Exploring wh-questions in Indian Sign Language

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Abstract

Wh-questions have been well studied in many sign languages. There have been many competing analyses like leftward, rightward and remnant movement, to explain the typologically uncommon appearance of wh-signs in the right periphery. In this paper, I focus on wh-questions in Indian Sign Language (ISL). A previous analysis of wh-questions in ISL argues against rightward wh-movement to Spec, CP. Instead, the general ISL wh-sign (G-WH) can be better analyzed as a syntactic head of a right-branching functional projection in the left periphery of the clause. In this paper, I scrutinize this analysis given for the wh-questions in ISL and attempt to formulate a new analysis based on new data collected online and during fieldwork with five deaf signers in India.

Keywords: wh-questions, wh-movement, head analysis, Indian Sign Language

1 Introduction

Wh- or content questions are those which are used to ask the addressee for specific information, other than a ‘yes’ or ‘no’ answer. They are well researched in many sign languages. However, there is a disagreement with respect to their analysis. This is especially due to an interesting difference between content questions in spoken and sign languages, which is that wh-words/elements appear either in the left periphery or in-situ in spoken languages. By contrast, in sign languages, apart from the positions which are available in spoken languages (left periphery and in-situ), wh-signs are commonly found in the right periphery. This is hardly attested in spoken languages.¹ Due to this difference, wh-questions have garnered much attention in sign language linguistics.

Two of the earliest and opposing analyses of the syntactic structure of wh-questions in sign languages come from American Sign Language (ASL): a leftward movement analysis proposed by Petronio and Lillo-Martin (1997) and a rightward movement analysis by Neidle, MacLaughlin, et al. (1998) and Neidle, Kegl, et al. (2000). A more recent analysis developed in Cecchetto, Geraci, and Zucchi (2009) adopted the rightward movement analysis for Italian Sign Language (LIS). This analysis factored in that only sign languages have wh-signs in the right periphery and argues that this is due to non-manual markers (NMM) like ‘furrowed eyebrows’, which play an important role in marking the dependencies between the lower copy of the wh-sign in the base position and the higher one in the sentence-final C position.

A different kind of analysis based on the leftward movement, known as the remnant movement analysis, has been proposed by Aboh, Pfau, and Zeshan (2005) for Indian Sign Language, by Quadros (1999) for Brazilian Sign Language (LSB) and Aboh and Pfau (2011) for Sign Language of the Netherlands (NGT). In all these languages, the wh-sign is not a phrase

¹Tennet is the only exception according to the WALS Online (cf. Dryer 2013).

but a head, which is present in the left periphery but ends up in the rightward position due to the movement of the whole clause to the left of the wh-sign (Cecchetto 2012).

The purpose of this paper is to re-examine the previous analyses in light of new data from Indian Sign Language (ISL). Based on the new findings, the paper will suggest that the general wh-sign in ISL should be analyzed as a head which is base-generated in the head of CP. In the following sections, I will discuss previous research on wh-questions in ISL (Section 2), the methodology of data collection (Section 3.1), and the observations based on the new data (Section 3.2). In Section 4, I will briefly sketch the previous analysis, and in Section 5, I will discuss why the previous analysis cannot account for the new findings and propose a preliminary alternative analysis.

2 Wh-questions in ISL: established facts

Previous studies on ISL by Zeshan (2003), Zeshan (2004), Zeshan (2006), and Aboh, Pfau, and Zeshan (2005) have shown that the wh-sign consistently appears in the sentence-final position, and there is no other position where it can possibly occur. ISL is an SOV language (Aboh, Pfau, and Zeshan 2005; Singh 2015) which has a minimal wh-sign paradigm where a general wh-sign G-WH can be used to introduce all kinds of questions. This sign can be combined with other non-interrogative signs such as FACE or PLACE to ask more specific questions (cf. Figure 1).

Figure 1: Wh-signs in ISL

The paradigm of wh-signs in ISL is summarized in Table (1).²

Regarding the non-manual marking (NMM), Aboh, Pfau, and Zeshan (2005) identify raised eyebrows and backward head tilt as the canonical NMM for wh-questions in ISL. The NMM appears on the wh-sign or the whole sentence, excluding topicalized elements (Zeshan 2004).

3 The picture looks much more complex: new data from ISL

During fieldwork in India, I collected new data using different kinds of production and judgment tasks to determine the most natural position of the wh-signs and to examine if there are positions available other than the sentence-final position, which has been argued to be the only position available in ISL in previous studies (Zeshan 2003; Zeshan 2004; Zeshan

²I will be using G-WH for the stand-alone general wh-sign and will be using G-WH_{COMP} for the sign which is a part of a compound wh-sign like FACE+G-WH_{COMP}. MOUTH is the reduced form of FACE which is signed only in the mouth region. FACE and MOUTH are used in free variation by the participants. WHO sign is a stand-alone sign used without G-WH for 'who' questions. WHEN is used when asking about the day of an event, for example, HOLI WHEN which means "When (which day) is Holi?"

Table 1: Wh-sign paradigm

SIGN	MEANING
G-WH	“What,” “Why,” “How” (it can be a two-handed or a one-handed sign)
FACE+G-WH _{COMP} /MOUTH+G-WH _{COMP} /WHO	“Who,” “Whose,” “Whom”
PLACE+G-WH _{COMP}	“Where”
TIME+G-WH _{COMP} /WHEN /WHEN+G-WH _{COMP}	TIME+G-WH _{COMP} used for asking time only, another sign WHEN is used when asking about the day
IX _a IX _b IX _c + G-WH _{COMP}	“Which”

2006; Aboh, Pfau, and Zeshan 2005). All tasks were combined with individual discussions of the data with the participants after the completion of the task. The production tasks and especially the discussions thereafter revealed that there could be other positions available for the wh-sign in ISL. These positions can be syntactically, semantically, and pragmatically restricted. To confirm these observations, I conducted an additional judgment task online.

3.1 Data collection

I collected data from 5 participants – 4 male signers, age 20, 27, 30 and 39, and 1 female signer, age 27. The participants were from different regions of India: Delhi (North), Mumbai (West), Hyderabad (South-East), Dehradun (North) and Jabalpur (Central). Two of the males were native signers, and the other three were near-native signers. All five signers use ISL as their first language in everyday communication and are active members of the deaf community.

3.1.1 Production tasks

Four production tasks were conducted to elicit the syntactic position of wh-signs in ISL. In addition, I included three other tasks as fillers. The tasks for eliciting wh-signs were the following:

- Personal Interviews:** The deaf participants interviewed each other, in a pair of two, for their life stories. The interviews were conducted in ISL.
- Story remembering tasks:** I showed two signed stories to the participants and asked them to form questions based on those stories. The deaf participants' task was to remember the details of the stories. After they saw the stories twice, the participants were shown the wh-questions word cards one by one from behind the camera, while recording their signs. On the wh-question word card, participants saw the question words in English (e.g. “who”, “why”, “when”, ...) and were asked to produce questions based on the question word and the stories that they had seen earlier. Each word was

repeated twice so that participants could think of more questions based on this word. This task was repeated with all five participants. Each participant saw the stories alone and was not allowed to discuss it with the other four.

- c) **Story finishing tasks:** I used two stories for this task. Each story had two sets of picture cue cards, one for questions and the other for answers. The deaf participants, in pairs, each got a set of picture cue cards where one participant had question cards, and the other had answer cards. They were asked to flip their cards one by one alternatively and sign the cue given in the picture.
- d) **Roleplay:** The last task was a role play where two deaf participants interacted with each other. The topics for the role plays included situations like ‘job interviews’ or ‘renting an apartment.’

The filler tasks included various tasks like ‘fables signing,’ ‘Cheese Race game,’ and ‘story building through picture dice,’ which were used to elicit other grammatical categories, such as role shift, reference tracking, or conditionals.

3.1.2 Judgment task

After the production task, an additional judgment task was conducted online, where signers had to judge different kinds of wh-questions. One of the deaf signers produced videos with wh-questions. In these wh-questions, the wh-sign appeared in different positions (sentence-initial, in-situ, sentence-final, doubled - in-situ and sentence-final, doubled-sentence-initial and final), and wh-questions with G-WH (1 a) and without G-WH (1 b) were also included. The signer was asked to keep the non-manual markers as neutral and consistent (only typical non-manuals) as possible to avoid any influence of non-manual marking on the judgments. These different types of wh-questions were combined with different kinds of verbs such as SLEEP, SNEEZE, RUN, DANCE, and EAT. For example, the sentences in (1) are four of the nine variants of the question, “Who sleeps?”:

(1)	(a)	SLEEP FACE+G-WH _{COMP}	(Compound wh-sign –sentence-final)
	(b)	SLEEP WHO	(without G-WH sign)
	(c)	WHO SLEEP WHO	(Double wh-sign, without G-WH sign)
	(d)	FACE+G-WH _{COMP} SLEEP	(In-situ wh-sign)

Each participant, including the signer, was sent the videos in a different order. After seeing the videos, the participants were asked to rate each construction on a five-point scale, where #1 is the construction that is never used in the deaf community and then grade in ascending order till #5, being the one used by everyone (see Figure 2). A comparative chart of their scores was prepared once they sent their grading sheets and then they were contacted again to discuss the sentences and judgments.

3.2 Observations

3.2.1 Position of wh-words

The results of the production tasks confirmed the previous findings that the most natural (but, as we will see below, not the only) position for the wh-sign is the sentence-final position. It is typically occupied by the general G-WH sign or by a compound wh-sign such as PLACE + G-WH_{COMP} (“Where”):

Figure 2: Scoring sheet pattern

- (2) (a) R-E-N-U_a A-L-K-A_b aCALL_b R-E-E-T-A_c aCALL_c G-WH
 “Why did Renu call Alka and Reeta?”
- (b) R-E-E-T-A DRESS COLOR G-WH
 “What is the color of Reeta’s dress?”
- (c) R-E-N-U BOTH HUSBAND R-A-V-I MARRIAGE PLACE+G-WH_{COMP}
 “Where is the wedding of Renu and her husband, Ravi?”

The results also confirmed that negation and modals typically precede wh-signs, as is shown in examples (3 a)-(3 b).

- (3) (a) R-E-E-T-A FLIGHT BOOK NO G-WH
 “Why didn’t Reeta book the flight?”
- (b) A-L-K-A R-E-E-T-A BOTH COME WEDDING MUST G-WH
 “Why must both Alka and Reeta come to the wedding?”

There were also instances where the wh-signs appeared elsewhere in the clause, as in (4).

- (4) YOU GROW.UP SIGN AWARENESS SIGN WHEN START
 “While growing up, when did the awareness for signing start for you?”

In the production tasks, I also found some instances of split-wh (5 a)-(5 b). However, split-wh was not accepted by the participants in the judgment task.

- (5) (a) INDEX₂ MOUTH INDEX_a INDEX_b INDEX_c G-WH
 “Who are they all?”
- (b) INDEX_{2Goa} MUMBAI_a WHEN RETURN G-WH
 “You are going to Mumbai, when will you return?”

Moving to the findings of the judgment task, the examples (6 a)-(6 g) were rated as the most acceptable ones (≥ 3.8 mean score) across all kinds of verbs:

- (6) (a) SLEEP WHO (Sentence-final wh)
- (b) WHO SLEEP WHO (Doubled wh)
- (c) WHO APPLE EAT WHO (Doubled wh, subject question)

- (d) SNEEZE FACE+G-WH_{COMP} (Sentence-final compound G-WH)
- (e) APPLE EAT FACE+G-WH_{COMP} (Sentence-final subject compound G-WH, transitive verb)
- (f) RAM EAT G-WH (Sentence-final object G-WH , transitive verb)
- (g) WHAT³ RAM EAT G-WH (Doubled wh, object question)

The examples which were rated quite low (< 2.5 mean score) were the sentences with wh-split (7 a) - (7 b), in-situ wh (7 c)-(7 d), and compound wh-questions where G-WH_{COMP} is signed in the initial position (7 e) and G-WH_{COMP} signed in the initial position in the doubled wh-questions (7 f).

- (7) (a) FACE SLEEP G-WH_{COMP} (Split-wh)
- (b) FACE SNEEZE G-WH_{COMP} (Split-wh)
- (c) WHO SLEEP (In-situ wh)
- (d) RAM G-WH EAT (In-situ wh)
- (e) FACE+G-WH_{COMP} SNEEZE (Compound G-WH in initial/in-situ position)
- (f) FACE+G-WH_{COMP} SLEEP FACE+G-WH_{COMP} (Doubling with compound G-WH in initial/in-situ and final position)

The main findings of the judgment task are summarized by the following observations:

- i. The sentence-final position is the most acceptable position for wh-signs.
- ii. Doubling construction with one wh-sign at the sentence-initial position and the other one in the final position is the second most accepted construction. However, this construction is acceptable only in contexts such as surprise, curiosity, and/or anger.
- iii. G-WH_{COMP} cannot appear in the initial position (single or doubled wh) if it is a part of a compound wh-sign like FACE+G-WH_{COMP}
- iv. The in-situ position of wh-signs is more acceptable for intransitive verbs than transitive ones, except for SNEEZE. Table 2 below shows the average scores for each verb.

Table 2: Comparative average scores of in-situ wh-signs for different verbs

WHO SLEEP	WHO SNEEZE	WHO RUN	WHO DANCE
3.2	2.6	3.6	3.8
WHO APPLE EAT	WHO EAT APPLE	RAM G-WH EAT	
2.6	2.4	2.2	

The scores suggest that there is definitely a difference between intransitive verbs and transitive verbs with respect to the in-situ position of the wh-sign. Wh in-situ is more acceptable for SLEEP, RUN, and DANCE than EAT. However, the score for SNEEZE is also very low; there is no conclusive reason for this.⁴

³The sign used for WHAT is same as G-WH, therefore, for the ease of following, I will write WHAT when indicating the sign responsible for cleft interpretation in the doubled wh-questions and G-WH when indicating the actual interrogative sign.

⁴SNEEZE is a non-volitional verb which is different from the other verbs such as SLEEP, RUN or DANCE.

Figure 3: Different non-manual markers

3.2.2 Non-manual markers

Aboh, Pfau, and Zeshan (2005) identified raised eyebrows and backward head tilt as an NMM associated with wh-questions in ISL. However, I found three different NMMs in my data, as can be seen in Figure 3. The furrowed eyebrows were the most frequent NMM used by the participants. These different NMMs could be due to an influence of context or bias. Cañas (2019) showed for polar interrogatives in Catalan Sign Language (LSC) that the NMMs related to the polar interrogatives are affected by the context and hence are typically used to express a bias. There can be two kinds of biases: *epistemic bias* – something we already know (ideas/beliefs) and *evidential bias* – something that we can see at present.

A similar kind of bias can be assumed for the wh-questions in ISL, which can be accompanied by different non-manual markers (Figure 3). However, at this point, it is only a conjecture, and more data are needed to verify this.

As can be seen in sentences (8 a)-(8 b), the non-manuals usually associated with wh-questions are furrowed eyebrows ‘bf’. In the examples, there is another non-manual marker, i.e., raised eyebrows ‘br’, which can be associated with topics. Wilbur and Patschke (1999) analyzed ‘br’ for ASL as a marker associated with A-bar positions and [-wh] operators. However, Zeshan (2004) notes that there is no NMM associated with the topicalized element in ISL.

- (8) (a) $\frac{\text{br}}{\text{R-E-N-U}_a \text{ A-L-K-A}_b} \frac{\text{bf}}{\text{aCALL}_b} \frac{\text{br}}{\text{R-E-E-T-A}_c} \frac{\text{bf}}{\text{aCALL}_c \text{ G-WH}}$
 “Why did Renu call Alka and Reeta?”
- (b) $\frac{\text{br}}{\text{A-L-K-A R-E-E-T-A}} \frac{\text{bf}}{\text{BOTH COME WEDDING MUST G-WH}}$
 “Why must both Alka and Reeta come to the wedding?”

However, in (9), the non-manual ‘br’ appears over the entire wh-question, which could be due to the influence of context.

- (9) $\frac{\text{br}}{\text{A-L-K-A HOME PLACE+G-WH}_{\text{COMP}}}$
 “Where is Alka’s home?”

4 Previous analysis of wh-movement in ISL

Aboh, Pfau, and Zeshan (2005) is the only generative analysis available for the syntax of wh-questions in ISL. They compared the leftward and the rightward movement analysis proposed for ASL (Petronio and Lillo-Martin 1997; Neidle, MacLaughlin, et al. 1998; Neidle, Kegl, et al. 2000) and argued for a remnant movement analysis for wh-questions in ISL. The analysis proposes that the wh-sign is in the left periphery, but due to the movement of other elements to the left of the wh-sign, it ends up in the sentence-final position.

Aboh, Pfau, and Zeshan (2005) propose a clause typing theory in which G-WH is a ‘clause typing morpheme’ that determines the interrogative feature in ISL. Based on Rizzi (1997), they assume a split-CP structure with G-WH present in the head of InterP. Their analysis accounts for the sentences given in (10 a)-(10 b). The two subparts of the compound wh-signs like PLACE+G-WH can be split up as in (10 a) or remain adjacent as in (10 b).

- (10) (a) INDEX₂ FRIEND PLACE SLEEP G-WH (Aboh, Pfau, and Zeshan 2005, p. 247)
 (b) INDEX₂ FRIEND SLEEP PLACE G-WH (Aboh, Pfau, and Zeshan 2005, p. 247)

As is shown in the tree in Figure 4A, in case of compound wh-signs, where the non-interrogative component (PLACE, TIME) co-occur with the G-WH, PLACE moves to Spec, FocP to check a focus feature and then further moves to Spec, InterP to satisfy the EPP (Chomsky 2001). In addition, the whole FocP moves to the Spec, TopP. By contrast, in the case of wh-split (Figure 4B), the non-interrogative component stays in-situ, and the whole FocP moves to Spec, InterP. The analysis predicts that the NMM can scope only over the head containing G-WH and the material present in its specifier, therefore in Figure 4A, it can only scope over PLACE+G-WH, and cannot extend any further to the material present in TopP since it is beyond the scope of NMM, and this agrees with the claim that the wh-NMM does not scope over the topicalized elements (Zeshan 2004; Aboh, Pfau, and Zeshan 2005). However, in Figure 4B the NMM can extend over the whole constituent, which moves to InterP.

Aboh et al.’s analysis also implies that there is a semantic difference between neutral questions, where the non-interrogative part is in-situ (Figure 4B), and the focused ones where it moves to the FocP (Figure 4A).

Figure 4: Syntactic structures in Aboh, Pfau, and Zeshan (2005)

5 Preliminary Analysis

As discussed in Section 3, I found that some of my data is not compatible with the analysis of Aboh, Pfau, and Zeshan (2005). First, I found that, in the appropriate context, the signers unanimously accepted constructions with wh-doubling. Aboh, Pfau, and Zeshan (2005), however, claim that doubled wh-signs do not exist in ISL. Second, my data did not attest to the existence of wh-split in ISL. Although the production task data included two instances of wh-split when asked about the split-wh sentences like (10 a)-(10 b) (Aboh, Pfau, and Zeshan 2005) during discussions, my participants rejected the constructions with wh-split.

The consequences of this new data are twofold: First, the analysis given by Aboh, Pfau, and Zeshan (2005) does not account for the doubled wh-signs and therefore, cannot account for this new data. Second, since my data does not show wh-split, the analysis provided by Aboh, Pfau, and Zeshan (2005) would not be able to account for the wh-NMM of my data as given in (11). As per Aboh, Pfau, and Zeshan (2005), when the sub-parts of compound wh-signs co-occur, the remnant movement will always target the Spec, TopP since the Spec, InterP will always be occupied by the non-interrogative component of the compound wh-sign (Figure 4A). If that is the case, then the NMM should not extend beyond the compound wh-sign, as explained in Section 4. But this is not the case with my data as the following example (11) shows: the scope of NMM clearly extends beyond NUMBERS+G-WH_{COMP}.

- (11)
$$\frac{\text{br}}{\text{R-E-E-T-A INDEX}_a \text{ FAMILY MEET WEDDING INDEX}_b \text{ FAMILY MEET}} \frac{\text{br}}{\text{STAY DAYS+ NUMBERS+G-WH}_{\text{COMP}}}$$

 “The girl Reeta, how many days did she stay to meet her family in/during the wedding?”

In order to account for the new data, a revised analysis needs to be formulated. As I have already mentioned, G-WH_{COMP} cannot appear in the initial position (either in single or doubled wh-questions) as a part of a compound wh-sign like FACE+G-WH_{COMP}, as is shown in (7 e)-(7 f) repeated here as (12 a)-(12 b).⁵ So, one possible analysis is that G-WH_{COMP} is a head and not a phrase. We will look at all the possibilities in order to formulate an analysis.

- (12) (a) FACE+G-WH_{COMP} SNEEZE (Compound G-WH in initial/in-situ position)
 (b) FACE+G-WH_{COMP} SLEEP FACE+G-WH_{COMP} (Doubling with compound G-WH in initial/in-situ and final position)

ISL has compound wh-signs, and under the head analysis, it is unlikely for these compound signs to be heads, unless there is evidence that they can be analyzed as one unit due to assimilation (Klima and Bellugi 1979). Though, Zeshan (2003) rejects this possibility, the examples (7 a)-(7 b) clearly show that this compound sign cannot be split, hence, there is a possibility that they can form a single unit and be analyzed as a head. Phonological assimilation might also be an evidence for a head analysis but that is beyond the scope of the current paper.

Apart from the analysis given by Aboh, Pfau, and Zeshan (2005), another possibility is to base the analysis of wh-questions in ISL on the analysis provided by Cecchetto, Geraci, and Zucchi (2009) and Branchini et al. (2013) for LIS. There are many similarities between the two sign languages with respect to the word order: both languages are SOV, in both languages, wh-signs appear at the sentence-final position, and modal verbs, the complete

⁵In doubled wh-questions, G-WH, can occupy the initial and final position when it appears alone, i.e., without a non-interrogative part, as shown in example (6 g).

aspect markers, and the negative markers also appear at the sentence-final position (Aboh, Pfau, and Zeshan 2005; Singh 2015; Zeshan 2003). Also, with respect to the doubling of the wh-signs, doubling in LIS occurs in a similar context and also in the similar positions as it occurs in ISL. Branchini et al. (2013) deem these constructions as wh-clefts as they can be asked in a very specific context fulfilling ‘existential presupposition’. Applying the analysis proposed for LIS to ISL may thus seem quite plausible. However, these analyses cannot be pursued further because Cecchetto, Geraci, and Zucchi (2009) and Branchini et al. (2013) adopt a rightward movement analysis for the wh-phrases. For the doubled wh-sign, Branchini et al. (2013) assume that the sentence-initial wh-sign moves to the Spec, FocP, where it gets a cleft-interpretation. By contrast, we assume that ISL does not have a wh-phrase which moves to the right. Instead, we take G-WH_{COMP} and G-WH to be base-generated heads. Consequently, there is no wh-movement to the right at all. Also, the movement could not have been possible if G-WH/G-WH_{COMP} are heads due to Head Movement Constraint, which states that a head must move to the next head position, it cannot skip heads in between (Travis 1984).

Keeping all these factors in mind, a new tentative analysis can be based on Petronio and Lillo-Martin (1997). In ASL, doubling occurs in the sentence-initial and final positions. Petronio and Lillo-Martin (1997) argue that, in such cases, the actual movement of the wh-sign is towards the left targeting the Spec, CP and to account for the sentence-final wh-sign in case of doubling, they explain that the head, CP is towards the right and has a base generated wh-sign, which they call a ‘double’. For ISL, we also assume that the head of CP is to the right containing a base-generated G-WH/G-WH_{COMP}. This base-generated head is the canonical position for the wh-signs in ISL. It checks wh-features and occupies the sentence-final position.

To account for the sentence-initial wh-sign which is responsible for the cleft-like reading and occurs in a very specific context, I assume that this wh-sign moves to the Spec, CP from its base position. Prima-facie, the scope of wh-NMM, can also be explained by this analysis.⁶ Since we know from previous research that the wh-NMM scopes over the c-command domain of the G-WH, the NMM, in this case, will co-occur either with G-WH/G-WH_{COMP} or with the whole clause under IP. Regarding topicalized elements, the topicalized element will move out of IP to the Spec, TopP, and hence will be beyond the scope of the wh-NMM.

As we have already discussed above that there can be a possibility that FACE+G-WH_{COMP} or MOUTH+G-WH_{COMP} form a single unit, instead of a compound sign, and cannot be split, so, they can be base-generated under the same head, i.e., the head of CP. We have also seen in the examples (6 a)-(6 c) that WHO occurs in the sentence-final position without G-WH_{COMP}. To account for the patterns given in (6 a)-(6 c) under this analysis, I propose that the G-WH_{COMP} is optional and can be dropped (or retained as in (6 d)-(6 e)) if its meaning can be recovered from the context, thus leaving WHO at the sentence-final position. In this case the non-manual marker which is associated with the [+wh] feature present in the head of CP can mark the sentence as interrogative even without G-WH_{COMP}. In cases where the G-WH sign occurs stand-alone like in the examples given in (6 f)-(6 g), the canonical position of G-WH is head, CP and in doubled wh-questions, WHAT moves to the Spec, CP yielding cleft-interpretation. It has also been shown by Aboh, Pfau, and Zeshan (2005) that in ISL, interrogatives can be formed without the presence of a wh-sign. In the absence of a suitable context for the cleft-interpretation, there is no movement to the left targeting the Spec, CP and only the base-generated wh-sign shows up in the right periphery.

The proposed analysis is represented in Figure 5.

⁶Wh-NMM scope has not been considered for this analysis in detail.

Figure 5: ISL wh-analysis

6 Conclusion

In this paper, I presented new empirical data and an outline of an alternative analysis of wh-questions in ISL, which takes into account two new empirical facts. First, wh-signs can appear at the sentence-initial and final positions simultaneously, and second, G-WH should be better analyzed as a sentence-final head. So far, the analysis does not take into account the scope of NMMs in case of doubled wh-signs. NMMs, in general, need to be studied in more detail in ISL to get a better understanding of their form and function in wh-questions. In the next round of data collection, the influence of the context needs to be examined to see if the impact of contextual information could be a reason for different sets and distributions of wh-NMMs found in my data.

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