

## Embracing optionality: pragmatic constraints on loci

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One of the most active theoretical issues in sign language research has been the use of space to keep track of discourse referents in sign languages via “loci”, used in indexical pointing signs (IX), verb forms, noun locationalization, role shift, etc. The use of loci has often been analyzed as equivalent to different grammatical functions, such as the analysis of directional verbs as verbal agreement (Fischer & Gough 1978, Lillo-Martin & Meier 2011, Padden 1983, Janis 1995, Meir 1998, Pfau, Salzmann, & Steinbach 2018) or the analysis of IX as pronouns with loci equated to features like number found on spoken language pronouns (Neidle 2000) or to semantic indices (Lillo-Martin & Klima 1990). Within these approaches, there has been some resistance to the idea that the use of loci is ever optional, given the obligatory nature of equivalents, like inflectional morphology in a spoken language like English (e.g. He sits/\*He sit). However, there is sample evidence that the use of loci is often optional, both from anecdotes as well as corpus studies on loci-marked verbs (Schembri, Cormier, & Fenlon 2018) and production studies of pronouns (Frederiksen & Mayberry 2016); this can sometimes be taken as evidence that it falls outside of a “grammatical” system, i.e. that optionality is at odds with grammaticality. Our goal is to emphasize the contrary: that optionality is a regular part of the grammar of both spoken and sign languages, by investigating pragmatic constraints on loci use.

We take as a point of comparison languages which display optional grammatical features based on pragmatic constraints, such as the realization of cliticized pronouns, which have already been compared to loci (Nevins 2009, 2011). The focus of much of the discussion of “optionality” in sign language verbs has been their optionality across the lexicon, that is, the existence of plain, agreement and spatial verbs (Padden 1986). In our view, optionality of loci use within the same verb, across different contexts, has been underappreciated. In Figure 1, we report acceptability judgements of short narratives in American Sign Language (ASL) by three Deaf native signers of ASL who participated in detailed interviews (3/3 represents acceptability by all 3 signers) in which we vary the pragmatic conditions for reference ambiguity. There was clear variation in the acceptability of the same verb with loci (e.g. <sub>A</sub>PUSH<sub>B</sub>) vs. the exact same verb without loci (e.g. PUSH), based on pragmatic context: an ambiguous context makes for less acceptable use of plain verbs ((2)

I. Contrast affects verb locus use:		1 vs. 2 refs
(1)	BOY ENTER CLUB. MUSIC IS-ON. DANCE.	(3/3)
(2)	BOY ENTER CLUB. SEE GIRL READ. MUSIC IS-ON. DANCE.	(1/3)
(3)	BOY IX <sub>A</sub> ENTER CLUB SEE GIRL IX <sub>B</sub> READ. (IX <sub>A</sub> ) DANCE <sub>A</sub> .	(3/3)
‘A boy entered a club. (He saw a girl read.) Music went on. He danced.’		
II. When referent clear, directional modification is not necessary:		
(4)	SUE HANG-OUT MARY. PUSH.	(0/3)
(5)	SUE IX <sub>A</sub> HANG-OUT MARY IX <sub>B</sub> . (IX <sub>A</sub> ) <sub>A</sub> PUSH <sub>B</sub> (IX <sub>B</sub> ).	(3/3)
(6)	SUE HANG-OUT MARY. MARY SAY SOMETHING. SUE ANGRY. PUSH.	(3/3)
‘Sue was hanging out with Mary. (Mary said something. Sue got angry.) She pushed her.’		

Figure 1. Acceptability judgments by three Deaf native signers of ASL

and (4), as compared with (3) and (5)) but disambiguation by the context either via only one salient reference (1) or by the narrative (6) **supports the use of a “plain directional” verb**.

Subsequently, we expanded our interview data via an online quantitative investigation, in which we present similar length short video dialogues (to those in Figure 1) via the Qualtrics survey platform to participants, who are asked to respond to a “picture choice” task (e.g. DANCE WHO?) and then share their acceptability of the narrative, as illustrated in (the condensed screenshot, with section titles added in) Figure 2. We presented dialogues in three pragmatic conditions (varying (i) number of references, (ii) plausibility given scenario, and (iii) animacy), which differed minimally according to either the presence or absence of loci (+*locus* included both IX to a locus and directionality on the verb, -*locus* included neither), for a total of 12 experimental conditions: 3 (pragmatic condition) x 2 (ambiguous/clear) x 2 (+*locus*/-*locus*), all within subjects. We visually analyzed the responses from a preliminary 9 participants who correctly answered comprehension check questions, and find **high rates of acceptability of dialogues with “plain directional” verb when pragmatic circumstances create unambiguous/ non-contrastive scenarios** in the number of referents condition (i.e. when there is only one referent in the dialogue) and in the animacy condition (i.e. when there are multiple referents but only one is animate and thus the only plausible agent). There was no increase in acceptability when only narrative plausibility was intended to disambiguate, presumably because the narrative context still supported some limited ambiguity. As a next step, we will revise this survey and collect additional data from a larger group of participants.

In sum, anecdotal, corpus, and production data have suggested that optionality of locus use even within “agreement”/directional verbs occurs; we confirm that these judgements hold in acceptability judgements in both detailed interviews with a small number of native signers and in an ongoing web experimental paradigm with a larger number and broader sample of signers. By investigating pragmatic conditions in a controlled environment, we see evidence that optionality should be embraced and can be subject to interesting rules and constraints in its own right.

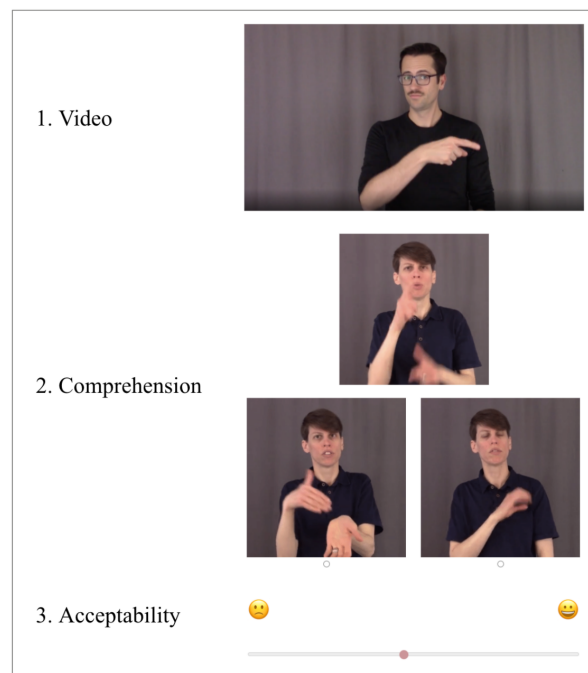


Figure 2. Sample trial

