (28b). What still sets them apart, however, is that the passive-like verbs are still semantically transparent, whereas the morphological passive marker *-i* is semantically opaque and its origin shrouded in mystery.¹⁴ Semantic opacity, however, facilitates a higher degree of generalization, which helps account for the versatility of voice marker *-i* as causative, middle or passive marker.

The third type of passive construction, often referred to as 'the phrasal passive' (Sohn 1994: 306), is the *V-eci* passive construction. It is an extended use of the middle *-eci* constructions discussed earlier in §3.1.2, and is formed with a non-finite verb marked with infinitive suffix *-e* (or its phonological variants *-a* or *-ye*) followed by an inchoative verb *ci-* 'get to be, become', yielding a *V-e ci* serial verb construction

¹⁴ The lexical origin of *-i* is further complicated by the existence of both copula *-i* within the verbal domain and nominative case marker and nominalizer *-i* within the nominal domain. Whether homonymy or polysemy is involved is unclear.

(Sohn 1994), as in (29a). As noted earlier in §3.1.2 (see also Ahn & Yap 2017), diachronic analysis of Middle Korean texts from the *Sejong* historical corpus indicates that inchoative verb *ci-* is derived from an unaccusative verb *ti-* meaning ‘fall’, which then develops into an aspectual suffix that initially was compatible with intransitive predicates with spontaneous and inchoative middle readings, but which over time gradually weakened its telicity constraints to also combine with atelic verbs that were compatible with facilitative middle readings. As seen in (29a) and (29b), with the inclusion of an implicit agent, a passive (rather than middle) reading emerges. Over time, the phrasal passive construction *V-e ci-(ess)-ta*, as in (29a), occurs with sufficiently high frequency to give rise to the fused form *-eci* (or its orthographic variant *-ecy*), which now can be reinterpreted as a morphological passive marker within a *V-eci-(ess)-ta*, as in (29b).

(29) a. *cinsang-i kwukmin-eykey palkhi-e ci-ess-ta*
 truth-NOM people-DAT reveal-INF get-PST-DEC
 ‘The truth was revealed to the people.’
 (Sohn 1994: 306, gloss slightly modified)

b. *yuli-chang-i palam-ey pwus-ecy-ess-ta*
 glass-window-NOM wind-DAT break-PASS-PST-DEC
 ‘The glass window was broken by the wind.’

The phrasal passive formed with suffix *-eci* as seen in (29b) has become structurally similar to the morphological *-i* passive as discussed in (22) earlier, reproduced below as (30) for ease of comparison. In other words, despite differences in their lexical origin and grammaticalization trajectory, both passive *-eci* and passive *-i* constructions have now converged to form a similar structure and serve a similar function—with a highlighted patient marked by a nominative case marker and a defocused agent marked by a non-nominative (e.g. dative) case maker.

(30) *manhun mwulkoki-tul-i sange-eykey capamek-hy-ess-ta* (=22)
 a.lot.of fish-PL-NOM shark-DAT eat-PASS-PST-DEC
 ‘A lot of fish was eaten by the shark.’

There is also evidence, from Contemporary Korean, of voice markers *-i* and *-eci* combining to yield a hybrid *-i-eci* passive construction. As seen in (31), *-hy-eci* comprises an *-i* suffix (phonologically realized as *-hy*) that expresses an implied agent through its causative use (*nelp-hy* ‘to widen’), and an *-eci* suffix (here orthographically realized as *-ecy*) that profiles only one argument (in this case, the Patient *pang* ‘(the) room’). The resulting hybridized *-eci* construction has the effect of defocusing the (implicit) causer or agent, and at the same time highlighting the outcome of the ‘room-widening’ event. In contrast, inchoative *-eci* as shown in (31’), does not indicate any agent, but rather highlights only the resultative state. In terms

of function, the hybrid *-hy-eci* passive produces a resultative effect that is rather similar to the English *get*-passive (e.g. ‘The room got widened’). These hybrid *-i-eci* constructions provide evidence of the interaction between voice markers of different lexical origins contributing to the rise of new and more nuanced voice functions.

(31) *pang-i* *nelp-hy-ecy-ess-ta*
 room-NOM be.wide-CAUS-PASS-PST-DEC
 ‘The room got widened.’

(31’) *pang-i* *nelp-ecy-ess-ta*
 room-NOM be.wide-MM-PST-DEC
 ‘The room got wide.’

It is worth noting here that the hybrid *-i-eci* passive construction is a fairly late addition to the voice system in Korean, and only recently attested in the 20th century (Ko 1974). By this time, suffix *-eci* has long since developed both middle and passive uses, and in contexts such as (31), the indeterminacy between either middle or passive reading flips toward the passive interpretation due to the availability of suffix *-i*, which still has a causative function and thus can still introduce an implicit causer/agent reading into the equation.

3.2 Grammaticalization of voice marker *-i*

Having seen how Korean suffix *-i* compares with other voice markers in the language with respect to their use across each of the three grammatical voice domains (causative, middle and passive), we now turn our attention to the chronological development of *-i* from a bird’s eye view that covers all three voice domains (§3.2.1) and its grammaticalization pathways (§3.2.2). Voice marker *-i* develops along two major trajectories: the causative-to-middle pathway (§3.2.2.1) and the causative-to-passive pathway (§3.2.2.2), with the *-eci* middle contributing to the rise of hybrid *-i-eci*-type passive constructions.

3.2.1 Chronological development of suffix *-i* and other voice markers in Korean

Figure 1 recaps what we know thus far about the chronological development of voice markers *-i*, *-eci* and *-key ha-* in Korean. Our earliest available Korean texts written in *Kukyel* scripts date back to the 8th century, and *Hankul* scripts that are included in the *Sejong* historical corpus date back to the mid-15th century. Morphological causative *-i* was attested as early as the 8th century in *Kukyel* texts and was already highly productive in *Hankul* texts by the mid-15th century. Both spontaneous middle *-i* and passive *-i* were first attested in the 15th century, with facilitative *-i* emerging later in the 20th century. In the case of middle marker *-eci*, its spontaneous use was also first attested in the 15th century, and has since competed with its *-i* counterpart

throughout Middle and Modern Korean to the present-day. Inchoative use of middle marker *-eci* emerged later in the 17th century, but without competition from suffix *-i*, indicating that *-eci* was beginning to carve out more semantic niches than *-i* within the middle voice domain. Passive uses of *-eci* emerged in the 18th century, several centuries later than passive *-i*. In a sense, *-eci* was busy consolidating its extension within the middle voice domain, leaving more room for *-i* to expand within the passive voice domain. The combined rise of passive uses of both *-i* and *-eci* helped to pave the way for the rise of facilitative uses of *-i* in Contemporary Korean. This is because the result-state focus of many passive constructions involves a relaxation of the telicity constraint, which is conducive for the emergence of the [-telic] aspectual feature associated with facilitative middle constructions. Syntactic causative *-key ha-* was also already attested by the 15th century, but initially occurred with less frequency than morphological causative *-i*. However, by Modern Korean, causative *-key ha-* has become more productive than causative *-i*. Syntactic causative *-key ha-* expresses indirect causation; over time, the rise of *-key ha-* nudged morphological causative *-i* to become increasingly associated with direct causation. This development, in which causative uses of *-i* eventually becomes restricted to direct causation and no longer includes indirect causation in Contemporary Korean, also coincides with the increasing use of passive *-i* over time.

Figure 1. Grammaticalization of voice markers *-i*, *-eci* and *-key ha-* in Middle and Modern Korean

Old Korean (8 th -13 th c.)	Middle Korean (14 th -16 th c.)	Modern Korean (17 th -19 th c.)	Contemporary Korean (20 th c. to present day)
Morphological causative <i>-i</i> (10 th c.)	Spontaneous middle <i>-i</i> (15 th c.)	Facilitative marker <i>-i</i> (20 th c.)	
	Passive marker <i>-i</i> (15 th c.)		
	Double causative (e.g. <i>-i-wu</i> in 15 th c.)		
	Double passive (e.g. <i>-i-i</i> in 15 th c.)		
	Postverbal suffix <i>-a/e</i> + verb <i>-ti</i> 'fall' (15 th c.)		
	Spontaneous middle marker <i>-ati/-eti/-eci/-ecy</i> (15 th c.)	Inchoative middle marker <i>-aci/-eci</i> (17 th c.)	
		Passive marker <i>-eci</i> with implicit agent (18 th c.)	
		Passive marker <i>-eci</i> with overt agent (19 th c.)	
		Hybrid passive <i>-i-eci</i> (20 th c.)	
		Facilitative marker <i>-eci</i> (20 th c.)	
	Syntactic causative <i>-key ha-</i> (15 th c.)		

In Middle Korean, we also see evidence of 'double causative' markers such as *-o-i* (CAUS-CAUS) and *-i-wu* (CAUS-CAUS) and 'double passive' markers *-i-i* and *-hi-i* (PASS-PASS) (Yu 1994; Na 2014). Later in Modern Korean, some of the double-marked causatives fell out of use (e.g. *-io*, *-oy*), but the double-marked passives

expanded its range of phonological variants (e.g. *-lii*, *-nii* and *-kii*). One of the functions of these double-marked causatives and passives is to disambiguate between the causative and passive uses of suffix *-i* (S. Lee 1970; Kwak 1980; J. Han 1985; Yu 1994).

The 'double causatives' are often used to express indirect causation, which helps explain the increasing retreat of suffix *-i* to the direct causation domain. These morphological 'double causatives' also competed with the syntactic causative *-key ha-* to express indirect causation, eventually losing considerable ground to the latter, as happened with morphological causative *-i*. Phonological and semantic reasons partially contribute to the rise of the *-key ha-* constructions. For example, compared to the diphthongized double causative markers (e.g. *-oi* and *-iwu*), syntactic causative *-key ha-* is phonologically more salient. In addition, with the verb *ha-* still interpretable as 'do, become, etc.', *-key ha-* is also semantically more transparent.

The 'double passives' (e.g. *-ii*, *-hii*, *-lii*, *-nii*, *-kii*), with their vowel lengthening effect, are also phonologically more salient for purposes of disambiguating between passive and causative or middle uses. Further innovation within the passive domain in Contemporary Korean saw the rise of hybrid *-i-eci* passives, a merger that draws on the semantic assets of two different strains of voice markers to produce a causativized passive.

3.2.2 Grammaticalization pathways of versatile voice marker *-i*

In this subsection, we will examine more closely how the causative, middle and passive uses of *-i* are related to each other. There are in fact two major related but separate grammaticalization pathways. In what follows, we examine how causative *-i* develops into spontaneous and facilitative *-i* along one grammaticalization pathway (§3.2.2.1), and into passive *-i* along another pathway (§3.2.2.2).

3.2.2.1 The causative-to-middle pathway

An interesting question to be addressed here is how suffix *-i* comes to serve not only a valence-increasing (causative) function but also a valence-reducing (middle marking) one. As noted earlier in §3.1.2 (see also Kemmer 1993), a hallmark characteristic of middle constructions is that the Initiator (often also referred to as the Causer or Agent) and the Target (often referred to as the Patient) is *one and the same referent*. This is illustrated in (32), an example reproduced from (19a), where a gate is profiled as opening and closing without any attention drawn to a causer or agent, at least one of which in reality did exist since the East Gate that is being described in the 15th century Korean text (*Welinsekpo*) was clearly not an automatic gate. This means that the choice of voice construction is largely a choice of event/situation-profiling, or perspective-taking on the part of the speaker. This also means that shifts in voice phenomena, say from causative to middle voice marking, essentially boil down to shifts in perspective-taking. In (32), the causer and agent are

left unmentioned and the gate-closing event is foregrounded as a seemingly autonomous event with just a single core argument, namely *tong-mwun* ‘the East Gate’ itself.

- (32) *tong-mwun-i tolo tat-hi-ko* (=19a)
 east-gate-NOM again close-MM-CONN
 ‘The East Gate closed again ...’ (1459, *welinsekpo* 23:80)

Often, then, reflexive constructions—which inherently conflates the Initiator and the Target—often serve as favorable ‘bridging contexts’ (Heine 2002) for suffix *-i* to extend from causative uses to middle uses. Sometimes the reflexive construction (e.g. *nwun-i kam-ki-nancila* ‘(my) eyes are closing’) is accompanied by explicit markers of reflexivity, such as *cecelno* ‘by themselves’, as in (33). In many other cases, reflexivity is interpreted from inherent and contextual semantic cues, as in (34), where contact with parts of a poisonous tree is understood to cause one to scratch oneself badly, even though no explicit mention is made of the Initiator (the one that does the scratching action) nor the Target (the one being scratched). As seen in (34’), covert reference arising from argument ellipsis involving the addressee (‘you’ and ‘your skin/yourself’) as shown in (i) helps to pave the way for the eventual rise of facilitative interpretations such as the potential construction in (ii), where reference to the Patient (i.e. the reflexive object complement ‘yourself’) is elided. In this sense, facilitative middle constructions structurally resemble antipassive (= object-elided) constructions.

- (33) *mom-i phikonha-ya nwun-i cecelno kam-ki-nancila*
 body-NOM be.tired-and eye-NOM by.itself close-MM-SFP
 ‘(I) am tired, and (my) eyes are closing by themselves.’
 (1894, *thyenlolyektyeng2.txt*(1476))

- (34) *namwu tok-(k)uy ep-ti ani-hA-ya pyenhA-ya*
 tree poison-NOM not.exist-NMLZ NEG-do-SEQ change-SEQ
nachang-kwa pecum-i toy-ye koloi kulk-hi-ketun
 furuncle-with psoriasis-NOM become-SEQ painfully scratch-CAUS-if
napphyeng-tAl-ey cap-un tothAy kilum-ul pala-myen
 ancestral.rites-month-in kill-ADN pig oil-ACC put.on-when

kuythuki tyohA-nila
 surprisingly be.good-SFP

‘If the poison of a tree, which gives rise to *furuncle* and *psoriasis* (skin diseases caused by fungi), causes excessive scratching (< causes **(you)** to scratch **(your skin/yourself)** badly), it will be surprisingly good to put on pig oil (*tothAy kilum*) which you killed in the month of ancestral rite.’ (1608, *twuchangha* 62b txt(588))

- (34') *namwu tok-(k)uy ... koloī kulk-hi-ketun*
 tree poison-NOM painfully scratch-CAUS-if
 (i) 'if the poison of a tree causes (you) to scratch (yourself) badly, ...'
 (ii) 'if the poison of a tree scratches badly'

As noted earlier in §3.1.2, middles involving bodily actions (e.g. 'washing oneself') are often derived from reflexive causatives. In a similar vein, reflexive causative *-i* constructions in Korean that involve bodily actions such as 'scratching oneself' provide a bridging context for causative *-i* constructions to develop into middle *-i* constructions, as shown in (34).

It is also not uncommon for reasons of politeness or discretion to refer to the addressee in an indirect manner, sometimes by eliding any explicit reference to the addressee or his/her body parts when discussing sensitive or personal topics such as one's discomfort. Thus, in the reflexive causative construction in (34), both the addressee (the Causee Agent 'you') and his body part (the Affected Patient 'your skin/yourself') are elided, in keeping with politeness norms. On the surface, this construction explicitly expresses only one argument, the Causer, *furuncle* and *psoriasis* (skin diseases caused by fungi). This paves the way for the use of *-i* to be extended to intransitive verbs, where the sole argument could be a patient or instrument and we then obtain middle constructions such as spontaneous and facilitative middles, as in (35) and (36) respectively.

- (35) *mwun-i soli-epsi sululu yel-ly-ess-ta*
 door-NOM sound-without mimetic.word(=gently) open-MM-PST-DEC
 'The door opened gently without any sound.'

- (36) *LP phan-un cal kulk-hi-n-ta*
 LP record-TOP easily scratch-MM-PRES-DEC
 'LP (long-playing) records scratch easily.'

The extended uses of suffix *-i* from causative to spontaneous to facilitative involved a cluster of changes. As noted earlier in §3.1.2, this includes a relaxation in telicity constraints, whereby suffix *-i* initially co-occurred with [+telic] verbs in Middle Korean to produce spontaneous constructions and gradually with [-telic] verbs as well in Contemporary Korean to produce facilitative constructions. In the case of facilitative *-i*, we also see a relaxation on the specificity constraint, which paves the way for the inclusion of generic references that allow for potentiality and facility (i.e. ease or difficulty of occurrence) readings. In addition, there is also a process of 'subjectification' in which the speaker encodes his/her judgment or belief toward the quality of an object or toward its intrinsic ability to perform a particular action or undergo a particular process (see Traugott 1989, 1995, 2010; Kemmer 1993). There

are more semantic constraints to weaken for facilitative uses of *-i* to emerge, which helps explain the late emergence of suffix *-i* as a facilitative marker.

3.2.2.2 *The causative-to-passive pathway*

It has also been crosslinguistically observed that causative constructions often develop into passive constructions through the mediation of reflexive constructions (Haspelmath 1990). This causative-to-passive development has been shown to be productive in the ‘give’ constructions of Manchu-Tungusic (Nedjalkov 1993; Knott 1995) and Sinitic languages (Yap & Iwasaki 2003). In English, passive *get* has also developed from causative *get* through the reflexive causative construction (Haegeman 1985; Givon & Yang 1994), as shown in (37).

- (37) *I got myself to be banished > I got to be banished > I got banished.*
 (Givon & Yang 1994: 144-5)

Keenan (1985) has likewise suggested that the causative in Korean developed into the passive through the reflexive permissive-causative. In the examples from Keenan (1985: 262) below, both (38a) and (38b) have causative meaning whereas (38c) has passive meaning. Keenan proposes that causative *-ki* (phonological variant of *-i*) acquires the passive meaning in (38c) through the deletion of the reflexive direct object *caki mom* ‘self’s body’ in (38b). He further claims that the availability of a permissive context for the *-ki* construction made the development from causative to passive possible.

- (38) a. *Nuna-ka emeni-eke ai-lul an-ki-ess-ta*
 sister-NOM mother-DAT child-ACC embrace-CAUS-PST-DEC
 ‘Sister had Mother embrace the child.’
- b. *Ai-ka emeni-eke caki mom-ul an-ki-ess-ta*
 child-NOM mother-DAT self body-ACC embrace-CAUS-PST-DEC
 ‘The child had Mother embrace him.’
- c. *Ai-ka emeni-eke an-ki-ess-ta*
 baby-NOM mother-DAT embrace-PASS-PST-DEC
 ‘The child was embraced by Mother.’

(Keenan 1985: 262)

Keenan’s (1985) observation that causative *-i* constructions in Korean have developed passive uses via reflexive causative contexts as an intermediate stage is supported by bridge examples such as (39) and (40) from the *Sejong* historical corpus (see also our discussion earlier in §3.1.3). In (39), we have a synechdoche-type reflexive causative, where *tungeli* ‘(my) back’ is co-indexical with the speaker

himself (*nay* 'I').¹⁵ In (40), we also have a synecdoche-type reflexive causative where the speaker inadvertently had his arm (and thus himself) scratched by the leopard's toenail, but in this example we also additionally have argument ellipsis, where neither the speaker as unintentional and non-volitional Causer nor himself as the unfortunate Patient is overtly mentioned, since this particular information is retrievable from the discourse context. Reflexive causative constructions such as these facilitate the emergence of passive uses of suffix *-i*.

(39) (*nay*)... *ahAy-lo hwenhi tungeli kulk-hi-ko*
 (1SG) child-INST effectively back scratch-CAUS-CONN
 'I had the child effectively scratch my back and...' (1481, *twusienhay* 15:4)

(40) *nay-ka tansinulo phal-ul nay-ye phyopem-uy nima-lul*
 1SG-NOM by.myself arm-ACC stretch-SEQ leopard-DAT forehead-ACC
chita-ka ku palthop-ey kulk-hi-ye cokom syangha-yess-una
 hit-SEQ the toenail-DAT scratch-PASS-SEQ a.little damage-PST-but
 'As I stretched out my arm and, all by myself, punched at the forehead of the leopard, I however was scratched by its toenail, and was injured a little.'
 (1904, *tayhanmayilsinpo.txt*(6181))

3.3 Directionality in the development of voice markers in Korean

As we have seen thus far, both voice markers *-eci* and *-i* have extended the range of their functions in more than one direction. In the case of voice marker *-eci*, we see an expansion of its middle voice functions (spontaneous > inchoative > facilitative) with no change in valence (i.e. all three types of middle *-eci* constructions remained intransitive). Along its secondary grammaticalization trajectory, on the other hand, its extension from middle to passive voice uses brought in an additional argument, namely, an Agent (either implicitly or explicitly expressed). There is an increase in valence, as *-eci* constructions extend from intransitive to transitive predicates. In other words, we see a 1-place predicate > 2-place predicate development, often also referred to as 1P > 2P for short.

Voice marker *-i* also extended along two grammaticalization trajectories, likewise along passive and middle pathways but with some variation. One pathway was a causative (3P) > causative reflexive (3P=2P-like) > passive (2P) development (i.e. a 3P > 2P valence change), while the second pathway was a causative (3P) > anticausative or spontaneous (1P) > facilitative (1P) development (i.e. 3P > 1P). Both developments for voice marker *-i* are valence-reducing. In sum, whereas the middle-to-passive *-eci* development is valence-increasing, the causative-to-middle *-i* and causative-to-passive *-i* developments are valence-reducing.

¹⁵ A synecdoche involves a part-whole metonymic relationship between two entities. In (41), this metonymic relationship allows for a co-indexical or reflexive interpretation between *tungeli* '(my) back' and *nay* 'I (the speaker him/herself)'.

What leads to this difference in directionality with respect to valence change? One important reason lies in their etymological history. Since *-eci* evolved from an unaccusative intransitive verb *ti-* ‘fall, collapse, disappear’, its voice marking functions initially clustered within the middle voice domain, at first for spontaneous uses with their sudden-change-of-state unaccusative semantics (e.g. ‘the bridge collapsed’), then for inchoative uses as the telicity constraint was weakened to allow for the inclusion of non-telic result states (e.g. ‘the weather got hotter and hotter’) and subsequently for facilitative uses as *-eci* constructions also began to be used in contexts for the expression of the speaker’s evaluative judgment (e.g. ‘this knife cuts well’) (see Ahn & Yap 2017). Note that the emergence of facilitative uses involves an ‘antipassivization-like’ process, as the speaker focuses on the quality of the instrument or means, with little consideration for the particular object, hence yielding a generic interpretation. It is perhaps not coincidental then that the ‘antipassivized-like’ facilitative middle *-eci* construction emerges later after *-eci* has already developed a passive construction.

The extension of *-eci* from the middle voice (1P) domain to the passive voice (2P) domain started out with ‘agentless’ passives, which are semantically transitive (i.e. 2P), but structurally appear intransitive-like due to the absence of an overtly expressed Agent. The rise of these ‘agentless’ passive *-eci* constructions in the 18th century pre-dated the emergence of facilitative uses of *-eci* which emerged more recently in the 20th century, and their passive counterparts with overtly-expressed agents were also attested later, in the 19th century (Ahn & Yap 2017). The sequence of semantic extension and directionality of valence change for *-eci* constructions are highlighted in Figure 2, which also includes the sequence for *-i* constructions for ease of comparison.

Figure 2. Directionality of valence changes within the Korean voice system

Voice marker		
<i>-eci</i>	unaccusative verb <i>ti-</i> ‘fall’ (1P) > spontaneous (1P) > inchoative (1P) > facilitative (1P) > extension to passive (2P) via ‘agentless’ passive constructions	
Voice marker	ANTICAUSATIVIZATION	ANTIPASSIVIZATION-LIKE
<i>-i</i>	causative (3P) > spontaneous (1P) > causative (3P) > causative reflexive (3P=2P-like) > passive (2P)	facilitative (1P)

As seen in Figure 2, unlike *-eci* constructions which clustered first within the middle voice domain, *-i* constructions began within the causative domain, then expanded in both directions into the middle and passive domains. Along the causative-to-passive pathway, as noted earlier, we see a valence-reducing development (3P > 2P) mediated by reflexive constructions. The role of the reflexive

was far less crucial in the rise of passive *-eci* constructions, where intransitive-like ‘agentless’ constructions were more suitable for the transition from middle to passive constructions (1P > 2P). The causative-to-middle pathway for *-i* constructions also began around the same time as the causative-to-passive pathway, with tokens from the *Sejong* corpus attested as early as the mid-15th century. However, the middle voice marking functions of *-i* went largely unnoticed in scholarly works until very recently (e.g. Name 2012; J.M. Kim 2013, 2014; Y.S. Kim 2014), with the present study contributing a diachronic account of the rise of the spontaneous and facilitative functions of *-i*.

An interesting question is why the causative-to-middle pathway remained largely unnoticed for so long. Part of the reason of course is that, relative to the extensive typological studies already available for causative and passive voice phenomena since the 1970s and 1980s (e.g. Shibatani 1976, 1985; Siewierska 1984; Keenan 1985), in-depth studies on middle voice phenomena emerged later, with Kemmer (1993) making a significant contribution in defining the category ‘middles’ itself. Another reason is related to the greater number of semantic constraints that need to be relaxed in the causative-to-middle shift, which calls for a multi-dimensional analysis involving changes not only in valence but also in aspectual features, specificity vs. genericity distinctions, and a process of subjectification (see §3.1.2 and §3.2.2.1). As seen from Figure 2, there is a greater reduction in valence involved (3P > 1P) for *-i* constructions to extend from causative to middle uses. This change in valence involves suppression of an external Causer (anticausativization) to yield spontaneous middles, and it further involves suppression of the Patient (antipassivization-like) to yield facilitative middles. Similar to *-eci* constructions, the extension of middle *-i* constructions from spontaneous to facilitative is further accompanied by a relaxation in the [+telicity] constraint as well as the [+specificity] constraint. In addition, the process of subjectification needed to bring about facilitative readings involves the broader domain of speaker stance, which operates beyond the subject-predicate syntactic level, and orients toward the interface between syntax and discourse. This cluster of changes that contributes to the development of middle voice functions help explain why research on middles had previously lagged behind research on causatives and passives. What is interesting, however, is that both the middle and passive *-i* pathways emerged around the same time, suggesting that neither construction is necessarily more semantically or structurally complex than the other.

We now return to our earlier discussion of the role of etymology on the directionality of valence change. Whereas the lexical source of *-eci* has been traced to an unaccusative intransitive verb meaning ‘fall, collapse, disappear, etc.’, which helps explain its valence-increasing extension to passive uses (1P > 2P), the lexical source of *-i* is largely unknown. Nevertheless, the Korean language has left some tantalizing clues that can help unravel much of the mystery surrounding the origin of *-i*, and which can help explain why the directionality of change for *-i* constructions is valence-reducing (rather than valence-increasing like *-eci*). Consider the following

'fossil' evidence. Korean has a proximal demonstrative *i* 'this', and nominative case marker *-i* as well as nominalizer *-i* within the nominal domain, as well as suffixal copula *-i* within the verbal domain that functions much like an agreement marker that links the subject and the predicate. In essence, we have a demonstrative recruited as a case marker to identify a nominative subject, and also recruited as an agreement marker to again identify a nominative subject. Among the nominative subjects, this agreement marker identifies not only Agents but also Causers, the latter emerging for causative events. In causative contexts, 'nominative agreement marker' *-i* signals the presence of a Causer, and hence is transitivity-increasing, giving rise to 3-place predicate (3P) constructions.¹⁶ As discussed earlier, reflexive constructions emerge when the Agent conflates with the Patient (2P), and passive constructions emerge when the Agent is defocused (2P), while spontaneous middle constructions emerge when the Causer is disregarded and the conflated Agent-Patient is involved in an autonomous spontaneous event (1P). Facilitative middle constructions emerge later, and given its focus on inherent attributes rather than Causer, Agent or Affected Patient, the valence remains that of a 1-place predicate (1P) construction. In short, a demonstrative origin for *-i* could account for the valence-increasing (causative) and valence-reducing (passive and middle) developments.¹⁷ Differences in etymology of a voice marker helps to determine the directionality of valence change, as seen in the divergent pathways for *-eci* and *-i* in Korean.

4. Concluding remarks

In this paper, we have traced the development of Korean suffix *-i* as a versatile voice marker across three different voice domains—namely, causative, middle and passive. We have identified two major pathways in the development of voice marker *-i*. One is the causative-to-middle pathway, and the other is the causative-to-passive pathway, with both pathways mediated by reflexive constructions. Our analysis reveals that the extended uses of suffix *-i* from causative to passive domains were paved in stages by a number of innovative strategies. Firstly, as far back as the 15th century (Middle Korean), there was already the rise of 'double causative' markers *-io*, *-oy*, *-iwu* and *-wui*, as well as syntactic causative marker *-key ha-*, as markers of indirect causation, which significantly diminished the sphere of influence of suffix *-i* within the causative domain, restricting it largely to the role of marking direct causation in Contemporary Korean. Secondly, also attested since Middle Korean, the rise of suffix *-eci* within the middle voice domain soon outpaced the middle marking functions of suffix *-i*, the former developing into a spontaneous, inchoative and facilitative marker, while suffix *-i* restricts itself to spontaneous and facilitative (but not inchoative) uses. With its reduced role as a causative marker, and a lesser role as a

¹⁶ We use quote marks around 'nominative agreement marker' for suffix *-i* because this notion is new and may invite controversy.

¹⁷ Arabic has a causative particle *sa-*, whose origin is a demonstrative pronoun (Lüling 2003).

middle marker, suffix *-i* was left with more room to develop more prolifically as a passive marker. Thirdly, the emergence of hybrid passive marker *-i-eci*, which combines causative suffix *-i* (or its phonological variants *-hi*, *-li*, *-ni*, *-ki*, etc.) with middle/passive suffix *-eci* to produce a causativized passive, further helps to expand the range of passive functions for suffix *-i*. All these innovative developments in the Korean language have contributed to the development of suffix *-i* as a versatile voice marker—one that retains its original use as a valence-increaser and marker of direct causation, as well as one that has some extended use as a middle marker, initially with spontaneous readings and later with facilitative readings as well, and also one that has subsequently expanded its role as a passive marker.

Given that our diachronic analysis has shed more light on how voice markers in the Korean language facilitate as well as compete with each other in the course of their development, similar studies could also be undertaken for other languages with a recorded history of appreciable time depths. This will help us address theoretical issues such as preferred directionality of voice-marking extensions. For example, our analysis from Old to Middle to Modern and Contemporary Korean has shown that for suffix *-i*, the direction of extended uses was from causative to middle and passive, not vice-versa. Understandably, this is because the function of suffix *-i* was initially causativizing in nature. The lexical origin of morphological suffix *-eci*, on the other hand, is generally believed to involve the lexical verb *-ti* (> *-ci*) meaning ‘fall’, and hence tends to favor a resultative focus (often adversative), which in turn favors the development of *-eci* as a middle marker that is extendable for passive uses (see also Ahn & Yap 2017). This suggests that type of middles and directionality of extended uses are to a significant extent determined by etymology. Previous studies have shown that causative to reflexive middle and passive constructions are well-attested crosslinguistically, notably among Manchu-Tungusic and Sinitic languages (e.g. Barber 1975; Berman 1979; Kemmer 1988; Washio 1993; Nedjalkov 1993; Knott 1995; Yap & Iwasaki 2002; Chen & Yap 2016; *inter alia*). Likewise, previous studies have also shown that the reflexive plays a role in the emergence of middle and passive constructions in many language families, among them Scandinavian (including Icelandic), Romance and Khoisan languages (e.g. Haspelmath 1990, 2003; Heine & Kuteva 2002, 2007; Solstad & Lyngfelt 2006). studies are needed to verify whether there is an asymmetry in directionality that favors a causative to middle and passive development (as in Korean suffix *-i*), as well as a middle to passive development (as in Korean *-eci*), and to additionally account for such asymmetry if it is found to be a strong typological tendency.

Abbreviations

ACC: accusative, ADN: adnominal, ATTR: attributive, CAUS: causative, CONN: connective, COP: copula, DAT: dative, DEC: declarative, DM: discourse marker, FIL: filler, GEN: genitive, HON: honorific, IE: informal ending, IMP: imperative, INTJ: interjection, INST:

instrument, LNK: linker, LOC: locative, MM: middle voice marker, NEG: negation, NMLZ: nominalizer, NOM: nominative, PASS: passive, PL: plural, POL: polite, PRES: present, POSS: possessive, PROG: progressive, PST: past, RETRO: retrospective, Q: interrogative, SFP: sentence final particle, SEQ: sequential, TOP: topic.

Acknowledgments

We wish to gratefully acknowledge funding from the Research Grants Council of Hong Kong through the research project entitled “Valence-reducing Phenomena and the Emergence of Markers of Speaker Affectedness” (GRF PolyU Project No. 154055/14H) awarded to the first author and university internal funding from Hankuk University of Foreign Studies to the second author.

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Highlights (no. of characters, inclusive of spacing)

- Korean suffix *-i* can serve multiple voice functions: causative, middle and passive. (83)
- Suffix *-i* develops in two directions: causative-to-middle and causative-to-passive. (83)
- Among the middles, spontaneous *-i* develops first, followed later by facilitative *-i*. (84)
- The causative-passive cline also includes double-marked causatives and passives. (80)
- Linguistic cues suggest that versatile suffix *-i* is derived from demonstrative *i*. (81)