Correlation between focus and the clause-final position in Hong Kong Sign Language

Introduction. This study investigates the correlation between focus and the clause-final position in Hong Kong Sign Language (hereafter HKSL). How languages encode information structure notions (e.g. focus, topic) has been a widely discussed topic across spoken languages, much less so in sign languages that adopt a visual-gestural modality. In many sign languages, focus-sensitive elements often occur in the clause-final position across many sign languages, including *wh-elements* (Zeshan 2004b; 2006; Neidle et al. 1996; Cecchetto et al. 2009, a.o.), the *A(nswer)-clause* of a clausal Question-Answer-Pair (QAP) (Wilbur 1996; Caponigro and Davidson 2011; Branchini 2015, a.o.) (a construction in sign languages that shares similarities with wh-clefts in spoken languages), *sentential negative markers* (Zeshan 2004a; Quer 2012; Pfau and Quer 2007), and *'Only'-phrases* (Kimmelman 2017; Herrmann 2013). HKSL displays similar patterns for all these categories. The correlation between word order alternation and information structure has been attested in different spoken languages (Neeleman and Vermeulen 2012; Kiss 1995; Bobaljik 2023; Borise 2023, a.o.). HKSL also allows word order alternations: while the default word order is SVO (Sze 2000), SOV, OSV, and VOS are attested. In this study, by examining word orders of declarative root sentences, I show that HKSL displays a preference to locate non-subject focus in the clause-final position, I further argue that this preference is driven by prosody. **The data.** I first discuss the descriptive patterns observed from the elicitation data. Different types of focus were elicited from 5 native signers of HKSL using the question-answer test (adapted from the QUIS manual (Skopeteas et al. 2006)). The focus constituent is in the answer corresponds to the wh-element in the question being asked (Büring 2009; Dayal 2016; Gundel 1974; Kiss 1998, a.o.). I considered three grammatical roles (subject, object, and verb) of the (semantic) focus constituents, and two types of focus (information focus and contrastive focus). Only non-reversible plain verbs were used in order to avoid the influence on word order from agreement verbs (Chen Pichler 2001). Overall, as shown in Table1 (the preferred cases are indicated in bold), focus objects and focus verbs are more frequently clause-final (objects: SVO; verbs: OSV, SOV, and SV), although they *can* appear non-clause-finally (objects: SOV, OSV; verbs: SVO). By contrast, subject focus are prevalently non-clause-final (SVO, SOV, OSV). Nevertheless, clause-final focus subject is attested (VOS). The word order is not possible when the sentence is pragmatically neutral, nor when the focus is the object or the verb.

Focus	**Contrastive focus**			**Information focus**			
	cl.final	non-cl.final	subotal	cl.final	non-cl.final	subotal	**Total**
object	**9**	6	15	**26**	0	26	41
verb	**11**	6	17	**25**	8	33	50
subject	3	**11**	14	8	**36**	44	58

Table 1: Summary of the surface word order of different focused constituents

Acceptability judgment data further confirms the clause-final preference. The judgment was collected from from 4 native consultants via a 5-point Likert Scale (0 – 4: not acceptable – fully acceptable, the average score is shown in the brackets before each sentence). I tested whether a focus object in a double object construction (DOC) is preferred to be clause-final. The answer is yes. As the baseline, DOCs in HKSL allow two word orders. The default one is [S-DO-V-IO] (1 a), and the secondary one is [S-V-IO-DO] (1 b). It is slightly degraded but acceptable. Interestingly, for focus IO, the secondary word order (in which the focus is not clause-final) gets worse (2 b). And for focus DO, the secondary word order (in which the focus is clause-final) improves and becomes the preferred word order (3 b). Subject again behave differently. Both word orders are acceptable for subject focus, in which it is clause-initial; and right-dislocation of the subject is not allowed (DO-V-IO-S or V-IO-DO-S). This pattern also applies to contrastive focus. Simple sentences overall display a similar pattern, in that object focus and verb focus both prefer to be clause-final, and subject focus prefers to be clause-initial over other possible word order alternations.

(1) (a) [4/4] GLADYS BOOK GIVE PIPPEN. 'Gladys gave a book to Pippen.' [S-DO-V-IO]

(b) [3/4] ?GLADYS GIVE PIPPEN BOOK. ?[S-V-IO-DO]

(2) A: GLADYS BOOK GIVE WHO? 'Who did Gladys give a book to?'
B: 'Gladys gave a book to Pippen.'

(a) [4/4] GLADYS BOOK GIVE PIPPEN$_F$

(b) [1.25/4] * GLADYS GIVE PIPPEN$_F$ BOOK

(3) A: GLADYS GIVE PIPPEN WHAT? 'What did Gladys give Pippen?'
B: 'Gladys gave a book to Pippen.'

(a) [3.5/4] GLADYS BOOK$_F$ GIVE PIPPEN

(b) [3.75/4] GLADYS GIVE PIPPEN BOOK$_F$

Discussion. I suggest that the clause-final preference discussed above is driven by prosody, i.e., focus prefers to occur in the clause-final position where it can obtain the sentential stress. I tested the relative *duration* of the clause-final and non-clause-final constituents in these sentences. Duration is one of the common measures of prosodic saliency of a sign (Wilbur 1999; Crasborn and Kooij 2013; Lombart 2022, a.o.). Overall, the clause-final focus has longer duration than the non-clause-final focus (PIPPEN in (4) and BOOK in (5)). In fact, the clause-final object in general has longer duration than the non-clause-final object in the same sentence (PIPPEN vs BOOK in each sentence).

(4) (a) GLADYS BOOK GIVE PIPPEN$_F$ (PIPPEN: 435 ms; BOOK: 84 ms)

(b) GLADYS GIVE PIPPEN$_F$ BOOK (PIPPEN: 321 ms; BOOK: 656 ms)

(5) (a) GLADYS BOOK$_F$ GIVE PIPPEN (PIPPEN: 450 ms; BOOK: 130 ms)

(b) GLADYS GIVE PIPPEN BOOK$_F$ (PIPPEN: 168 ms; BOOK: 412 ms)

A similar pattern is observed in simple sentences. In general, the clause-final focus has longer duration than the clause-final non-focus counterparts. In fact, the clause-final constituent has longer duration than the non-clause-final constituent in the same sentence regardless of its focus status. Mainly based on data of QAPs, in which focus is expressed in the clause-final A-clause (6), Wilbur (1996, 1997, 2012) suggests that ASL locates focus to the clause-final position to receive the primary stress of the sentence. In this sense, HKSL is similar to ASL.

(6) [ASL] (Wilbur 2012, ex. 41 a & c)

(a) $\overline{\text{CHRIS SEE TED PUT BOOK WHERE}}^{\text{br}}$, DESK$_F$ 'Chris saw Ted put the book on the desk$_F$.'

(b) $\overline{\text{CHRIS SEE TED PUT-ON DESK WHAT}}^{\text{br}}$, BOOK$_F$ 'Chris saw Ted put the book$_F$ on the desk."

I adopt Zubizarreta (1998) and assume that the phrasal *Nuclear Stress Rule (NSR)* applies in HKSL (the nuclear stress lands in the most embedded constituent of the structure), and the preference for the focus to be in clause-final is due to the *Focus Prominence Rule (FPR)* (7). I suggest that except for VOS, all other word order alternations are derived in narrow syntax (i.e., movements driven by feature checking) before NSR, *p-movement (prosodically-motivated movement)*, and FPR apply. This includes the derivation of the two word orders in DOCs, and SVO, SOV, OSV in simple sentences. I further suggest that the derivation of the VOS order involves *p-movement* which is a byproduct of the activation of FPR. Specifically, unlike other word order alternations, VOS cannot be used in focus-neutral contexts, i.e., the clause-final subject is unambiguously interpreted as the focus, and it also has longer duration than the non-focalized object (8). I propose that the focalized subject is p-moved to a position that can receive the nuclear stress by NSR, so that the output of the derivation is compatible with the FPR.

(7) *Focus Prominence Rule (FPR)*
Given two nodes C_i (marked [+F]) and C_j (marked [-F]), C_i is more prominent than C_j.

(8) EAT MEAT LISA$_F$ 'Lisa eats meat.' (MEAT: 632 ms; LISA: 1076 ms)

Nevertheless, because focus *can* be non-clause-final, I propose that the activation of FPR in HKSL is optional. When FPR is not activated, neither will the p-movement. The output of narrow syntax is sent to Spell-Out after NSR applies, and focus is interpreted by F-marking solely.

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