

Semantic Extension and Grammaticalization of SAME in Korean Sign Language (KSL) and Korean

Youngju Choi

Department of English Language & Literature, Chosun University, Gwangju, Jeonbuk, Korea

Seongha Rhee*

Faculty of Liberal Arts, Mahidol University, Salaya, Nakhon Pathom, Thailand;
ELLT Department, Hankuk University of Foreign Studies, Seoul, Korea

Abstract—Semantic extension and grammaticalization have been extensively studied in spoken languages, but sign languages remain relatively underrepresented. This paper investigates the semantic extension and grammaticalization of the lexeme [SAME] in Korean Sign Language (KSL) and compares them with the spoken Korean counterpart *kath-* ‘be same’. The investigation yields both commonalities and differences in the developmental paths of these two lexemes. Parallels are found particularly in their progression from the original meaning of IDENTICALNESS to the more abstract meaning of CORRECTNESS, and further to epistemic-evidential functions, such as INFERENTIAL CONJECTURE, and the pragmatic-interactional function of MITIGATION. While both [SAME] in KSL and *kath-* in Korean undergo grammaticalization, their trajectories are partly shaped by modality-specific constraints. The spoken modality allows *kath-* to evolve toward similarity, whereas the visual-spatial modality of KSL, constrained by iconic distinctions, prevents [SAME] from extending into the domain of similarity, as this function is already occupied by the iconically related sign [SIMILAR]. While previous studies on modality-specific grammaticalization in sign languages have focused primarily on the process of gestures evolving into lexical items, the present study opens up the possibility that additional modality-specific factors may influence the pathways of grammaticalization as well as lexical semantic extension in sign languages.

Index Terms—Korean Sign Language (KSL), Korean, semantic extension, grammaticalization, modality effect

I. INTRODUCTION

The process of semantic extension and grammaticalization has been extensively examined in spoken languages, revealing universal mechanisms by which lexical items evolve into grammatical markers. However, research on grammaticalization in sign languages remains relatively underexplored, with some exceptions (Pfau & Steinbach, 2004, 2006, 2011; Steinbach & Pfau, 2007; Otte et al., 2023). Sign languages employ a visual-spatial modality, which is fundamentally distinct from the auditory-vocal modality of spoken languages. Despite the modality differences, the underlying processes of grammaticalization are largely parallel in both spoken and sign languages. Grammatical elements evolve from lexical items through similar mechanisms, adapted to the specific constraints imposed by the modality. However, in some instances, the unique modality influences how meaning is constructed, expanded, and grammaticalized, despite notable similarities shared between spoken and sign languages.

This study focuses on the grammaticalization of the sign [SAME] ‘(be) same’ in Korean Sign Language (KSL) in comparison to the lexeme *kath-* ‘be same’ in spoken Korean (Korean, in short), a lexical item that encodes identicalness or sameness.¹ While both KSL and Korean exhibit pathways of grammaticalization from lexical to grammatical functions, their developmental trajectories reveal notable similarities as well as divergences. Investigating these patterns not only enhances our understanding of grammaticalization as a universal linguistic process, but also sheds light on the modality-specific factors that shape meaning in sign languages.

The present paper is organized in the following way: Section I has provided an introduction and brief overview of the topic; Section II presents a succinct review of extant research; Section III provides a brief exposition on a few points pertaining to the theoretical background; Section IV describes the research methodology; Section V reports the results and discusses noteworthy findings; and Section VI concludes the paper.

* Corresponding Author. Email: srhee@hufs.ac.kr

¹ For notational distinction, the signs in KSL, comparable to words in spoken languages, are represented in small caps within square brackets (e.g., [SAME]), whereas the words in spoken Korean are represented in romanized, italicized forms (e.g., *kath-* ‘be same’). KSL sentences and phrases are given with signs in a string (as in [BOY] [GIRL] [FLOWER] [GIVE] for ‘The boy gives flowers to the girl.’) The concepts (or ‘semes’) are rendered in capital letters without square brackets (as in SAME).

II. LITERATURE REVIEW

As mentioned above, KSL has been largely understudied. However, a notable change of research trend is that the past decade has witnessed an increasing interest in KSL research, with special emphasis on iconicity and embodiment, largely because of sign languages' modality characteristic, i.e., the use of bodily movement across signed space. Examples of recent research include studies by Lim (2018, 2021, 2022), Song et al. (2020), Yang and Choi (2022), Lee and Choi (2024), and Choi (2024a), among others. These have focused on the construction of signs based on iconicity. Furthermore, studies by Choi (2021), Cha and Chung (2023), and others have examined embodiment of KSL signs, and Lee and Choi (2025) have studied the role of prominence creating visual prosody in KSL. Other studies have investigated the internal structure of signs, such as semantic network and conceptual blending (Choi, 2017, 2021; Choi & Yang, 2023; Jeong, 2024). In addition, a few comparative studies have investigated the dynamics both between different sign languages and between signed and spoken languages. For instance, Bai et al. (2022) compare the varying degrees of iconicity in KSL, Chinese Sign Language (CSL), and Japanese Sign Language (JSL), with each respective spoken language; Xi (2023) studies the patterns of iconicity in KSL and CSL; Seo et al. (2013) compares the construction of signs in KSL and American Sign Language (ASL) in light of the differences in the ambient cultures; Choi (2022) investigates KSL, Korean, and English in terms of the metaphorical extension patterns; and Choi (2024b) compares the manifestations of the concept FOLLOW in KSL, Korean, and English.

While these studies have contributed significantly to a greater understanding of various features of KSL, research on the emergence of grammatical forms in KSL from a grammaticalization perspective is nearly non-existent. This unfortunate state of affairs contrasts sharply with other sign languages, which have received considerable attention. For instance, iconicity has been discussed in a plethora of studies, such as Mandel (1977) and Taub (2001) for ASL, Vinson et al. (2008) for BSL (British Sign Language), Pietrandrea (2002) for LIS (Italian Sign Language), and Fuks (2023) for Israeli Sign Language (ISL), to name a few. Studies addressing grammaticalization of sign languages also abound. Jacobowitz and Stokoe (1988) and Janzen and Shaffer (2002) claim that some ASL verbs may show grammaticalization of tense markers, and Zucchi (2003) observes the development of temporal markers by means of suprasegmental features combined with verbs in LIS. Grammaticalization of aspect markers from verbs and adverbs, e.g., completive and perfective, has been observed in ASL (Fischer & Gough, 1999, 1972; Janzen, 1995; Sexton, 1999), ISL (Meir, 1999), and LIS (Zucchi, 2003; as cited in Pfau & Steinbach, 2006). Similarly, Wilcox and Wilcox (1995) and Janzen and Shaffer (2002) expound on the grammaticalization of modal auxiliaries (e.g., MUST, SHOULD, CAN) in ASL. Some comparative studies, mostly focusing on iconicity, are found in Ortega et al. (2025) for BSL and German Sign Language (DGS), and McKee and Kennedy (2000) for ASL, BSL, and New Zealand Sign Language. These studies found overwhelming evidence of common organizational principles that operate in both the signed and spoken languages (Sandler & Lillo-Martin, 2006; Emmorey, 2001; Ortega et al., 2025, among others). Additional studies have observed properties that are unique to sign languages (Keener & Gathercole, 2007; Villameriel et al., 2019; Permiss et al., 2015). In this regard, noteworthy research on grammaticalization patterns across sign languages is found in Pfau and Steinbach (2006), who observe both modality-independent and modality-specific grammaticalization patterns. These authors also show that grammaticalization of sign languages exhibits largely similar behavior to that of oral languages (Pfau & Steinbach, 2011).

Given the background, the present paper addressing grammaticalization of KSL and comparing it with Korean will shed light on the extent of the similarities and differences between the two languages of different modality.

III. THEORETICAL BACKGROUND

A brief description of KSL is in order. KSL has been recognized as an official language of Korea since 2016, and is used by approximately 30 percent of hearing-impaired Koreans, according to a sampled survey performed by NIKL (2024), although the exact number of users has not been established. Comparative studies have shown that KSL bears considerable similarity with JSL, accounting for 63.35 percent similarity (Kim, 1983; as cited in Choi & Ko, 2020). The similarity is so extensive that users of KSL, JSL, and even Taiwan Sign Language (TSL) communicate together almost perfectly (Fischer, 2010; as cited in Choi & Ko, 2020). KSL is morphologically isolating and analytic, meaning that signs are largely used without the affixes commonly found in Korean. The feature analogous to agglutinating affixation is the simultaneous occurrence of signs and movements, which are often iconic, such as facial expressions, postures, eye gaze, etc. KSL and Korean have both shared and differing typological features, as summarized in Table 1.

TABLE 1
NOTABLE FEATURES OF KSL AND KOREAN

Features	KSL	Korean
Geography	South Korea	Korean peninsula & vicinity
User population	120,000*	82,000,000**
Modality	Visual-gestural	Auditory-vocal
Morphological cohesion	Isolating (co-occurring signs)	Agglutinating
Morphological complexity	Analytic	Synthetic
NP Head Directionality	Head-initial (largely flexible)	Head-final
Word Order	SOV	SOV

* Projected figure by the National Institute of the Korean Language (2024), but figures are widely variable

** Ethnologue 26th edition (Eberhard et al., 2023)

The major theoretical framework of the present study is grammaticalization, as pioneered by Meillet (1912) and later refined by Lehmann (2015, 1982), Heine et al. (1991), Hopper and Traugott (2003, 1993), Bybee et al. (1994), among others. The tenets underpinning grammaticalization theory are the uniformitarian principle (i.e., linguistic changes observed in the present can be assumed to have occurred in the past as well); the unidirectionality principle (i.e., forms change from conceptually concrete to abstract, from categorially lexical to grammatical, from morphosyntactically independent to dependent, from phonologically long to short, etc.); the source determination principle (i.e., the developmental paths and the final products are determined by the sources); and the universal path principle (i.e., a limited set of developmental paths exists across languages) (cf. Heine et al., 1991; Bybee et al., 1994).

The present study employs a comparative approach grounded in grammaticalization theory, which focuses on the evolution of lexical items into grammatical markers. Since grammaticalization is in principle a diachronic change, researching languages with shallow historical depth or with no documentation is challenging. In this regard, spoken Korean benefits from extensive diachronic data (see below), but research into KSL faces the challenge of limited historical records. However, these challenges are not insuperable due to the uniformitarian and unidirectionality principles allowing for a new approach whereby the undocumented historical path can be ‘reconstructed’ based on the current state of affairs. This approach, ‘from synchrony to diachrony’ (cf. Givón, 1971, 2015; Traugott & Heine, 1991), is useful because when a contemporary form carries, for example, the lexical meaning of ‘intend’ and the grammatical meaning of the future-tense ‘will’ but with no known historical information, the principles offer a ‘reconstructed’ path from ‘intend’ to ‘will’ (not the reverse), since this pathway has been extensively attested across languages (Bybee et al., 1991, 1994, pp. 254-257; Heine et al., 1991; Kuteva et al., 2019).

IV. RESEARCH METHODOLOGY

The semantic and grammatical analysis of the source lexemes [SAME] in KSL and *kath-* ‘be same’ in Korean involves, critically, the concepts IDENTICALNESS, SIMILARITY, CORRECTNESS, CONJECTURE, and MITIGATION, informed by earlier research on *kath-* ‘be same’ in Korean (Baek, 2012; Kim, 2012; Rhee, 2005; among others). IDENTICALNESS denotes the quality of being selfsame in two entities being compared; SIMILARITY denotes the quality of being alike; CORRECTNESS denotes accuracy or validity of a propositional content; CONJECTURE denotes inference by the speaker formed without proof or sufficient evidence; MITIGATION denotes an act of softening or hedging statements in consideration of the interlocutor’s face.

The present research compares the lexical extension and grammaticalization of KSL and Korean. For the KSL data, this study draws on two primary sources. The first consists of naturally occurring utterances extracted from 30 hours of discourse video recordings, which were collected and transcribed by the Language Convergence Research Institute of Chosun University. These data provide authentic, context-rich examples of KSL usage in real communicative settings. The second source includes example sentences taken from the *Korean Sign Language Dictionary*, published and made available online by the National Institute of the Korean Language, which offers standardized lexical and grammatical examples. Korean has been well documented, particularly from the Late Middle Korean in the mid-15th century, when the Korean script *Hangeul* (*Hankul*) was invented. Data collection for Korean involved consulting two major sources: the Sejong Historical Corpus (SHC) for diachronic investigation, and the Drama and Movie Corpus (DMC) for investigation of contemporary usage. The SHC is a 15-million-word historical section (1446-1913) of the Sejong Corpus, developed as part of the government-led 21st Century Sejong Project. The DMC is a 24-million-word contemporary corpus based on a collection of 7,454 scenarios in dramas and movies dating from 1992 through 2015, compiled by Min Li. The collected data have been curated through hand-screening, and the identified semantic denotations and grammatical functions have been categorized for comparison.

Based on the collected data, an analysis was performed to compare the semantic extension and grammaticalization pathways, either inductively identified or theoretically hypothesized, of the two lexemes KSL [SAME] and *kath-* ‘be same’ in Korean, focusing on their similarities and differences as well as the potential influence of modality on the developmental patterns in cases where the paths of the two forms diverge. Via this analysis, the present study aims to reveal both the universal mechanisms underpinning grammaticalization and the modality-specific constraints and affordances that contribute to cross-linguistic differences.

V. RESULTS AND DISCUSSION

A. Similarities in Grammaticalization of KSL and Korean

The grammaticalization pathways of KSL [SAME] and Korean *kath-* reveal striking similarities in their semantic shifts and functional expansions, demonstrating universal mechanisms of linguistic evolution across modalities.

(a). Identicalness

The original lexical meaning of both [SAME] in KSL and *kath-* in Korean lies in IDENTICALNESS, an ideational meaning denoting exact sameness or equivalence. This is the core meaning of the two forms, from which semantic extension and grammaticalization developed. This meaning is exemplified in (1):

- (1) a. [FRIEND][UNIVERSITY][SAME]

- ‘My friend and I go to the same university.’ (KSL)
- b. *na-wa nay chinkwu-nun kath-un tayhak-ul tani-n-ta.*
 I-COM my friend-TOP be.same-ADN university-ACC attend-PRES-DEC
 ‘My friend and I go to the same university.’ (Korean)

The KSL [SAME] is signed by bringing the thumb and index fingers together repeatedly or in a single contact to symbolize the notion of two entities being identical (see Figure 1). This visual gesture effectively conveys the concept of sameness by emphasizing the physical unification of two elements. In both examples, the terms [SAME] and *kath-* clearly denote identicalness by indicating that two referents, i.e., the universities that ‘I’ and ‘my friend’ attend, are one and the same.



Figure 1. KSL Sign for [SAME] ‘(be) same’

(b). *Correctness*

Both KSL [SAME] and Korean *kath-* have undergone a semantic shift, extending their meaning from IDENTICALNESS to CORRECTNESS, and shifting from an ideational to a more epistemic, evaluative meaning. At this stage, the expressions affirm the validity or truth of a preceding statement. In (2), the response of Speaker B involves the sign [SAME] which denotes that what is said or implied by Speaker A is correct. The sign [CALL] is used to draw the attention of the interlocutor; the repeated plus sign (+) stands for reduplication and emphasizes the meaning of the sign; and ‘IX’ is a notation for indicating an object with the index finger while signing. Similarly, example (3) involves *kath-*, which denotes CORRECTNESS.

- (2) A: [CALL] [IXTHERE] [TWO] [ROMANTIC-RELATIONSHIP] [DUBIOUS] [?]
 ‘Don’t you think those two are in a romantic relationship?’
 B: [SAME]++
 ‘Yes, you are right.’ (KSL)

- (3) *ney mal kath-Anila*
 your word be.same-DEC
 ‘You are right.’ (Korean; 1447 *Sekposangcel* 9: 22)

In examples (2) and (3), both [SAME] and *kath-* (note the historical spelling variation in *kath-*) affirm the correctness of an interlocutor’s statement or implication and serve the function of marking epistemic concordance, either as a free-standing agreement marker as in (2), or as an inflected predicate as in (3). Incidentally, this usage in contemporary Korean is nearly defunct and its vestiges are found in its lexicalized antonym *kathcanh-* (‘be not *kath-*’) denoting ‘incorrect, unacceptable, insignificant, nonsensical’.

The conceptual motivation behind the extension from IDENTICALNESS to CORRECTNESS is straightforward. The notion of IDENTICALNESS involves two entities with shared properties being identical either by being self-same (e.g., ‘same school’, ‘same surname’) or having essentially same quality (e.g., ‘same food’, ‘same weather’). When the involved entities are third-order, i.e., propositions, the quality of being self-same or matching can be construed as real or true. It is interesting to note that CORRECTNESS does not necessarily involve explicit entities being compared, i.e., the truth-value of an explicit statement may simply be compared with the implicit truth or the reality. Thus, if ‘the presence of a romantic relationship of the two people’ (in [2]) matches the reality, the statement or implied message is ‘correct.’ By involving evaluation, this meaning is highly stance-imbued. This type of colexification of ‘identical’ and ‘correct’ can also be observed with the Thai lexeme *tòok* ‘same’ (see also List et al., n.d., for conceptual connection between ‘equal’ and ‘correct’).

(c). *Togetherness*

The semantic range of both expressions further expands to encode TOGETHERNESS, signifying shared actions or collective participation, thus acquiring more interactional meanings (though statives are also allowed). In (4a), the sign [SAME] in KSL denotes the collective action of going to a movie together. Similarly, in (4b), *kathi* (< *kath-i* [be.same-ADVZ]) in Korean functions as an adverbial, signifying togetherness in performing an action.

- (4) a. [YOU] [RECENTLY] [MOVIE] [NEW] [WATCH] [SAME] [GO] [?]
 ‘Can we go together to see a movie that was released recently?’ (KSL)
- b. *wuli ku il kath-i ha-ca*
 we that work be.same-ADVZ do-HORT
 ‘Let’s do it together.’ (Korean)

The visual representation of [same] in KSL inherently captures the idea of collectiveness, reflecting physical and temporal unity, as it is signed by bringing the thumb and index fingers together in a deliberate gesture, iconically symbolizing collection and unity. In Korean, the adverbial form *kath-i* is a fully unverbated word denoting ‘together’.

The semantic extension from identicalness to togetherness in KSL seems to have been motivated in part by the image-schematic meaning from the iconic gesture of bringing two fingers together. Furthermore, the extension in both KSL and Korean seems to be conceptually well-motivated as well insofar as two entities sharing the same properties (identicalness) can easily be conceptualized as sharing the same spatial location (togetherness), or vice versa, a state of affairs also observed with the Sino-Japanese lexeme *issho* ‘same; together’.

(d). Conjecture-Inference

Semantic extension of both lexemes has led to their grammaticalization into the epistemic meaning of CONJECTURE and the evidential meaning of INFERENCE, whereby speakers and signers can express these meanings based on interpretations or reasoning from available evidence. In (5a), the KSL sign [SAME] indicates the speaker’s inference that the text message was delivered incorrectly, emphasizing a conclusion drawn from context rather than direct observation. Similarly, in (5b), *kath-* functions as an inferential marker signaling conjecture based on available evidence that a war is likely to break out.

- (5) a. [TEXT-MESSAGE] [MISTAKE] [SAME]
 ‘It seems that the text message was wrongly delivered.’ (KSL)
- b. *cencayng-i na-nun kes kath-ta*
 war-NOM come.out-ADN thing INFR-DEC
 ‘A war seems to be breaking out.’ (Korean)

These examples illustrate the shift toward epistemic-evidential functions, where the expressions convey subjective judgment or interpretation, reflecting the speaker’s internal cognitive process rather than a statement of absolute fact. Both expressions convey an inferred conclusion based on contextual evidence. This stage highlights the semantic shift from concrete identicalness to abstract reasoning.

The conceptual motivation of this grammaticalization from CORRECTNESS to CONJECTURE-INFERENCE in the epistemic-evidential domain is straightforward, because an inferential statement is, in essence, an assertion of truth, although it is qualified with an additional indication that the assertion is not from direct observation, but from indirect sources. The weakening effect by explicit indication of correctness or surety is a phenomenon generally observed across languages (e.g., *It is true* vs. *I’m sure it’s true*, in English, where the former is a stronger assertion).

(e). Mitigation

Still another instance of grammaticalization shared by [SAME] and *kath-* is that of mitigators, the primary function of which is to soften the force of assertions, making statements tentative and polite. In (6a), [SAME] is employed to express tentativeness for the sake of politeness in order not to appear pretentious. Similarly, in (6b), *kath-* is used to convey the speaker’s sense of happiness in a softened, non-assertive manner, framed as a subjective observation, a seemingly incongruous statement as it involves the speaker’s own feelings.

- (6) a. [I] [THIS-TIME] [THE-FIRST] [RIGHT] [SAME]
 ‘I ranked first this time. (Polite)’ (KSL)
- b. *ce-n nemwu hayngpokha-n kes kath-ayo*
 I:HUM-TOP very be.happy-ADN thing be.same-POL
 ‘I am very happy. (Polite)’ (Korean)

The mitigating function helps reduce the force of the assertion, thereby creating a polite and socially considerate tone. This strategy not only softens the impact of the statement but also fosters interpersonal harmony by minimizing potential conflict or disagreement in the interactional domain. This development is an ideal example of intersubjectification, whereby the weakening effect of CONJECTURE-INFERENCE involving a proposition is adopted to weaken the degree of assertiveness involving the speaker-interlocutor interaction.

(f). Summary of Similarities

The grammaticalization pathways of [SAME] in Korean Sign Language and *kath-* in spoken Korean demonstrate significant parallels, particularly in their progression from the original meaning of IDENTICALNESS to more abstract lexical meanings of CORRECTNESS and TOGETHERNESS, to epistemic-evidential CONJECTURE, and further to pragmatic MITIGATION.

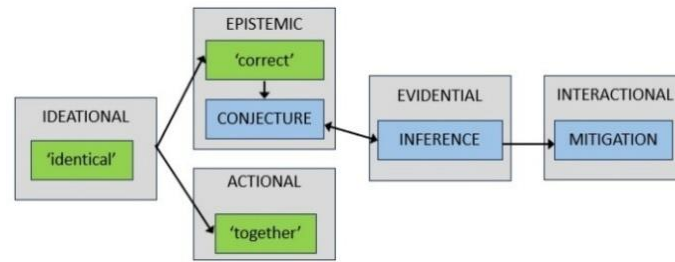


Figure 2. Parallel Pathways of KSL [SAME] and Korean *kath-*

The development as outlined in Figure 2 captures how a linguistic form denoting ideational meaning has undergone semantic extension (shown in cells marked in green) to epistemic and actional domains as well as grammaticalization (shown in cells marked in blue), into epistemic, evidential, and interactional domains. This parallel development underscores the shared cognitive mechanisms in both signed and spoken modalities. Presumably, these paths are among the common pathways attested across languages.

B. Divergence in Grammaticalization of KSL and Korean

While KSL [SAME] and Korean *kath-* share similar grammaticalization pathways, as shown in the foregoing exposition, they later diverge en route to their development into other meanings and functions.

(a). Similarity in Korean *kath-*

In spoken Korean, *kath-* expands its semantic scope to encode similarity or approximation, as exemplified in (7). In (7a), *kath-* conveys visual similarity, describing a rock that resembles a dragon in shape. In (7b), the expression *khal-kath-i* ('like a knife') metaphorically signifies sharpness and strictness, akin to the precision and facility of a knife.

- (7) a. *yong-kath-un pawi*
 dragon-be.same-ADN rock
 'A rock resembling a dragon, a dragon-shaped rock.'
- b. *sikan yaksok-un khal-kath-i cikhi-n-ta*
 time appointment-TOP knife-be.same-ADVZ keep-PRES-DEC
 '(He/she/they/you) are very punctual with appointments.'

This shift illustrates how the concept of identicalness has evolved naturally into approximate similarity, reflecting a gradual semantic expansion. The transition from exact sameness (IDENTICALNESS) to mere resemblance (SIMILARITY) demonstrates the flexibility of *kath-* in accommodating both concrete and abstract interpretations, and is an excellent instance of 'desemanticization' (Kuteva et al., 2019), a robust concomitant of grammaticalization.

(b). Definiteness in KSL [SAME]

In sharp contrast to the expansion of *kath-* in spoken Korean to convey SIMILARITY, KSL [SAME] uniquely has developed meanings in the opposite direction, specifically those associated with DEFINITENESS (or conclusiveness), as illustrated in (8). In (8a), [SAME] is used to inquire whether or not the preparations for the trip are complete, marking a sense of finality in the task. Similarly, in (8b), [SAME] indicates a conclusive decision following careful consideration, emphasizing the speaker's resolved stance to run for class president.

- (8) a. [TRIP] [PREPARE] [SAME] [?]
 'Have you finished preparing for the trip?'
- b. [CLASSROOM] [LEADER] [NO] [THINK] [SAME] [RUN]
 'After much deliberation (whether or not to), I decided to run for class president.'

This semantic shift toward DEFINITENESS (or finality) can be attributed, in part, to the visual-spatial modality of KSL. The physical alignment and emphasis when producing the [SAME] sign contribute to the expression of certainty, as the gesture inherently conveys a sense of closure and resolution (see Figure 1 above). The use of reduplication or deliberate movement culminating in the two fingers coming into contact further reinforces this conclusive meaning, utilizing the modality's capacity to visually represent states of completion or determination.

(c). Acceptability in KSL [SAME]

Another semantic extension of [SAME] in KSL that differentiates it from its Korean counterpart is its development into the meaning of 'to be acceptable'. This usage emerges in contexts where something is perceived as fitting well or being agreeable to the speaker's senses. This meaning is exemplified in (9), where [SAME] is used to indicate that the taste of soybean paste soup is delectable to the speaker, and in (10), where [SAME] in B's response signifies that the car is operating well.

- (9) A: [SOY-BEAN-PASTE] [BOIL] [SOUP-BRING] [TASTE] [SALTY]
 'Does the soybean paste soup taste salty?'
- B: [TASTE] [SAME] [TASTY]
 'The taste is fine; it's not too salty, and it tastes good to me.'

- (10) A: [CALL] [CAR] [NOISE]
 ‘Does the car make strange noises?’
 B: [SAME]
 ‘No, it’s fine (it’s not making any strange noises).’

The development of this ACCEPTABILITY meaning reflects a conceptual shift from CORRECTNESS in the epistemic domain, as discussed in V-A-(b), into the evaluative. The conceptual link between ‘correct’ and ‘good’ seems to be well attested across languages (e.g., English *right* ‘proper, good, correct’; *okay* ‘correct, good’; Vietnamese *phải* ‘good, correct’; Hungarian *jobb* ‘better, right’, etc.).

(d). *Confirmation of Expectation in KSL [SAME]*

Another functional extension of [SAME] in KSL occurs in the domain of cognition, where it conveys the meaning of ‘matching one’s thoughts’ or ‘being as expected’, i.e., CONFIRMATION OF EXPECTATION, a ‘semantically elaborate’ category (Kuteva, 2009). In this usage, [same] is employed to indicate that an outcome perfectly meets the speaker’s expectations, functioning similarly to the adverbial expression *just as I thought* in English. This extension demonstrates how the concept of sameness expands beyond perceptual experiences to the cognitive domain.

- (11) A: [CALL] [MARY] [EXAM] [THE-FIRST]
 ‘Mary ranked first in the exam.’
 B: [STUDY] [VERY-WELL] [SAME]
 ‘(Of course,) she studied very hard, as I expected.’

In (11), [SAME] in B’s response signifies that the information matches his expectations. This meaning extension illustrates that, beyond physical or sensory alignment, [SAME] also develops into an epistemic marker that expresses cognitive agreement or confirmation. This shift from ‘correct’ to ‘confirmation’ is reminiscent of some ‘truth’-lexemes developing into discourse markers of confirmation marking (e.g., English *really*, *indeed*, Lee, *forthc.*; Thai *ciŋ* ‘true’ used as a confirmation solicitation marker with appeal contour or in question, Khammee, 2024).

(e). *Summary of Differences*

The findings reported in this section underscore a critical divergence in the pathways of semantic extension and grammaticalization of KSL [SAME] and *kath-* in Korean. While both forms originate from the notion of IDENTICALNESS, their semantic expansions are shaped by the affordances and constraints of their respective modalities. Korean *kath-* developed into SIMILARITY, whereas KSL [SAME] did not. Conversely, KSL [SAME] developed into the markers of DEFINITENESS, ACCEPTABILITY, and CONFIRMATION OF EXPECTATION, while Korean *kath-* did not.² This intriguing state of affairs merits further research and discussion. It is noteworthy that across spoken languages the semantic boundary between IDENTICALNESS and SIMILARITY is relatively fluid, as the English word *same* suggests (often differentiated as *the same as* and *the same that*), and thus Korean *kath-* developing into SIMILARITY does not particularly concern us. Rather, a point of query is why KSL did not follow this ‘loosening’ pathway, but instead followed a more ‘tightening’ pathway to DEFINITENESS and CONCLUSIVENESS. We suspect that the differences in modality played a role. As shown above, KSL [SAME], operating within the visual-spatial modality, undergoes development supported by the iconic precision of its form (see V-B-(b), above). This is in consonance with the earlier observation that iconicity operates more strongly in sign languages than in spoken languages (Perlman et al., 2018). This divergence highlights how modality-specific features guide the direction of grammaticalization, even with a shared initial lexical source. In other words, modality may be a limiting factor of the source determination hypothesis.

In addition, the unique semantic development of [SAME] in KSL toward DEFINITENESS and CONCLUSIVENESS can be partially explained by its relationship with the sign [SIMILAR] ‘(be) similar,’ which closely resembles [SAME] in its form. While [SAME] is signed by bringing the thumb and index fingers together in a firm and static gesture, emphasizing exact sameness or identicalness, [SIMILAR] involves a slight rubbing motion of the thumb and index fingers. This subtle motion iconically represents the idea of resemblance or approximate similarity, signaling that two entities are alike but not identical (see Figure 3).

² Of these, ACCEPTABILITY is conceptually close to CORRECTNESS and, thus, may be considered an instance of a similar meaning with different overtones.



Figure 3. (A) [SAME] '(be) same' and (B) [SIMILAR] '(be) similar' (KSL)

Due to this clear iconic differentiation, the semantic boundaries between [SAME] and [SIMILAR] remain distinct in KSL. The iconicity of [SIMILAR] visually conveys the concept of partial similarity, leaving no ambiguity between the two signs. As a result, the meaning of [SAME] is less likely to extend into the domain of approximate similarity, a function already well-represented by [SIMILAR]. Instead, [SAME] retains its core meaning of IDENTICALNESS and naturally evolves toward DEFINITENESS and CONCLUSIVENESS, further differentiating itself from [SIMILAR].

This distinction underscores how iconicity in the visual-spatial modality not only influences the formation of lexical items but also constrains their semantic extensions. Unlike in spoken languages, where similar lexical items can overlap in meaning due to less iconic differentiation, the clear visual distinction in KSL between [SAME] and [SIMILAR] prevents semantic convergence, guiding their respective grammaticalization pathways in distinct directions.

VI. SUMMARY AND CONCLUSION

The semantic extension and grammaticalization pathways of [SAME] in Korean Sign Language and *kath-* in spoken Korean demonstrate both significant parallels and divergences. The overall evolutionary paths of lexical meanings, together with their associated grammatical functions and conceptual network, are summarized in Figure 4, with red lines signifying the paths of KSL [SAME] and black lines signifying those of Korean *kath-*, and green and blue cells signifying lexical and grammatical concepts, respectively.

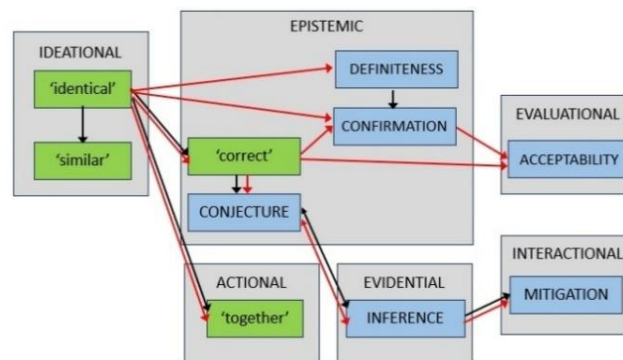


Figure 4. Paths of KSL [SAME] (In Red) and Korean *kath-* (In Black)

As shown in Figure 4, parallels appear in each lexeme's progression from the original meaning of IDENTICALNESS to the more abstract meaning of CORRECTNESS, as well as to epistemic-evidential functions such as INFERENCE and further to the pragmatic-interactive function of MITIGATION. While both [SAME] and *kath-* undergo grammaticalization, their trajectories are, at least in part, shaped by modality-specific constraints. The spoken modality allows *kath-* to evolve toward SIMILARITY (and approximation). In contrast, the visual-spatial modality of KSL, constrained by iconic distinctions, prevents [SAME] from extending into the domain of SIMILARITY, as this function is already occupied by the iconically related sign [SIMILAR]. While previous studies on modality-specific grammaticalization in sign languages have primarily focused on the process of gestures evolving into lexical items (Pfau & Steinbach, 2004, 2006, 2011), the present study introduces the possibility that additional modality-specific factors may influence the pathways of grammaticalization as well as lexical semantic extension in sign languages.

APPENDIX

ADN: adnominalizer; ADVZ: adverbializer; COM: comitative; DEC: declarative; HORT: hortative; HUM: humilific; INFR: inferential; NOM: nominative; POL: polite; PRES: present; TOP: topic

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Youngju Choi, the first author, is professor of linguistics in the Department of English Language and Literature, Chosun University, Korea. She earned her Ph.D. in linguistics from the University of Illinois at Urbana-Champaign in 2007. She has recently published a research article ‘Visual prosody in Korean Sign Language: (Non)manual cues for boundary and prominence’ in *Frontiers in Psychology* (2025), and the book *Semantic Motivation in Korean Sign Language: Iconicity, Metaphor, and Metonymy in Lexical and Idiomatic Expressions* (2025, Hanshin). Her primary research interests lie in cognitive semantics, sign language linguistics, and cross-modal typology. She can be contacted at: ychoi1@chosun.ac.kr



Seongha Rhee, the second and corresponding author, is Global Talent Professor of the Faculty of Liberal Arts, Mahidol University, Thailand and Professor Emeritus of Hankuk University of Foreign Studies, Korea. He received his Ph.D. in linguistics from the University of Texas, Austin in 1996. He has published *World Lexicon of Grammaticalization* (2019, CUP, co-author), book chapters in *Grammaticalization Scenarios* (2020, Mouton), *The Cambridge Handbook of Korean Linguistics* (2021, CUP), *The Oxford Handbook of Grammaticalization* (2011, OUP), etc., and research articles in *Nature* (co-author), *Journal of Pragmatics*, *Language Sciences*, and *Language & Cognition*, among others. His primary research interest is identifying cognitive mechanisms of grammaticalization from crosslinguistic, typological perspectives. He can be contacted at: srhee@hufs.ac.kr