Definiteness in Korean Sign Language: The Role of IX and NP-IX

Introduction. This study investigates the semantic distribution of definiteness in Korean Sign Language (KSL). While extensive research has been conducted on definiteness in Korean, its counterpart in KSL remains largely unexplored. Definiteness in natural languages typically involves uniqueness (identifying a single entity that satisfies a particular property) and indexicality (linking an entity to a specific discourse context). Building on Schwarz (2009) and Jenks (2018), this study examines definiteness in KSL across contexts such as uniqueness, anaphoricity, part-whole relations, and producer-product relations.

Data. In Korean, bare NPs mark uniqueness, while demonstratives like *ku* indicate contextually indexed definites. In KSL, definiteness is expressed through **bare NPs, NP-IX, and IX**, each with distinct functions. Bare NPs serve as neutral forms, NP-IX enhances contextual salience via simultaneous pointing, and IX assigns loci in the signing space, marking anaphoric references. Notably, NP-IX is a unique feature of KSL, rarely observed in other sign languages. This study examines the distinctive roles of IX and NP-IX in expressing definiteness in KSL.

① **Situational**: KSL demonstratives rely on spatial indexicals, IX_{there}. Bare NPs are acceptable for demonstrative contexts (1a), but NP-IX is not (1b), showing its irrelevance for demonstratives.

(1) a. IX_{there} BOOK BRING ‘Bring me that book.’
b. *IX_{there} BOOK-IX BRING

② **Uniqueness**: NP-IX marks refer referential specificity within a unique context, as seen in (2). While bare nouns like *sun* generally conveys uniqueness (2a), NP-IX highlights a salient instance of the referent (2b).

(2) a. SUN WANT PRAY
b. SUN-IX WANT PRAY ‘I prayed to the sun.’

③ **Anaphoric**: IX supports loci assignments to specify anaphoric references (3a). NP-IX further increases salience, while bare nouns fail to establish anaphoric specificity (3b).

(3) a. STORE $SHOES_{3a}$ PRETTY. MONEY-SAVING IX_{3a} (SHOES-IX) BUY WANT.
‘I saw the pretty $shoes_i$ at the store. I want to buy the $shoes_i$ by saving money.’
b. STORE SHOES PRETTY. MONEY-SAVING SHOES BUY WANT.
‘I saw the pretty shoes at the store. I want to buy any shoes by saving money.’

④ **Part-Whole**: NP-IX contextualizes accessible entities, often requiring accommodation based on the context. In (4a), the reference to the book’s cover is general, but in (4b), NP-IX specifies that it is the cover of a particular book that needs to be replaced.

(4) a. BOOK OLD COVER CHANGE
b. BOOK OLD COVER-IX CHANGE
‘This book is old. The cover needs to be replaced.’

⑤ **Producer-Product**: The bare noun in (5a) does not explicitly clarify the identity of the writer, while in (5b), NP-IX clarifies the identity of a specific writer. In this case, NP-IX must be paired with indexed NPs ‘that person’ to ensure clear identification:

(5) a. YESTERDAY PAPER READ BOOKSTORE WRITER MEET
b. YESTERDAY PAPER READ BOOKSTORE WRITER THAT.PERSON-IX MEET
‘Yesterday, I read a paper. I met the author at the bookstore.’

The table below summarizes the realization patterns of NPs in KSL and Korean across different contexts of definiteness. In KSL, NP-IX exhibits broader functionality compared to IX. NP-IX serves as a versatile marker for definiteness, encompassing uniqueness, anaphoric, part-whole, and producer-product contexts.

Context	KSL	Korean
Situational (1)	IX_{there}+Bare NP	DEM
Uniqueness (2)	Bare NP, NP-IX	Bare NP
Anaphoric (3)	NP-IX, IX	Bare NP, DEM
Part-Whole (4)	Bare NP, NP-IX	Bare NP
Producer-Product (5)	Bare NP, NP-IX	Bare NP, DEM

Theoretical analysis is as follows: IX is treated as a strong definite article, signaling familiarity. It serves as an explicit indexical expression that refers to a fixed entity determined by the variable assignment function *g*(*y*). Loci(*x*) indicates that the referent is associated with a specific spatial location.

(6) $[\![IX]\!]^g = \lambda s.\lambda P_{<s,et>}: \exists !x\ [P(x)(s) \wedge x = g(y) \wedge loci(x)].\ \iota x[P(x)(s) \wedge x = g(y) \wedge loci(x)]$

For example, in (3a), IX assigns a locus associated with "shoes," allowing the reference in the second sentence to retrieve this anaphorically. This aligns with the view that loci serve as explicit realizations of pronominal indices in American Sign Language (Lillo-Martin&Klima 1990; Schlenker 2011; Irani 2016; Ahn et al. 2019).

NP-IX, on the other hand, has two primary roles. First, it presupposes contextual salience, emphasizing an entity as significant within a given context. Unlike strict indexicality, which identifies a fixed referent, NP-IX dynamically selects an entity based on its prominence in the context. This salience condition ensures that the entity is contextually relevant and noteworthy. Second, as illustrated in (3a), NP-IX can combine with IX to enhance the salience of the referent. In this role, it functions as a modifier, refining the interpretation of the associated predicate. The formal semantics of NP-IX is as follows.

(7) $[\![NP - IX]\!]^c = \lambda s.\lambda P_{<s,et>}: \lambda x[P(x)(s) \wedge sal(x,c)]$

sal(x,c) indicates that x is important in the context c. (7) can account for both uniqueness and anaphoric usage. In the case of uniqueness, it serves to emphasize and specify a referent, drawing attention to an important entity in a specific context through salience. For anaphoricity, NP-IX clarifies references to an already established locus and emphasizes it. For example, in (3a), IX_{3a} refers to an anaphoric referent, "the $shoes_i$." When combined with *SHOES-IX*, the predicate associated with "shoes" gained additional salience. This ensures that the reference is both contextually specific and prominent.

Conclusion. KSL uses two types of IX, IX, and NP-IX, to mark definiteness. IX functions like a strong definite article, using loci to signal familiarity and indexical reference. NP-IX presupposes salience by dynamically selecting contextually significant entities, enhancing their prominence. This study provides new insights into how sign languages encode definiteness through physical space, contributing to our broader understanding of definiteness in semantic systems.

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