# Questions and negation in Hong Kong Sign Language

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#### HONG KONG SIGN LANGUAGE

Hong Kong Sign Language (HKSL) is the name given to the sign language variety used by the deaf signers of Hong Kong. Records about the history of Hong Kong Sign Language are few and far between. The earliest records date back to a book entitled The Origin and Development of Hong Kong Sign Language compiled by the Hong Kong Society for the Deaf in 1987. From the recollections of the authors of that book, Hong Kong Sign Language owes its origin to the sign language varieties of Nanjing, Hangzhou and Shanghai from where the deaf signers emigrated to Hong Kong during the Communist liberation in the late 1940's. They set up schools for deaf children and sign language was used as a medium of communication. In fact, Woodward (1993) observed that Hong Kong Sign Language and the sign language variety of Shanghai shared 77% of their basic vocabulary. Over the years, Hong Kong Sign Language has been influenced by the varieties of China and Taiwan. There is no official record concerning the number of deaf signers in Hong Kong but one can estimate that there are about 7000-14000 deaf signers, assuming that 1-2 babies out of 1000 are born deaf or become deaf by age 2. Earlier analysis involving HKSL and Chinese Sign Language (CSL) data had been documented in Yau (1977, 1986). Also in the 1980's, a group of researchers conducted some systematic analysis on HKSL at the SALK Institute for Biological Studies (Fok, van Hoek, Klima & Bellugi 1991; van Hoek, Bellugi & Fok 1986). For a fuller description of the works on HKSL, see Tang (in press).

#### References:

- Fok, A., U. Bellugi & D. Lillo-Martin (1986): Remembering in Chinese Signs and Characters. In: Kao, H.S.R. & R. Hoosain (eds.): Linguistics, Psychology and the Chinese Language. Centre for Asian Studies, University of Hong Kong.
- Tang, G. (in press): Dictionary of Hong Kong Sign Language. Hong Kong: Chinese University.
- Van Hoek, K., U. Bellugi & A. Fok (1986): Phonology of Chinese Sign Language. Working paper. Salk Institute, University of California, San Diego & The University of Hong Kong.
- Yau, S-C. (1977): The Chinese Signs: Lexicon of the Standard Sign Language for the Deaf in China. Hong Kong, Paris: Ed. Lang. Croises.
- Yau, S-C. (1986): Two Strategies in Sign Creation. In: Tervoort, B.T. (ed.) Proceedings of the Second European Congress on Second Language Research.

#### Introduction

This chapter provides a preliminary discussion on two grammatical constructions in Hong Kong Sign Language: Negative and interrogative constructions. We focus specifically on the word order of these constructions, as well as the related linguistic markers, manual and non-manual. The data were collected from two signers of HKSL: Signer A was born of a deaf family and acquired HKSL from his parents. He was prelingually deaf and diagnosed to be suffering from profound to severe hearing loss. He attended a deaf school that offered education in the oral mode. Signer B was born of a hearing family. She was twenty years older than Signer A and acquired deafness due to illness at the age of three and attended the same deaf school as Signer A. She learned HKSL from her peers at school. Both claimed to be using HKSL in daily communications. The data were elicited first through the researcher preliminarily observing the signing of the informants during free conversations, which provided the first hunch of the word order patterns of the constructions in question. These observations were compared with data collected through videotaping their interactions in two task-based information exchange activities, which induced the use of interrogative and negative constructions. The relevant data were transcribed and details of word order and non-manual markings were noted. The data were then presented to the signers for further confirmation and verification. This set of data was also subsequently presented to four more signers of HKSL, who confirmed that they were representative constructions of HKSL.

#### 1. Questions

#### 1.1 Polar questions

There are two distinct forms of polar questions in HKSL. The first type involves no word order changes but the questions are marked by brow raise only. The second type involves attaching a question sign in the form of 'A+~A' in the clause final position. It will be shown that these two forms of polar questions serve different

semantic functions and the second type seems to be a linguistic outcome of language contact situation.

#### 1.1.1 Polar questions with no word order changes

Tang and Sze (2001) and Lau (2002) observe that the basic word order in HKSL is SVO when no classifier predicates are involved. As in ASL and BSL, polar questions in HKSL adopt a neutral word order. Although its optionality remains a controversy, brow raise as a non-manual marker for polar questions is quite common among the sign languages discussed so far¹. When it occurs, it usually extends over the entire clause (Liddell 1980, Wilbur and Patschke 1999, NKMBL 2000², Sutton-Spence & Woll 1999). Example (1) and (2) in HKSL involve no word order changes but the clauses can be marked non-manually by brow raise. In HKSL, brow raise is obligatory and the absence of it makes the sentence ungrammatical (3). Sometimes, brow raise is observed to begin after signing the grammatical subject and extends until the end of the clause (2). Occasionally, we observe forward head tilt and body lean with this form of questions.

	<u>pol-q</u>	
(1)	INDEX <sub>3</sub> GO WATCH+MOVIE?	(Figure 1)
	'Will he go to watch movies?'	video ex.1

(2) INDEX<sub>a</sub> MALE WORK FINISH<sup>3</sup>?
'Has that man finished working?'

(3) \*INDEX<sub>2</sub> EAT BANANA. 'Do you eat bananas?'

<sup>&</sup>lt;sup>1</sup> The status of brow raise as a marker for polar questions is still controversial. For some researchers, in addition to brow raise, forward head-tilt, body lean, widened eyes, eye gaze at the addressee were also suggested to be markers of polar questions (Liddell 1980; Baker-Shenk 1983). There are researchers who also argued that brow raise is not necessarily obligatory because other emotional facial expressions might blur the necessity of brow raise (Sutton-Spence and Woll 1999).

<sup>&</sup>lt;sup>2</sup> NKMBL here refers to a recent publication co-authored by Carol Neidle, Judy Kegl, Dawn MacLaughlin, Benjamin Bahan and Robert Lee.

<sup>&</sup>lt;sup>3</sup> There is a perfective marker in HKSL glossed as FINISH, which is used to denote the completion of an event (Lee 2002).



Figure 1: 'Will he go to watch movies?'

video ex.1

Semantically, this form of polar questions is neutral to either an affirmative or a negative response. Responses to polar questions are primarily expressed nonmanually by nodding or shaking one's head to signal affirmative and negative responses respectively. Alternatively, the signs YES and NO/NOT are the usual responses to polar questions. The handshape of YES is A with an extended thumb and that of NO/NOT is B with an extended thumb. YES is signed with an epenthetic movement to the neutral signing space<sup>4</sup>. NO/NOT involves a waving motion of the palm which faces out. NO and NOT (ref. Section 2.1) are the same sign but they are distributed in different syntactic positions. NO is usually an interjection and NOT is clause final, as a syntactic negator. These responses are usually accompanied by Cantonese mouthing<sup>5</sup>.

In some cases, we also observe that responses to polar questions can be by repeating part of the question as an affirmative response<sup>6</sup>. In (4) below, the signer asks whether the mother of the other signer is fond of watching TV.

	pol-q INDEX <sub>2</sub> MOTHER LIKE WATCH-TV?	
(4)		
	a. 'Is it true that your mother likes watching TV?'	
	b. 'Does your mother like watching TV or not?'	

<sup>&</sup>lt;sup>4</sup> Sometimes a small waving motion of the A-handshape is also observed.

<sup>&</sup>lt;sup>5</sup> Mouthing here is defined as part of the non-manual expression of the sign that follows the mouth patterns of the Cantonese vocabulary. It is different from mouth gesture that is unrelated to the spoken language (Emmorey 2001).

<sup>&</sup>lt;sup>6</sup>Zeshan (p.c) also observes that this is common in many sign languages documented so far. In fact, responding to polar questions by repeating part of the questions is also observed in Chinese disjunctive as well as particle questions (Li and Thompson 1989; Matthews and Yip 1994). So far as Cantonese is concerned, this type of response patterns is also allowed even in negative responses.

According to the informants, a question like (4) is ambiguous. One reading is that the signer is questioning the truth or falsity of the entire proposition, meaning 'Is it true that your mother likes watching TV?'. A typical response would be either YES or NO/NOT, meaning 'true' or 'not true'. Another reading requires a choice between 'like watching TV' or 'doesn't like watching TV' – as implied by the question. An affirmative response to reading (b) will be 'LIKE' while a negative response remains NO/NOT or simply DISLIKE. As such, reading (b) may be perceived as a specific type of disjunctive question, with the presupposed values being p or  $\sim p$ , where p is the proposition set up by the verbal predicate LIKE WATCH-TV. Other examples are FINISH, GO and most of the modals such as CAN (5).

(5) A: KENNY DRIVE CAN?

'Can Kenny drive?'

B: CAN.

'Yes, he can.'

The data above suggest that those polar questions that also invoke a disjunctive reading are ambiguous in HKSL. In cases where a negative response is required, LIKE has its counterpart DISLIKE, FINISH may be responded to by NOT-YET, and there are negative modals like CAN'T and WON'T. Nevertheless, we also observe that with the verb GO, one way to disambiguate the question is to modify its articulation by adding the feature [repeat]. GO in (6a) is monosyllabic and the question is ambiguous:

pol-q INDEX, GO BUY CAR? (6a) A: 'Is it true that you are going to buy a car?' YES B: b. 'Are you going to buy a car or not?' B: GO INDEX<sub>3</sub> GO+ BUY CAR? (6b) A: b. 'Is he going to buy a car or not?' GO B:

We can posit two readings with (6a), hence both answers are possible. However, (6b) is not ambiguous because it yields a disjunctive reading only and the affirmative response is GO, rather than YES. One plausible explanation is that modulating the articulation of GO by adding [repeat] has a semantic consequence — to assign the focus of interrogation to the verb. Yet, we argue that it could be a case of borrowing from Cantonese. (6b) has an equivalent translation in spoken Cantonese,  $keoi_3 heoi_3 - m_4 - heoi_3 maai_3 ce_1$  ('he go-not-go buy car'), which triggers a disjunctive reading. Our native informants comment that GO+ is a translation of Cantonese heoi-m-heoi ('go not go') with 'not' being deleted in the signing process. GO+ in (6b) is mouthed as "heoi\_3-m\_4-heoi\_3" rather than "heoi\_3" as observed when the reading is aligned with (6a). It could be that GO+ in simple word order is a form of polar question that stems from spoken Cantonese and becomes part of HKSL.

Another aspect of ambiguity in the study of polar questions is the scope of interrogation. In the spoken language literature, the scope of interrogation may be varied by stress shift. In sign language, it seems that scope may be varied by (a) word order permutations, and (b) non-manual markings. In (7), we assume that VIDEO-TAPE BABY is being topicalized, leaving NEXT WEEK in the clause final position. We observe that non-manual marking does not extend to the topicalized constituents. From a discourse perspective, it appears that topicalizing VIDEO-TAPE BABY allows NEXT WEEK to receive end-focus, in this case the focus of interrogation, confirming the time when the activity of video-taping the baby is conducted with the addressee.

A second way to avoid ambiguity in polar questions seems to be by varying the scope of non-manual markings. In some of our data, we observe that the scope of non-manual marking varies according to the constituent being questioned. Example (8a) is ambiguous between 'Is it true that you are going to videotape the baby next week?' and 'Is it the baby that you are going to video-tape next week?'. The

second reading presupposes that someone is going to be videtaped next week. In (8a), the verb phrase VIDEO-TAPE BABY marked by brow raise is in the scope of interrogation.

# (8a) INDEX, NEXT WEEK VIDEO-TAPE BABY?

- a. 'Is it true that you are going to video-tape the baby next week?'
- b. 'Are you going to video-tape the baby next week or not?"

## \_<u>pol-q</u> (8b) INDEX<sub>2</sub> NEXT WEEK GO VIDEO-TAPE BABY?

'Is it the baby that you are going to video-tape next week?'

The brow raise in (8b) has scope over the direct object BABY only. As such, the reading can only be 'Is it the baby that you are going to video-tape next week?'. This question presupposes that the addressee is going to videotape somebody and the question is about whether or not the subject to be videotaped is the baby.

To conclude, the first batch of data from HKSL suggests that brow raise is obligatory in polar questions in HKSL. The scope of non-manual marking in HKSL is related to the scope of interrogation. When it extends over the clause, the associated polar question may be ambiguous. One way to avoid ambiguity is to vary brow raise according to the constituent being questioned. In HKSL, there is another type of polar questions that do not invoke ambiguity and they always have a disjunctive reading.

### 1.1.2 $A+\sim A$ Q-signs

It is quite common for a form of polar question in HKSL that follows a neutral word order but ends with a Q-sign. Commonly observed ones are GOOD+BAD and HAVE+NOT-HAVE. Morphologically, these Q-signs are compounds that are traceable to spoken Cantonese. When being consulted, the signers reported that they perceived these signs not as a sequence of two separate signs but as one bimorphemic sign. Phonologically, the process of deletion results in temporal compression in articulation. For instance, the Q-sign GOOD+BAD (Figure 2) is formed by a fast, repeated handshape change in the signer's neutral space with the palm facing the signer. In fact, parts of the epenthetic movement in syllable initial position and the hold in syllable final position in the original signs are dropped and the compound

is just marked with repeated handshape change. Depending on context, this sign may be translated into Cantonese  $hou_2$ - $m_4$ - $hou_2$  ('good-not-good'),  $ho_2$ - $m_4$ - $ho_2$   $ji_3$  ('can-not-can'), or  $ngaam_1$ - $m_4$ - $ngaam_1$  ('right-not-right'). Cantonese mouthing is one way to disambiguate the meaning of the sign.

The second sign HAVE+NOT-HAVE occurs in questions that concern the existence or non-existence of a certain entity, state or event. It is formed by combining HAVE and NOT-HAVE (Figure 3). (9) - (11) show that these signs are consistently marked by brow raise, but it does not spread to the preceding part of the sentence (12).

- (9) INDEX<sub>2-1</sub> FLY BEIJING GOOD+BAD? 'Will you and I fly to Beijing?'
- (10) TIN INDEX, BISCUIT HAVE+NOT-HAVE?

  'Are there any biscuits inside the tin?'
- (11) INDEX<sub>2</sub> YESTERDAY NIGHT WATCH-MOVIE HAVE+NOT-HAVE? 'Did you watch the movie last night?'
- (12) \*TIN INDEX, BISCUIT HAVE+NOT-HAVE?

  'Are there any biscuits inside the tin?'

Semantically, this type of polar questions is adopted to question the truth or falsity of propositions (9), the existence or non-existence of entities and events (10 &

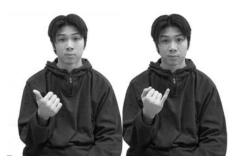


Figure 2: GOOD + BAD



Figure 3: HAVE + NOT-HAVE

11), as well as the modality of events. Unlike the tag questions in Cantonese and English, which normally presuppose a biased response, the questions in (9) - (11) are neutral polar questions, which means the signer's expectation is not biased towards an affirmative or a negative response. In (11), if the signer's assumption is biased towards an affirmative response, such that he thinks that the addressee did watch the movie the night before, HAVE instead of HAVE+NOT-HAVE will be signed instead.

Syntactically, these Q-signs are obligatory as far as this type of polar questions is concerned. Also, they are consistently clause final and not clause initial (13 & 14).

\_\_\_\_\_pol-q
(13) \*GOOD+BAD FATHER COME?
'Did father come back?'

\_\_\_\_\_pol-q (14) \*HAVE+NOT-HAVE GO TRAVEL? 'Did you go traveling?'

(15), however, poses an interesting counterexample to our generalization. While accepting the clause final Q-sign HAVE+NOT-HAVE, a lot of signers of HKSL also accept sentences such as (15a). When occurring sentence initially, HAVE+NOT-HAVE is not a Q-sign but behaves like a main verb of existence or possession and brow raise is observed to extend over the entire clause, otherwise it is unacceptable, as shown in (15b). In fact, (15a) parallels the syntactic pattern of the existential constructions in spoken Cantonese,  $yau_3mou_3cin_2$ ? ('Have not-have money?'), the translation being 'Is there any money?'. As such, we argue that the sign HAVE+NOT-HAVE in fact stems from spoken Cantonese and it is eventually borrowed into the system of natural HKSL. During the process, the sign HAVE+NOT-HAVE acquires two grammatical status: it serves as a verb of possession or existence or a as Q-sign that appears consistently in the clause final position<sup>7</sup>.

(15a) pol-q (HAVE+NOT-HAVE MONEY? 'Do you have any money?'

<sup>&</sup>lt;sup>7</sup> In spoken Cantonese,  $yau_3 mou_3$  ('have not-have') never occurs in clause final position as a question tag, which is different from the syntactic pattern of HAVE+NOT-HAVE in HKSL.

(15b) \*HAVE+NOT-HAVE MONEY?
'Do you have any money?'

One may ask which grammatical category these Q-signs belong to? There are two potential analyses. One possibility is that they are question tags having their origin in spoken Cantonese. Tag questions in Cantonese are formed by short A-not-A forms (Matthews and Yip 1994), where the negator 'not' is morphologically realized though phonologically reduced. In (16) and (17), the speaker assumes positively that the addressee broke the bowl, and a tag is used to confirm his presupposition. Prosodically, tags in Cantonese are preceded by an intonation break. The usual A-not-A forms are  $hou_2-m_4-hou_2$  ('good-not-good'),  $hai_6-m_4-hai_6$  ('right-not-right'), and  $dak_1-m_4-dak_1$  ('can-not-can').

- (16) Nei daalaan zo zek wun  $a_4$ ? you break PVF-marker classifier bowl Q-particle 'Did you break the bowl?'
- (17) Nei daalaan zo zek wun, hai<sub>6</sub>-m<sub>4</sub>-hai<sub>6</sub>?

  you break PVF-marker classifier bowl right or not right

  'You broke the bowl, didn't you?'

Typical tags are also observed in HKSL, such as TRUE, or OK, as in (18):

In certain respects, these Q-signs in (9) and (10 are like are like tag questions in spoken Cantonese. Morphologically, they are formed by juxtaposing the positive and the negative element of the same grammatical category. Second, the pattern of non-manual marking of these Q-signs is similar to the typical tag questions in other sign languages such as BSL or ASL, in the sense that the non-manual marking never spreads to the preceding part of the sentence. Third, they are consistently clause final. However, unlike typical tag questions in either spoken or sign languages, there is no intonation break between the preceding part of the sentence and the Q-signs.

This suggests that the Q-sign together with the preceding part forms a single clause, rather than being a clause followed by a tag. In the sign phonology literature, it has been well-established that a clause boundary, is usually marked by a pause and an eye blink (Wilbur 1994b; Sandler 1999). In the data from HKSL, an intonation break in any of these non-manual forms before the Q-signs is not obvious and a pause certainly leads to ungrammaticality. Therefore, polar questions in HKSL that adopt these Q-signs form a specific type of disjunctive questions, one that juxtaposes the positive and negative value of the proposition in the question. Disjunctive questions presuppose no biased assumptions.

Could these Q-signs be question particles? According to Zeshan (2004b), Q-particles are not observed in BSL, German Sign Language (DGS), and Sign Language of the Netherlands (SLN) but they are found in the sign languages in Finland, Denmark, Spain, South Korea, Turkey, Japan, Taiwan, and possibly Kenya and Tanzania. Q-particles in sign languages display the following characteristics: First, they fall within the same prosodic unit as the actual question and are not preceded by an intonational break. Second, where the Q-particles originate from some other signs, the original meanings may not be retained. Third, Q-particles are pragmatically marked; and finally, they can be clause final, clause initial, or they may occur in both positions. The Q-signs documented in HKSL do share some of these characteristics, in particular, an intonational break before the sign is not allowed. However, they differ from typical Q-particles in that they appear to be morphologically complex and they are distributionally restricted - they are clause final and occur in just one sub-type of polar questions. One possibility is that these signs originate from tag questions in Cantonese; however, when being incorporated into the natural sign language system, they undergo semantic shift and at the same time a change in the grammatical status, to the extent that they no longer behave strictly like question tags, but like a kind of clause final Q-expression that makes use of a disjunctive A-not-A pattern.

In sum, we have analyzed two main forms of polar questions. The basic form does not involve word order change but brow raise to mark a polar question. The second form involves attaching an 'A+~A' Q-sign clause finally. Apparently, these Q-signs are not many and their distribution appears to be restricted to the specific semantics of polar questions. HAVE+NOT-HAVE as a Q-sign questions the existence of states and events, as well as entities. GOOD+BAD seeks confirmation to the truth or falsity of a proposition; or poses a request for permission.

#### 1.2 Content questions

#### 1.2.1 Question signs

There are two generic wh-signs in HKSL, which are articulated by the a 1-handshape or an open 5-handshape. The wh-signs with a1-handshape (glossed as WH1) involves a pivoting motion of the wrist and may be translated as 'who, whose, what, which, why, where, and how' (Figure 4). It is also common to combine WH1 with other lexical signs to form question compounds: FACE+WH1 means 'who' (Figure 5) and PLACE+WH1 means 'where' (Figure 6). In addition to WH1, 'why' may also be signed by a 1-handshape tracing a question mark in the signer's neutral signing space.

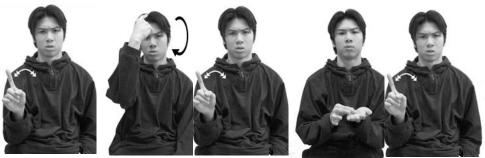


Figure 4: WH1 Figure 5: FACE+WH1 'who' Figure 6: PLACE+WH1 'where'

video ex. 4-6

The second generic wh-sign is glossed as WH5. It is articulated by an open 5-handshape with the fingers in a wiggling motion. By itself, this wh-sign is associated with questioning measures or degrees and can be glossed as HOW-MUCH/MANY (Figure 7). Also, various time concepts are articulated through specific compounds with an underlying WH5 sign, rendering a general 'when'-question unnecessary. Thus TIME+WH5 means 'what time' with respect to the hour of the day (Figure 8). HOW-LONG is articulated by placing the wiggling WH5

on the back of the wrist. Pointing at the contralateral side of the top of the torso area in an open 5-handshape followed by a wiggling WH5 in the neutral signing space is glossed as DAY-OF-THE-WEEK+WH5, meaning 'what day of the week' (Figure 9)8. WH5-MONTH-WH5-DATE is a double-handed sign formed by two wiggling WH5 in identical orientation towards the signer's torso area (Figure 10). WHAT-MONTH is similar to WH5-MONTH-WH5-DATE except that WH5-DATE (articulated usually by the dominant hand) is replaced by a curved G-handshape in repeated downward movement (Figure 11). Therefore, in HKSL, the type of variable being questioned is signified by the handshape, and the movement of the signs







Figure 8: TIME+WH5 video ex.7-9



Figure 9: DAY-OF-THE-WEEK+WH5







Figure 11: WH5-DATE

video ex.10-11

<sup>8</sup> In HKSL, the signs for days of the week are formed by incorporating number signs into the place of articulation, (that is, top of left torso). It seems that number signs have the tendency to adopt a place of articulation which may have its origin from another lexical sign. MONDAY, for instance, is articulated by combining ONE with a place of articulation. It is also possible to use the 1-handshape (that is, index finger) instead of 5-handshape to point at the top of the torso.

seems to imply uncertainty. The open 5-handshape in a wiggling motion is used to question time, duration, and quantity, which may be measured conceptually on a scale. Identification of persons, entities, manner, reason and purpose is covered by the 1-handshape.

#### 1.2.2 Non-manual marking in content questions

In the sign language literature, brow furrow is typically regarded as having the grammatical function of marking content questions. It is an obligatory feature and its scope varies; either it is restricted to the wh-sign only or it spreads over the entire question (Baker-Shenk 1983, Sutton-Spence and Woll 1999, NKMBL 2000). In HKSL, brow position is obligatory in content questions. However, we observed a frequent use of brow raise and eye-gaze at the addressee as markers of content questions.

		<u>cont-q</u>	
(19)	ELDER-BROTHER	BUY WH1?	(Figure 12)
	'What did the elder brother buy?'		

- (20) BUY BOOK FACE+WH1?
  'Who bought a book?'
- (21) Cont-q FACE+WH1 BUY BOOK? 'Who bought a book?'



ELDER-BROTHER

Figure 12: 'What did the elder brother buy?'



BUY



WH1 video ex. 12

However, we do observe occasional brow furrow and it is usually associated WH1 (see Figure 12). This brow position is accompanied by a round, open mouth pattern and is co-extensive with the wh-sign, as shown in (19). Occasionally, we observe a spread of non-manual marking over the entire question when it is a subject question and the wh-sign is in clause initial position (21).

#### 1.2.3 Word order in content questions

Cross-linguistically, wh-signs are most often placed in either clause initial or clause final position. In BSL and Indo-Pakistan Sign Language, the wh-signs may occur clause finally (Sutton-Spence & Woll 1999, Zeshan 2000). It has also been reported in some sign languages that the wh-signs may be clause initial, clause final or the two positions combined (Lillo-Martin 1990, Aarons 1994; NKMBL 2000 for ASL; Bouchard & Dubuisson for LSQ (Quebec, Canada); Pfau 2002 for DGS). In HKSL, the wh-signs for argument questions are either in situ (19 & 21) or in clause final position (20). In (19) above, the wh-sign WH1 'what' overlaps between in-situ and clause final positions. However, in Cantonese, the in-situ wh-words are observed in both argument and adjunct questions. Except for in-situ subject questions, as in example (21), the wh-signs never occur clause initially in HKSL; therefore, (22) and (23) are ruled out.

- cont-q
  (22) \*WH1 ELDER-BROTHER BUY?

  'What did the elder brother buy?'
- cont-q
  (23) \*WH1 POLICEMAN CATCH?

  'Who did the policeman catch?'

Unlike many sign languages, HKSL does not allow wh-pronoun copies, that is, having two identical question signs for the same variable in a question to occur clause initially and clause finally. (24) is ruled out in HKSL.

(24) \* WH1 ELDER-BROTHER BUY WH1?

'What did the elder brother buy?'

As for 'which'-questions, we observe that the wh-sign seldom combines with a noun, forming a 'WH1 +N' phrase. As the variables of 'which'-questions are definite referents in the signing discourse, this referential property seems to have an effect on the formation of 'which'-questions. (25) and (26) indicate that the signing of WH1 assumes that the referents are already assigned a locus in space.

#### cont-q

(25) HOUSE INDEX, INDEX, MALE LIKE WH1?

'This house or that house, which house does the man like?'

In (25), where the referents for the houses are already established in space, the movement parameter of WH1 is modified from local to path movement between the two loci to signal a request for a choice between the referents previously located in space. Where number is incorporated into a 'which'-question, the following pattern results:

#### <u>cont-q</u>

(26) HOUSE THREE, MALE LIKE WH1?

'Of the three houses, which does the man like?'

In this question, the sign THREE is signed and held by the non-dominant hand until the end of the sentence. Then, WH1 is signed by the dominant hand that moves towards the number sign held by the non-dominant hand, meaning 'which one of the three (houses)'. We argue that when combined with WH1, this number sign is pronominal and assumes the referential property of [+definite], providing a specific range of variables for identification.



Figure 13: 'Of the three houses, which does the man like?' video ex.13

As for adjunct questions, we observe that the informants are aware of the difference in the syntactic pattern between Cantonese and HKSL. As noted, the question word in adjunct questions is in-situ in Cantonese, but this seldom occurs in HKSL. Wh-signs for adjunct questions in HKSL are generally clause final (27a & 28a). (27b) and (28b) show the original site of the temporal or locative adverbials in the sentence; placing the adjunct question sign in clause initial position is unacceptable (29a & 29b).

- (27a) FATHER GO SIGN-CONTRACT LOCATION+ WH1? 'Where did father go to sign the contract?'
- (27b) FATHER GO CENTRAL SIGN-CONTRACT. 'Father went to Central to sign the contract.'
- (28a) ELDER-SISTER GET-MARRIED WH5-MONTH-WH5-DATE?

  'What month and date will the elder sister get married?'
- (28b) ELDER-SISTER FIRST-OF-MAY GET-MARRIED. 'The elder sister will get married on the first of May.'
- cont-q (29a) INDEX<sub>2</sub> KILL DOG WH1? 'Why did you kill the dog?'
- (29b) \*WH1 INDEX<sub>2</sub> KILL DOG? 'Why did you kill the dog?'

In sum, one may posit that wh-signs are generally clause final, and this is true for both argument and adjunct questions; but we also observe some instances of insitu wh-questions with the younger signer, and this may be due to influence from Cantonese, which is a language with wh-in-situ questions. Non-manual marking can be brow raise or brow furrow in some instances, but it is usually restricted to the wh-signs.

#### 2. Negation

Systematic typological surveys on negation in spoken languages have been reported in Dahl (1979) and Payne (1985); Zeshan (2004a) provides the first systematic typological survey in sign languages. As reported in her study, most of the analysis focuses on the syntactic position of the negator NOT and its associated non-manual marking. NOT is reported to occur in different syntactic positions in different sign languages. Specifically, in ASL it tends to be preverbal (Newport and Meier 1987, Aarons 1994), but postverbal and affixal to the verb in German Sign Language (Pfau 2000). Bergman (1995) documents the syntactic position of NOT in Swedish Sign Language (SSL) and claims that it is dependent upon the type of verbal categories and predicates. NOT is postverbal in sentences containing a main verb, such as SEE NOT, or KNOW NOT. If the main verb is preceded by a modal, NOT follows the modal instead. NOT also precedes the adjectival and nominal predicates. In ASL, negative verbs such as WANT+NOT, LIKE+NOT, KNOW+NOT involve the incorporation of a negative morpheme into the verb stem morphologically (Woodward and De Santis 1977).

As for non-manual marking, a side-to-side headshake is common across sign languages to mark the grammatical property of negation. Most sign language researchers would agree that this is the most fundamental non-manual feature accompanying negation in sign languages. A recent acquisition study on ASL also reveals a systematic development from a communicative, gestural headshake to one that reveals the linguistic property of negation in the language (Anderson and Reilly 1997). Other non-manual markings include wrinkled nose, frowns and brow furrow, as well as spread lips. Many sign languages also report negative constructions in the absence of a manual negator, in which case non-manual expressions are obligatory as the only marker of negation (Zeshan, chapter 2, this volume).

There are quite a few manual negators in HKSL, the most common ones being NO/NOT, NOT-HAVE, and NOT-YET. There are also negative quantifiers like NOTHING, and negative modals like CAN'T and WON'T. In this section, I provide an analysis of the syntactic and semantic properties of these negators as well as the non-manual marking for negation. We also take a look at a negative morpheme realized by the I-handshape.

#### 2.1 Clause negators in HKSL

As mentioned, NO/NOT is articulated by a B-handshape with a waving motion. NO/NOT can be translated as 'no' when it is an interjection. This sign is accompanied by a Cantonese mouthing pattern  $m_4$ -hai<sub>6</sub> ('no'). In the following discussion, we will focus on the clause final NOT. Semantically, NOT denies the truth of a proposition, expressed as 'It is not true that P where P = proposition', as shown in (30) and (31).

(30) INDEX<sub>3</sub> TOMORROW FLY NOT. (Figure 14)

'It is not true that he is flying tomorrow.'

(31) HOUSE BIG NOT, SMALL.

'It is not true that the house is big, it is small.'

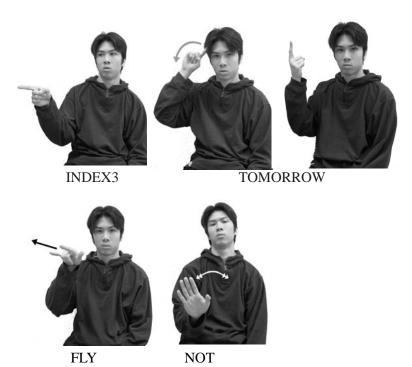


Figure 14: 'It is not true that he is flying tomorrow.' video ex.14

Another negator, NOT-HAVE, is articulated by an F-handshape with a waving motion. NOT-HAVE is taken to be the negative counterpart of HAVE, the latter translatable as 'there is' or 'have' in English. However, HAVE can be negated by NOT, as in (32):

(32) INDEX<sub>3</sub> HAVE MONEY NOT.

'It is not true that he has money.'

Instead of denying the truth of a proposition using NOT, the negative sentence with NOT-HAVE simply asserts the non-existence or non-possession of entities and states (33 to 35):

- \_\_\_\_\_neg
  (33) FATHER CAR NOT-HAVE. (Figure 15)

  'Father does not have a car.'
- (34) DRAWER INDEX, MONEY NOT-HAVE.

  'There is no money in the drawer.'
- (35) MARY PREGNANT NOT-HAVE.

  'Mary isn't pregnant.'

Also, it is typical in HKSL to adopt NOT-HAVE to assert the non-existence of an event that occurs either in the past or at present but not in the future (36 & 37). For instance, (37a) asserts that 'Father didn't go to the shop yesterday', and whether 'he went somewhere else' is not an issue. The reading of the sentence is different if NOT-HAVE is replaced by NOT (37b), which means 'It is not true that father went

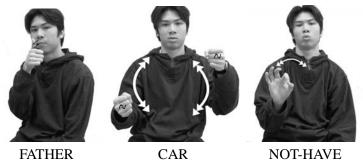


Figure 15: 'Father does not have a car.'

to the shop yesterday', with a presupposition that father went somewhere, but it was not the shop that he went.

- (36) KENNY NOW PARTICIPATE RESEARCH NOT-HAVE.

  'Kenny does not participate in the research now.'
- (37a) YESTERDAY FATHER GO SHOP NOT-HAVE. 'Father didn't go to the shop yesterday.'
- (37b) YESTERDAY FATHER GO SHOP NOT.

  'It is not true that father went to shop yesterday (but he went somewhere else).'

NOT-HAVE is also distinguished from NOT-YET (Figure 16), which only implies that the event has not yet taken place. Compare (38) and (39):

- (38) (KENNY) PARTICIPATE RESEARCH NOT-HAVE.

  'Kenny did not participate in the research.'
- (39) (KENNY) PARTICIPATE RESEARCH NOT-YET.

  'Kenny has not yet participated in the research (but he will).'

When an event is perceived by the signer to take place in future, WON'T (Figure 17) is used to negate its occurrence:

- (40) KENNY FEBRUARY FLY TAIWAN WON'T.

  'Kenny won't fly to Taiwan in February.'
- (40) shows that the event that Kenny is flying to Taiwan will not take place. To negate s uch a possibility, a modal negator WON'T is adopted. To negate it by NOT-HAVE would only lead to semantic anomaly. WON'T involves an L-handshape with the index finger and thumb extended. WON'T generally denies the possibility of

occurrence of a certain event or state in the future; the signer poses a proposition and asserts the low probability of its occurrence, as in (40).

Another negative modal is CAN'T. It adopts an I-handshape and involves a twisting motion in the neutral signing space (Figure 18). CAN'T is adopted for a range of semantic functions, particularly deontic modality of ability, permission and obligation. This sign is relatively common for denoting the lack of ability, as in (41), where the signer asserts someone's inability to play the piano. (42) is concerned with the deontic modality of permission, where the signer denies someone's access to a computer. (43) asserts the obligation that children should not commit themselves to gambling on horse racing.

neg

(41) INDEX<sub>3</sub> PLAY-PIANO CAN'T, SIGN CAN. 'He can't play the piano, (but) he can sing.'

neg

(42) INDEX<sub>3</sub> USE INDEX<sub>1</sub> COMPUTER CAN'T 'He can't use my computer.'



Figure 16: NOT-YET

Figure 17: WON'T



Figure 18: CAN'T

<u>nea</u>

(43) CHILDREN GAMBLE HORSE-RIDING CAN'T 'Children should not gamble on horse racing.'

In terms of syntactic distribution, all negators discussed above are clause final; therefore, (44) and (45) are rejected by our informants.

\_\_\_\_\_neg
(44) \*(KENNY) NOT-HAVE PARTICIPATE RESEARCH

'Kenny did not participate in the research.'

\_\_neg
(45) \*INDEX, CAN'T GAMBLE HORSE-RIDING

'He should not gamble on horse-racing.'

However, occasionally, NOT is observed to occur preverbally in some high frequency verbs like EAT and, COME, as shown in (46). If NOT is not clause final but occurs to the left of the elements being negated, the scope of non-marking may extend to the end of the clause.

\_\_\_\_\_neg
(46) INDEX<sub>3</sub> NOT COME, BUSY
'He won't come, he is busy.'

In fact, preverbal NOT is more common among the younger than the older signers of HKSL. One suggestion is that this is due to influence from Cantonese since these sentences do reflect the syntactic pattern of negative sentences in the spoken language. To sum up, except for a few frequently occurring expressions that are modelled on Cantonese, NOT, NEVER, NOT-HAVE, NOT-YET, and the modal negators consistently occupy the clause final position. That the negators occupy a clause final position is also observed in many other sign languages, according to Zeshan (2004a).

#### 2.2 Non-manual negation in HKSL

While it has been reported in many sign languages that headshake grammatically marks negation (Baker and Cokely 1980 for ASL, Yang and Fischer 2002 for CSL, Pfau and Quer 2003 for DGS, Coerts 1992 for SLN; Bergman 1994 for SSL), we observe that frowns and spread lips are also associated with negation in HKSL, in addition to headshake. In our data, where the negator is clause final, it is co-extensive with the negator only. However, when NOT is preverbal, as noted in some of the frequency expressions, we observe that while the headshake ends after the negator is signed, the other non-manual markers may be sustained until the end of the clause. In example (47), the dotted line indicates a continuation of the other non-manual markers after the headshake ends.

Whether headshake is an obligatory grammatical marker of negation in HKSL remains an open issue. Lee (2005) based on his data argues that headshake does not bear any lexical or grammatical properties in HKSL because it is not obligatorily co-extensive with the manual negation marker, neither does its extent have any scope properties.

Also, although non-manual marking alone may perform the function of negation in some sign languages such as ASL, BSL or CSL, this is ruled out in HKSL, where negation requires the presence of a manual negator (48 & 49).

(48) \*YESTERDAY NIGHT FATHER FAX FRIEND 'Father didn't fax his friend last night.'

(49) <u>neg</u>
\*HOUSE FAR
'The house isn't far.'

#### 2.3 Negative handshape in HKSL

As in CSL, the I-handshape in many instances carries a negative meaning in HKSL. By itself, this handshape may form a sign BAD/WRONG which is held in the neutral signing space with the palm facing the signer. It is adopted in the lexical formation of some negative signs. One example is the negative modal CAN'T. CAN and CAN'T bear no articulatory similarities in terms of handshape and movement. The negative modal CAN'T adopts the I-handshape, but CAN involves a B-handshape with fingers flexed at the base joint. This negative handshape may also be signed on certain body parts such as the temple for verbs of cognition like KNOW-BAD 'don't know'/UNDERSTAND-BAD 'don't understand' or near the mouth for adjectives like TASTE-BAD 'taste awful'. Other examples are EAR-BAD 'deaf', MOUTH-BAD 'dumb', and EYE-BAD 'blind'.



Figure 19: CLEAR/CLEAN

Figure 20: UNCLEAR/UNCLEAN

video ex. 19-20

Alternatively, BAD/WRONG is grammaticalized into a negative suffix. Examples are CLEAR/CLEAN (Figure 19) and UNCLEAR/UNCLEAN (Figure 20), SKILLFUL and UNSKILLFUL, REASONABLE and UNREASONABLE, APPEALING and UNAPPEALING, LUCKY and UNLUCKY, TIME+GOOD ('got time') and TIME+BAD 'got no time'. These opposite pairs usually require just a switch between the handshapes of GOOD and BAD.



Figure 21: KNOW



Figure.22: KNOW-BAD video ex.21-22

In fact, suffixing BAD to some verbs of cognition such as KNOW to form KNOW/UNDERSTAND+BAD as a free variant of KNOW/UNDERSTAND-BAD is also observed. This is formed by keeping the citation form of KNOW (that is, an index sign at the body part), as shown in (Figure 21), and the handshape is subsequently changed to that of BAD (Figure 22).

#### Conclusion

This chapter provides a preliminary survey on the word order of interrogative and negative constructions and the related signs in HKSL. Specifically, it is common for the question signs, A+~A Q-signs, and negators to be consistently clause final. However, we also observe influence from Cantonese, as typically manifested in some in-situ wh-questions and A+~A Q-signs. Another issue is scope of negation and interrogation as well as the related non-manual marking. The data, though limited, suggest that they are related, and this is obvious in the case of interrogation while less obvious in negation. In the linguistic literature on interrogation and negation, researchers are also interested in scope issues which are argued to be interacting with the constituents in the sentence. Certainly, negating the entire proposition is different from negating a particular term in the proposition. An interesting issue is how deaf signers express such scope properties in sign languages. At the present stage, research on sign languages points to the significance of non-manual expression for grammatical properties. One may posit that the scope of non-manual expression may also reflect the semantic characteristics of certain grammatical constructions. Further research on the functional and grammatical properties of non-manual markings will add to our understanding of the grammar of interrogation and negation in HKSL.