



**INFORMATION STRUCTURE IN GHANAIAN SIGN  
LANGUAGE**

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## ABSTRACT

This research explores how information structure is expressed in Ghanaian Sign Language, focusing on the concepts of focus and topic, along with their associated syntactic and prosodic markers and interpretations.

Regarding focus, the study shows that both arguments and predicates can express focus narrowly or broadly, either in canonical or non-canonical forms. In canonical positions, these elements remain unmarked—except for the subject, which is marked by the *reb* prosodic marker. In non-canonical positions, focus constituents are prosodically marked, with the subject again being an exception. The analysis identifies three primary syntactic strategies for marking focus in Ghanaian Sign Language: (i) Doubling, (ii) Ellipsis, and (iii) Movement. The movement strategy is described as opaque, given the difficulty in determining its precise motivation and the directionality of constituent shifts. Semantically, Ghanaian Sign Language distinguishes between two types of focus constructions: (i) Information focus and (ii) Contrastive focus, following the framework proposed by Kiss (1998). Constructions not inferable from the discourse context are classified as information focus, while those presupposed by the context are treated as contrastive focus.

With respect to topic, the study adopts both the aboutness approach (Reinhart 1981) and the scene-setting approach (Chafe 1976, Sze 2011), showing that topics are structurally projected at the left periphery and separated from the clause by prosodic markers—both manual and non-manual. Ghanaian Sign Language allows for the merging of two topics at the left periphery, whether of the same or different types. Although topics in Ghanaian Sign Language are generally presupposed from the discourse context, they can be distinguished through the use of restricted propositions, which apply specifically to scene-setting topics.

## DECLARATION

I hereby declare that this dissertation is the result of my own research and has not been presented in part or whole for another degree elsewhere. The research materials used in this study have been fully acknowledged.

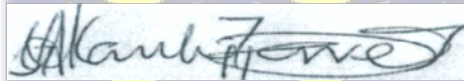


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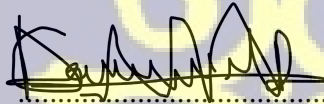


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## DEDICATION

*To MY ROLE MODEL, Dr. Reginald Akuoko Duah*



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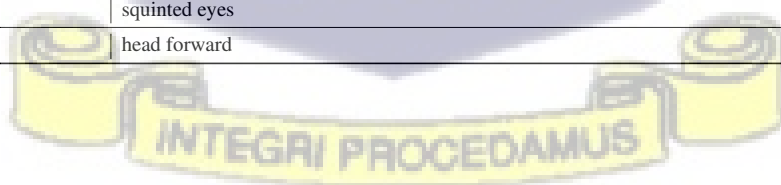
## ABBREVIATIONS FOR SPOKEN LANGUAGE

|       |                    |
|-------|--------------------|
| 1     | first person       |
| 3     | third person       |
| ACC   | accusative         |
| COMPL | Complete           |
| DEF   | definite           |
| DET   | determiner         |
| DM    | declarative marker |
| F     | focus              |
| FOC   | focus marker       |
| OBJ   | object             |
| PERF  | perfective         |
| SG    | singular           |
| SM    | subject marker     |
| SUBJ  | subject            |
| T     | topic              |
| TOP   | topic marker       |



## ABBREVIATIONS FOR SIGN LANGUAGE

| Glossing       | Translation                                                                                               |
|----------------|-----------------------------------------------------------------------------------------------------------|
| M-G            | Words that do not have signs are fingerspelled. They are glossed by putting dashes in between the letters |
| -a, -b         | -a and -b are used to differentiate between the location of two signs                                     |
| -1, -2, -3 (p) | first, second, third person for marking pronouns                                                          |
| IX (or INDEX)  | for pointing signs                                                                                        |
| SIGN-SIGN      | used when two words are necessary to gloss a single sign                                                  |
| SIGN^SIGN      | used for glossing a compound sign                                                                         |
| CL             | classifier                                                                                                |
| TOP            | aboutness topic                                                                                           |
| LD             | left-dislocated                                                                                           |
| H              | hanging                                                                                                   |
| LOC            | locative                                                                                                  |
| TEMP           | temporal                                                                                                  |
| SST            | scene-setting topic                                                                                       |
| FOC            | focus                                                                                                     |
| /              | Prosodic pause or boundary                                                                                |
| I-focus        | information focus                                                                                         |
| ndh            | non-dominant hand                                                                                         |
| dh             | dominant hand                                                                                             |
| _____          | the scope of the non-manual marker                                                                        |
| reb            | raised eyebrow                                                                                            |
| br             | brow raise                                                                                                |
| ew             | eyes wide open                                                                                            |
| we             | eyes wide                                                                                                 |
| fht            | forward head tilt                                                                                         |
| ht             | head tilt                                                                                                 |
| bht            | back head tilt                                                                                            |
| hn             | head nod                                                                                                  |
| hs             | head shake                                                                                                |
| neg            | negative marker                                                                                           |
| feb            | furrowed eyebrows                                                                                         |
| se             | squinted eyes                                                                                             |
| hf             | head forward                                                                                              |



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## CHAPTER ONE

### GENERAL INTRODUCTION

#### 1.1 Introduction

This thesis seeks to provide a detailed description and analysis of how information structure is expressed in Ghanaian Sign Language, a national sign language used as a medium of communication by Deaf individuals in Ghana, as well as by hearing people who use it to interact with the Deaf community. The research focuses on two central concepts within the domain of information structure: *focus* and *topic*. To investigate these fundamental notions, the study examines: (i) the morphosyntactic strategies employed to mark focus and topic, and (ii) the semantic interpretations associated with these constructions.

The structure of the current chapter is as follows: the background of the study is presented in [Section 1.2](#), followed by a description of Ghanaian Sign Language in [Section 1.3](#). The problem statement is discussed in [Section 1.4](#), with the research objectives and research questions outlined in [Section 1.5](#) and [Section 1.6](#), respectively. The methodology employed in conducting the study is described in [Section 1.7](#). Finally, the significance of the research, the organisation of the thesis, and a summary of the chapter are provided in [Section 1.8](#), [Section 1.9](#), and [Section 1.10](#), respectively.

#### 1.2 Background

Information Structure, also referred to as information packaging ([Chafe 1976](#)), was originally introduced by [Halliday \(1967\)](#), as noted by [Büring \(2007\)](#) and [Féry & Ishihara \(2016\)](#). It concerns the way information is conveyed from a speaker

to a listener, taking into account that both interlocutors possess some level of background knowledge—whether temporally recent or long-term—about a specific context (Chafe 1976). Information structure typically classifies sentences into three fundamental categories: (i) focus–background, (ii) given (or old)–new information, and (iii) topic–comment (Krifka 2008, Zimmerman & Féry 2010). The given–new distinction is often associated with topic and focus, although some scholars argue that given information does not necessarily equate to old information. Furthermore, Vallduví & Vilkuna (1998) and Navarrete-González (2021) propose an additional category for *contrast*, treating it as distinct from focus. Nevertheless, others—including Chafe (1976) and Kiss (1998)—consider contrast to be a subcategory of focus. In Chapter 3, this thesis adopts the latter view, treating contrast as a facet of focus. According to Büring (2007), information structure is best understood as a syntactic representation—based on the aforementioned categories—that interacts with phonological and pragma-semantic rules to derive meaning. Phonologically, it is expressed through prosodic elements such as intonation, pauses, and accentuation. Interpretively, it is understood via mechanisms like presupposition and truth conditions, often triggered by the presence of focus-sensitive particles.

In the field of information structure, a sentence can be divided into *focus* and *background*. Focus refers to the part of a sentence that conveys new information and is syntactically marked with an F feature (Vallduví & Engdahl 1996). The background comprises the non-focused portion of the sentence. According to Büring (2007: 449), two commonly used methods for distinguishing between focus and background are: “Given/New: New material is focused, Given material is not” and “Question–Answer: The material in the answer that corresponds to the wh-constituent in the (constituent) question is focused.” The latter method is adopted in this study to distinguish between focus and background in (i) from English.

(1) a. Q: Who killed the dog?

A: **Kofi<sub>F</sub>** killed the dog

b. Q: What did Kofi do?

A: Kofi **killed the dog<sub>F</sub>**

In examples (1a) and (1b), the portion of the sentence marked with F in bold is identified as the focus—which are answers to the content questions—while the remainder constitutes the background. Although both sentences share a similar syntactic structure, they differ in focus scope: (1a) exhibits narrow focus on the subject, whereas (1b) demonstrates broad focus on the verb and its complement.

The concept of focus is often categorized in various ways, reflecting the diverse terminology employed by different scholars. For instance, Gundel (1999), as cited in Crasborn & Van der Kooij (2013), identifies three types of focus: psychological focus, semantic focus, and contrastive focus. Similarly, Kiss (1998) distinguishes between information focus (also referred to as presentation focus) and identification focus (also known as contrastive focus). In the context of sign languages, three primary types of focus are typically recognized: information focus, contrastive focus, and emphatic focus (Wilbur 2012, Lillo-Martin & de Quadros 2008, Kimmelman 2014). Notably, Kimmelman (2014) further subdivides contrastive focus into two subcategories: selective focus and corrective focus.

The category of topic–comment in information structure has long been a subject of scholarly debate, primarily due to the varied terminology used in its definition and classification. This concept corresponds to the theme–rheme distinction introduced by the Prague School of Linguistics (Ingram 1978, Reinhart 1981, Büring 2007). The term *topic* refers to the entity under discussion in a sentence (Reinhart 1981), while the *comment* provides information about the topic or describes its actions which could be regarded as focus. (Aboutness) Topic is normally associated with arguments of a sentence, unlike focus which can be expressed on various constituent of a sentence.

Typically, topic precedes comment, as suggested by the terminology, although there are instances in which the comment may precede the topic. Gundel (1985: 86) also defines topic as follows: “[a] constituent, C, is the syntactic topic of some sentence, S, if and only if C is immediately dominated by S and C is adjacent to the left or right of some sentence S’ which is also immediately dominated by S.” Based on these definitions, the topic may be understood as a reference point to prior discourse or to the mental context of the listener, while the comment introduces new information (Vallduví & Engdahl 1996). Example (2) illustrates the topic–comment structure provided that the subject of discussion is the “man” while “bought a dog” functions as the comment.

- (2) [The man]<sub>topic</sub> [bought a dog]<sub>comment</sub>.

Moreover, the example in (2) reflects a subject-topic, which is integrated into the main clause. In Chapter 2, we will examine various types of topic constructions, including those classified as scene-setting topics that is, topics that describe the place or time of an event (Kimmelman 2014).

### 1.3 Ghanaian Sign Language

Sign language is a complex visual–spatial modality that emerges whenever Deaf individuals in a particular area come into contact, forming a linguistic community. It is a fully-fledged human language, exhibiting core linguistic properties such as phonology, morphology, syntax, semantics, and other levels of linguistic analysis, comparable to those found in spoken languages. The linguistic study of sign languages began with Stokoe’s seminal work on the phonology of American Sign Language in the 1960s. Sign languages arise organically within Deaf communities, and each country typically develops its own distinct sign language, irrespective of international recognition or status.

Research shows that approximately 95% of deaf children are born to hearing

parents who are not users of sign language, resulting in limited early exposure to signed communication. This linguistic gap often leads to the emergence of unique home-based sign systems known as home sign languages. According to [Kimmelman & Pfau \(2016\)](#), comparative studies of sign language structure reveal that sign languages differ significantly from one another, and often exhibit structural patterns that diverge from those found in spoken languages.

Ghanaian Sign Language is one of the three sign languages used by the Deaf communities in Ghana and is the most prevalent and influential among them. The other two are Adamorobe Sign Language and Nanabin Sign Language.<sup>1</sup> The origins of Ghanaian Sign Language can be traced to the work of Rev. Dr. Andrew Jackson Foster, the first Deaf African-American graduate of Gallaudet University. Upon arriving in Ghana in 1957, Foster aimed to promote education and Christianity among Deaf communities. He established the first school for the Deaf in Osu, which was later relocated to Mampong. The school remains operational today, serving both Deaf and blind students. Initially, Andrew Foster taught using American Sign Language, but he encouraged Deaf individuals to develop their own sign language. This led to the emergence of Ghanaian Sign Language. Although Ghanaian shares some lexical and structural similarities with American Sign Language due to its historical influence, it is recognized as a separate language. These differences are largely attributed to cultural adaptations and signs that have evolved from local practices.

As observed by [Hadjah \(2016\)](#), the field of linguistics has paid limited attention to the study and documentation of Ghanaian Sign Language. He notes that research on Ghanaian Sign Language remains scarce, with most existing work comprising unpublished undergraduate essays, graduate term papers, and manuscripts

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<sup>1</sup>Adamorobe Sign Language is a village sign language used in the town of Adamorobe, an Akan-speaking community located in the Eastern Region of Ghana, at the base of the Akuapem Hills, approximately 40 kilometres from Accra ([Nyst 2007, 2010](#)). Nanabin Sign Language is a home sign language used by a family of Deaf individuals living in Ekumfi, Central Region ([Nyst 2010, Edwards & Akanlig-Pare 2021](#)).

pending publication. Notable early contributions include those of Brenu (2011), Edward (2012), Yoni (2012), and Hadjah (2015). However, recent scholarly efforts have contributed to an increased recognition of the language. Among these are studies by Edward (2020) and Edwards & Akanlig-Pare (2021), which offer more systematic analyses and signal a growing academic interest in Ghanaian Sign Language.

### 1.3.1 Linguistic features

This section provides a brief overview of the linguistic structure of Ghanaian Sign Language, with particular attention to its phonological and morphological properties. The phonetics and phonology of Ghanaian Sign Language are discussed in Section 1.3.1.1, while a brief overview of its morphological features is presented in Section 1.3.1.2.

#### 1.3.1.1 Phonetics and phonology

The study of how signs are structured and organized is referred to by most sign linguists as the *phonology* of sign language (Valli & Lucas 2000). Just as spoken languages use phonemes, such as vowels and consonants, to define their sound systems, sign languages use *cheremes* and *allocheres*, which conceptually correspond to phonemes and allophones. The term *cher-* is derived from the Greek word for ‘hand’ and is used to describe the manual components involved in sign formation (Stokoe 1960). According to Stokoe, the production of signs involves specific parts of the signer’s body.<sup>2</sup> He notes that “if the active part is mobile enough, there are various places in which the action may occur, i.e., begin, take place, or end. But the action, the active part, and the place are all present simultaneously” (Stokoe 1980: 369). These observations led Stokoe to propose a set of manual markers for analyzing sign structure. He introduced three key parameters:

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<sup>2</sup>In general, the signing space in which a sign is produced extends from slightly above the head to the waist level of the signer.

*Designator (Dez)* for handshape, *Signation (Sig)* for movement, and *Tabular (Tab)* for location. These articulatory parameters traditionally serve as essential tools for identifying the phonological structure of sign languages. More recently, [Liddell & Johnson \(1989\)](#) added *orientation* as a fourth parameter, expanding the framework for analyzing sign articulation.

### *Handshape*

Handshape refers to the configuration of the hand during the production of a sign. Common handshapes include a clenched fist, open palm, extended or bent index finger, among others. In Ghanaian Sign Language, a wide range of handshapes are used in sign formation. These can be categorized into two types: (i) alphabetic and (ii) numeric. [Figure 1.1](#) presents the manual alphabet chart of Ghanaian Sign Language, followed by [Figure 1.2](#), which illustrates the numeral system of 1 to 10. These systems are analogous to the manual alphabet and numeral representations found in American Sign Language.

In Ghanaian Sign Language, fingerspelling is primarily used for lexical items that lack conventional sign equivalents, such as personal names. The manual numerals in Ghanaian Sign Language share some similarities with the alphabetical handshapes, although they exhibit less consistency in terms of hand orientation and execution. For example, numbers 1 through 5 are typically fingerspelled with the palm facing the signer, whereas numbers 6 through 9 are produced with the palm facing outward toward the addressee. The number 10 is articulated by wiggling the thumb ([Stokoe 1960](#)).

### *Movement*

Movement refers to the trajectory or direction in which the handshape moves during the signing process. It also encompasses how the hand(s) move relative to the body in the articulation of a sign. In Ghanaian Sign Language, as in other sign languages, certain signs require the use of both hands. In such cases, either both hands are actively engaged (e.g., PERSON) or one hand functions as the active

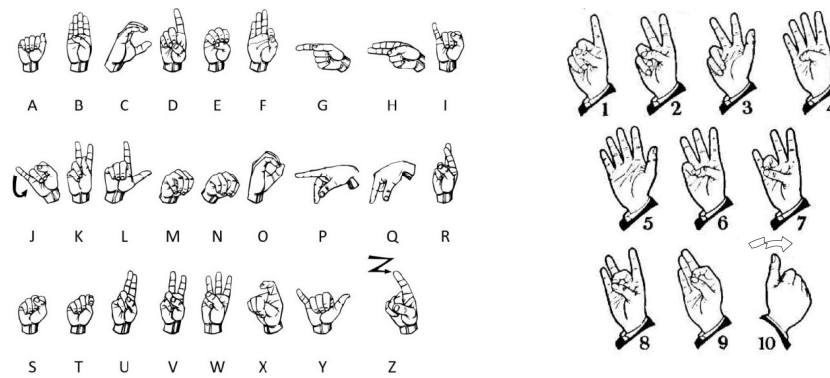


Figure 1.1: The manual alphabet of Ghanaian Sign Language

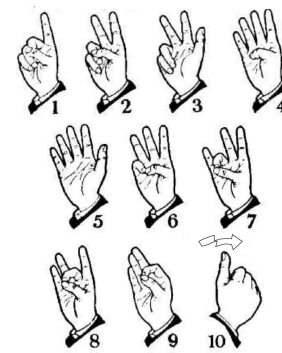


Figure 1.2: A numeral system of Ghanaian Sign Language

articulator while the other remains passive (e.g., GOOD). When a sign involves only one hand, the dominant hand of the signer is typically preferred for execution (Hadjah 2016). As illustrated in Figure 1.3, movement in Ghanaian Sign Language can take various forms, including: straight (e.g. PERSON), cyclic (e.g. PEOPLE), bi-directional (e.g. BABY), intermittent closure (e.g. MORE), and complete closure (e.g. GOOD).

### *Location*

In sign language, location refers to the position of the hand on the body or within the signing space surrounding the signer. In signed languages, the signing space typically extends from slightly above the head to the waist level, encompassing the hands and the area immediately around the upper body. This space may be oriented either toward or away from the signer's body, depending on the communicative intent and the structure of the sign. In some cases, signs may be produced at lower regions of the body, such as the groin, buttocks, or thighs, thereby extending beyond the conventional waist-level boundary (Hadjah 2016). According to members of the Deaf community, sign names or personal name signs are typically articulated within the region that spans from the waist to the top of the body. In contrast, signs representing common objects or abstract concepts may be produced at various locations on or around the body. Figure 1.4 illustrates some of the typical locations used in Ghanaian Sign Language.

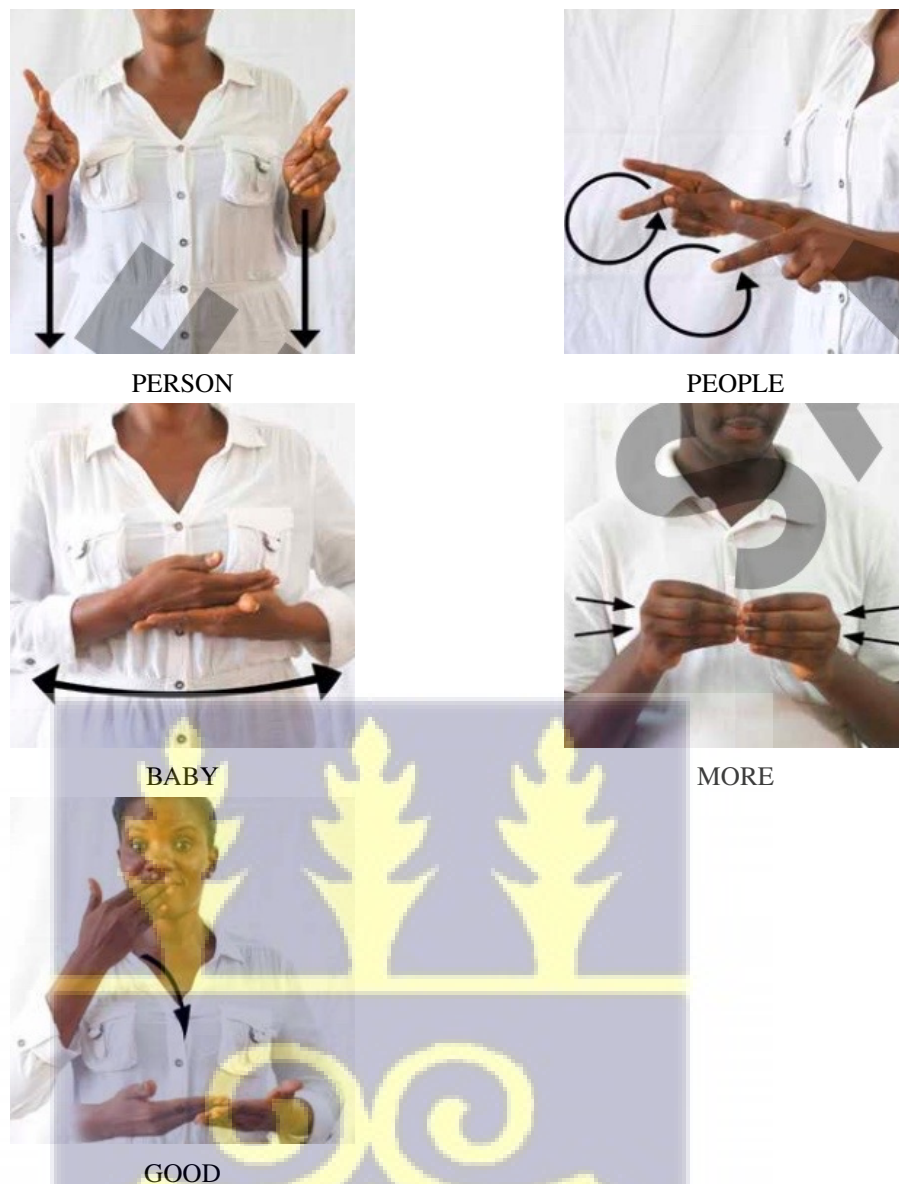


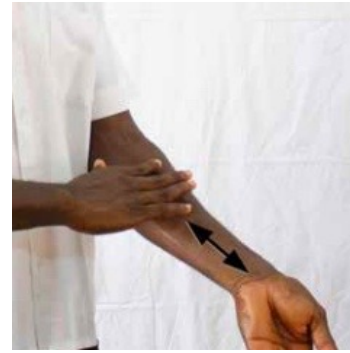
Figure 1.3: Types of movement (Source: Ghanaian Sign Language dictionary)

### *Orientation*

The orientation was introduced by [Liddell & Johnson \(1989\)](#) as an additional articulatory parameter in sign language phonology. Orientation refers to the direction of the palm and fingers relative to the signer's body. This includes orientations such as leftward, rightward, upward, downward, toward the signer, or away from the signer. Orientation plays a crucial role in distinguishing signs that may otherwise share similar handshapes, movements, or locations. [Figure 1.5](#) illustrates examples of signs in Ghanaian Sign Language that vary based on palm orientation.



Location=forehead, Sign=BLACK



Location=Hand, Sign=WHITE PERSON



Location=above the head, Sign=ROOF



Location=Below the waist, Sign=SKIRT

Figure 1.4: Types of location (Source: Ghanaian Sign Language dictionary)

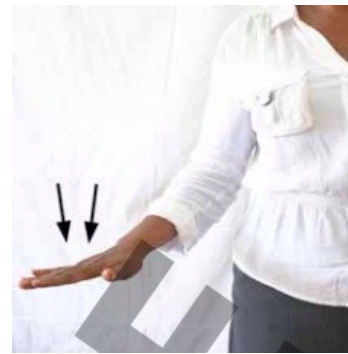
### *Non-manual markers*

In sign language, signing is composed of two elements: manual markers and non-manual markers. Manual markers include handshape, location, movement, and orientation, as previously discussed. Non-manual markers, by contrast, encompass features that do not involve the hands and can be categorized into three main types, and they are sometimes called visual prosody: (i) Facial expressions, including eye gaze, raised or furrowed eyebrows, frowning, mouthing, and other facial gestures; (ii) Body movement, such as leaning, shoulder shrugging, jerking, and other torso-related actions and; (iii) Head movement, including nodding, shaking, and tilting the head forward or backward.

Non-manual markers may accompany manual signs or appear independently. Crucially, the meaning of a manual sign can vary depending on the non-manual markers that co-occur with it. In some cases, native signers consider signs ungram-



Orientation=Palm up, Sign=SERVICE



Orientation=Palm down, Sign=CHILD



Orientation=Palm towards, Sign=MASK



Orientation=Palm away, Sign=AVOID

Figure 1.5: Types of palm orientation (Source: Ghanaian Sign Language dictionary)

matical if they are not accompanied by appropriate non-manual markers (Aarons 1994). For example, in Ghanaian Sign Language, the sign SURE is typically produced with a raised eyebrow, forward head tilt, and mouthing of the lexical item. Similarly, the sign AVOID, as shown in Figure 1.5, is accompanied by a backward body lean and a frowning facial expression to convey denial. Research on non-manual markers has primarily focused on their phonetic realization and descriptive properties. However, certain non-manual markers have been identified based on their linguistic functions, particularly those associated with “wh-questions, yes/no questions, rhetorical questions, topics, conditional clauses, relation clauses, and negation” (Aarons 1994: 41).

In this thesis, special attention is given to non-manual markers associated with focus and topic constituents. Future research will further explore their manual prosodic features and distributional patterns (see Aarons 1994).

### *Stokoe's Transcription System*

Before the work of [Stokoe \(1960\)](#), signs in sign language were widely regarded as holistic, indivisible units lacking internal linguistic structure. Stokoe revolutionized this view by proposing that signs could be decomposed and analyzed similarly to the morphemic and phonemic components of spoken language. This insight marked a foundational shift in the field of sign linguistics. Stokoe developed a transcription system that allowed the representation of a sign using the manual parameters, as previously discussed. His system laid the groundwork for subsequent phonological analyses of signed languages and remains influential in sign language research. Consider example (3) below.

- (3) a. THINK  $\longleftrightarrow \cap G^{\omega \times}$   
 b. GRANDFATHER  $\longleftrightarrow \cap 5^{\perp \times}$   
 c. GRANDMOTHER  $\longleftrightarrow \cup 5^{\perp \times}$   
 d. BRING  $\longleftrightarrow [ ] B^{\top}$

In example (3a), following Stokoe's transcription system, the symbol  $\cap$  represents the forehead, indicating the location of the sign. This is followed by the handshape, represented by G, and the movement, depicted by  $\omega \times$ , where  $\omega$  signifies a twisting motion and  $\times$  denotes a contact or touch action. Stokoe's system allows for the representation of contrast between signs, as illustrated in examples (3b) and (3c). The contrast arises from a change in location—from the forehead ( $\cap$ ) in (3b) to the chin ( $\cup$ ) in (3c)—while the other parameters remain constant.

According to [Stokoe \(1980\)](#), signs are produced and represented simultaneously within this transcription framework, even though their articulation may occur sequentially. The system also provides extensions for representing complex sign structures. For example:

- Signs involving two locations are transcribed as Tabular-Tabular-Designator-Signation(TTD<sup>s</sup>),

- Signs involving two hands are represented as TDD<sup>s</sup>,
- Signs with more than two movements are denoted as TD<sup>ss</sup>.

A noted limitation of Stokoe's system, as observed by [Valli & Lucas \(2000: 33\)](#), is that “contrast is seen as simultaneous contrast, and the issue of sequential contrast is not discussed.” This highlights the need for more nuanced transcription frameworks that can capture temporal dynamics in sign articulation, see for example [Liddell & Johnson \(1989\)](#).

### 1.3.1.2 Morphology

This section examines how the phonological parameters—handshape, location, movement, orientation, and non-manual markers—are combined to form meaningful lexical items in Ghanaian Sign Language. Specifically, it explores key word formation processes such as reduplication, compounding, and affixation, which contribute to the morphological study of the language. In addition, the section provides an analysis of the internal structure of simple and complex signs in Ghanaian Sign Language, illustrating how morphological patterns interact with phonological features to encode grammatical and semantic distinctions.

#### *Reduplication*

Reduplication is a morphological process in which part or all of a base form is copied and attached to the original, before or after it ([Haspelmath & Sims 2010](#)). In signed language, reduplication serves as a productive strategy for deriving or inflecting signs. It may signal grammatical categories such as aspect, plurality, or intensity, depending on the context and the form of the reduplicated sign. In Ghanaian Sign Language, reduplication often involves the repetition of movement or handshape, and may be accompanied by non-manual markers to reinforce semantic distinctions. For example, a sign indicating a repeated or habitual action may be reduplicated with cyclic movement, while a plural noun may be marked by repeating the base sign in quick succession. These patterns reflect modality-

specific strategies for encoding morphological information.

In the context of derivation, a sign may evolve from another through the partial repetition of its phonological parameters. This process reflects a form of morphological reduplication, where selected features of the base sign are retained and modified to create a new lexical item.

For instance, in Ghanaian Sign Language, the sign CHAIR is derived from the sign SIT via partial reduplication. The derivation involves repeating the active hand movement associated with SIT, while modifying the passive hand into a C handshape as illustrated in Figure 1.6. This structural transformation encodes a shift from an action (sitting) to an object (chair), illustrating how reduplication and handshape modification can function as derivational strategies in Ghanaian Sign Language.



Figure 1.6: Reduplication processes (Source: Ghanaian Sign Language dictionary)

In Ghanaian Sign Language, reduplication also functions as an inflectional strategy, particularly for marking number or plurality among others. This involves repeating the movement of a base sign and modifying its spatial trajectory to convey a plural interpretation. For example, the sign CHILD may be inflected to indicate plurality by repeating the movement and extending it outward from the signer's body, thus signaling CHILDREN. This morphological process is illustrated in Figure 1.7, where reduplication is used to encode number through repetition and spatial expansion.



CHILD



CHILDREN

Figure 1.7: Reduplication processes (Source: Ghanaian Sign Language dictionary)

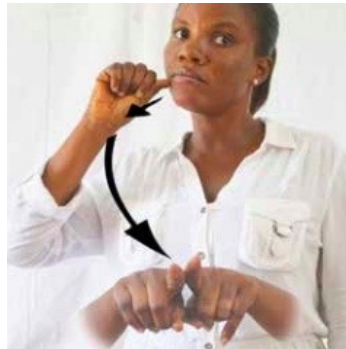
### *Compounding*

Compounding is a morphological process in which two free morphemes—each capable of conveying meaning independently—are combined to form a single lexical item. An example from English is *firewood*, derived from the combination of *fire* and *wood* (Haspelmath & Sims 2010). In Ghanaian Sign Language, it is evident that two distinct signs can be combined to form a compound. Compound signs are typically represented as  $SIGN^{\wedge}SIGN$ . See Figure 1.8 for examples of compound signs in Ghanaian Sign Language.

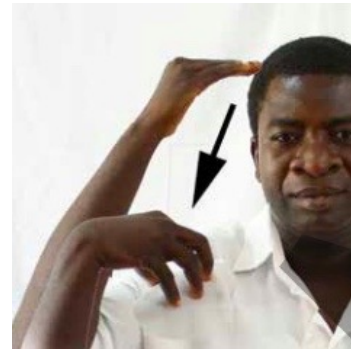
According to Valli & Lucas (2000: 59), three morphological rules govern compound formation in American Sign Language, and these rules are also applicable to Ghanaian Sign Language:

- i Rule of First Contact: When two signs are combined, the contact hold of the first sign is retained. If the first sign lacks a contact point, the contact hold of the second sign is maintained. This is illustrated in Section 1.3.1.2, where a contact hold is initiated at the beginning of the compound sign.
- ii Rule of Single Sequence: In compound formation, internal movement or repetition within individual signs is eliminated. For instance, the repetitive movement in the sign MASTER is deleted when it combines with HEAD to form the compound HEADMASTER.

- iii Rule of Weak Hand Anticipation: During compound formation, the non-dominant (passive) hand anticipates the second sign. In the compound sign SISTER, represented as GIRL<sup>^</sup>SAME in Section 1.3.1.2, the passive hand forms the '1' handshape for SAME and remains in position while the dominant hand signs GIRL.



GIRL<sup>^</sup>SAME=SISTER



HEAD<sup>^</sup>MASTER=HEADMASTER

Figure 1.8: Compounding processes (Source: Ghanaian Sign Language dictionary)

### *Affixation*

Affixation is a morphological operation in which a free morpheme combines with a bound morpheme to form a meaningful lexical item. It is not merely the concatenation of morphemes, but a principled process involving the selection of compatible morpheme types based on grammatical and semantic criteria (Valli & Lucas 2000). Affixes are typically classified into two major categories: derivational affixes, which create new words or change lexical categories, and inflectional affixes, which modify a word to express grammatical features such as tense, number, or aspect.

In Ghanaian Sign Language, affixation is realized through the combination of signs to mark grammatical functions. This is evident in processes such as reduplication (discussed above) and derivation. A common derivational strategy involves the use of the agentive suffix PERSON, which corresponds to the English suffix *-er*. This suffix is added to a verb to derive a noun denoting an agent, as illustrated in Figure 1.9 with the signs LAWYER and TEACHER.

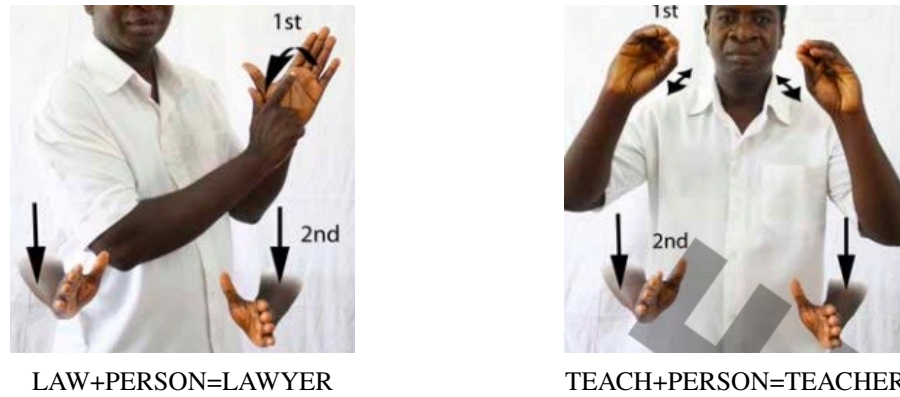


Figure 1.9: Derivation processes (Source: Ghanaian Sign Language dictionary)

#### 1.4 Problem Statement

Despite extensive research on information structure in sign languages globally, particularly in American Sign Language, there remains a significant gap in the literature concerning African sign languages. To date, no comprehensive study has addressed information structure in any African sign language, including Ghanaian Sign Language (Roland Pfau, personal communication, September 27, 2022).

Existing studies have examined information structure in a range of sign languages, including American Sign Language (Ingram 1978, Liddell 1980, Aarons 1994, 1996, Neidle 2002, Lillo-Martin & de Quadros 2008, Wilbur 2012), Sign Language of the Netherlands (Coerts 1992, Crasborn et al. 2009, Crasborn & Van der Kooij 2013, Kimmelman 2014), German Sign Language (Deutsche Gebärdensprache) (Herrmann 2013, 2015), Brazilian Sign Language (Língua de Sinais Brasileira) (Lillo-Martin & de Quadros 2008), Hong Kong Sign Language (Sze 2008, 2011, 2012, 2015), Irish Sign Language (Herrmann 2015), Israeli Sign Language (Rosenstein 2001), Catalan Sign Language (Navarrete-González 2016, 2019), Turkish Sign Language (Gürer & Karabuklu 2023), Russian Sign Language (Kimmelman 2014), and Finnish Sign Language (Jantunen 2008), among others.

Although these studies have contributed valuable insights into how focus and topic are encoded across different signed languages, there are currently no em-

pirical data on how these notions are conveyed in Ghanaian Sign Language. The absence of descriptive and analytical work on the information structure of Ghanaian Sign Language presents a critical gap in both African sign linguistics and the broader typological landscape. This thesis therefore seeks to address this gap by exploring how focus and topic are represented in Ghanaian Sign Language. It aims to identify the strategies employed to mark these notions and to situate Ghanaian Sign Language within the cross-linguistic typology of information structure in signed languages.

### **1.5 Research Objectives**

The primary aim of this study is to investigate how information structure is expressed in Ghanaian Sign Language, with particular attention to the notions of focus and topic. The specific objectives are as follows:

1. Identify the morpho-syntactic strategies used to mark focus in Ghanaian Sign Language.
2. Identify the morpho-syntactic strategies used to mark topic in Ghanaian Sign Language.
3. Examine the semantic interpretation of focus and topic constructions in Ghanaian Sign Language.

### **1.6 Research Questions**

In pursuit of the above objectives, the study seeks to answer the following research questions:

1. How is focus morpho-syntactically marked in Ghanaian Sign Language?
2. How is topic morpho-syntactically expressed in Ghanaian Sign Language?
3. What are the semantic interpretations associated with marked focus and topic constructions in Ghanaian Sign Language?

## **1.7 Methodology**

This section outlines the methodology employed to obtain the data for this study. The research site is described in [Section 1.7.1](#), followed by an overview of the research design and data sources in [Section 1.7.2](#). The ethical considerations and research participants are stated in [Section 1.7.3](#) and [Section 1.7.4](#) respectively. Finally, the data collection procedures are detailed in [Section 1.7.5](#). The methodological framework adopted in this study draws inspiration from previous work on signed language information structure, particularly the approaches developed by [Kimmelman \(2014\)](#) for Russian Sign Language and Sign Language of the Netherlands and [Navarrete-González \(2016\)](#) for Catalan Sign Language. These studies provide a comparative foundation for designing elicitation tasks and analyzing how focus and topic are encoded in Ghanaian Sign Language.

### **1.7.1 Research site**

Data for this study were collected at the Senior High Technical School for the Deaf, located in Mampong-Akuapem, in the Eastern Region of Ghana. This institution serves as a key educational hub for Deaf students at the senior high level and is distinguished by its exclusive use of Ghanaian Sign Language as the medium of instruction and communication. The school is widely recognized as a leading center for Deaf education in Ghana, particularly for students seeking to acquire proficiency in Ghanaian Sign Language and pursue further academic training at the tertiary level. Its linguistic environment and educational orientation make it an ideal site for eliciting data relevant to the study of information structure.

### **1.7.2 Research Design and Source of Data**

This study adopts a qualitative research approach to language analysis. Qualitative research employs tools such as field notes, interviews, and audio-visual recordings to examine linguistic phenomena in various settings ([Denzin & Lincoln 2011](#)).

This approach facilitated direct interaction with participants, allowing the collection of rich and context-sensitive data through individual sessions conducted in Ghanaian Sign Language.

### **1.7.3 Ethical Considerations**

Before data collection, an introductory letter was submitted to the Headmistress of the Senior High Technical School for the Deaf, with the support of the Head of the Department of Linguistics at the University of Ghana. This letter formally requested permission to conduct research at the school. In addition to institutional consent, informed consent was obtained from each participant. Participants were briefed on the nature and purpose of the study, assured of their right to withdraw at any point without consequence, and compensated for their time and contribution.

### **1.7.4 Participants**

Four Deaf students, two male and two female, who use Ghanaian Sign Language as their primary language were selected for participation. A Deaf teacher assisted in the selection process, which included a pre-data collection screening to assess participants' comprehension of the elicitation tasks.

The first participant lost her hearing at age three and is the only Deaf individual in her family. The second participant was born Deaf to hearing parents and is the only Deaf sibling. The third participant lost his speech at age five and is the sole Ghanaian Sign Language user in his family. The fourth participant also lost her hearing at age three and is the only Deaf person in her home (Table 1.1). According to George Akanlig-Pare (personal communication, August 28, 2023), individuals who become Deaf at birth or before the age of six are typically classified as pre-lingually Deaf.

Table 1.1: Participants Background

| Participant | Gender | Age | Place of Stay, Region | SHS Level |
|-------------|--------|-----|-----------------------|-----------|
| One         | Female | 21  | Tema, Greater Accra   | SHS 2     |
| Two         | Male   | 20  | Akim Oda, Eastern     | SHS 3     |
| Three       | Male   | 20  | Swedru, Central       | SHS 3     |
| Four        | Female | 20  | Assin Fosu, Central   | SHS 2     |

## 1.7.5 Data Collection

### 1.7.5.1 Tools for Data Collection

The primary tool used for data collection was a DVC digital video camera, which recorded each interview session. The duration of individual interviews ranged from 60 to 130 minutes. To guide the elicitation process, questionnaires were adapted from the Questionnaires for Information Structure (QUIS) framework developed by Skopeteas et al. (2006), which is widely used in cross-linguistic studies of focus and topic.

### 1.7.5.2 Elicitation Tasks

Three elicitation tasks were designed to investigate how focus and topic are constructed in Ghanaian Sign Language. These tasks targeted the following categories: information focus, contrastive focus (including selective and corrective subtypes), aboutness topic, and scene-setting topic.

**Task 1** involved the use of picture stimuli adapted from QUIS (see Figure 1.10 for an illustration). A total of 32 picture cards were used during the interviews: 28 for focus elicitation and 4 for topic elicitation. The focus-related cards were divided into two subsets:

- The first subset contained 16 items paired with questions designed to elicit information focus.
- The second subset included 12 items accompanied by questions aimed at eliciting contrastive focus, specifically selective and corrective focus.

The questions were carefully constructed to distinguish between narrow and broad focus, reflecting differences in syntactic scope. For topic elicitation, the remaining four picture cards were used to prompt topic constructions occurring within the main clause.



Figure 1.10: A picture card for eliciting contrastive focus

**Task 2** involved participants responding to questions related to their daily experiences in school and their local communities. Each participant was presented with 19 descriptive questions targeting specific entities or events. The elicitation process included video prompts featuring a Deaf individual signing questions about particular scenarios. After each video segment, the playback was paused to allow participants to respond. This task was primarily designed to elicit data on topic constructions in Ghanaian Sign Language.

**Task 3** aimed to collect data in a more naturalistic setting through narrative production. Participants were asked to recount two animated videos they had watched on a laptop to each other in Ghanaian Sign Language. The animated clips were sourced from a Twitter account with the username @ANIME\_ZONE\_\_. This task provided insight into spontaneous discourse and the use of topic and focus in extended narratives. However, the data gathered in this setting was not used in the analysis due to time constraints.

## 1.8 Significance of the Research

This study contributes to the growing body of literature on sign language linguistics, with a particular emphasis on African signed languages. By focusing on Ghanaian Sign Language, it addresses a critical gap in the typological and descriptive study of information structure in signed modalities. As the first major investigation into focus and topic in Ghanaian Sign Language, the research offers a foundational account of how information is packaged to meet communicative demands between interlocutors. The findings of this study serve as a reference point for future linguistic research on Ghanaian Sign Language and other African sign languages. Moreover, the descriptive insights generated here contribute to the broader goals of language documentation and grammatical analysis, supporting efforts toward the recognition and development of Ghanaian Sign Language.

## 1.9 Organization of the Thesis

The thesis is organized into five main chapters. **Chapter 1** provides a general introduction to the study. It outlines the background of information structure and its core concepts, introduces Ghanaian Sign Language, and presents the problem statement, research objectives, questions, methodology, and significance of the study.

**Chapter 2** offers a structured review of literature on information structure across spoken and signed languages. It highlights key debates and findings related to topic and focus, and presents the theoretical framework adopted for data analysis.

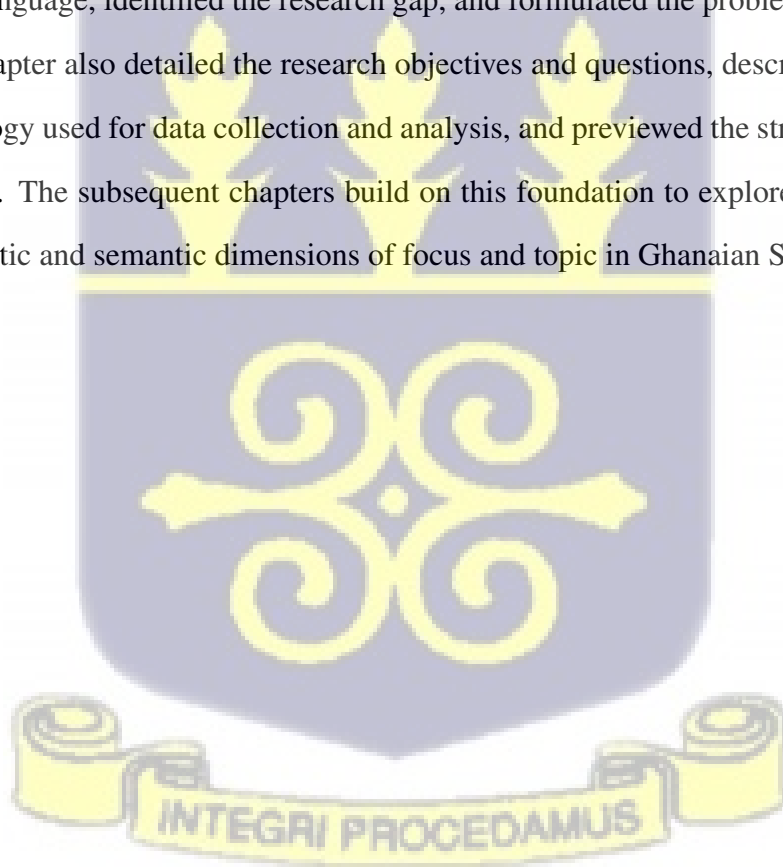
**Chapter 3** examines the expression of focus in Ghanaian Sign Language from both syntactic and semantic perspectives. It analyzes two primary types of focus, information and contrastive (including selective and corrective), and the strategies used to mark them.

**Chapter 4** presents an analysis of topic constructions in Ghanaian Sign Language. It explores how aboutness and scene-setting topics are syntactically and semantically encoded, including their prosodic marking nature.

**Chapter 5** concludes the thesis by summarizing the findings and offering recommendations for future research on Ghanaian Sign Language and African sign linguistics more broadly.

### **1.10 Summary**

This chapter has introduced the study by outlining its background, scope, and relevance. It has presented the linguistic and sociocultural context of Ghanaian Sign Language, identified the research gap, and formulated the problem statement. The chapter also detailed the research objectives and questions, described the methodology used for data collection and analysis, and previewed the structure of the thesis. The subsequent chapters build on this foundation to explore the morphosyntactic and semantic dimensions of focus and topic in Ghanaian Sign Language.



## CHAPTER TWO

### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

#### 2.1 Introduction

This chapter provides a comprehensive review of the literature on information structure in both spoken and signed languages, as well as the theoretical frame adopted for analyzing the data. It begins with a discussion of the concept of information structure in [Section 2.2](#), followed by an overview of cross-linguistic studies on topic and its encoding strategies for spoken languages in [Section 2.3](#) and sign languages in [Section 2.4](#). The chapter then turns to the linguistic representation of focus in [Section 2.5](#) for spoken languages and [Section 2.6](#) for sign languages, before presenting the theoretical background that guides the analysis in [Section 2.7](#). Finally, a summary of the chapter is provided in [Section 2.8](#).

#### 2.2 Information Structure

Information structure has long been a controversial phenomenon with various opposing views. One persistent controversy concerns the distinction between subject and topic, and the criteria by which a constituent qualifies as a topic.<sup>1</sup> For instance, scholars differ on whether the topic must always be a sentence-initial constituent or whether it should be defined as the antecedent of the comment (see [Ingram 1978](#), [Lambrecht 1994](#), [Shi 2000](#), [Sze 2011](#)). According to [Féry & Ishihara \(2016\)](#), the study of information structure traces its origins to the work of [Mathesius \(1975\)](#), a Prague School linguist who reformulated the earlier notions of “psychological

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<sup>1</sup>See [Section 2.3](#) for a detailed discussion of these controversies.

subject” and “psychological predicate” introduced by Gabelentz (1869). Mathesius replaced these terms with the concepts of theme and rheme, which correspond to what is now commonly referred to as topic (old or given information) and focus (new or contrastive information), respectively (Krifka 2008, Féry & Ishihara 2016).

The basic concept of information structure is rooted in the interactions between interlocutors (Krifka 2008). Krifka argues that the interlocutors’ communicative demands are met when a Common Ground (CG) is used. Initially used by Stalnaker (1974) according to Krifka (2008), Féry & Ishihara (2016), CG is the shared knowledge interlocutors have in a particular conversation. However, the CG changes when the communicative demands of the interlocutors also change. Krifka further distinguishes between two aspects of CG: CG content, which encompasses the truth-conditional information shared by interlocutors, and CG management, which concerns the mechanisms by which CG content is updated. Krifka further distinguishes between the truth-conditional information of the CG (CG content) and how CG content should develop (CG management). For example, in (4), the two sentence structures with the same word order can convey different information structures due to accent (Vallduví & Engdahl 1996, Navarrete-González 2019). The accent causes the CG content to change or shift in both examples. The sentences do not differ in terms of “what they say about the world, but in how they say what they say about the world; that is, they differ in the way they are packaged” (Vallduví & Engdahl 1996: 461).

(4) (Vallduví 1991: 295)

- a. The boy hates **broccoli**<sup>2</sup>
- b. The boss **hates** broccoli

According to Wilbur (2012), the information that has yet to be transmitted between interlocutors should be assessed in terms of what the sender knows about

<sup>2</sup>The part of sentences presented in bold marks accent.

the addressee. However, there are some factors that the sender must consider: (i) taking into account the general knowledge of the addressee; (ii) the knowledge of the addressee in relation to his/her past conversations with the sender; (iii) the knowledge of the addressee with regard to what has been discussed earlier in the current conversation.

Information structure has received considerably more attention in the study of spoken languages than in signed languages. Within the domain of sign language research, investigations into Western and European sign languages far outnumber those focused on African signed languages. This imbalance underscores the need for more studies in Africa. In the following sections—[Section 2.3](#) and [Section 2.5](#)—I review existing research on topic and focus constructions in both spoken and signed languages, respectively, with the aim of situating Ghanaian Sign Language within this broader cross-linguistic landscape.

### 2.3 Topic in Spoken Language

Traditionally, a sentence is composed of a grammatical subject and a predicate. Within the framework of information structure, the subject is often interpreted as the topic of the sentence.<sup>3</sup> The topic is generally understood as what the sentence is about ([Reinhart 1981](#)), while the remainder of the sentence is referred to as the comment. This leads to the widely held assumption that the topic precedes the comment.

However, empirical research has shown that this linear ordering is not universal. In certain languages, comments may precede topics, challenging the notion of fixed topic–comment sequencing. For illustrative examples, see [\(13\)](#) and [\(14b\)](#).

(5) Indonesian ([Li & Thompson 1976](#): 470)

- a. Ibu      anak itu   membeli sepatu.  
    mother child that buy      shoe

---

<sup>3</sup>To avoid any controversy, this does not imply that all subjects are topic constituents.

‘That child’s mother bought shoes.’

- b. [Ibu anak itu]<sub>T</sub> dia membeli sepatu.  
 mother child that she buy shoe  
 ‘That child’s mother, she bought shoes.’

The difference between (5a) and (5b) lies in the introduction of the pronoun *dia* ‘she’ in (5b), which functions as the subject of the verb *membeli* ‘buy’. The constituent *ibu anak itu* ‘that child’s mother’, which precedes the pronoun, is identified as a left-dislocated topic.<sup>4</sup> In this construction, the topic is externally linked and not an argument of the main clause. One structural justification for this distinction is the use of the pattern “[XP [clause]]” (Jantunen 2008: 160), where XP denotes the topic constituent and the embedded clause represents the comment. In contrast, in (5a), the constituent *ibu anak itu* is regarded as a grammatical subject and an argument of the verb. The absence of a resumptive pronoun further supports its syntactic integration. Nonetheless, from a pragmatic perspective, it may still be interpreted as a topic entity under the ‘aboutness topic’ approach proposed by Reinhart (1981).

According to Reinhart (1981), an aboutness topic refers to what is said about an argument in the sentence. Consider sentence (6), which is structurally similar to (5a). In sentence (6a), the topic is *Aristotle Onassis*, and the comment provides information about him, namely, that he was married to Jacqueline Kennedy. In contrast, sentence (6b) shifts the topic to *Jacqueline Kennedy*, with the comment describing her marital connection to Aristotle Onassis. Despite this change in topic marking, both sentences express the same propositional content (Krifka 2008, Kimmelman 2014).

Sentence (6) exemplifies an aboutness topic embedded within the main clause, a construction that Wilbur (2012: 471) refers to as a “plain topic.” This type of topic is syntactically integrated and does not involve left-dislocation or external

<sup>4</sup>A left-dislocated topic is a constituent that is co-referential with a resumptive pronoun in the following clause. See Andrason, Westbury & Merwe (2016), López (2016), Westbury (2016) for further discussion.

linkage, distinguishing it from syntactic topics discussed earlier.

(6) (Kimmelman 2014: 12)

- a. [Aristotle Onassis]<sub>T</sub> married Jacqueline Kennedy.
- b. [Jacqueline Kennedy]<sub>T</sub> married Aristotle Onassis.

Alternatively, Vallduví & Engdahl (1996) and Krifka (2008) argue that some sentences lack an explicit topic constituent and are therefore considered topicless. In such cases, the entire sentence functions as a comment, without preceding topic. These constructions are often referred to as *thetic sentences*, as illustrated in (7a) and (7b). Here, the topic entity is not overtly expressed; instead, prosodic stress falls on one of the topicless constituents, signaling the presence of focus. This prosodic prominence reclassifies the sentence as a focus construction, where the entire proposition is presented as new information (Gundel 1988, Vallduví & Engdahl 1996).

(7) (Vallduví & Engdahl 1996: 466), (Krifka 2008: 267)

- a. The **screen** died.
- b. The **house** is on fire.

According to Gundel (1988), there are three major construction types in which the topic precedes the comment (cf. Li & Thompson 1976): (i) syntactic-topic constructions, (ii) cleft constructions, and (iii) subject-creating constructions.

Syntactic-topic constructions are further divided into two subtypes: left-dislocated topics and topicalized constructions. Left-dislocated topics, as illustrated in (5b) and (8), are adjoined to the left periphery of the clause and are co-referential with a resumptive pronoun within the comment. These constructions highlight the topic externally while maintaining referential continuity. However, not all topics are left-adjoined or require a co-referential element. For example, the construction in (9) exemplifies a so-called “double-subject construction”, in which the initial NP

behaves like a topic but lacks a resumptive pronoun in the main clause. As noted by Gundel (1988), such constructions mimic the structure of left-dislocation while diverging in referential linkage.

(8) (Gundel 1988: 224)

Fijian

- a. [Na gone tagine]<sub>T</sub>, e lako mai Hawaii oya  
DEF child male 3SG come from Hawaii he  
'The boy, he is from Hawaii.'

German

- b. [Die frau da]<sub>T</sub>, sie kommt aus Berlin  
The woman there 3SG comes from Berlin  
'The woman there, she comes from Berlin.'

(9) (Li & Thompson 1976: 468)

Japanese

- a. [Sakana]<sub>T</sub> wa tai ga oisii  
fish TOP red-snapper SM delicious  
'Fish, red snapper is delicious.'

Mandarin

- b. [Nèike shù]<sub>T</sub> yèzi dà  
that tree leaves big  
'That tree, the leaves are big.'

Additionally, in languages like Japanese, topic and subject constituents are morphologically distinguished. In example (9a), the noun phrases bear different particles: *wa* marks the topic, while *ga* marks the subject and encodes case. This shows that for a language like Japanese, a topic entity and a subject are distinguished using their markers (Wilbur 2012).

Another type of syntactic-topic construction, illustrated in (10), is the topicalized construction. In this structure, a constituent is moved from its original syntactic position to occupy the topic position, typically located at the sentence-initial position. This movement leaves behind a trace, denoted as *t*, in the constituent's

base position, as exemplified in (10a) and (10b). However, topicalization may introduce ambiguity in certain languages. For example, in Lisu, a verb-final language, the example in (10b) is considered ambiguous. When a verb follows two or more noun phrases, it becomes unclear which noun phrase serves as the agent and which as the patient (Li & Thompson 1976).

(10) Hebrew (Berman 1980) in (Gundel 1988: 224)

- a. [al sratim ka ele<sub>i</sub>]<sub>T</sub>, Rina mamaš meta t<sub>i</sub>  
 on movies like that Rina really dies  
 ‘Movies like that, Rina is really crazy about.’

Lisu (Li & Thompson 1976: 472)

- b. [aná<sub>i</sub>]<sub>T</sub> nya láthyu khù-a t<sub>i</sub>  
 dog TOP people bite-DM  
 ‘Dogs, [people bite them or they bite people]’

Topics can also be identified through cleft constructions, including wh-clefts and pseudo-clefts. Although these constructions are typically associated with focus marking, they often contain a nominal topic (NP) that precedes the focused constituent, as illustrated in (11). This structural arrangement allows the topic to be foregrounded while the focus provides new or contrastive information. In certain cases, such as in sentence (11b) where no overt copular verb is present, the construction may alternatively be analyzed as a form of left-dislocation (Gundel 1988).

(11) Japanese (Sugioka & Faarlund 1980) in (Gundel 1988: 225)

- a. [Mado]<sub>T</sub> o watta no wa [Taro]<sub>F</sub> da  
 window OBJ broke TOP Taro be  
 ‘The one who broke a window was Taro.’

Russian (Gundel 1988: 225)

- b. [(to) čto menja udivljaet]<sub>T</sub> eto eë mudrost  
 that what me surprises that her wisdom  
 ‘What surprises me, it’s her wisdom.’

Subject-created topics, as illustrated in (12), arise when a noun phrase (NP)

marked for topic is promoted to the subject position of the sentence. In example (12a), the determiner phrase (DP) *your battery* from the second clause is raised to the initial subject position, functioning as the topic of the sentence. A similar operation is observed in (12b), where the object *George* is promoted to the subject position of the first clause. These constructions exemplify how topic marking can interact with syntactic structure to yield subject-like behavior, even when the promoted constituent originates from a non-subject position.

(12) (Gundel 1988: 225)

a. It seems that your battery is dead.

Your battery<sub>T</sub> seems to be dead.

b. It is difficult to talk to George.

George<sub>T</sub> is difficult to talk to.

While topics are often syntactically positioned before comments, cross-linguistic evidence shows that this ordering is not universal. Notably, Gundel (1988) and Kimmelman (2014) demonstrate that in some languages, comment may precede topic, challenging the assumption that topics must always be clause-initial. Consider examples (13) and (14b).

(13) Haya (Byarushengo & Tenenbaum 1976) in (Gundel 1988: 225)

ba-cumb enkok [abakazi]<sub>T</sub>  
they-cook chicken women

‘They cook chicken, the women.’

(14) Russian (Kimmelman 2014: 12)

a. [Petja]<sub>T</sub> on včera prišol  
Petja he yesterday come  
‘As for Petja, he came yesterday.’

b. on včera prišol, [Petja]<sub>T</sub>  
he yesterday come Petja  
‘As for Petja, he came yesterday.’

Sentences (13) and (14b) exemplify right-dislocated topics, where the topic constituent is adjoined to the right periphery of a full-sentence comment. These constructions feature co-referential pronouns—*ba* ‘they’ in Haya and *on* ‘he’ in Russian—that link the comment to the dislocated topic. In summary, all 30 languages surveyed by Gundel (1988) exhibit constructions in which the topic precedes the comment and vice versa. However, none of these languages consistently project the topic at the clause-final position as a default strategy (ibid.), suggesting that right-dislocation is marked and context-dependent rather than canonical.

In some spoken languages, topic is realized using a topic marker. For instance, in Korean (15, 16) and Japanese (17), topic is marked using the topic markers ‘(n)ᄃn’ and ‘wa’ respectively. The topic entities are not necessarily arguments of the verb, unlike the subject constituents that are arguments of the verb (cf. Gundel 1988).

(15) Korean (Li & Thompson 1976: 462)

- a. Siban-ᄃn hakkjo-ga manse  
now-TOP school-SM many  
‘The present time, there are many schools.’

(16) Korean (Gundel 1988: 217)

- a. John nᄃn i salam-lᄃl manna-ass-ta  
John TOP DET man-OBJ meet-COMPL  
‘(As for) John, (he) met this man.’

(17) Japanese (Li & Thompson 1976: 462)

- a. Gakoo-wa buku-ga isogasi-kat-ta  
school-TOP 1SG.SUBJ-SM busy-COMPL  
‘School, I was busy.’

## 2.4 Topic in sign language

Generally, with respect to information structure, topic construction is more widely researched and studied than focus construction in various distinct sign languages

(Kimmelman & Pfau 2016). However, American Sign Language seems to be the most widely researched sign language (Ingram 1978). Some of the research conducted so far are American Sign Language (Ingram 1978, Liddell 1980, Aarons 1994, 1996, Wilbur 2012 ,among others), Sign Language of the Netherlands (Coerts 1992, Crasborn et al. 2009, Kimmelman 2014), Hong Kong Sign Language (Sze 2008, 2011, 2015), Russian Sign Language (Kimmelman 2014), Finnish Sign Language (Jantunen 2008), and Israeli Sign Language (Rosenstein 2001).

From a cross-linguistic perspective, topic constituents in sign language occupy the sentence-initial or left peripheral position of the sentence, accompanied by a non-manual marker especially raised eyebrows and immediately followed by a pause (Liddell 1980, Aarons 1994, Sze 2011, Kimmelman 2014). The literature on topic in sign language seems to be similar to that of spoken language. Just as spoken languages distinguish between topic-prominent and subject-prominent languages (see Li & Thompson 1976), sign languages also have this distinction. For instance, some sign languages, such as Nederlandse Gebarentaal or Sign Language of the Netherlands (Crasborn et al. 2009) and Israeli Sign Language (Rosenstein 2001) are claimed to be topic-prominent languages (i.e., sentence structures that begin with a topic). However, Kimmelman (2014) using (Sze 2008) criteria to identify topic-prominent languages shows that Sign Language of the Netherlands and Russian Sign Language are not topic-prominent languages.

#### 2.4.1 Syntactic distribution

Syntactically, topic constituents in sign languages are typically positioned at the beginning of the sentence, occupying the left periphery. However, these topics rarely appear in isolation; they are often accompanied by non-manual markers. While some topic entities may appear in bare form, see the case of Hong Kong Sign Language (Sze 2011), the presence of non-manual cues is a strong indication for topic across many sign languages.

According to [Aarons \(1994\)](#), topic constituents in American Sign Language can be classified into two syntactic types: base-generated topics and moved topics. Regarding the former, a base-generated topic is a constituent that is not introduced by the main verb and originates in the left periphery as shown in (18).

(18) American Sign Language ([Aarons 1994](#): 152, 160)

- a.  $\overline{\text{VEGETABLE}}^{\text{tm2}}, \text{JOHN LIKE CORN}^5$   
 ‘As for vegetables John likes corn.’
- b.  $\overline{\text{MARY}}_i^{\text{tm2}}, \text{JOHN LIKE IX-3P}_i$   
 ‘As for Mary, John likes her.’

Examples (18a) and (18b) can be related to the so-called “double construction” and left-dislocation, as illustrated in (9) and (8), respectively. Example (18b) is coindexed and co-referential with the resumptive pronoun IX-3P topic, while the other (18a) does not include a co-referential element in the main clause, but maintains a hyponymic relationship with an argument in the main clause.

Regarding the second type of topic in American Sign Language, a moved topic is a topic that originates as an argument of the verb and is displaced to the sentence-initial position through a syntactic operation known as topicalization. In example (19), the internal argument MARY moves to occupy the topic position and leaves the trace ‘t’ indicating movement. This process is called topicalization.

(19) American Sign Language ([Aarons 1994](#): 157)

- $\overline{\text{MARY}}_i^{\text{tm1}}, \text{JOHN LOVE } t_i$   
 ‘Mary, John loves.’

[Sze \(2011\)](#) in Hong Kong Sign Language identify two types of topics: aboutness and scene-setting topics using [Reinhart \(1981\)](#) procedure for identifying topics. She identifies two categories of aboutness topics in Hong Kong Sign Lan-

<sup>5</sup>Topic marker(TM) 1 or 2 is a collection of non-manual markings on a topic entity. The different types of non-manual markers will be discussed in [Section 2.4.3](#).

guage: (i) those found within the main clause like subjects and objects, and (ii) those located outside the main clause, such as left-dislocated and hanging topics. Out of the syntactic types mentioned above, most aboutness topics are subjects within the main clause. Interestingly, in Hong Kong Sign Language, “aboutness topic NPs are definite and are mostly fully activated in the discourse, they are usually pronominals or NPs involving a pointing sign as a determiner” (Sze 2011: 134). She further argues that aboutness topics in Hong Kong Sign Language are not regularly marked non-manually, “nor are they necessarily separated intonationally from the rest of the sentence” (Sze 2011: 136).

The following examples illustrate aboutness topics in Hong Kong Sign Language: left-dislocated topic (20); preposed grammatical object or fronted object (21); hanging topic (21). Hanging topics are topics that are not co-referential with an argument in the following clause unlike left-dislocated topics (Kimmelman 2014). In comparison to topic construction in spoken languages, a hanging topic can also be known as what Gundel (1988) calls ‘double-subject’ construction since it also lacks a co-referential argument.

- (20) Left-dislocated topic (Sze 2011: 136)

[IX<sub>kenny</sub>] ALL(SAY) IX<sub>kenny</sub> STRONG  
 ‘He (Kenny), all of them (say) he is strong.’

- (21) Fronted object (Sze 2011: 137)

[INTERPRETER^SIGN-LANGUAGE]<sub>T</sub> GOVERNMENT PAY-THEM NOT-HAVE  
 ‘The sign language interpreters, the government does not pay (them).’

- (22) Hanging topic (Sze 2011: 136)

[IX-1P<sub>deaf-allowance</sub> DEAF DEAF-ALLOWANCE IX-1P<sub>deaf-allowance</sub>]<sub>T</sub> MONEY  
 (HESITATION) MONEY EVERY-MONTH HAVE  
 ‘About the deaf allowance, (I) get the money every month.’

On the other hand, scene-setting topics “set a spatial, temporal or individual

framework within which the main predication holds” (Chafe 1976: 50 , see also Kimmelman & Pfau 2016: 818). They are realized as locative expressions (23a and 24b) or temporal domains such as temporal adverbials (23b), temporal NPs (24a) and temporal subordinate clauses in (24c) (Sze 2011). They are also referred to as ‘spatio-temporal topics’ (Crasborn et al. 2009) or ‘adjunct topics’ (Aarons 1994, Jantunen 2008). They create the domain in which the main clause exists.

(23) Finnish Sign Language (Jantunen 2008: 161)

- a.  $\overline{\text{NIGHT CLUB INDEX}_a}^{\text{ew+reb}} / \text{PAUSE \& BLINK IX-1P WORK DOORMAN}$   
 ‘That night club, I work there as a doorman.’

- b.  $\overline{\text{NOW EVENING}}^{\text{ew+reb}} / \text{IX-1P GO PUB}$   
 ‘This evening, I (will) go to the pub.’

(24) Hong Kong Sign Language (Sze 2011: 140)

- a.  $\overline{\text{SECONDARY-TWO, START PLAY-BASKETBALL, HAVE-COMPETITION, FARE-BETTER-THAN}}^{\text{fht+reb}}$   
 ‘At secondary two (=grade8), I started playing basketball and had competitions; I was better than (other senior schoolmates).’

- b.  $\overline{\text{IX}_{\text{here}} \text{ HAVE TWO, FATHER IX}_{\text{father}} \text{ OLD YOUNG NOT OLD, IX}_{\text{boy}} \text{ BOY}}^{\text{fht+reb}}$   
 ‘In this place, there are two persons: a father, who is quite old/not young, and a boy.’

- c.  $\overline{\text{IX}_1 \text{ SECONDARY-FIVE GRADUATE IX}_1 \text{ FINISH, gesture CL-a-big-pile-of-books BOOK gesture DICTIONARY MANY ENGLISH DICTIONARY gesture IX}_1 \text{ MANY CL-a-big-pile-of-books gesture}}^{\text{bht+br}}$   
 ‘After I graduated from secondary-five (=grade 11), I had a big pile of used books such as English books and dictionary; I didn’t know what to do with them.’

## 2.4.2 Topic stacking

Topics can be combined or stacked within a single clause, resulting in constructions that contain more than one topic constituent. This phenomenon is referred to as topic stacking. According to [Kimmelman \(2014\)](#), the concept of topic stacking was first introduced by [Ingram \(1978\)](#) in the context of American Sign Language.

[Aarons \(1994\)](#) argues that only a maximum of two topics are possible for stacking in American Sign Language. However, there are restrictions on the topics that can be stacked in a clause. According to her, two base-generated topics of the kind shown in (25) can be put together with a free ordering of the topics. Moreover, as shown in (26a), when two different base-generated topics (a dislocated topic and a class-membership topic) co-occur, the dislocated topic precedes the class-membership topic. The reverse order of the two becomes ungrammatical shown in (26b).

- (25) a. ([Aarons 1994: 175](#))  

$$\frac{\text{tm2}}{\text{CHINA IX, VEGETABLE, PEOPLE PREFER BROCCOLI}}$$
 'In China, as far as vegetables are concerned, people prefer broccoli.'
- b. ([Aarons 1994: 175](#))  

$$\frac{\text{tm2}}{\text{VEGETABLE CHINA IX, VEGETABLE, PEOPLE PREFER BROCCOLI}}$$
 'As far as vegetables, in China, are concerned, people prefer broccoli.'
- (26) a. ([Neidle 2002: 79](#))  

$$\frac{\text{tm2}}{\text{MARY VEGETABLE IX-1P LIKE CORN}}$$
 'As for Mary, as for vegetables, I know she likes corn.'
- b. ([Aarons 1994: 176](#))  

$$* \frac{\text{tm2}}{\text{VEGETABLE, JOHN IX-1P KNOW IX-3P LIKE CORN}}$$
 'As far as vegetables are concerned, as for John, he prefers artichokes.'

Aarons further argues that native American Sign Language signers marginally accept combining topics in which the base-generated topic precedes the moved

topic, as illustrated in (27a), while the reverse is judged as ungrammatical (27b). In addition, a combination of two moved topics co-occurring in a clause is never accepted regardless of their ordering (27c).

(27) (Aarons 1994: 178)

- a. #  $\frac{\text{tm2}}{\text{JOHN}} \frac{\text{tm1}}{\text{MARY}} \text{LOVE IX-3P}$   
 ‘As for John, Mary loves him.’
- b. \*  $\frac{\text{tm1}}{\text{MARY}} \frac{\text{tm2}}{\text{JOHN}} \text{LOVE IX-3P}$   
 ‘Mary, as for John, (she) loves him.’
- c. \*  $\frac{\text{tm1}}{\text{JOHN}} \frac{\text{tm1}}{\text{MARY}} \text{LOVE}$   
 ‘John, Mary, he loves her.’

Crasborn et al. (2009) argue that the two types of topics they identified in Sign Language of the Netherlands, namely, argument topics and spatio-temporal, can be combined in a single sentence. Discussing topic stacking differently, they observe that argument topics (accompanied by neutral non-manual markers) precede spatio-temporal topics (accompanied by head tilt) as illustrated in (28). They also claim that spatio-temporal topics follow a pattern in that time specifications MORGEN precede place specifications THUIS. In addition, MORGEN THUIS makes one prosodic unit since they share the same non-manual marker (head tilt) and in Sign Language of the Netherlands “the occurrence of final pointing signs is used as a marker of topic-hood” (Crasborn et al. 2009: 359).

(28) (Crasborn et al. 2009: 359)

- $\text{PT}_{\text{right}} \frac{\text{neutral}}{\text{PERSOON}} \frac{\text{ht}}{\text{MORGEN THUIS}} \frac{\text{hn}}{\text{PT}_{\text{right}}} \frac{\text{neutral}}{\text{KRANT LEZEN PT}_{\text{right}}}$   
 ‘The man, tomorrow at home he will read the newspaper.’

Alternatively, Kimmelman (2014) presents evidence that the ordering of topic stacking differs from the proposal by Crasborn et al. (2009). Based on his analysis of Sign Language of the Netherlands and Russian Sign Language, Kimmelman argues that these languages exhibit a consistent structural ordering in topic stacking:

scene-setting (spatio-temporal) topics precede aboutness topics. This arrangement is exemplified in (29), where the initial topic establishes the temporal or spatial frame, followed by the aboutness topic.

(29) (Kimmelman 2014: 48)

a. Sign Language of the Netherlands

$\overline{\text{[THEN]}}_{\text{SST}}^{\text{bht}} / \text{[IX]}_{\text{TOP}} / \text{GO}$

‘Then he goes away.’

b. Russian Sign Language

$\text{[FOURTH]}_{\text{SST}} / \overline{\text{[IX CAT]}}_{\text{TOP}}^{\text{bht}} / \text{LOOK}$

‘In the fourth story the cat looks.’

### 2.4.3 Prosody

Prosodic pause in sign languages, first systematically described in the late 1980s (Crasborn & Van der Kooij 2013), has been attested across a range of signed languages. It typically involves “a pause which sets the topic constituent off from the rest of the sentence intonationally” (Sze 2011: 115; see also Aarons 1994). This pause serves as a prosodic boundary that distinguishes the topic from the comment. However, not all topic constituents are separated by a prosodic boundary (Crasborn et al. 2009). According to Kimmelman (2014), prosodic boundaries in sign languages may be signaled through a manual hold at the end of the topic sign or through changes in non-manual markers. For instance, if raised eyebrows accompany only the topic while the remainder of the sentence is marked by a different non-manual signal, the change in the markers initiate the boundary (Nespor & Sandler 1999). In addition to manual holds and pauses, prosody is frequently marked non-manually. The most widely reported cues include eyebrow movements and eye blinks (Crasborn et al. 2009).

Across sign language, cross-linguistically, constituents in topic positions are frequently marked non-manually. The most frequently mentioned non-manual

marker that independently follows a topic item is a raised eyebrow (McIntire 1980 for American Sign Language, Coerts 1992 for Sign Language of the Netherlands, Sze 2011 for Hong Kong Sign Language, among others). Moreover, in American Sign Language, other non-manual markers such head tilts, shoulder twitching and finger-pointing accompany topic constituents (Ingram 1978, Liddell 1980, Padden 1988, Valli & Lucas 2000). Similarly, in Sign Language of the Netherlands, topics are marked with a raised eyebrow and a forward head tilt position (Crasborn & Van der Kooij 2013, Kimmelman 2014). In addition, head nod movement and raised eyebrows accompany sentence-initial topics in Turkish Sign Language (Gürer & Karabuklu 2023).

Aarons (1994) distinguishes between three sets of non-manual topic markers with separate functions that occur on different types of topic constituents. She labels them topic marking 1 (tm1), topic marking 2 (tm2), and topic marking 3 (tm3). Tm1 and tm2 will be discussed since they are the only ones represented in (18) and (19). As shown in Table 2.1, tm1 consists of all the non-manual markers that accompany moved topic and tm2 on the other hand are associated with base-generated topics.

Table 2.1: Topic markers in American Sign Language

|            | Topic Types           | Non-manual markers                                                                                    |
|------------|-----------------------|-------------------------------------------------------------------------------------------------------|
| <b>Tm1</b> | moved topic           | eye-brow raised, head tilted slightly back and to the side, eyes widened, head moves down and forward |
| <b>Tm2</b> | based-generated topic | large movement of head back and to the side, eyes very wide, head moves down and forward              |

Ghanaian Sign Language resembles Table 2.1 in that it includes a set of non-manual markers that go along with topical constituents. However, there is no distinct marking of these markers in Ghanaian Sign Language. For example, non-

manual markers of aboutness topic tend to accompany scene-setting topic as well.

Sign language studies in other unrelated languages show that topics are not always associated with a non-manual marker. For instance, in British Sign Language (Sutton-Spence & Woll 1999) and Israeli Sign Language (Rosenstein 2001), topics are not accompanied by raised eyebrows unlike in American Sign Language and other unrelated sign languages shown above. Similarly, Sze (2011) observed that in Hong Kong Sign Language, aboutness topics are not regularly marked non-manually as represented in (20), (21), and (22) or separated prosodically from the rest of the clause.

In summary, taking into account the literature concerning topic construction in sign languages, the following will be considered in investigating topic in Ghanaian Sign Language: (i) What are the types and markers of topic?, (ii) Can different set of topics be stacked together?, (iii) Does Ghanaian Sign Language havethetic sentences?, and (iv) How is topic interpreted?

## 2.5 Focus in spoken languages

Focus as discussed in Chapter 1 is defined as the part of a sentence that answers a content question. It also refers to “the current center of attraction” (Gundel, Hedberg & Zacharski 1993: 279) or it “indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions” (Krifka 2008: 247). For Féry & Ishihara (2016: 6), “anything that does not indicate any alternative to  $\alpha$  should not be called focus.” There are different ways to categorise focus in spoken languages (Lillo-Martin & de Quadros 2008). In this section, I review how focus is expressed in some spoken languages syntactically, morphologically and prosodically.

Syntactically, different constituents in a sentence can be focused, such as the subject, object, and verb. This type of focus marking is called narrow focus where single constituents in the sentences are focused. The second type, which is broad

focus, has scope over more than one constituent. An example is a VP focus and in some cases the whole sentence (Lillo-Martin & de Quadros 2008, Krifka 2008). Consider the following examples from English.

- (30) Q: What did John?  
A: He ate [the rice]<sub>F</sub>.
- (31) Q: Who ate the rice?  
A: [He]<sub>F</sub> ate the rice.
- (32) Q: What did John do?  
A: He [ate the rice]<sub>F</sub>.

The sentences presented above illustrate a type of focus that introduces new information called information focus. Example (30) is identified as object focus, the second example (31) represents subject focus, and the third example (32) is classified as VP-focus. Both examples (31) and (32) are regarded as narrow focus, whereas example (33) is considered broad focus.

Another form of focus construction is known as contrastive focus, which involves the selection of one alternative over others to highlight contrast. This type of focus can be further subdivided into two categories: selective focus (33), and corrective focus (34). Selective focus introduces a chosen item from a set of alternatives, while corrective focus replaces a presupposed item with a new, contrasting one.

- (33) Q: What did John eat: rice or yam?  
A: He ate [rice]<sub>F</sub>.
- (34) Q: Did John eat yam?  
A: No, he ate [rice]<sub>F</sub>.

Kiss (1998) distinguishes between two types of focus: identificational focus (also called contrastive focus) and informational focus based on data elicited from

English and Hungarian. She describes (35a) as an exhaustive identificational focus in a preverbal position and (35b) as an informational focus in a post-verbal position.

(35) Hungarian (Kiss 1998: 249)

- a. Mari [egy kalapot]<sub>F</sub> nézett ki magának  
Mary a hat.ACC picked out herself.ACC  
'It was [a hat]<sub>F</sub> that Mary picked for herself.'
- b. Mari ki nézett magának [egy kalapot]<sub>F</sub>  
Mary out picked herself a hat.  
'Mary picked for herself [a hat]<sub>F</sub>.'

In some spoken languages, focus is expressed through the use of a morphosyntactic focus marker. For example, in Gungbe, focus is expressed by using the marker 'wè' as illustrated in (36b-36c). Sentence (36a) with no focus marker shows that Gungbe is an SVO language. While the focus constituent 'Sena' moves to the left of 'wè' resulting in S 'wè' VO in (36b), in example (36c) the focused element wémà occupies the specifier position of FocusPhrase (FocP) giving the word order O 'wè' SV, through topicalization (Aboh 2004).

(36) Gungbe (Aboh 2004: 237)

- a. Sèna xiá wémà  
Sena read-PERF book  
'Sena read a book.'
- b. Sèna<sub>i</sub> \*(wè) t<sub>i</sub> xiá wémà  
Sena FOC read-PERF book  
'[Sena]<sub>F</sub> read a book.'
- c. wémà<sub>i</sub> Sèna \*(wè) xiá t<sub>i</sub>  
book FOC Sena read-PERF  
'Sena read [a book]<sub>F</sub>.'

It has been argued that in many spoken languages the (information) focus of a sentence is more marked through prosody. Focus can be marked by stress shifting from one position to another (cf. Vallduví 1991, Kimmelman 2014), as shown in

(37). The focus part of the sentence in bold marks the stress that shifts from the object to the subject. Moreover, the sentences (37a-37c) are structurally the same but differ according to stress.

(37) John ate the banana (CG)

a. Q: What did John eat?

A: He ate **the banana**.<sub>F</sub>

b. Q: What did John do to the banana?

A: He **ate**.<sub>F</sub> the banana.

c. Q: Who ate the banana?

A: **He**.<sub>F</sub> ate the banana.

## 2.6 Focus in sign languages

As said earlier in Section 2.4, cross-linguistically, the literature on focus is not as extensive as the literature on topic. However, several studies have been conducted in some languages such as American Sign Language (Wilbur 1997, Neidle 2002, Lillo-Martin & de Quadros 2008, Wilbur 2012), Sign Language of the Netherlands (Crasborn & Van der Kooij 2013, Kimmelman 2014), Catalan Sign Language (Navarrete-González 2016, 2019), Língua de Sinais Brasileira (Lillo-Martin & de Quadros 2008) German Sign Language/Deutsche Gebärdensprache (Herrmann 2013, 2015), and Russian Sign Language (Kimmelman 2014).

### 2.6.1 Information focus

It has been discussed in some languages, for example, in American Sign Language, that the prominent position of a focused item is the final position and may sometimes move elsewhere, e.g., sentence-initial position (also called fronting) (Wilbur 1997, Lillo-Martin & de Quadros 2008). Example (38) shows that (information) focus items can either be fronted (38a) or stay in-situ (38b). The non-manual ‘I-focus’ used on the focused item is what Aarons (1994) refers to as tm1 (moved

topic).

(38) (Lillo-Martin & de Quadros 2008: 169)

- a.  $\overbrace{[\text{BOOK STOKOE}]_F}^{\text{I-focus}} \text{ I READ}$   
 ‘I read Stokoe’s book.’
- b.  $\text{ I READ } [\text{BOOK STOKOE}]_F$   
 ‘I read Stokoe’s book.’

Improving on Aarons (1994), Neidle (2002) argues that the left periphery of a sentence is dedicated to topic items and ‘focused DPs’ (which mark information focus). Topic DPs are non-manually marked with ‘TM2’ and focused DPs take ‘TM1’ non-manual markers. Neidle (2002) thereby identifies moved topics as instances of focus. Moreover, while staked focused DPs are disallowed in the left periphery, a topic DP and a focused DP can be found at the left periphery as shown in (39).

(39) (Neidle 2002: 79)

- $\overbrace{\text{JOHN}_i}^{\text{tm2}} \overbrace{\text{FISH}_j}^{\text{tm1}} \text{ IX-3P}_i \overbrace{\text{WON'T EAT T}_j}^{\text{neg}} \text{ BUT CAN EAT CHICKEN}$   
 ‘As for John, fish, he won’t eat, but he can eat chicken.’

According to Navarrete-González (2016), in Catalan Sign Language (an SOV language), information focus can be identified by moving the focused constituent to the final position of the sentence where prosody is prominent. The syntactic movement occurs in single constituents, as illustrated in (40).

(40) (Navarrete-González 2016: 25)

- Q: Who gave you the shirt?
- A:  $\text{CLOTH SHIRT 3-GIVE-1 } [\text{FATHER}]_F$   
 ‘Father gave me the shirt.’

Concerning the examples (38a & 40), Catalan Sign Language and American Sign Language seem to differ in the movement of a focus item. While an informa-

tion focus may sometimes move leftward to a sentence-initial position in American Sign Language, information focus in Catalan Sign Language moves rightward to the final position, see also [Wilbur \(1997\)](#).

## 2.6.2 Contrastive focus

There is a debate in information structure regarding whether the concept of contrast is a feature of focus as suggested by some scholars ([Chafe 1976](#), [Kiss 1998](#)) or whether it is an independent feature unrelated to the notion of focus ([Vallduví & Vilkuna 1998](#), [Navarrete-González 2021](#)). A focus item is contrasted “when the context provides overt alternatives to the alternative in focus in a particular sentence. In sign language, contrastive foci are often marked by topicalization” ([Kimmelman 2014](#): 28). This indicates that topic and focus entities can be marked by topicalization. Contrastively, [Wilbur \(2012: 471\)](#) argues that “topicalization is actually a form of focusing and, as has been pointed out numerous times in the literature, should be called ‘focalization’.”

As previously noted, [Aarons \(1994\)](#) claims that constituents accompanied with ‘tm1’ are moved topics. Nonetheless, [Neidle \(2002\)](#), as illustrated in (39), argue that such constituents should be focus DPs. Based on this observation, MARY in (41) should be called contrastive focus (see [Kimmelman 2014](#) and [Kimmelman & Pfau 2016](#)). Furthermore, using the definition that focus encompasses a set of alternatives and “anything that does not provide an alternative to  $\alpha$  should not be called focus” ([Féry & Ishihara 2016](#): 6), it is evident that MARY should be identified as a (contrastive) focus rather than a topic.

- (41) ([Aarons 1994](#): 159)
- tm1  
JOHN NOT-LIKE JANE MARY IX-3P LOVE
- ‘John doesn’t like Jane. Mary he loves.’

Contrastive focus in sign language can be categorised into two sub-types: corrective focus (42) and selective focus (43). According to [Kimmelman \(2014\)](#), there

was only one instance where the object focus was fronted without a non-manual marker, as illustrated in (42). And as a result, fronting may not serve as a strategy for indicating focus.

- (42) Sign Language of the Netherlands ([Kimmelman 2014](#): 95)

[ICE CREAM]<sub>f</sub> WOMAN EAT

‘No, the woman eats ice cream.’

- (43) a. Catalan Sign Language ([Navarrete-González 2016](#): 27)

Q: What do you like more, dancing or singing?

A: <sup>reb</sup>  
[DANCE]<sub>F</sub> LIKE MORE

‘Dancing, I like more.’

- b. A1: LIKE MORE <sup>nb</sup>  
DANCE<sub>F</sub>

‘I like more dancing.’

### 2.6.3 Emphatic focus

Another type of focus discussed in the literature is called emphatic focus, and a strategy for marking this type of focus is doubling. The doubled constituents most commonly identified are nouns, verbs, modals, wh-words, and clauses (see [Kimmelman 2014](#) for a discussion on clausal doubling). In the case of American Sign Language and Língua de Sinais Brasileira, [Lillo-Martin & de Quadros \(2008](#): 15) observe that doubling is employed to “emphasize or make more prominent the final/doubled element.” According to their findings, and those of [Petronio \(1993\)](#), [Petronio & Lillo-Martin \(1997\)](#), the sentence-final position is the most prominent site for emphatic focus marking. This position is typically accompanied by a head nod, a non-manual marker that reinforces the emphatic interpretation. Consider examples (44) and (45) below, which illustrate a doubling type where there is an intervening node between the doubled constituents.

- (44) American Sign Language ([Lillo-Martin & de Quadros 2008](#): 167)

JOHN CAN READ <sup>hn</sup>  
CAN

‘John really [can]<sub>F</sub> read.’

- (45) Língua de Sinais Brasileira (Quadros 2003: 147)

IX <I> LOSE BOOK <sup>hn</sup>LOSE

‘I [lost]<sub>F</sub> the book.’

Alternative accounts for doubling have been proposed, for instance in Russian Sign Language & Sign Language of the Netherlands, and Catalan Sign Language. Based on a detailed analysis of doubling in Russian Sign Language and Sign Language of the Netherlands, Kimmelman (2014) proposes an account which suggests that doubling should be classified as more than just a strategy for marking emphatic focus as it performs a broader function. In his view, the main purpose of doubling is to highlight a certain element of a new sentence if the signer needs to distinguish more relevant information from less relevant.

Consider examples from Catalan Sign Language (46 & 47), Russian Sign Language (48 & 49), and Sign Language of the Netherlands (50) where (verbal) doubling is commonly associated with broad focus (VP-focus and sentence focus). Sentences (46), (48), and (50) are examples of VP-focus while the rest are considered as sentence-focus. In addition, Kimmelman (2014) shows some cases of noun (subject and object) doubling in both Russian Sign Language and Sign Language of the Netherlands (see Kimmelman 2014 for more discussion on doubling).

- (46) Catalan Sign Language (Navarrete-González 2016: 28)

FROG [ESCAPE WANT ESCAPE]<sub>F</sub>

‘Frog WANTS TO ESCAPE.’

- (47) Catalan Sign Language (Navarrete-González 2016: 28)

[GO TOGETHER CINEMA GO]<sub>F</sub>

‘(We) WENT TO THE CINEMA TOGETHER.’

- (48) Russian Sign Language (Kimmelman 2014: 97)

GIRL [KISS BOY KISS]<sub>F</sub>

‘The girl is KISSING THE BOY.’

- (49) Russian Sign Language (Kimmelman 2014: 97)

[CAR CRASH TREE CL: CRASH]<sub>F</sub>

‘A CAR CRASHED INTO A TREE.’

- (50) Sign Language of the Netherlands (Kimmelman 2014: 97)

IX-3P [CARRY CHILD CL: CARRY]<sub>F</sub>

‘He is CARRYING A CHILD.’

Drawing on Kimmelman’s claim about the main function of doubling, in the case of VP-focus, the doubling of the verb in each sentence shows that only the verb preceding the object is foregrounded. However, the verb and object remain focused. A similar observation occurs in sentence focus, but the difference is that the whole sentence is focused.

#### 2.6.4 Focus-sensitive particles

Focus-sensitive particles are a syntactic strategy to mark focus. The presence of focus-sensitive particles in many spoken languages is also attested in sign languages such as Catalan Sign Language (Navarrete-González 2016), Sign Language of the Netherlands (Crasborn & Van der Kooij 2013, Herrmann 2013, Kimmelman 2014), Russian Sign Language (Kimmelman 2014), German Sign Language and Irish Sign Language (Herrmann 2013).

According to Kimmelman (2014), Kimmelman & Pfau (2016), and Navarrete-González (2016), the most discussed focus particles are (restrictive particle) *only* and (additive particle) *also*. Moreover, focus-sensitive particles are often accompanied by non-manual markers such as raised eyebrows, and head tilt (Kimmelman & Pfau 2016). Consider example (51) with the focus particle *only* for identifying the focused constituent. The use of the restrictive particle indicates that the focus constituent must be restricted from a variety of options (Navarrete-González 2016).

- (51) Catalan Sign Language (Navarrete-González 2016: 29)

[NO POTATOES <sup>reb</sup> ONLY AFTERNOON REST]<sub>F</sub>

‘No, only the potatoes, (I will buy) the rest in the afternoon.’

### 2.6.5 Non-manual marking

The non-manual markers that accompany topic (Section 2.4.3) are also used in the marking of focus. Contrastive focus tends to be more marked non-manually than information focus (Kimmelman 2014). The most widely reported non-manual markers are raised eyebrows and head movements. This shows that any of the two non-manual markers can be a marker for topic or focus if we accept what has been reported thus far (Sze 2011).

According to Navarrete-González (2016), the relevant non-manual markers for expressing focus in Catalan Sign Language are: (i) raised eyebrows commonly used when focus item remains in-situ (52); (ii) left and right body leans positions (53); (iii) head movement, which consists of head tilts/nods observed on different focus types. Forward or backward head tilt accompanies information focus (54a), head nod mainly occurs on selective focus (54b, and corrective focus takes a head thrust non-manual marker (54c) and; (iv) mouthing.

- (52) (Navarrete-González 2016: 36)

Q: Who is eating an apple?

A: [WOMAN PERSON]<sub>F</sub> <sup>reb</sup> APPLE EAT-APPLE

‘The WOMAN is eating an apple.’

- (53) (Navarrete-González 2016: 41)

Q: Who finished the BA this year, you or your brother?

A: [IX1 MAN SIBLING]<sub>F</sub> <sup>left-bl</sup> IX3 BA FINISH, <sup>right-bl</sup> IX1 MASTER

‘MY BROTHER finished the BA, I finished the MASTER.’

- (54) (Navarrete-González 2016: 43-44)

a. Q: What is the girl doing now?

forward ht  
A: NOW [EAT-SNACK]<sub>F</sub> IX3

‘She is EATING A SNACK now.’

- b. Q: What is the girl eating, an apple or an ice cream?

hn+ht  
A: [APPLE]<sub>F</sub> EAT

‘She is eating an apple.’

- c. Q: You ate an apple, right?

hthr+ht  
A: IX1 NOTHING, [WOMAN]<sub>F</sub> IX3

‘I didn’t, the WOMAN did.’

In American Sign Language and Língua de Sinais Brasileira, the focus is non-manually marked by head tilts and raised eyebrows (Lillo-Martin & de Quadros 2008). For Sign Language of the Netherlands and Russian Sign Language, Crasborn & Van der Kooij (2013) and Kimmelman (2014) identify six non-manual markers that are similar to Catalan Sign Language: (i) eyebrow movement (55); (ii) head tilt; (iii) body lean (56); (iv) head nod, small nods (57a) or large nods (57b); (v) mouthing gestures and; (vi) eye gaze.

- (55) Russian Sign Language Kimmelman (2014: 115)

er  
IX BOY [PLAY.GUITAR]<sub>F</sub>

‘The boy plays guitar.’

- (56) Sign Language of the Netherlands Kimmelman (2014: 116)

fbl  
MAN IX BALL [CL: THROW]<sub>F</sub>

‘The man is throwing the ball.’

- (57) Kimmelman (2014: 116)

- a. Russian Sign Language

sn  
[BOY]<sub>F</sub> WALK

‘A boy is walking.’

- b. Sign Language of the Netherlands

ln  
[CHILD / CLEAR / CHILD]<sub>F</sub> EAT

‘Clearly a child is eating.’

In Turkish Sign Language, the non-manual markers namely, head nod movement and raised eyebrows that appear on a topic as said in [Section 2.4.3](#) accompany focus as well ([Gürer & Karabuklu 2023](#)). See the following examples.

(58) [Gürer & Karabuklu \(2023: 39\)](#)

Q: IX-3 RABBIT IX-3 WHO

‘Who has the rabbit.’

A:  $\overline{[\text{ASLI}]_F}^{\text{hn}}$  RABBIT EXISTENTIAL PALM-UP

‘Asli has a rabbit.’

In conclusion, based on the literature presented on focus in sign language, the following questions on focus will be investigated: (i) How is focus marked? and (ii) How is focus interpreted?

## 2.7 Theoretical background

The data analysis of this study is discussed in the theory of information structure at its basic level (see [Krifka 2008](#) for further discussions). With information structure being a theory rooted in interlocutors’ communication, it is important to also adopt the concept of Common Ground (CG), which helps to distinguish between presupposition and assertion ([Krifka 2008](#)).

Based on the notion of common ground, we can distinguish between common ground content and common ground management, which help in differentiating the semantic and pragmatic use of focus. Common ground content relates to the semantic use of focus, while common ground management relates to the pragmatic use of focus. The common ground content consists of a collection of propositions that are assumed to be mutually accepted, along with a set of entities (for example, indefinite NPs) previously introduced in the common ground while the common ground management is concerned with how the common ground content should be

managed (Krifka 2008). Consider the following examples.

(59) (Krifka 2008: 246)

- a. I have a cat, and I had to bring my cat to the vet.
- b. # I had to bring my cat to the vet, and I have a cat.

The idea of common ground can explain why (59a) is good and (??) is bad. In (59a), the initial clause includes an indefinite NP (a cat), which sets the stage for the presupposition in the second clause to attach to, something that is not achievable in (59b).

In exploring the semantics of focus, this study utilizes Kiss (1998)'s framework to differentiate between two focus types in Hungarian and English: identificational focus and information focus. See also Duah (2015) for an application of this model in Akan. According to Kiss:

- (i) If a sentence part conveys new, non-presupposed information marked by one or more pitch accents—without expressing exhaustive identification performed on a set of contextually or situationally given entities, it is not an identificational focus but a mere information focus (Kiss 1998: 246).
- (ii) An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase holds (Kiss 1998: 245).

We can derive some insights from the aforementioned claims, which will act as a roadmap for focus interpretation in Ghanaian Sign Language. Firstly, there exists a type of focus construction in which the focus constituent is identified from a set of alternatives. The identified foci elements must be a presupposed variable or inferred from the context. Secondly, there is a different focus structure where no

explicit set of variables exists from which a variable is singled out. This represents a non-presupposed variable that needs to be newly introduced. These observations indicate that, on the basis of a given context, focus can be interpreted differently, that is, those that are new and those that inferred (that is, contrasted).

In addition, I adopt the metaphoric approach to identifying topic (Reinhart 1981). According to Kimmelman (2014: 11):

The notion of (sentence) topic is easier to understand in terms of a metaphor introduced by Reinhart (1981) and developed in Vallduví (1992) It is useful to picture Common Ground as a file card system. Each proposition is written on a card, and each card has a header which helps identify and locate it. The topic of the sentence would therefore be a constituent that is also the header of a file card in the Common Ground. The rest of the sentence is usually called “the comment”.

We can apply this metaphor to the example below.

(60) [The man]<sub>topic</sub> [bought a dog]<sub>comment</sub>.

Example (60) includes a card identified as *the man* that contains certain details about him. In utterance, the NP *the man* acts as a hint for the listener to find this particular card and add new information, that is the comment *bought a dog*, to it.

## 2.8 Summary

This chapter reviewed the literature on information structure in spoken and sign language. The review focuses on various issues related to two aspects of the information structure: topic and focus construction. The review shows that in sign language structure patterns like spoken language as strategies used to express focus and topic in spoken languages are employed in sign languages. For example, both spoken and sign languages show that the topic occupies the left periphery

and consider topicalization a tool to mark topic. Also, the chapter shows that non-manual marking of a topic/focus constituent plays an important role in distinguishing how different types of topics/focus are marked. An example is Hong Kong Sign Language where scene-setting topics are marked non-manual than aboutness topics. Another example is from Catalan Sign Language, where information focus is marked non-manually when the focus constituent stays in-situ.



## CHAPTER THREE

### FOCUS IN GHANAIAIN SIGN LANGUAGE

#### 3.1 Introduction

The current chapter provides a detailed description of how focus is expressed in Ghanaian Sign Language. In this chapter, I will examine the construction of focus by concentrating on the syntactic characteristics and the semantic categories of focus in Ghanaian Sign Language. This chapter also explores whether focus is indicated through morphosyntactic or prosodic means.

The following sections of this chapter are organized as follows: It starts with an investigation of word order in [Section 3.2](#), which is essential for the discussion on focus and topic constructions ([Chapter 4](#)). [Section 3.3](#) provides an overview of focus marking in Ghanaian Sign Language, followed by the syntactic properties of focus discussed in [Section 3.4](#). The various interpretations and types of focus are addressed in [Section 3.5](#), and the chapter concludes with a summary in [Section 3.6](#).

#### 3.2 Word order

The arrangement of constituents is considered a crucial strategy for determining the prominent positions of focused constituents (see [Aboh 2004](#), [Lillo-Martin & de Quadros 2008](#), [Kimmelman 2014](#), [Navarrete-González 2019](#)). [Hadjah \(2016\)](#) asserts that Ghanaian Sign Language is a free word order without much evidence. Therefore, it is essential to explore how constituents in simple sentences are structured without being influenced by any syntactic strategies, such as movement.

Regarding Ghanaian Sign Language, basic verbs were used to determine the structure of words in a simple clause. In this language, in the absence of supple-

mentary information, more than one word order is considered grammatical. Consider the varied word orders that are accepted.

(61) **SVO**

- a.  $\overline{\text{MAN (IX) CARRY CHAIR}}^{\text{reb}}$

‘The man is carrying a chair.’

- b.  $\overline{\text{WOMAN BEAT COW}}^{\text{reb}}$

‘The woman is beating a cow.’

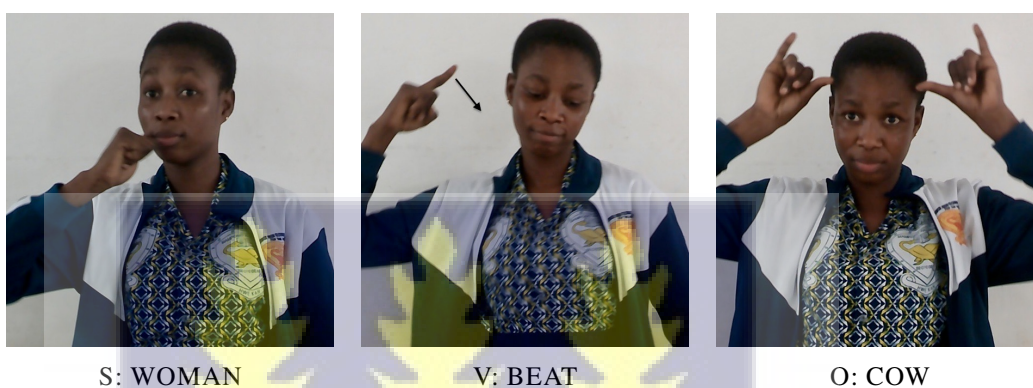


Figure 3.1: Illustration of an SVO structure

(62) **OSV**

- a.  $\overline{\text{COW WOMAN BEAT}}^{\text{reb}}$

‘The woman is beating the cow.’

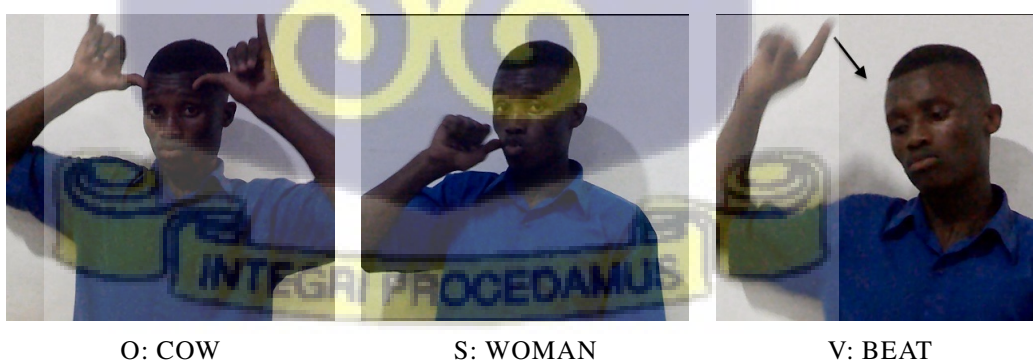


Figure 3.2: Illustration of an OSV structure

- b.  $\overline{\text{(IX) SNAKE DOG BITE}}^{\text{reb}}$

‘A dog is biting the snake.’

(63) **SOV**

- a.  $\overline{\text{MAN (IX)}}^{\text{reb}} \overline{\text{WATERMELON}}^{\text{p-reb}} \text{CUT}$

‘The man is cutting a watermelon.’

- b.  $\overline{\text{(IX) MAN}}^{\text{reb}} \overline{\text{CHAIR}}^{\text{p-reb}} \text{CARRY}$

‘The man is carrying a chair.’



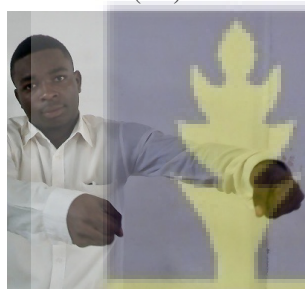
(IX)



S: MAN



O: CHAIR



V: CARRY

Figure 3.3: An SOV structure

(64) **OVS**

- a.  $\overline{\text{BOTTLE.COKE}}^{\text{reb}} \text{DRINK IX WOMAN}$

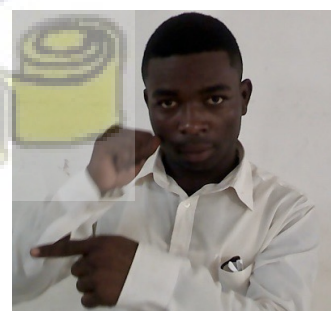
‘The woman is drinking coke.’



O: BOTTLE-COKE



V: DRINK



S: WOMAN IX

Figure 3.4: An OVS structure

- b.  $\frac{\text{reb}}{\text{(IX-A) CHILD BEAT MOTHER IX-B}}$

‘The mother is beating the child.’

The examples provided indicate that Ghanaian Sign Language may be a language with a flexible word order. However, the collected data did not reveal any sentence structure with a VOS and VSO word orders. Additionally, among the various word orders utilised by the signers, the most prevalent was SVO. In other words, all participants used the SVO word order in constructing their sentences, while the other word orders differed between signers. As a result, despite Ghanaian Sign Language being a free word order language, one can say that SVO is the basic and dominant word order. However, more research needs to be done to accurately confirm which of the word orders is used most in daily communication interactions. Additionally, different word orders are not only evident in declarative sentences, but also appear in the formation of questions. Instances of this will be examined when addressing focus construction.

Besides the diverse word orders we have examined that might make Ghanaian Sign Language a language with free word order, additional insights can be derived from the examples. Firstly, the examples show that non-manual markers accompany constituents in clause structure. For instance, we see that in the various word orders, constituents that precede the verb are marked with (fully) raised eyebrows (reb) and partially raised eyebrows (p-reb) in cases where the object appears between the subject and the verb (SOV). However, the p-reb might be considered as fully raised eyebrows because the degree of eyebrow raising varies between speakers.

Another possibility is that Ghanaian Sign Language marks definiteness through the use of IX (some researchers prefer INDEX, which is used for indicating pointing, reference, pronominal marking, or as a determiner in instances of ‘the’), and indefiniteness by presenting the noun without any additional markers. Further-

more, IX can be prenominal or postnominal, as illustrated in examples (61a and 63b).

Third, it could be that in cases where the subject appears in the final position, as illustrated in the examples (64a) and (64b), the use of IX becomes obligatory, unlike in the other instances. Its purpose might be to signify that the subject is the entity that performs the action, not the object. This is further highlighted in example (64b), where each nominal element is marked with an IX for reference, but only the subject entity requires a mandatory reference marker.

### 3.3 Focus marking

Ghanaian Sign Language indicates focus in two forms: narrowly (focusing on individual elements within a simple clause) and broadly (focusing on multiple elements within the clause). Narrow focus in Ghanaian Sign Language involves constituents such as the subject, verb, and object. Broad focus in Ghanaian Sign Language, on the other hand, typically involves verb phrases (VPs), which include the verb and its complement, though it can also encompass an entire sentence focus.

#### 3.3.1 Subject focus

Subject focus in Ghanaian Sign Language is marked in two ways: (i) canonical and (ii) non-canonical. In its canonical position, it can appear with or without a marker (IX) as shown in (65) and (66) respectively. The examples demonstrate that, in its canonical position, the subject-focus is prosodically marked by a raised eyebrow (*reb*) non-manual marker. While it is plausible that additional non-manual markers might accompany the subject-focus, currently, it primarily utilizes the *reb* marker. However, it is also feasible that subject-focus may not always be associated with this marker, as the different word orders indicate that any argument preceding the predicate adopts the *reb* non-manual marker.

(65) Q:  $\overline{\text{CAR (IX) PUSH}}$ ,  $\overline{\text{WHO MAN (IX-A) OR BOY (IX-B) WHO}}$

‘Who is pushing the car, the man or the boy?’

A:  $\overline{\text{[MAN (IX)]}}_{(\text{SUBJ-FOC})}$  PUSH CAR

‘**The man** is pushing the car.’

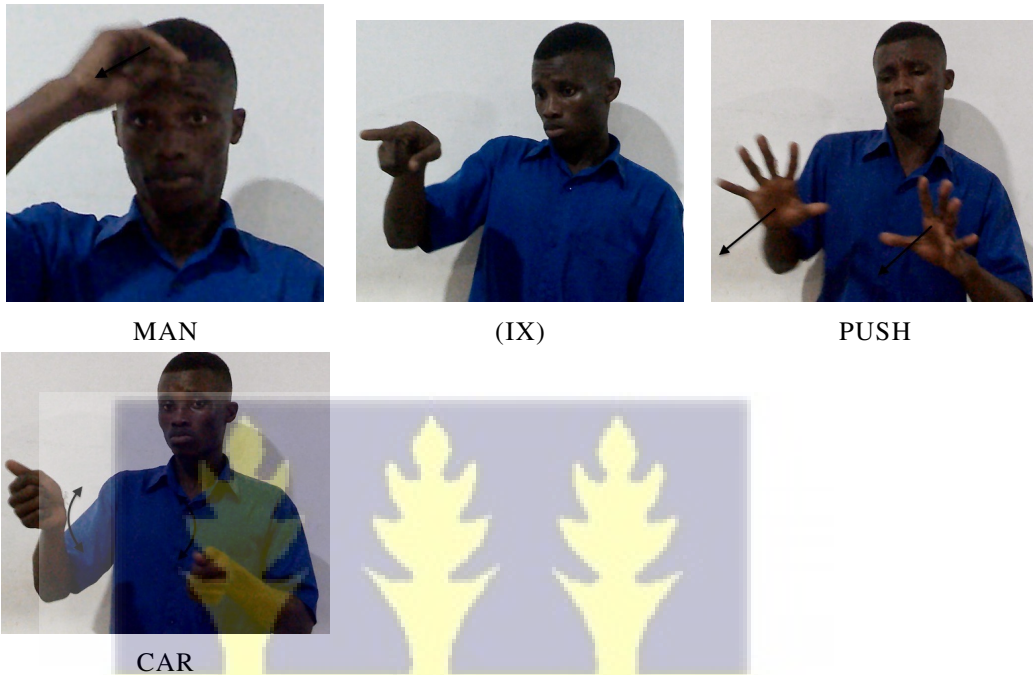


Figure 3.5: An illustration of the selective type of focus in (65)

(66) Q: APPLE EAT  $\overline{\text{WHO}}$

‘Who is eating an apple?’

A:  $\overline{\text{[WOMAN]}}_{(\text{SUBJ-FOC})}$  EAT APPLE

‘**The woman** is eating an apple.’

In non-canonical positions, such as when the predicate and its complement come before the subject-focus leading to an OVS word order, it requires a mandatory IX without any prosodic marker (67c). In contrast, when the subject-focus is within the VP, it takes a prosodic marker without IX (67b). The concept of movement within focus construction remains unclear. The examples demonstrate the two non-canonical positions in which the subject-focus may occur. In these examples, the triggers for indicating that the movement are hard to determine; could

this movement be due to the word order in the question in (67), which results in the structure seen in (67c)?, and if so, what could also account for the structure in (67b)?, see Section 3.4.3 for further discussion.

- (67) Q:  $\overline{\text{TABLE}}^{\text{feb}} \overline{\text{WHO}}^{\text{reb}}$   
 ‘Who is pushing the table?’  
 a. A:  $\overline{[\text{MAN}]_{(\text{SUBJ-FOC})}}^{\text{reb}} \text{PUSH TABLE}$   
 ‘**The man** is pushing a table.’  
 b. A1:  $\text{TABLE} \overline{[\text{MAN}]_{(\text{SUBJ-FOC})}}^{\text{reb}} \text{PUSH}$   
 ‘**The man** is pushing the table.’



Figure 3.6: An illustration of the focus structure in (67b)

- c. A2:  $\text{TABLE} (\text{IX-A}) \overline{\text{PUSH IX-B } [\text{MAN}]_{(\text{SUBJ-FOC})}}^{\text{reb}}$   
 ‘**The man** is pushing the table.’

### 3.3.2 Object focus

Similar to subject focus, object focus is marked in its canonical and non-canonical positions. In its canonical position, it appears unmarked, as shown in the examples below.

- (68) Q:  $\overline{\text{MAN}}^{\text{reb}} \overline{\text{HOLD WHAT}}^{\text{feb+hf}}$   
 ‘What is the man holding?’  
 A:  $\overline{\text{MAN}}^{\text{reb}} \text{HOLD } [\text{SPOON}]_{(\text{OBJ-FOC})}$   
 ‘The man is holding **a spoon**.’



Figure 3.7: An illustration of the focus construction for example (68)

(69) Q:  $\overline{\text{GIRL IX}}^{\text{reb}} \overline{\text{THROW WHAT, BALL OR UMBRELLA WHICH}}^{\text{feb+hf}} \overline{\text{WHICH}}^{\text{reb}}$

‘What is the girl throwing, a ball or an umbrella?’

A:  $\overline{\text{GIRL (IX)}}^{\text{reb}} \text{THROW [UMBRELLA]}_{(\text{OBJ-FOC})}$

‘The girl is throwing **an umbrella**.’

In positions other than the canonical position, it similarly behaves like the subject focus. For example, when placed at the beginning of the sentence in (71), forming an OSV sentence structure, the object adopts the characteristics of the subject focus in its typical position (see 65). Furthermore, when it appears between the subject and the verb, what is observed in (67b) is similar to what is seen in (70) but different in terms of the nonmanual marking.

(70) Q:  $\overline{\text{MAN}}^{\text{reb}} \overline{\text{HOLD WHAT}}^{\text{feb+hf}}$

‘What is the man holding?’

A:  $\overline{\text{MAN}}^{\text{reb}} \overline{\text{[SPOON]}}^{\text{p-reb}}_{(\text{OBJ-FOC})} \text{HOLD}$

‘The man is holding **a spoon**.’

(71) Q:  $\overline{\text{WOMAN (IX)}}^{\text{reb}} \overline{\text{PUSH WHAT, TABLE OR CHAIR}^{\text{feb+hf}} \text{BIG}}^{\text{reb}}$

‘What is the woman pushing, table or sofa?’

A:  $\overline{\text{[CHAIR}^{\text{feb+hf}} \text{BIG}]^{\text{reb}}}_{(\text{OBJ-FOC})} \text{WOMAN PUSH}$

‘The woman is pushing **a sofa**.’

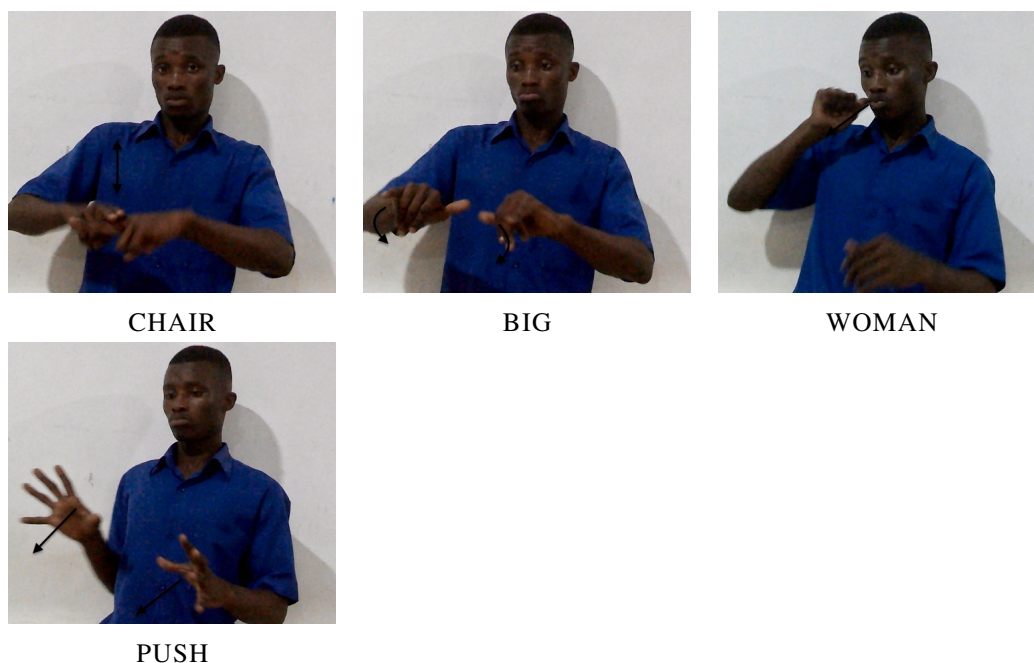


Figure 3.8: Illustration of the focus construction for example (71)

### 3.3.3 Predicate focus

In Ghanaian Sign Language, predicate focus can be achieved in two forms: (i) narrow and (ii) broad. Narrow focus often involves the verb or an adjective, while broad focus generally encompasses the verb along with its complement. Both types of focus can be canonical or non-canonical.

Canonically, the predicate focus—for transitive verbs—in Ghanaian Sign Language as it stands is unmarked, that is, it does not appear with any morphosyntactic or prosodic marker. As demonstrated in the following, in narrow (72) and broad (73) focus, the verb (and its complement) appear as bare and unmarked. It is important to note that in Ghanaian Sign Language, there is no indication of a clause structure where the verb expressing focus is at the beginning for transitives. Therefore, verbs that express focus are presented in situ.

(72) Q:  $\overline{\text{WATERMELON (IX) MAN DO}}^{\text{reb+hf}}$

‘What is the man doing to the watermelon?’

A:  $\overline{\text{MAN}}^{\text{reb}} [\text{CUT}]_{(\text{V-FOC})} \text{WATERMELON}$

‘The man **is cutting** the watermelon.’

(73) Q:  $\overline{\text{GIRL DO}}^{\text{feb}} \overline{\text{WHAT}}^{\text{reb}}$

‘What is the girl doing?’

A:  $\overline{\text{GIRL}}^{\text{reb}} [\text{EAT BANANA}]_{(\text{VP-FOC})}$

‘The girl **is eating a banana.**’



Figure 3.9: A visual representation of the focus construction in (73)

The predicate focus in non-canonical positions is exclusively found before the subject. In the case of verb predicates, it applies to both transitive and intransitive verbs. For intransitives, the verb expressed for focus can be fronted, forming  $V_{\text{FOC}}S$ . When this occurs, it carries the *reb* non-manual marker (74b) but remains unmarked in its typical position (74a).

(74) Q:  $\overline{\text{MAN DO}}^{\text{feb}} \overline{\text{WHAT}}^{\text{reb}}$

‘What is the boy doing?’

a. A:  $\overline{\text{MAN (IX)}}^{\text{reb}} [\text{WALK}]_{(\text{V-FOC})}$

‘The man **is walking.**’

b. A1:  $[\text{WALK}]_{(\text{V-FOC})}^{\text{reb}} \text{MAN}$

‘The man **is walking.**’

For VP-focus in non-canonical position, the verb appears alongside its complement, meaning that the verb cannot be fronted without the object. Moreover, in this instance, the object must precede the verb (its head), creating an  $[\text{OV}]_{\text{FOC}}S$



Figure 3.10: A focus structure illustration of example (74a)



Figure 3.11: A focus structure illustration of example (74b)

structure. This indicates that transitive verbs cannot occupy the initial position. Sentence (75a) demonstrates the VP-focus in its standard position, while (75b) illustrates it in a non-canonical position. When fronted, only the object of the VP-focus is prosodically marked with *reb*.

(75) Q: <sup>feb</sup>WOMAN DO WHAT, BOOK READ OR TV WATCH WHICH

‘What is the woman doing, reading a book or watching TV?’

a. A: <sup>reb</sup>WOMAN (IX) [READ BOOK]<sub>(VP-FOC)</sub>

‘The woman is reading a book.’



Figure 3.12: A visual representation of the selective focus in (75a)

- b. A1:  $\overline{\text{BOOK READ}}_{(\text{VP-FOC})}^{\text{reb}}$  IX WOMAN

‘The woman is **reading a book.**’



Figure 3.13: A representation of a focus type as shown in (75b)

In Ghanaian Sign Language, adjectival predicates can express focus in canonical and non-canonical positions. In its canonical position, the adjectival focus remains unmarked (76a) unlike in (76b) when fronted.

- (76) Q:  $\overline{\text{HORSE (IX) COLOR BLACK}}^{\text{reb+hf}}$

‘Is the horse black?’

- a. A:  $\overline{\text{(BLACK) NO (IX) HORSE [RED]}}_{\text{ADJ-FOC}}^{\text{reb+hf}} \text{hs} \overline{\text{reb}}$

‘(Black?) No, the horse is **red.**’

- b. A1:  $\overline{\text{(HORSE COLOR BLACK) NO [COLOR RED]}}_{(\text{ADJ-FOC})}^{\text{reb+hf}} \text{hs} \overline{\text{reb}}$  HORSE

‘(Is the horse black?) No, the horse is **red.**’

### 3.4 Syntactic properties

In this section, the strategies for expressing focus are discussed. Ghanaian Sign Language utilises three main methods to determine focus: (i) Doubling (Section 3.4.1); (ii) Ellipsis (Section 3.4.2) and ; (iii) Movement (Section 3.4.3).

#### 3.4.1 Doubling

As discussed in Section 2.6.3, doubling is a syntactic technique used to convey an emphatic form of focus in sign language and is also found in spoken languages



Figure 3.14: Illustration of corrective focus for example (76b)

(see [Kandybowicz 2007](#)). This method involves repeating a single element to refer to the same event or situation ([Kimmelman 2014](#): 135). Various analyses indicate that doubling serves to emphasize a specific type of focus called emphatic focus, as demonstrated by [Lillo-Martin & de Quadros \(2008\)](#). However, an alternative observation proposed by [Petronio \(1991\)](#) in [Kimmelman \(2014\)](#) links doubling to all forms of focus. This latter observation is evident in Ghanaian Sign Language.

[Kimmelman \(2014](#): 136) identifies three patterns in which doubling can be analysed: “the X X pattern mostly used for hesitation”, “the X X’(X) pattern for clarification/elaboration”, and “the X Y X(’) used for foregrounding.” The X X and X Y X doubling patterns exist in Ghanaian Sign Language.

### 3.4.1.1 *XX doubling pattern*

The X X doubling type occurs when “the second occurrence of the sign appears immediately after the first one but usually, the second occurrence is different from the first one because it clarifies or specifies the first occurrence” (Kimmelman 2014: 137). This pattern is found in Ghanaian Sign Language with only one case from the collected data. Observe example (77) where two identical signs are placed side by side. However, the focus constituent differs from the duplicated one due to the presence of the marker (IX).

(77) Q:  $\overline{\text{BALL THROW}}^{\text{feb}} \overline{\text{WHO MAN IX-A OR WOMAN IX-B WHICH}}^{\text{reb}}$

‘Who is throwing the ball, the man or the woman?’

A:  $\overline{\text{BALL}} [\text{MAN IX}]_{(\text{SUBJ-FOC})}^{\text{reb}} \overline{\text{MAN THROW}}$

‘The man is throwing the ball.’



Figure 3.15: Representation of example (77)

Example (77) presents considerable complexity when analysing this kind of doubling structure due to word order. the doubling type is located in an  $\text{OS}_{\text{FOC}}\text{V}$  word order, suggesting that the movement might involve the non-focus segment

rather than the focus constituents. Nonetheless, it is worth questioning whether this is genuinely a case of movement or merely a variation in the inherent word order of the language. Observations in Chapter 2 indicate that two separate constituents, which are marked for both topic and focus (refer to 39), can be joined at the left periphery. In this context, since two focus constituents cannot co-occur at the left periphery (Neidle 2002), it is plausible that the construction in (77) is a topic-focus structure, particularly because the object (BALL) is given.

### 3.4.1.2 X Y X doubling pattern

This type of focus doubling occurs when the repeated elements are separated by an intervening constituent. The X Y X doubling pattern is categorised into two subtypes: (i) clause-internal doubling and (ii) clause doubling (Kimmelman 2014). The former is evident in Ghanaian Sign Language. According to Kimmelman, in the clause-internal doubling, the doubling mostly concerns the predicate, while some dependent constituent separates the two occurrences be it the subject or the object. However, example (78b) demonstrates the opposite, with the predicate being the intervening constituent.

- (78) Q:  $\overline{\text{MAN}}^{\text{reb}} (\text{IX}) \overline{\text{HOLD}}^{\text{feb+hf}} \text{WHAT}$   
 ‘What is the man holding?’  
 a. A:  $\overline{\text{MAN}}^{\text{reb}} \text{TAKE.HOLD} [\text{SPOON}]_{(\text{OBJ-FOC})}$   
 ‘The man is holding a spoon.’  
 b. A1:  $\overline{\text{MAN}}^{\text{reb}} [\text{IX SPOON}]_{(\text{OBJ-FOC})}^{\text{p-reb}} \text{HOLD SPOON}$   
 ‘The man is holding a spoon.’

Examples (77) and (78b) illustrate the presence of doubling in Ghanaian Sign Language. Nevertheless, the occurrence of only two cases of doubling prompts the question of whether doubling functions as a syntactic feature for conveying focus in Ghanaian Sign Language. The potential issue could be the lack of an established method for doubling, as it was not anticipated in the collected data. Consequently,



Figure 3.16: An illustration of the focus construction for example (78b)

further investigation is essential to precisely determine how doubling is classified within Ghanaian Sign Language.

### 3.4.2 Ellipsis

Ellipsis according to [McShane \(2005\)](#) exists in every natural (human) language, but its scope and means of realization varies across languages. An example is zero anaphora which is realized differently in languages where this phenomenon is applicable ([Jantunen 2013](#)). Ellipsis can be grouped mainly in two: (i) syntactically, it refers to the “omission of a syntactic element” while (ii) semantically, it “refers to cases in which a semantic element is missing without any syntactic gap.” ([Jantunen 2013](#): 306).<sup>1</sup> Not only is ellipsis evidential in spoken languages, but this phenomenon is more often syntactically proven in sign languages such as Russian Sign Language, Finnish Sign Language, and Sign Language of the Netherlands (see [Jantunen 2013](#), [Kimmelman 2014](#)). With respect to identifying focus, ellipsis is not directly seen as a strategy for marking focus, however, it makes the identification of focus easy since only the non-focus items can be elided ([Kimmelman 2014](#)). It is very important to note that this strategy only applies to narrow focus

<sup>1</sup>For a comprehensive discussion on Ellipsis, see [McShane \(2005\)](#).

and not the case of broad focus, since they cannot be elided.

Ghanaian Sign Language uses the ellipsis strategy to identify focus constituents. Moreover, it shows that constituents in a simple clause can express focus with the rest of the sentence being elided. Consider the following examples that shows different cases of how ellipsis reacts with focus constituents.

(79) Q:  $\overline{\text{MAN (IX) PUSH WHAT}}^{\text{reb}}^{\text{feb+hf}}$

‘What is the man pushing?’

A: [TABLE]<sub>(OBJ-FOC)</sub>

‘(The man is pushing) **a table.**’

(80) Q:  $\overline{\text{WOMAN IX-B DO WHAT (TO MAN IX-A)}}^{\text{reb}}$

‘What is the woman doing (to the man)?’

A: [(ANGRY) BEAT]<sub>(V-FOC)</sub>

‘The woman **is (angrily) beating** the man.’

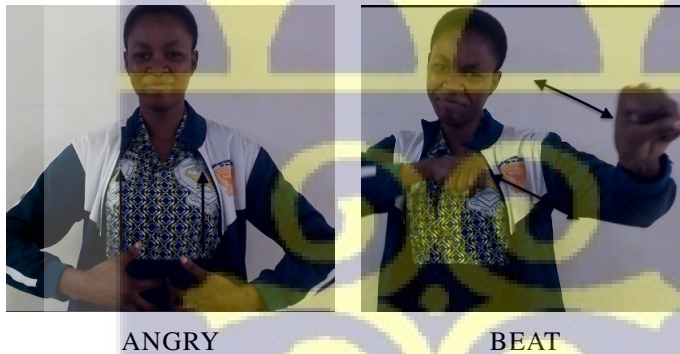


Figure 3.17: A visual representation of example (80)

(81) Q:  $\overline{\text{BANANA EAT WHO}}^{\text{feb}}^{\text{reb}}$

‘Who is eating a banana?’

A:  $\overline{\text{[MAN]}}^{\text{reb}}_{\text{(SUBJ-FOC)}}$

‘**The man** (is eating the banana).’

The examples provided illustrate that subject (81), verb (80), and object (79) can be marked for (narrow) focus, with other parts of the sentence omitted. Furthermore, these focus elements do not show any morphosyntactic markers but,



MAN

Figure 3.18: A visual representation of example (81)

considering prosody, the subject-focus is indicated by the reb non-manual marker. The focus constructions (79-81) expressed through ellipsis are regarded as new information called information focus (to be discussed in Section 3.5.1). In terms of information focus, there may be situations where ellipsis is not considered a prominent strategy for indicating focus in Ghanaian Sign Language, as most focus sentences in this language contain both the focused and non-focused parts. However, its importance should not be ignored since it can be used to express new information (Kimmelman 2014).

Ghanaian Sign Language shows ellipsis not only in the information focus, but this method is also present in contrastive focus (Section 3.5.2), which contrasts with the information focus in terms of form and structure. They appear in two types: (i) those that select from the given context or (ii) those that correct the given context.

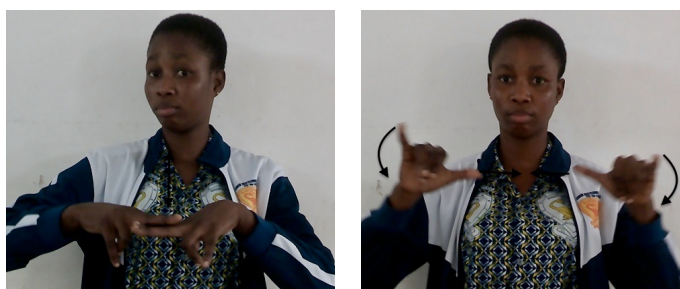
Concerning the initial type, based on the collected data, the constituents that exhibit selective focus through the ellipsis approach include the subject and object arguments. Here, only the selected variable among the visible alternatives is signed as demonstrated in examples (82) and (83).

(82) Q:  $\overline{\text{WOMAN (IX)}}^{\text{reb}} \overline{\text{PUSH WHAT, TABLE OR CHAIR}^{\text{feb+hf}} \text{BIG}}^{\text{reb}}$

‘What is the woman pushing, table or sofa?’

A:  $\overline{\text{CHAIR}^{\text{reb}} \text{BIG}}_{(\text{OBJ-FOC})}$

‘[The woman is pushing] **a sofa**.’



CHAIR

BIG

Figure 3.19: Visual illustration of the focus type in example (82)

- (83) Q: <sup>feb</sup>HORSE RIDE <sup>reb</sup>WHO WOMAN IX-A OR MAN IX-B WHICH

‘Who is riding the horse, the woman or the man?’

A: <sup>reb</sup>[MAN]<sub>(SUBJ-FOC)</sub>

‘**The man** [is riding a horse].’

Ellipsis, as shown for the focus type in, for example, (81), seems to be used in a similar way for the focus type as illustrated in the preceding examples. However, they vary in terms of markedness; the focus elements in (83) and (83) are marked prosodically, which contrasts with those related to new information where only the subject is marked prosodically.

In the case of the latter type, Ghanaian Sign Language employs ellipsis to indicate correction. Here, NO is manually signed, followed by the correction relevant to the given context, with the non-focus part of the sentence being omitted. This can be applied narrowly (84) or broadly (85). Additionally, focus constituents are marked with a head nod (hn) non-manual marker, which is absent in other forms of focus construction, even when expressed through ellipsis. The use of this marker might aim to confirm the focus constituent as the correct response as demonstrated in (84 & 85).

- (84) Q: <sup>reb+hf</sup>WOMAN IX PAPER READ

‘Is the woman reading a paper?’

A:  $\frac{\text{reb+hf}}{\text{hs}} \text{ (WOMAN PAPER READ) } \overline{\text{NO}} \frac{\text{hn}}{\text{hn}} [\text{BOOK}]_{(\text{OBJ-FOC})}$

‘Is the woman reading a paper? No, the woman is reading **a book.**’



Figure 3.20: Illustration of the corrective focus in example (84)

(85) Q:  $\frac{\text{reb+hf}}{\text{hs}} \text{ WOMAN DO NOTHING}$

‘Is the woman doing nothing?’

A:  $\frac{\text{hs}}{\text{hs}} \overline{\text{NO}} \frac{\text{hn}}{\text{hn}} [\text{READ BOOK}]_{(\text{VP-FOC})}$

‘No, the woman **is reading a book.**’

### 3.4.3 Movement

In Section 3.2, it was mentioned that the arrangement of words plays a role in determining which constituents can be highlighted for focus, whether they are in their original position or moved. This holds if we assume that Ghanaian Sign Language adheres to a strict word order, which is actually not the case due to its potential flexible word order. However, given the varied word orders in Ghanaian Sign Language, SVO tends to be predominantly used. Thus, focus constituents can be canonical and non-canonical as shown in Section 3.3.

We can identify focus elements through the use of movement, that is, shifting

to a new syntactic position different from their primary position. Their syntactic movement can be in the initial position or in the final position, varying between different sign languages (see [Kimmelman 2014](#), [Navarrete-González 2016](#)). Ghanaian Sign Language displays both types of movement in narrow and broad focus as well as in medial position.

In the case of narrow focus, the movement is associated with the arguments of the predicate. It can be suggested that the subject shifts to the right, while the object shifts to the left (considering that Ghanaian Sign Language follows an SVO word order), as indicated in [Section 3.3](#), however, confirming this observation is challenging. A more qualifying approach would be to consider a topic-focus construction. Consider the following examples for subject-focus.

- (86) Q:  $\overline{\text{TABLE}}^{\text{feb}} \overline{\text{PUSH}}^{\text{reb}} \overline{\text{WHO}}^{\text{reb}}$   
 ‘Who is pushing the table?’  
 a. A:  $\overline{\text{TABLE}}^{\text{reb}} [\text{MAN}]_{(\text{SUBJ-FOC})} \text{PUSH}$   
 ‘The man is pushing the table.’



Figure 3.21: An illustration of the focus structure in (86a)

- b. A1:  $\overline{\text{TABLE}}^{\text{reb}} (\text{IX-A}) \overline{\text{PUSH}}^{\text{reb}} \text{IX-B} [\text{MAN}]_{(\text{SUBJ-FOC})}$   
 ‘The man is pushing the table.’

Examples (86a) and (86b) illustrate instances of subject-focus displacement. In (86a), the subject focus is positioned between the object and the verb, whereas in (86b), the subject-focus appears at the end of the sentence. In (86a), one possibility

is that while the subject-focus remains in its canonical position, the object might move past it to occupy a topic position. Another possibility is that the subject and object move together but assume different positions. The subject could move to a focus position, and the object could take the topic position, which precedes FocP. In (86b), it is possible that the subject remains stationary (spec of VP), while the object relocates to a topic position and the verb shifts to the TP (T) head.

Another case of topic-focus construction can be seen with object-focus in (87) & (88). We can assume that in (87) the subject is extracted to a topic position followed by the extraction of the object-focus to a focus position. In the instance of (88), it is plausible that only the object-focus is displaced to a focus position while the subject stays in its original position.

- (87) Q:  $\frac{\text{reb}}{\text{MAN}} \frac{\text{.feb+hf}}{\text{HOLD WHAT}}$   
 ‘What is the man holding?’  
 A:  $\frac{\text{reb}}{\text{MAN}} \frac{\text{p-reb}}{[\text{SPOON}]_{(\text{OBJ-FOC})}} \text{HOLD}$   
 ‘The man is holding **a spoon.**’



Figure 3.22: A picture illustration of information focus in (87)

- (88) Q:  $\frac{\text{feb}}{\text{MAN (IX)}} \frac{\text{.feb+hf}}{\text{PUSH WHAT CAR OR TABLE WHICH}}$   
 ‘What is the man pushing, car or table?’  
 A:  $\frac{\text{reb}}{[\text{CAR (IX)}]_{(\text{OBJ-FOC})}} \text{MAN PUSH}$   
 ‘The man is pushing **the car.**’

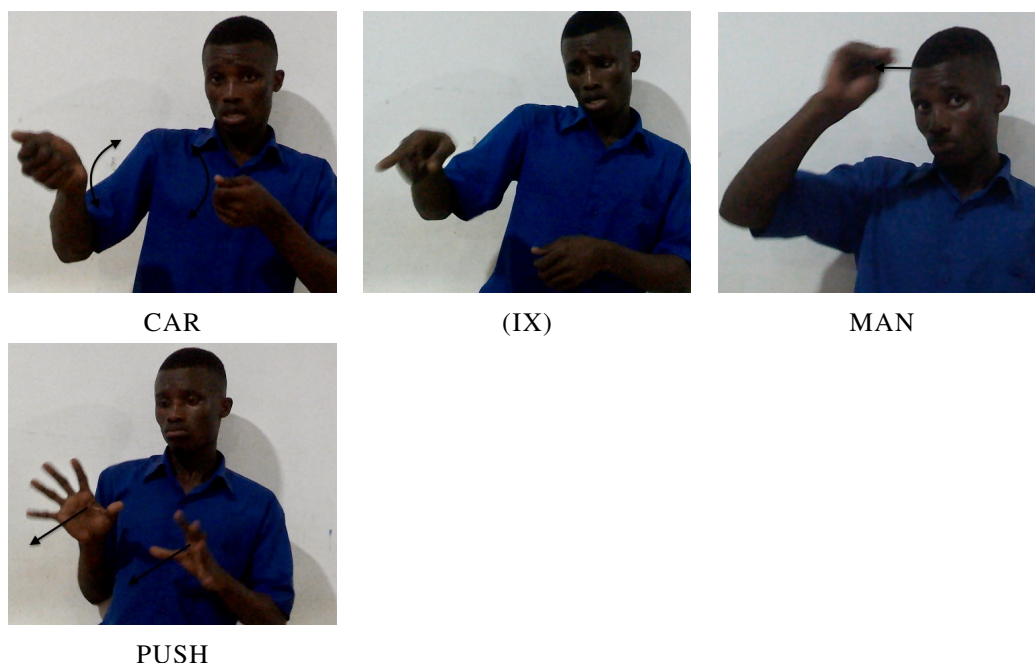


Figure 3.23: A representation of the topicalised selective focus presented in (88)

With regard to broad focus, the movement is associated with the VP (including the complement), which appears at the beginning of clause (89). When in the initial position, the object takes on the 'reb' non-manual marker and comes before its focus counterpart (the verb). This structure could be the result of the arrangement in the arrangement of the question.

- (89) Q: <sup>feb</sup>WOMAN DO WHAT, BOOK READ OR TV WATCH WHICH  
 'What is the woman doing, reading a book or watching TV?'  
 A: <sup>reb</sup>[BOOK READ]<sub>(VP-FOC)</sub> IX WOMAN  
 'The woman is reading a book.'



Figure 3.24: A representation of a focus type as shown in (89)

The various sequences of words in focus constructions may be influenced by the word arrangement in question contexts. From the different question contexts that prompt focus construction, it is evident that in Ghanaian Sign Language, wh-phrases are positioned at the end of the question and may sometimes be marked prosodically without any content question (85). Let us examine the different positions that the object-focus can shift into. Consider the examples below.

(90) Q:  $\overline{\text{TABLE}}^{\text{feb}} \text{PUSH}^{\text{reb}} \text{WHO}$

‘Who is pushing the table?’

A:  $\overline{\text{TABLE}}^{\text{reb}} (\text{IX-A}) \text{PUSH IX-B} [\text{MAN}]_{(\text{SUBJ-FOC})}$

‘The man is pushing the table.’

(91) Q:  $\overline{\text{CAR}}^{\text{feb}} (\text{IX}) \text{PUSH}^{\text{reb}} \text{WHO MAN OR BOY WHO}$

‘Who is pushing the car, man or boy?’

A:  $\overline{\text{CAR}}^{\text{reb}} (\text{IX-A}) \text{PUSH} [\text{IX-B MAN}]_{(\text{SUBJ-FOC})}$

‘The man is pushing a car.’

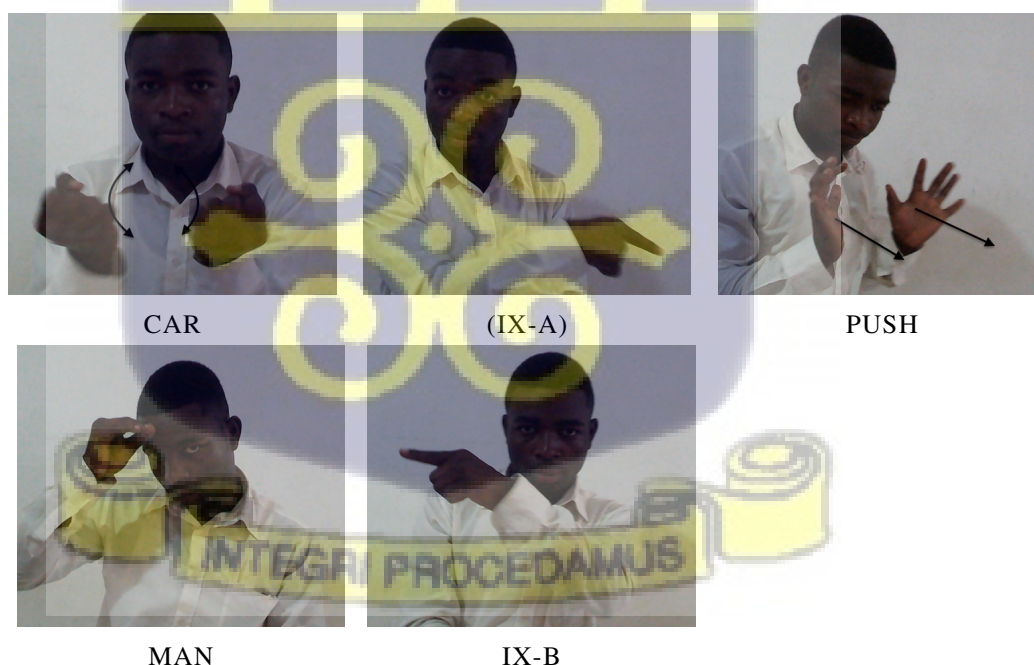


Figure 3.25: A visual representation of example (91)

The instances in (90) and (91) illustrate scenarios where in Ghanaian Sign Lan-

guage the subject appears at the end, leading to an  $OVS_{foc}$  structure. This configuration may be motivated by the structure of the questions. In the question-context for (90) and (91), the observed word order is OVWh- and the same structure is reflected in the answers. Therefore, it appears that question formation plays a role in constructing focus.

The position of the verb in relation to the object is another plausible way of indicating focus (Kimmelman 2014). According to Kimmelman (2014: 88), “If focus plays a role in determining the position of the object, we would expect to find differences between object focus, VP and sentence focus, and other types of focus.” In line with Kimmelman’s claim, I examine the interaction between the identified focus scopes. The data from Ghanaian Sign Language reveals two instances of focus scopes in relation to object focus and VP focus. Consider the examples below.

- (92) Q:  $\overline{WOMAN} \overline{IX} \overline{PUSH} \overline{TABLE}$ <sup>feb+hf</sup>  
 ‘Is the woman pushing a table?’  
 a. A:  $\overline{NO} \overline{WOMAN}$   $\overline{CHAIR} \wedge \overline{BIG}$ <sub>(OBJ-FOC)</sub>  $\overline{PUSH}$  –OV word order  
 ‘No, the woman is pushing a sofa.’  
 b. A1:  $\overline{NO} \overline{WOMAN} \overline{IX}$   $\overline{PUSH}$   $\overline{CHAIR} \wedge \overline{BIG}$ <sub>(OBJ-FOC)</sub> –VO word order  
 ‘No, the woman is pushing a sofa.’  
 (93) Q:  $\overline{WOMAN} \overline{DO} \overline{NOTHING}$ <sup>reb+hf</sup>  
 Is the woman doing nothing?  
 a. A:  $\overline{NO} \overline{WOMAN} \overline{IX}$   $\overline{READ} \overline{BOOK}$ <sub>(VP-FOC)</sub> –VO word order  
 ‘The woman is reading a book.’  
 b. A1:  $\overline{NO} \overline{WOMAN}$   $\overline{BOOK} \overline{READ}$ <sub>(VP-FOC)</sub> –OV word order  
 ‘No, the woman is read a book.’

In the above examples, it is evident that both VO and OV arrangements of the verb and object can occur in Ghanaian Sign Language. However, these orders

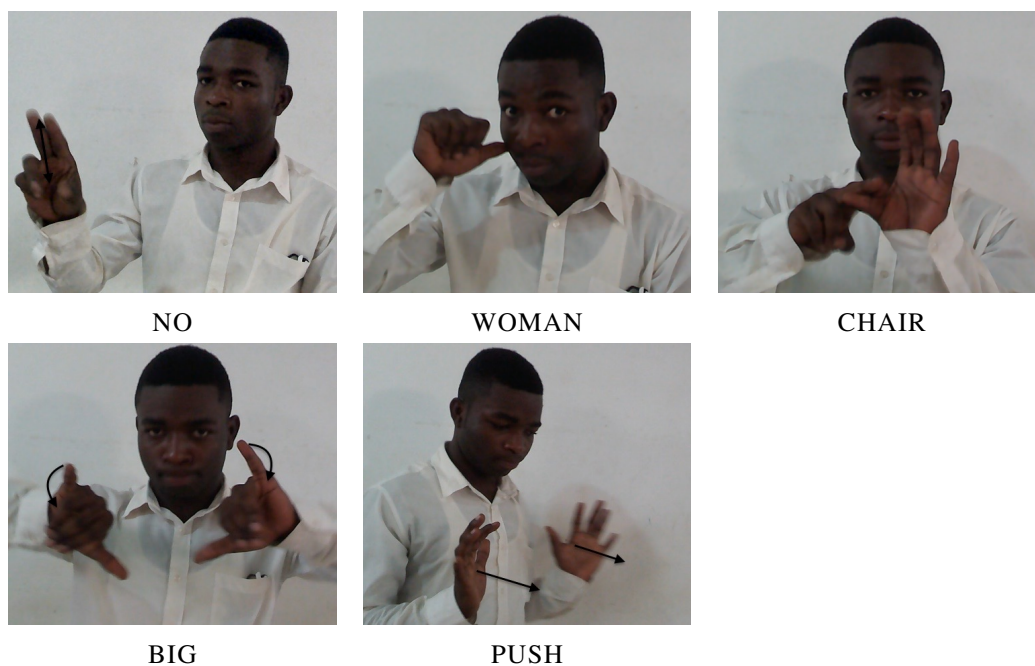


Figure 3.26: Visual representation of the corrective focus in (92a)



Figure 3.27: Corrective focus illustration of example (92b)

seem not to be an effect of focus marking, as there is no distinction between the two focus scopes in terms of markedness. This gives the impression that the distinction between VO vs OV does not serve as a marker for focus (see [Kimmelman 2014](#)).

### 3.4.4 Modality specific and Dominant reversal strategy

Kimmelman (2014) argues that some sign languages utilize a unique modality-specific approach to convey (contrastive) focus. This is achieved by assigning contrasting spatial locations to the referents under contrast using different spatial locations for the referents being contrasted. In this context, the contrasted referents are placed on opposing ends of the signing space or it involves the signer shifting the body to opposite ends to indicate contrast.

Example (94) illustrates the case where contrast is achieved using a modality-specific method, with IX-A and IX-B indicating the two distinct spatial locations as depicted in Figure 3.28.

- (94) Q:  $\overline{\text{CAR (IX)}}^{\text{feb}} \text{ PUSH } \overline{\text{WHO MAN OR BOY WHO}}^{\text{reb}}$   
 ‘Who is pushing the car, man or boy?’  
 A:  $\overline{\text{CAR (IX-A)}}^{\text{reb}} \text{ PUSH [IX-B MAN]}_{(\text{SUBJ-FOC})}$   
 ‘The man is pushing a car.’

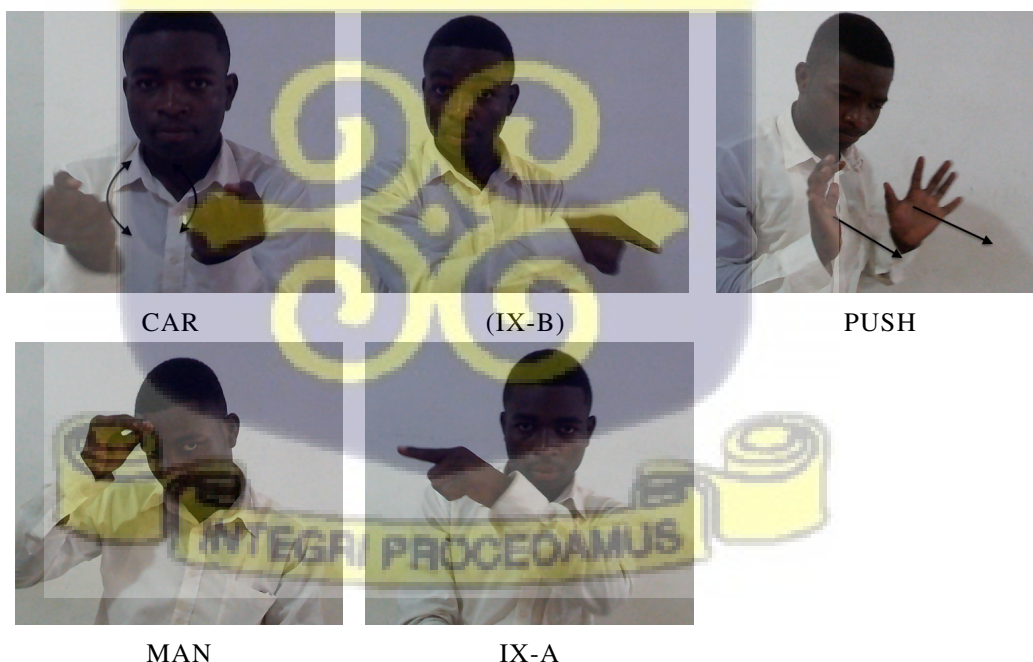


Figure 3.28: A visual representation of example (94)

Additionally, referents may be contrasted using the dominant reversal strategy

(Frishberg 1985 cited in Kimmelman & Pfau 2016). This concept is linked to the idea that signers actively use one hand (dominant hand) more than the other (non-dominant hand) in signing. However, in some cases the non-dominant (or passive) hand of the signer becomes active. The usage of this phenomenon “implies that referents localized contrastively (to the right and to the left of the signer) can be signed with two different hands, leading to the dominance reversal” (Kimmelman & Pfau 2016: 828).

In Ghanaian Sign Language, the dominance reversal strategy is also used to create contrast. Two referents can be contrasted using both hands. The non-dominant hand indicates the different spatial locations for the referents being contrasted. An example is illustrated below.

- (95) Q:  $\overline{\text{WOMAN RIDE HORSE}}^{\text{feb+hf}}$   
 Is the woman riding a horse?  
 A:  $\overline{\text{IX-B}_{ndh} \text{WOMAN}_{dh} \text{NO}}^{\text{reb hs}} \overline{[\text{MAN}_{dh} \text{IX-A}_{ndh}]}^{\text{reb}} \text{RIDE HORSE}$   
 ‘No, it is not the woman, it is **the man** who is riding the horse.’

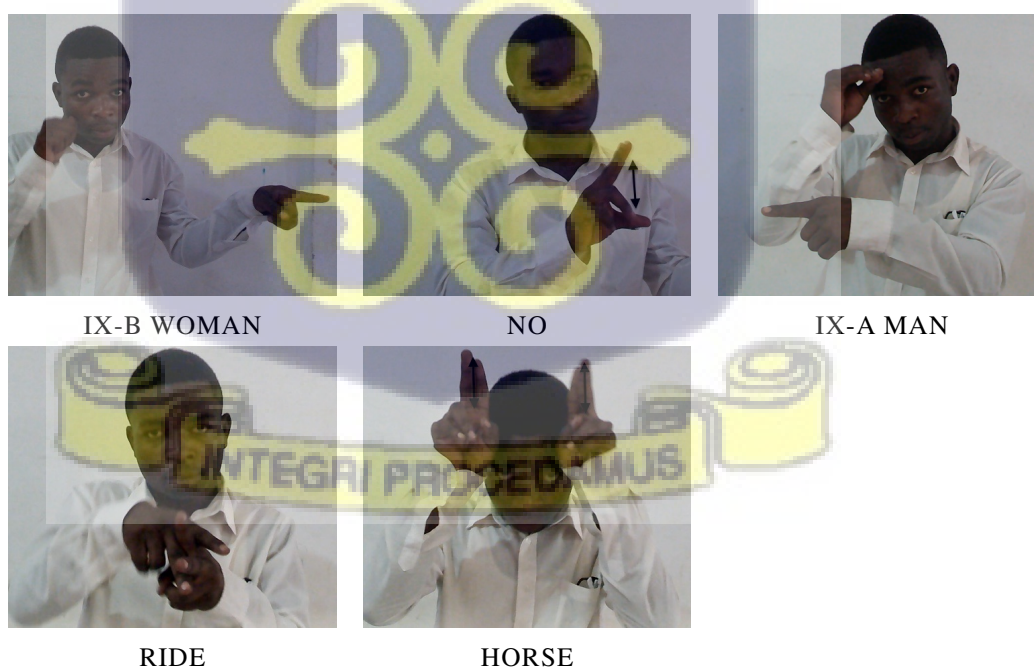


Figure 3.29: A visual representation of example (95)

### 3.5 Semantics of focus

Scholars take different perspectives on how focus is defined or how focus is characterised. Kiss (1998) for instance adopts the terms identification focus and information focus to discuss how focus is realized in English and Hungary. In other studies, identificational focus is referred to as contrastive focus (Crasborn & Van der Kooij 2013), while others refer to information focus as presentational focus or semantic focus (see Kiss 1998, Crasborn & Van der Kooij 2013).

I will examine the types of focus by utilizing the semantic characteristics outlined by Kiss (1998) to distinguish between information focus and contrastive focus.

#### 3.5.1 Information focus

Information focus involves introducing new information through the use of questions-answer pairs, as discussed in Lillo-Martin & de Quadros (2008) and Kimmelman (2014)

From a semantic perspective, (information) focus is a segment of an utterance that the speaker emphasises, ensuring that the recipient understands that this segment contains new information which needs to be incorporated into the Common Ground (Kimmelman 2014). Alternatively, information focus can intuitively be defined as the part of the sentence that is not presupposed (Kiss 1998). Consider the following narrow (96 and 97) and broad focus (98) expressed in-situ.

(96) Q: APPLE EAT <sup>reb</sup>WHO?

‘Who is eating an apple?’

A: <sup>reb</sup>[WOMAN]<sub>(SUBJ-FOC)</sub> EAT APPLE

‘A woman is eating an apple.’

(97) Q: <sup>reb+hf</sup>WATERMELON (IX) MAN DO?

‘What is the man doing to the watermelon?’

- A:  $\overline{\text{MAN}}^{\text{reb}} [\text{CUT}]_{(\text{V-FOC})} \text{ WATERMELON}$   
 ‘A man **is cutting** the watermelon.’
- (98) Q:  $\overline{\text{BOY}}^{\text{feb}} \overline{\text{DO}}^{\text{reb}} \text{ WHAT?}$   
 ‘What is the boy doing?’
- A:  $\overline{\text{BOY}}^{\text{reb}} [\text{EAT BANANA}]_{(\text{VP-FOC})}$   
 ‘The boy **is eating a banana.**’

Following [Kiss \(1998\)](#), the examples above which demonstrate cases of argument and predicate focus constructions are considered as information focus. The constituents expressing focus encode new information that cannot be presupposed from the given contexts. Moreover, the truth condition of the focus constituents is not known given that there could be other potential foci element that could be highlighted for focus since there are no presence of focus particles. Currently, the discussion will not cover focus particles, and the idea of information focus being a non-presupposed element will hold for Ghanaian Sign Language.

### 3.5.2 Contrastive focus

Contrastive focus is a type of focus that deals with a “set of possible candidates” and “what is communicated by a contrastive sentence is that a certain focus rather than other possible ones is correct” ([Chafe 1976: 35](#)). Drawing on the semantic understanding that contrastive focus, also known as identificational focus, operates as a subset within a set of alternatives provided by the context. ([Kiss 1998](#)), Ghanaian Sign Language indicates contrastive focus in two ways: (i) through selectives and (ii) corrections.

With regard to selective focus, it is a type of contrastive focus “if two (or more) alternatives are present and the answer selects one of the alternatives” [Kimmelman \(2014: 15\)](#) In this case, two or more visible options are presented, and one of them is selected for focus. These visible options are often connected by the conjunction ‘or’. For instance: Who is pushing the table, the man or the woman?—It is the man

who is pushing the table. Consider examples (99) and (100)

(99) Q:  $\overline{\text{CHAIR}^{\text{feb}} \text{BIG}} \text{ IX } \overline{\text{PUSH}}^{\text{reb}} \overline{\text{WHO MAN, WOMAN WHICH}}^{\text{reb}}$

‘Who is pushing the sofa, woman or man?’

A:  $\overline{\text{CHAIR}^{\text{reb}} \text{BIG}} \text{ PUSH } [\text{IX WOMAN}]_{(\text{SUBJ-FOC})}$

‘**The woman** is pushing the sofa.’

(100) Q:  $\overline{\text{GIRL}^{\text{reb}} \text{ IX } \text{THROW}}^{\text{feb+hf}} \overline{\text{WHAT, BALL OR UMBRELLA WHICH}}^{\text{reb}}$

‘What is the girl throwing, a ball or an umbrella?’

A:  $\overline{\text{GIRL}^{\text{reb}} (\text{IX}) \text{ THROW}}^{\text{reb}} [\text{UMBRELLA}]_{(\text{OBJ-FOC})}$

‘The girl is throwing **an umbrella**.’

With regard to corective focus, it is a sub-type of a contrastive category where two (or more) overt alternatives are used from which a correction is made about the question asked. They are mostly elicited using questions that pose an incorrect statement and are sometimes followed by a request for confirmation. For example: Is the man pushing a chair?-No, he is pushing a table. Examples from Ghanaian Sign Language are demonstrated in (101) and (102).

(101) Q:  $\overline{\text{WOMAN}}^{\text{feb+hf}} \overline{\text{PUSH TABLE}}^{\text{feb+hf}}$

‘Is the woman pushing a table?’

A:  $\overline{\text{NO}}^{\text{hs}} \overline{\text{WOMAN (IX) PUSH}}^{\text{reb}} [\overline{\text{CHAIR}^{\text{feb}} \text{BIG}}]_{(\text{OBJ-FOC})}$

‘No, the woman is pushing **a sofa**.’

(102) Q:  $\overline{\text{WOMAN DO NOTHING}}^{\text{reb+hf}}$

Is the woman doing nothing?

A:  $\overline{\text{NO}}^{\text{hs}} \overline{\text{WOMAN (IX) [READ BOOK]}}^{\text{reb}}_{(\text{VP-FOC})}$

‘The woman **is reading a book**.’

As shown in the examples for selective focus (99-100) and corrective focus (101-102), the contrastive foci are preceded by contexts that explicitly present a set of alternatives from which the focus elements are identified, whether selectively or

correctively. Thus, contrastive focus are presupposed or inferred from the given context.

According to Krifka (2008), focus has a pragmatic feature which can be used to correct or confirm an information. In this case, we can relate this pragmatic feature by including a selective focus. Let us assume that two signers are having a conversation with both having a common ground (CG) which is the response to the question of the selective focus in (99). This is the only proposition that holds despite all other alternatives given. Should a new proposition be proposed that differs from the preceding alternative (context), a corrective interpretation would be required, as shown in (101) for the initial interpretation to hold. Furthermore, in the cases where the context is the same as the current proposition, a confirmative interpretation is needed as demonstrated in (103) to confirm the ordinary meaning (cf. Krifka 2008).

- (103) Q:  $\overline{\text{WOMAN PUSH CHAIR}}^{\text{feb+hf}} \text{BIG}$   
 ‘Is the woman pushing a sofa?’  
 A:  $\overline{\text{YES}}^{\text{hn}} [\text{WOMAN}]^{\text{reb}}_{(\text{SUBJ-FOC})} \text{PUSH CHAIR}^{\text{feb+hf}} \text{BIG}$   
 ‘Yes, **the woman** is pushing a sofa.’

### 3.6 Summary

This chapter explored and analysed how focus is encoded in Ghanaian Sign Language. It starts with a brief overview of the language’s word order, which is essential for the general analysis of information structure. The research indicates that Ghanaian Sign Language employs a flexible word order, however, SVO is frequently used. By adopting SVO as the underlying word order, the research indicates that arguments and predicates can encode focus canonically and non-canonically. In their canonical position, they are unmarked with the exception of the subject that takes a ‘reb’ non-manual marker. In their non-canonical position, they are marked prosodically with the exception of the subject-focus in an  $\text{OVS}_{\text{FOC}}$ .

The research further demonstrates that Ghanaian Sign Language has two types of focus: (i) information focus and; (ii) contrastive focus.



## CHAPTER FOUR

### TOPIC IN GHANAIAN SIGN LANGUAGE

#### 4.1 Introduction

The focus of this chapter is to examine how topic is constructed in Ghanaian Sign Language. In this chapter, I demonstrate how topic is syntactically integrated and its interpretations in Ghanaian Sign Language. Following [Chafe \(1976\)](#), [Reinhart \(1981\)](#) and [Sze \(2011\)](#), I discuss topic based on these two semantic categories: (i) aboutness topic ([Reinhart 1981](#)) and (ii) scene-setting ([Chafe 1976](#), [Sze 2011](#)).<sup>1</sup>

The rest of the chapter is as follows: [Section 4.2](#) presents an analysis of how topic is distributed in Ghanaian Sign Language followed by its prosodic marking in [Section 4.3](#). The semantic interpretation of focus in [Section 4.4](#). The chapter concludes with a summary in [Section 4.5](#).

#### 4.2 Syntactic distribution

According to [Jacobs \(2001\)](#), there exist several syntactic methods to identify topics. This can be achieved through various degrees of syntactic integration within the sentence, ranging from full to null integration. In the case of full integration, the topic forms part of the main predicate or resides within the main clause (as a subject or object). For mid-integration, the topic does not belong to the main predicate but is co-referential with a pronoun in the main clause. For null integration, the topic is not part of the main clause or co-referential with any argument in the main clause. In an attempt to identify the syntactic distribution of topic in Ghanaian Sign Language, these integrations will be used to distinguish between

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<sup>1</sup>These two terms are also referred to as 'addressation' and 'frame-setting', respectively (see [Jacobs \(2001\)](#)).

the various forms of aboutness topics (Section 4.2.1) and scene-setting topics (Section 4.2.2) in Ghanaian Sign Language.

#### 4.2.1 Aboutness topic

Following Jacobs (2001)'s syntactic integration of topic, there are two forms of aboutness topic that are identified in Ghanaian Sign Language namely, internal aboutness topics and external aboutness topics.

##### 4.2.1.1 Internal topics

Internal topics are topics that are introduced by or are part of the main predicate. They are sometimes called argument topics, that is, subject and object NPs of the predicate (Crasborn et al. 2009). These forms of topic found in Ghanaian Sign Language are projected at the left periphery and appear before the rest of the sentence. Consider the following examples that show cases of subject-topics.

- (104) Q:  $\overline{\text{PICTURE SHOW BOY}}_{\text{reb}} \overline{\text{INSIDE BOY DO INSIDE PICTURE}}_{\text{se}} \text{WHAT}$   
 $\overline{\text{EXPLAIN ME CAN}}_{\text{reb+hf}}$   
 'What can you say about the boy (inside the picture?)'  
 A:  $\overline{\text{BOY (BIG)}}_{\text{reb+ew+hf}} (\text{SUBJ-TOP}) / \text{BANANA EAT}$   
 'The (big) boy is eating banana.'
- (105) Q:  $\overline{\text{PICTURE SEE DOG THERE IX-2 LOOK WHAT DOG DO WHAT}}_{\text{reb}} \text{WHAT}$   
 $\overline{\text{EXPLAIN ME CAN}}_{\text{reb+hf}}$   
 'What can you say about the dog?'  
 A:  $\overline{\text{DOG}}_{\text{reb}} (\text{SUBJ-TOP}) / \text{CHASE BOY}$   
 'The dog is chasing the boy.'

As illustrated in examples (104) and (105), subject-topics are projected at the left periphery and can be isolated from the remainder of the sentence by a pause (/) and accompanied by at least one non-manual marking features different from the case of a focus constituent which takes at most one non-manual marking feature.

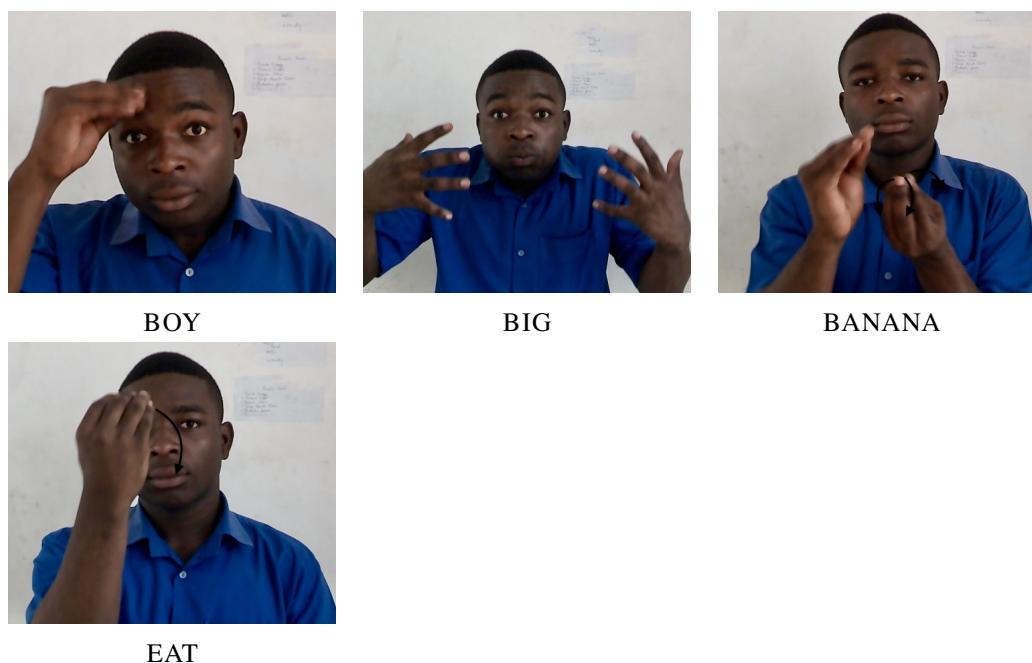


Figure 4.1: Visuals of the aboutness topic in (104)

Not only are subjects marked for topic in Ghanaian Sign Language but objects as well. For objects to be marked for topic as demonstrated in (106) and (107), they must be topicalised or fronted. Assuming the left periphery, they are also separated from the rest of the sentence with a pause and could take only the ‘reb’ non-manual marker.

- (106) Q:  $\overline{\text{IX-2 EVENING GO TO DORMITORY HAPPEN}}^{\text{reb}} \overline{\text{OFF LIGHT}}^{\text{ew}}$   
 $\overline{\text{IX-2 FEEL IX-2}}^{\text{se+hf}}$

‘How do you feel when there is no light?’

A:  $\overline{[\text{LIGHT OFF}]_{(\text{OBJ-TOP})}}^{\text{reb}} / \text{CANNOT SEE}$

‘I cannot see during light out.’

- (107) Q:  $\overline{\text{PICTURE BOY THERE SEE FINISH}}^{\text{reb}} \overline{\text{WHAT THINK BOY DO WHAT}}^{\text{se}}$

‘What can you say about the boy?’

A:  $\overline{[\text{BOY}]_{(\text{OBJ-TOP})}}^{\text{reb}} / \text{RUN } \overline{\text{DOG CHASE}}^{\text{reb}}$

‘The dog is chasing the boy.’

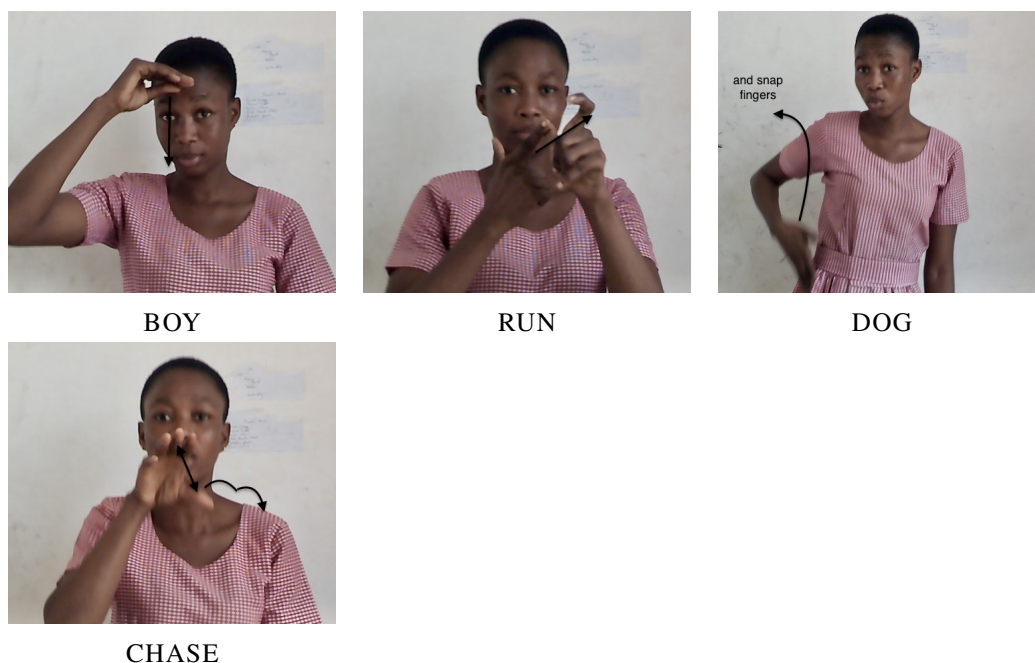


Figure 4.2: Visual representation of an object topic in (107)

#### 4.2.1.2 *External topics*

External topics are topics that are semi-integrated or not at all connected to the main sentences. These forms of integration are termed left-dislocated and hanging topics or the so-called double-subject constructions, respectively. We will take a look at these two forms in Ghanaian Sign Language. Scene-setting topics (Section 4.2.2) can also be referred to as external topics.

##### *Left-dislocated topic*

Left-dislocated topics as we have seen in Chapter 2 are topics that are co-referential with a pronoun in the main clause. At such these are also topics that are externally left-adjoined to the main clause. Consider the examples below.

(108) Q:  $\overline{\text{IX-2}}$   $\overline{\text{FOOD}}$   $\overline{\text{IX-2}}$   $\overline{\text{LIKE}}$   $\overline{\text{MOST}}$   $\overline{\text{WHICH}}$   $\overline{\text{IX-2}}$

‘Tell me about your favorite food?’

A:  $\overline{\text{IX-1}}$   $\overline{\text{LIKE}}$   $\overline{\text{FOOD}}$   $\overline{\text{KENKEY}}$   $\overline{\text{OKRO}}$   $\overline{\text{FISH}}$

‘As for me, the food i like is kenkey with okro and fish.’

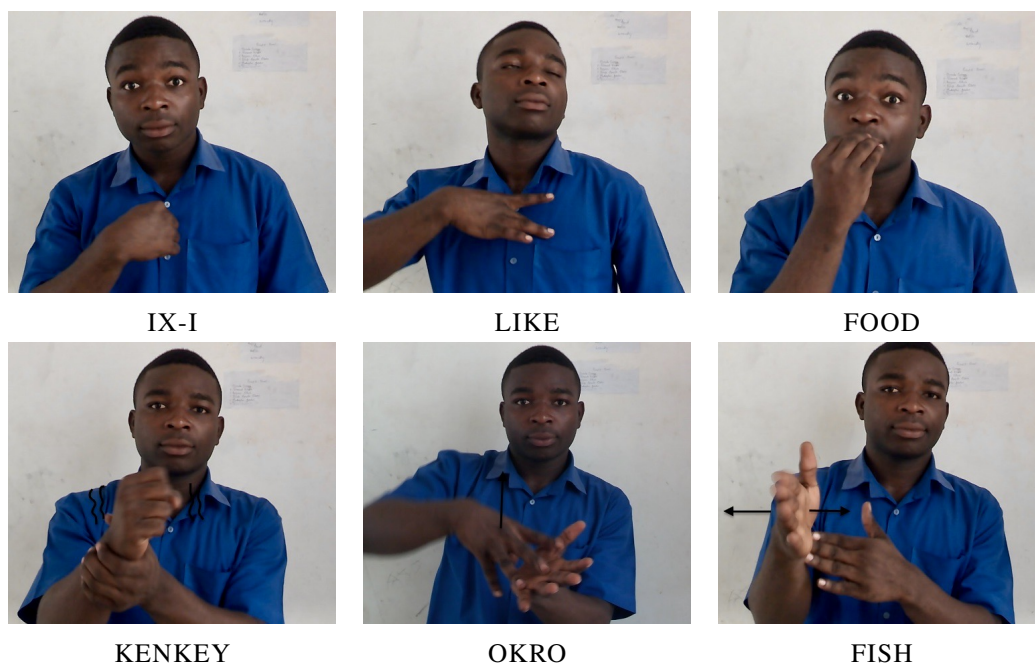


Figure 4.3: Visuals of the left-dislocated topic in (108)

- (109) Q:  $\overline{\text{DEAF STUDENT ALL CHARACTER HOW}}^{\text{reb}} \overline{\text{EXPLAIN ME CAN}}^{\text{reb+hf}}$   
 ‘What can you say about the Deaf students?’  
 A:  $\overline{[\text{STUDENT}]}^{\text{reb}}_{(\text{LD-TOP})} \overline{\text{THEY}}^{\text{reb}} \text{ALWAYS LEARN PLAY}$   
 ‘As for the students, they are always learning and playing.’

Examples (108) and (109) show that in Ghanaian Sign Language, the topic can be identified by attaching the topic element to the beginning of a complete sentence, which also co-refers with a pronoun in the main clause. In (108), the presumptive pronoun that refers to ME is phonologically omitted or deleted. This happens because in Ghanaian Sign Language, the pronoun I is sometimes not signed when it coincides with signs made at the same location. However, in (109), the main clause contains a pronoun THEY that refers back to the topic constituent STUDENT. Although both are marked with the same non-manual marker, these markers are used separately: first on STUDENT, followed by a drop of the eyebrows and then raised again when signing THEY. The dropping of the eyebrows could signal a prosodic boundary.

### *Hanging topic*

Hanging topics represent another form of externally integrated topics. They resemble left-dislocated constructions, but are distinct because they do not share a referent with any resumptive pronoun in the main clause. Consider the following example from Ghanaian Sign Language.

- (110) Q:  $\overline{\text{YOUR HOME THERE COMMUNITY THERE}}^{\text{reb}}$   
 $\overline{\text{DEAF PEOPLE THERE PROBLEM WHAT}}^{\text{se}} \overline{\text{EXPLAIN ME CAN}}^{\text{reb}}$

‘What are some of the problems faced by Deaf people at your home?’

- a. A:  $\overline{\text{MY HOME IX}}^{\text{reb}} \overline{\text{DEAF PEOPLE NO}}^{\text{reb hs}}$

‘There are no deaf people in my area.’

- b. A1:  $\overline{\text{MY HOME AREA}}^{\text{reb+ew+hf}}_{(\text{H-TOP})} \overline{\text{DEAF COMPLAIN MONEY}}^{\text{reb}}$

‘My home area, deaf people complain about money.’



Figure 4.4: Visuals of a hanging topic in (110b)

In (110), the initial NP serve as the topic item, while the subsequent NP is seen as the subject of the main clause. By analysing their non-manual markers, we can differentiate between the topic NP and the subject NP, similar to the distinction

seen in Japanese where the two noun phrases are distinguished by the morphological markers *wa* (topic marker) and *ga* (subject marker). In (110a), the topic is marked by a bundle of non-manual markers, similar to (104) and (108). This shows that there are variations in how topic is marked non-manually.

The data collected show that for aboutness topic, constituents in the main clause encode more topics than those outside the main clause, which is a common observation in different languages (see Sze 2011). Out of the fifty-three tokens, internal topics were present in forty-nine cases, whereas external topics were present in only three cases. However, in internal topics, the grammatical subject tends to be more marked than the grammatical object, that is, most of the internal topics were the subject topics. Furthermore, the data provided regarding the concept of aboutness topic indicate that there may be a distinct differentiation between what constitutes a topic and what constitutes a subject in Ghanaian Sign Language. This potentially rule Ghanaian Sign Language as a non-topic-prominent language. Another intriguing finding in the data provided pertains to indexation. When it comes to aboutness topic, it appears that Ghanaian Sign Language does not frequently utilise indexing (IX) to identify topic elements, unlike focus elements.

#### 4.2.2 Scene-setting topic

As mentioned earlier, scene setting topics are topics that are also externally attached to the left of a full clause. This is a semantic notion that “set a spatial, temporal, or individual framework within which the main predication holds” Chafe (1976: 50). In other words, a scene setting topic is a topic that describes the event of a place or time (Kimmelman 2014). The data collected demonstrate that Ghanaian Sign Language shows various cases of scene-setting topics. Following Sze (2011), I group scene-setting (spatio-temporal) topics into two main categories: locative topics (Section 4.2.2.1) and temporal topics (Section 4.2.2.2).

#### 4.2.2.1 Locative topics

Locative topics, also known as place specifications (Crasborn et al. 2009), set the scene by depicting events that occur at specific locations. Thus, any instance that illustrates the occurrence of an event in a place was classified as a locative topic. From a syntactic perspective, these topics are usually initiated by adpositions and can be categorised as adjuncts alongside other scene-setting topics (Kimmelman & Pfau 2016). In this section we will explore their syntactic integration and how they can be expressed through prosody.

In Ghanaian Sign Language, locative topics as illustrated in (111) and (112) are placed at the left periphery of the main clause, which is also observed for temporal topics (Section 4.2.2.2). In fact, all the gathered data on topics (excluding sentences without topics) indicate that Ghanaian Sign Language positions topic elements at the beginning of the sentence, which is a widely observed phenomenon across languages. The examples demonstrate that these topics are also externally connected to the main clause, similar to the left-dislocated and hanging topics.

- (111) Q: <sup>reb</sup> HERE M-G <sup>se</sup> HERE WEATHER SEE IX-2 <sup>reb</sup> WATCH EXPLAIN ME CAN  
 ‘What can you say about Mampong?’  
 A: <sup>reb+ew</sup> HERE M-G <sub>(LOC-SST)</sub> <sup>feb</sup> COLD FANTASTIC  
 ‘Here in Mampong, the cold is fantastic.’
- (112) Q: IN CLASS STUDENTS LIKE <sup>reb</sup> WHAT <sub>FEB</sub>  
 ‘What do students like doing in class?’  
 A: <sup>reb</sup> IN CLASS <sub>(LOC-SST)</sub> <sup>reb</sup> ALL STUDENT LEARN PLAY  
 ‘In class, all the students learn and play.’

In addition to its syntactic integration, it is worth noting the prosodic markers that appear with the locative topics. As shown in example (111), the locative topic is paired with two non-manual markers (reb and ew), demonstrating potential variability in the prosodic marking of the topic. It is intriguing why the following con-

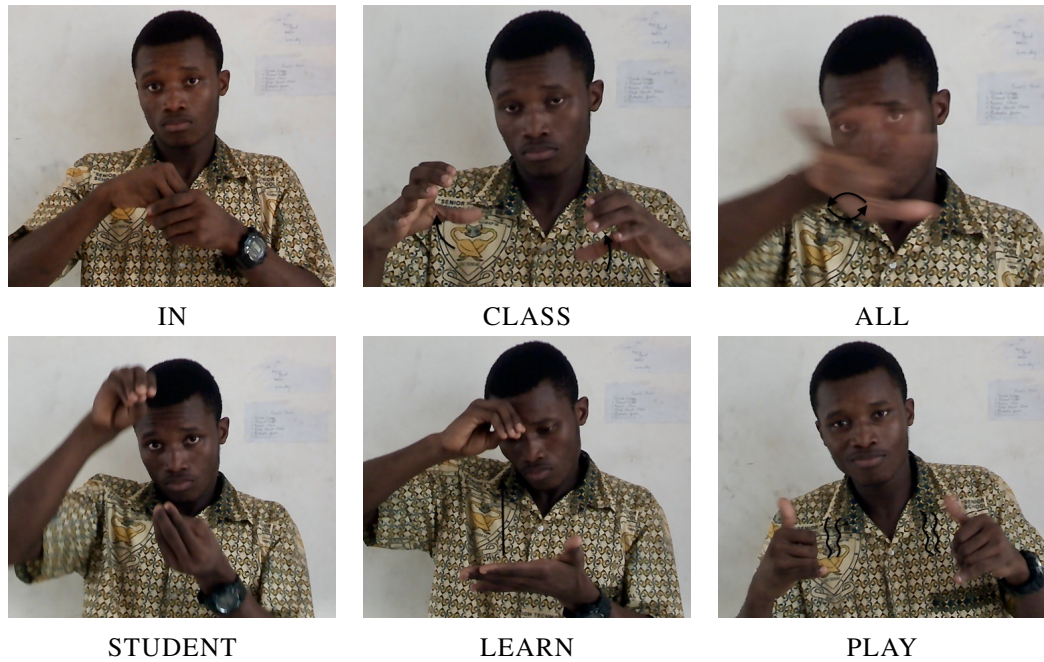


Figure 4.5: Visuals of the locative topic in (112)

stituent ‘COLD’ takes a ‘feb’ non-manual marker. The change in the non-manual marker after the topic is initiated might signify a prosodic boundary when a manual hold (/) is absent, as mentioned in Section 2.4.3. The prosodic marking observed in (112) is similar to what was found for aboutness topic. Moreover, a sudden release of the eyebrows (which can be a prosodic strategy for indicating a boundary) occurs between the two signs, distinguishing the topic element from the main clause.

#### 4.2.2.2 Temporal topics

Temporal topics are also scene-setting topics that set the stage for discussions related to time specification (Crasborn et al. 2009). They establish the context by indicating the time of an event or the time frame within which an event could occur. They are grouped into three: (i) adverbials, (ii) noun phrases, and (iii) subordinate clauses (Sze 2011, Kimmelman & Pfau 2016). Based on Sze’s classification of temporal topics, I identify two out of the three types in Ghanaian Sign Language, namely, adverbials and subordinate clauses. It is unclear whether Ghanaian Sign Language includes topical NPs that establish a temporal context, as no examples

of this type were found. However, it is possible that this language may express this temporal information differently from Hong Kong Sign Language. Currently, we will discuss the two remaining categories identified in the collected data.

### *Adverbial topic*

Temporal adverbials in Ghanaian Sign Language are also projected externally at the left periphery of the main clause as demonstrated in (113) and (114). As shown in other topic sentences, temporal adverbials are also signed before the rest of the sentence, and are marked prosodically. Prosody is initiated by a release or change in the non-manual markers which separate the topic constituents from the main clause. The adverbial topic takes a bundle of non-manual markers, while the subject of the main clause takes a single marker. This separates the topic from the main clause. Nonetheless, adverbial topics do not consistently utilize multiple non-manual markers, as there can be differences in how non-manual markers are employed to indicate adverbial topics.

- (113) Q: <sup>reb</sup> TOMORROW <sup>se</sup> YOURSELF PLAN DO <sup>reb</sup> EXPLAIN ME CAN  
 ‘Describe your plans for tomorrow?’  
 A: <sup>reb+ew+hf</sup> TOMORROW<sub>(TEMP-SST)</sub> <sup>reb</sup> IX-1 BATH FINISH DRESS SCHOOL GO  
 ‘Tomorrow, I will bathe, dress and go to school.’
- (114) Q: <sup>reb</sup> YESTERDAY DORMITORY <sup>se</sup> YOU DO EXPLAIN ME  
 ‘Describe what you did in your dormitory yesterday.’  
 A: <sup>reb+ew+hf</sup> YESTERDAY<sub>(TEMP-SST)</sub> <sup>reb</sup> IX-1 GO DORMITORY SLEEP  
 ‘Yesterday, i slept in the dormitory.’

As mentioned in Sze (2011) and Kimmelman & Pfau (2016), scene-setting topics, in contrast to aboutness topics, include previously known and new information. In Ghanaian Sign Language, scene-setting topics, especially temporal adverbial topics, can set the scene for the introduction of a new adverbial topic. Consider examples (115).

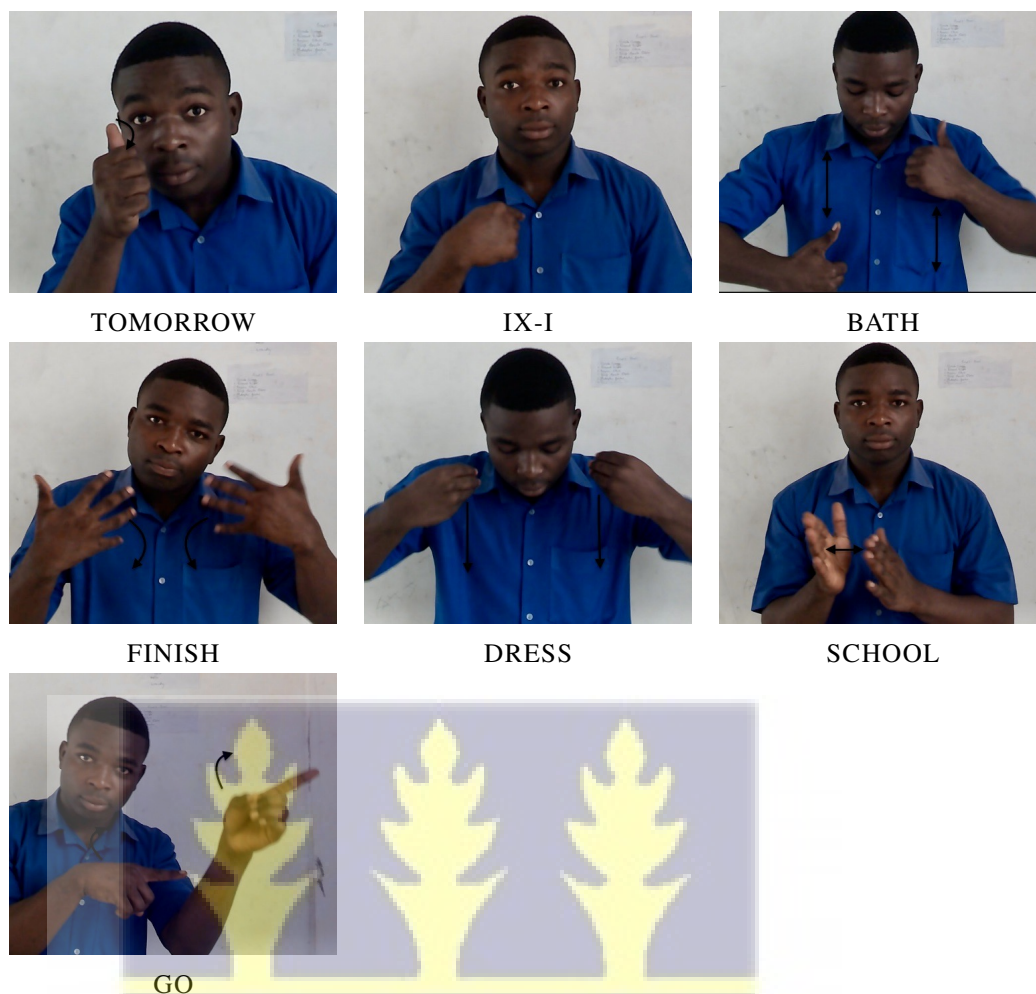


Figure 4.6: Visual representation of the scene-setting example in (113)

(115) Q: YESTERDAY YOU DO WHAT TELL ME<sup>reb</sup>

‘Tell me about you did yesterday?’

- a. A: MORNING WAKE UP BRUSH FINISH BATH FINISH GO CLASSROOM<sup>reb</sup>  
LEARN FINISH AFTERNOON FRIEND COMMUNICATE EVENING IX  
WATCH TV FINISH GO DORMITORY SLEEP

‘In the morning when I get up, I brush my teeth and go to learn in the classroom. Later in the afternoon, i talked to my friends. In the evening I watched television and after that went to sleep in the dormitory.’

- b. A1: MORNING / BATH FINISH GO READ BOOK AFTERNOON / BALL  
PLAY NIGHT / EAT FINISH SLEEP

‘In the morning, I bathe and read a book. Later in the afternoon I played football. At night I ate and slept.’

The examples in (115a) and (115b) contain newly introduced adverbial topics such as morning, afternoon, and evening, introduced by YESTERDAY, each topic depicting an event that takes place in that time frame. However, the structure of the topic sentences differs in each example. In (115a), the initial topic element is marked with the prosodic marker ‘reb’, separating it from the main clause, while the following scene-setting topics remain unmarked. In contrast, in (115b), each topic constituent is followed by a pause.

#### *Subordinate clauses*

Another type of temporal topics identified in the collected data includes subordinate clauses that also provide a temporal framework for the main clause to hold. Aside from being projected at the left periphery and prosodically marked, the subordinate clause’s boundary was indicated by the sign FINISH, as shown in (116) and (117). Identifying clausal boundary was dependent on Sze’s data on subordinate clauses. In her analysis, this temporal topic was identified by the presence of the sign FINISH at the end of the clause (see 24c). Although there is no explicit FINISH sign associated with the clause in (118), the non-manual features that take scope over the clause played a role in recognizing it as a subordinate clause.

(116) Q:  $\overline{\text{IX-2 SHS FINISH SCHOOL}}^{\text{reb}} \overline{\text{NEXT DO WHAT}}^{\text{hf}}$

‘What do you want to do after SHS?’

A:  $\overline{\text{IX-1 SHS SCHOOL FINISH}}^{\text{reb+ew+hf}}_{(\text{TEMP-SST})} \text{CONTINUE UNIVERSITY}$

‘After completing SHS, I will continue at the university.’

(117) Q:  $\overline{\text{STUDENTS WRITE EXAM FINISH}}^{\text{reb}} \overline{\text{NEXT DO WHAT}}^{\text{hf}}$

‘After writing the exams, what will the students do?’

A:  $\overline{\text{STUDENT WRITE EXAM FINISH}}^{\text{reb}}_{(\text{TEMP-SST})} \text{TOMORROW GO HOME}$

‘After writing the exams, the students will go home tomorrow.’

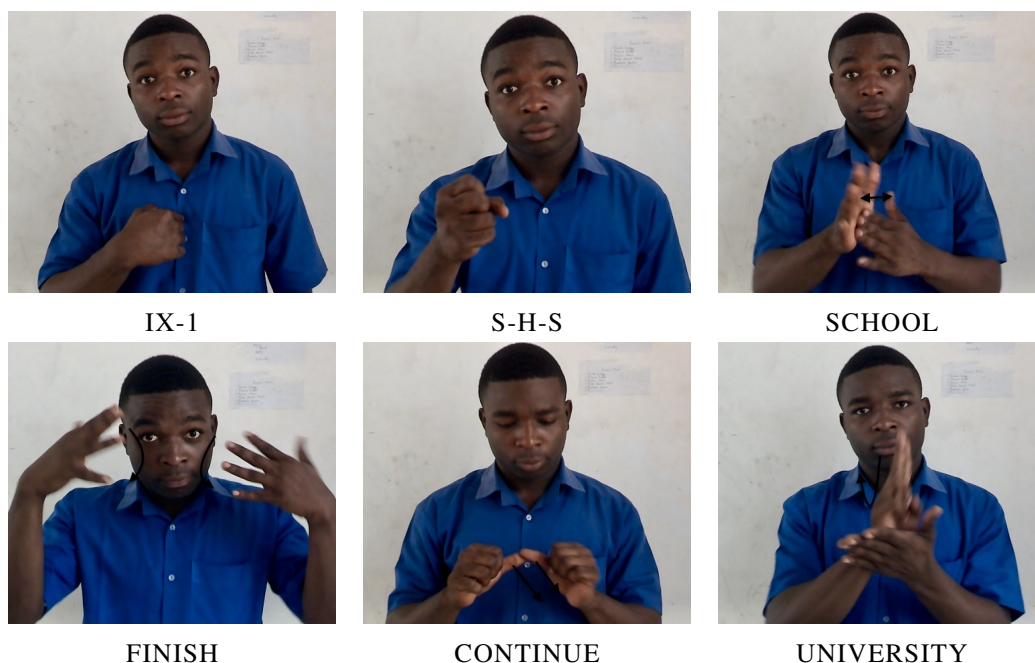


Figure 4.7: Visuals of the scene-setting topic structure in (116)

- (118) Q: <sup>reb</sup> HOLIDAY YOU GO HOME <sup>se</sup> WHAT DO THERE HOME <sup>reb</sup> EXPLAIN ME CAN  
 ‘What are some of the things you do at home during vacation?’  
 A: <sup>reb+ew</sup> HOLIDAY IX-1 GO HOME <sub>(TEMP-SST)</sub> <sup>reb</sup> HELP PARENT WORK  
 ‘When I go home during vacation, I help my parents with housework.’

The indication of temporal topics in Ghanaian Sign Language bears resemblances to locative topics, both in their syntactic integration and prosody. Regarding their syntactic placement, these scene-setting topics are positioned at the sentence’s left periphery and are infrequently prosodically marked with a pause (/) as compared to aboutness topics. Moreover, they also share similarity in the use of non-manuals.

#### 4.2.3 Thetic sentences

Literature reveals that some sentence structures lack a topic entity, making them topicless. Scholars use various terms to describe these sentences, such as thetic sentences Kuroda (1972), news sentences Kuno (1972), and neutral descriptions Schmerling (1976), see Vallduví & Engdahl (1996). As stated in Schmerling



Figure 4.8: A representation of the moved contrastive focus in example (118)

(1976: 269),thetic sentences present “what is new, hence unpredictable information in a given sentence.” The statement can be associated with a sentence that presents new information.

In Ghanaian Sign Language, it is possible for sentences to be presented without a topic entity, even when the context suggests that one should be included, as shown in (119) and (120). These sentences can be considered as new information, as a sentence without a topic is considered as a focus (Gundel 1988, Vallduví & Engdahl 1996). In addition, these constructions lack the prosodic features that we have observed for topic constructions.

(119) Q:  $\overline{\text{WOMAN PICTURE INSIDE SHOW}}^{\text{reb}} \overline{\text{FINISH IX-2 LOOK WHAT THINK}}^{\text{se}}$   
 $\overline{\text{EXPLAIN ME CAN}}^{\text{reb}}$

‘What can you say about the woman?’

A: DRINK RED COKE

‘A coke is being drunk.’

(120) Q:  $\overline{\text{ELEPHANTS SEE BEFORE IX-2 LOOK ELEPHANT EXPLAIN ME CAN}}$

‘What do you know about an elephant, can you say something about it?’

A: WATER PICK THROW

‘It throws away water.’



Figure 4.9: Visuals of the thematic topic in (120)

#### 4.2.4 Topic stacking

As previously mentioned in Section 2.4.2, topic stacking typically involves merging two topic elements within a single clause. It seems that sign languages do not seem to follow a strict order when arranging topic elements during this process unlike other sign language such as American Sign Language (Aarons 1994, Neidle 2002), Sign Language of the Netherlands (Crasborn et al. 2009, Kimmelman 2014), and Russian Sign Language (Kimmelman 2014).

In Ghanaian Sign Language, the combination of constituents can be seen in two distinct forms. Firstly, both aboutness and scene-setting topics can be combined within a single clause. Secondly, Ghanaian Sign Language permits the stacking of two scene-setting topics.

In Ghanaian Sign Language, the arrangement of aboutness and scene-setting topics is flexible, meaning that the aboutness topic can come before or after the

scene-setting topic. The actual arrangement involves the usage of a subject-topic and a locative-topic for aboutness and scene setting, respectively, as shown in (121). In sentence (121a), the sequence involves an aboutness topic and a locative topic, followed by the remainder of the sentence. While in (121b), the stacking is a locative-aboutness sequence followed by the rest of the sentence. Both forms of stacking are marked with the same non-manual marker.

- (121) Q:  $\overline{\text{IX-2 SEE M-G HERE WEATHER SEE WHAT IX-2 THINK}}$   
 $\overline{\text{EXPLAIN ME CAN}}$

‘How is the weather here in Mampong, tell me about it?’

- a. A:  $\overline{\text{WEATHER HERE M-G COLD}}$

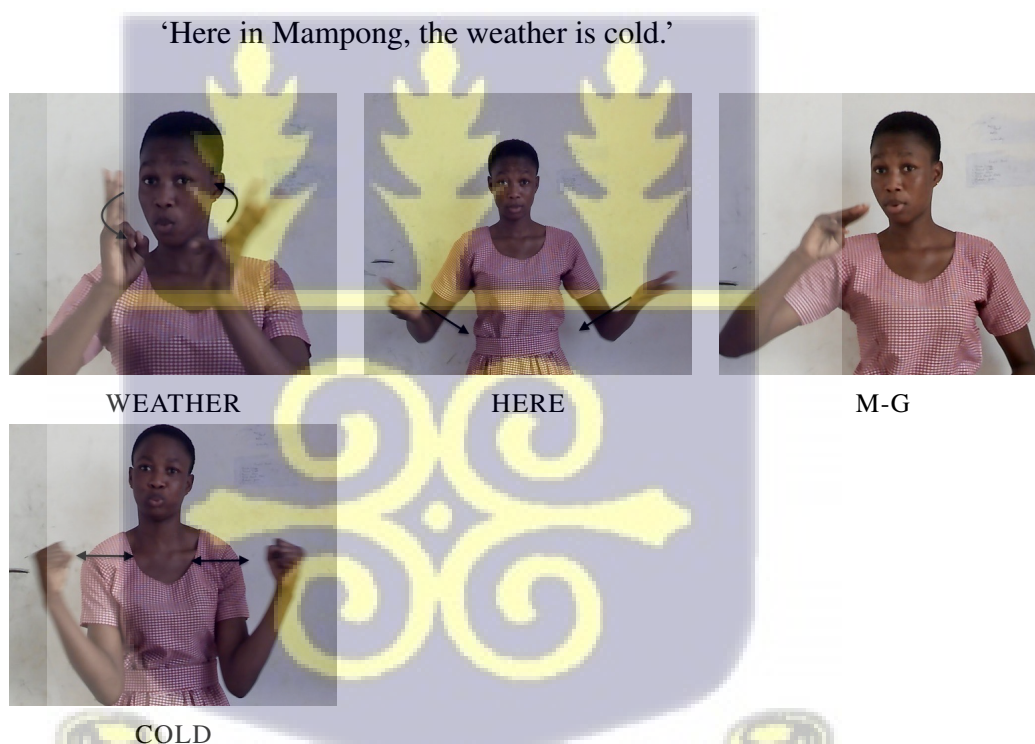


Figure 4.10: Topic stacking representation of example (121a)

- b. A1:  $\overline{\text{HERE M-G WEATHER COLD FANTASTIC}}$

‘Here in Mampong, the weather is cold and fantastic.’

Regarding the second form of topic stacking in Ghanaian Sign Language, it involves an adverbial topic followed by the locative topic as demonstrated in (122).

(122) Q:  $\overline{\text{YESTERDAY DORMITORY}}^{\text{reb}} \overline{\text{YOU DO EXPLAIN ME}}^{\text{se}}$

‘Describe what you did in your dormitory yesterday.’

A:  $\overline{\text{YESTERDAY DORMITORY THERE}}^{\text{reb}} \overline{\text{WORK AFTER GO SLEEP}}^{\text{reb}}$

‘Yesterday, in the dormitory, i was always working and after that i slept.’



Figure 4.11: Visuals of the topic stacking in (122)

### 4.3 Prosodic marking

There are basically two ways in which prosody is used to mark topic in sign languages, that is, through manual marking and/or non-manual marking (Kimmelman 2014). However, in some other sign languages, manual prosodical marking is not evident (Crasborn et al. 2009). The subsequent sections will evaluate how Ghanaian Sign Language utilizes both strategies to mark topics.

#### 4.3.1 Manual marking

Ghanaian Sign Language uses a manual pause (/) in marking topic by creating a boundary that sets the topic from the rest of the sentences. This manual hold is commonly observed for aboutness topics, typically argument topics, as shown in

Section 4.2.1.1 and presented below.

- (123) Q:  $\overline{\text{PICTURE SHOW BOY INSIDE}}^{\text{reb}} \overline{\text{BOY DO INSIDE PICTURE}}^{\text{se}}$   
 $\overline{\text{EXPLAIN ME CAN}}^{\text{reb+hf}}$

‘What can you say about the boy (inside the picture)?’

- A:  $\overline{[\text{BOY (BIG)}]}^{\text{reb+ew+hf}}_{(\text{SUBJ-TOP})} / \text{BANANA EAT}$

‘The (big) boy is eating banana.’

- (124) Q:  $\overline{\text{PICTURE BOY THERE SEE FINISH}}^{\text{reb}} \overline{\text{WHAT THINK BOY DO WHAT}}^{\text{se}}$

‘What can you say about the boy?’

- A:  $\overline{[\text{BOY}]}^{\text{reb}}_{(\text{OBJ-TOP})} / \text{RUN } \overline{\text{DOG}}^{\text{reb}} \text{CHASE}$

‘The dog is chasing the boy.’

#### 4.3.2 Non-manual marking

In topic construction, it is observed that non-manual markers are consistently used to mark topic constituents, with the eyebrow raise widely used (Kimmelman & Pfau 2016). Ghanaian Sign Language employs a bundle of non-manual markers in marking the topic. However, in some instances, a single non-manual marker can be used to mark the topic. The primary non-manual marker used to indicate a topic is the raising of eyebrows, which can be observed on its own without any other markers. This marker can be accompanied by either one or two additional non-manual markers, such as wide-open eyes and forward head movement. According to Crasborn & Van der Kooij (2013: 36), it is common for wide-open eyes and forward head movement to accompany raised eyebrows. These movements often co-occur and are seen as a “phonetic expression of a single phonological feature” (also see Kimmelman 2014). There is a lack of specificity regarding which types of topics are associated with which form of non-manual marking. This is due to the variation in the use of the non-manual markers from one informant to another. The non-manual markers and prosodic types related to different topics in Ghanaian Sign Language are described in Table 4.1 based on their application to the collected

data.

Table 4.1: Non-manual and prosodic topic markers in Ghanaian Sign Language.

| Types of topics            | Non-manual markers                                           | Prosodic types                                                         |
|----------------------------|--------------------------------------------------------------|------------------------------------------------------------------------|
| Subject topics             | Raised eyebrows,<br>eyes open wide,<br>forward head movement | Pause (/)                                                              |
| Object topics              | Raised eyebrows                                              | Pause (/)                                                              |
| Left-dislocated topics     | Raised eyebrows,<br>eyes open wide,<br>forward head movement | Change of the non-manual markers,<br>release of the non-manual markers |
| Hanging topics             | Raised eyebrows,<br>eyes open wide,<br>forward head movement | Change of the non-manual markers,<br>release of the non-manual markers |
| Locative topics            | Raised eyebrows,<br>eyes open wide                           | Change of the non-manual markers,<br>release of the non-manual markers |
| Adverbial topics           | Raised eyebrows,<br>eyes open wide,<br>forward head movement | Change of the non-manual markers,<br>release of the non-manual markers |
| Subordinate-clausal topics | Raised eyebrows,<br>eyes open wide,<br>forward head movement | Change of the non-manual markers,<br>release of the non-manual markers |

#### 4.4 The semantics of topic

In this section, i will discuss the interpretation of topic in Ghanaian Sign Language by focusing on the basic intuition that topic is old information ([Reinhart 1981](#), [Gundel 1988](#), [Jacobs 2001](#), [Krifka 2008](#), [Sze 2011](#)).

##### 4.4.1 Aboutness topic

Intuitively, an aboutness topic is the part of a sentence (i) that needs to be identified, (ii) should be definite or salient within a discourse, and (iii) should be familiar and / or presupposed from a preceding context ([Gundel 1988](#), [Jacobs 2001](#), [Kimmelman 2014](#)). According to [Jacobs \(2001: 651\)](#), in a set (X, Y), “X is the address for Y iff X marks the point in the speaker-hearer knowledge where the information carried by Y must be stored at the moment of the utterance of (X Y)”. The variable X represents the topic (aboutness), and the variable Y represents the comment, which is the information that must be stored about X. Alternatively, topic is a constituent that “identifies the entity or set of entities under which the information expressed

in the comment constituent should be stored in the CG content” (Krifka 2008: 265).<sup>2</sup>

Recall from Section 2.7 that the topic-comment structure can be understood using the file-card-system analogy proposed by Reinhart (1981). This file card contains a series of propositions applicable in a specific context set. Each file card features a header (the topic) that stores the necessary information about the header. The stored information represents the comment. In cases where a new topic is introduced, a new file card is introduced, which will contain entries of the header of the new file card.

Based on these claims, we can conclude that the aboutness topic in Ghanaian Sign Language is intuitively recognisable from the previous context and includes a referent address known to the participants in the discourse. In addition, the topic constituents can be identified as a file card in which a series of propositions about it can be stored. Let us consider the various aboutness topics namely, subject-topic (125), object-topic (126), left-dislocated topic (127), and a hanging topic (128).

- (125) Q:  $\overline{\text{PICTURE SHOW BOY INSIDE BOY DO INSIDE PICTURE WHAT}}^{\text{reb se}}$   
 $\overline{\text{EXPLAIN ME CAN}}^{\text{reb+hf}}$

‘What can you say about the boy inside the picture?’

- A:  $\overline{[\text{BOY (BIG)}]}^{\text{reb+ew+hf}}_{(\text{SUBJ-TOP})} / \text{BANANA EAT}$

‘The (big) boy is eating banana.’

- (126) Q:  $\overline{\text{PICTURE BOY THERE SEE FINISH WHAT THINK BOY DO WHAT}}^{\text{reb se}}$

‘What can you say about the boy?’

- A:  $\overline{[\text{BOY}]}^{\text{reb}}_{(\text{OBJ-TOP})} / \overline{\text{RUN DOG CHASE}}^{\text{reb}}$

‘The dog is chasing the running man.’

- (127) Q:  $\overline{\text{IX-2 FOOD IX-2 LIKE MOST WHICH IX-2}}^{\text{reb feb+ec}}$

‘Tell me about your favorite food?’

<sup>2</sup>Remember in Section 2.2 that CG refers shared knowledge that interlocutors have and continuous to be modified when the CG changes.

A:  $\overline{[\text{IX}-1]}_{(\text{LD-TOP})}^{\text{reb+ew+hf}}$  LIKE  $\overline{\text{FOOD}}^{\text{reb+ew}}$  BANKU OKRO FISH

‘As for me, the food i like is banku with okro and fish.’

(128) Q:  $\overline{\text{YOUR HOME THERE COMMUNITY THERE}}^{\text{reb}}$   
 $\overline{\text{DEAF PEOPLE THERE PROBLEM WHAT EXPLAIN ME CAN}}^{\text{se reb}}$

‘What are some of the problems faced by Deaf people at your home?’

A:  $\overline{\text{MY HOME IX DEAF PEOPLE NO}}^{\text{reb reb hs}}$

‘There are no deaf people in my area.’

It is evident from the examples mentioned above that the topic constituents represent discourse-old information, which can be deduced from the context provided. Also, according to Reinhart (1981), topic can be interpreted through the use of (i) a referential link or (ii) a semantic link in relation to adjacent sentences in the discourse (see Sze 2011). We will discuss the referential link in relation to the above examples, since the semantic link signals a change in the discourse, allowing the presentation of a new topic (Sze 2011). According to Reinhart (1981: 74):

Two adjacent sentences are considered referentially linked if any of the following holds: the two sentences contain a mention of the same referent, or there are set-membership relations between their referents, or a referent mentioned in the second sentence belongs to the ‘frame of reference’ established in the first (Reinhart 1981: 74).

Based on the examples listed above (125, 126, 127 & 128), a referential relationship appears to exist between two consecutive sentences, namely the given contexts and the topic sentences. The addresses in the second sentence seem to connect to a referent in the first sentence as they contain the same identifiable referent.

#### 4.4.2 Scene-setting topic

Once again, scene-setting topics, also known as frame-setting topics (Jacobs 2001, Krifka 2008) are topic constructions that “set a spatial, temporal, or individual framework within which the main predication holds” (Chafe 1976: 50). These topics semantically perform “the function of setting up the scene for the proposition of the main clause” (Sze 2011: 128). In other words, they function by setting the frame needed for interpreting the subsequent statement. (Krifka 2008). Unlike aboutness topic (or addressation), scene-setting topics according to Jacobs (2001: 257) “restrict the application of the proposition expressed by the rest of the sentence to a certain domain” (cf. Chafe 1976). Also, according to Jacob’s definition, “[i]n (X Y), X is the frame for Y iff X specifies a domain of (possible) reality to which the proposition expressed by Y is restricted” (Jacobs 2001: 657). From the above claims one could argue that despite both aboutness topics and scene-setting topics having similar syntactic distributions and being considered as old information within the discourse, they differ as scene-setting topics create constraints, thereby making the proposition restricted within the context specified by these topics.

Consider the following scene-setting examples from Ghanaian Sign Language: locative topic (129), temporal adverbials (130), and temporal subordinate clauses (131).

(129) Q: HERE M-G HERE WEATHER SEE IX-2 WATCH EXPLAIN ME CAN

‘What can you say about Mampong?’

A: HERE M-G<sub>(LOC-SST)</sub> COLD FANTASTIC

‘Here in Mampong, the cold is fantastic.’

(130) Q: YESTERDAY DORMITORY YOU DO EXPLAIN ME

‘Describe what you did in your dormitory yesterday.’

A: YESTERDAY<sub>(TEMP-SST)</sub> GO DORMITORY SLEEP

‘Yesterday, i slept in the dormitory.’

(131) Q:  $\overline{\text{HOLIDAY YOU GO HOME}}^{\text{reb}} \overline{\text{WHAT DO THERE HOME}}^{\text{se}} \overline{\text{EXPLAIN ME CAN}}^{\text{reb}}$

‘What are some of the things you do at home during vacation?’

A:  $\overline{\text{HOLIDAY IX GO HOME}}^{\text{reb+ew}}_{(\text{TEMP-SST})} \overline{\text{HELP PARENT WORK}}^{\text{reb}}$

‘When I go home during vacation, I help my parents with housework.’

If we accept the claims made about scene-setting topics, then the examples can intuitively be regarded as scene-setting topics. For instance, in example (129), the utterance COLD FANTASTIC holds in the domain of the presupposed locative phrase HERE IN M-G. This limits the possibility for propositions outside the context of the topic to be valid. For example, the proposition *it is hot* may not hold since Mampong is a mountainous place. The same observation holds for the other examples as well.

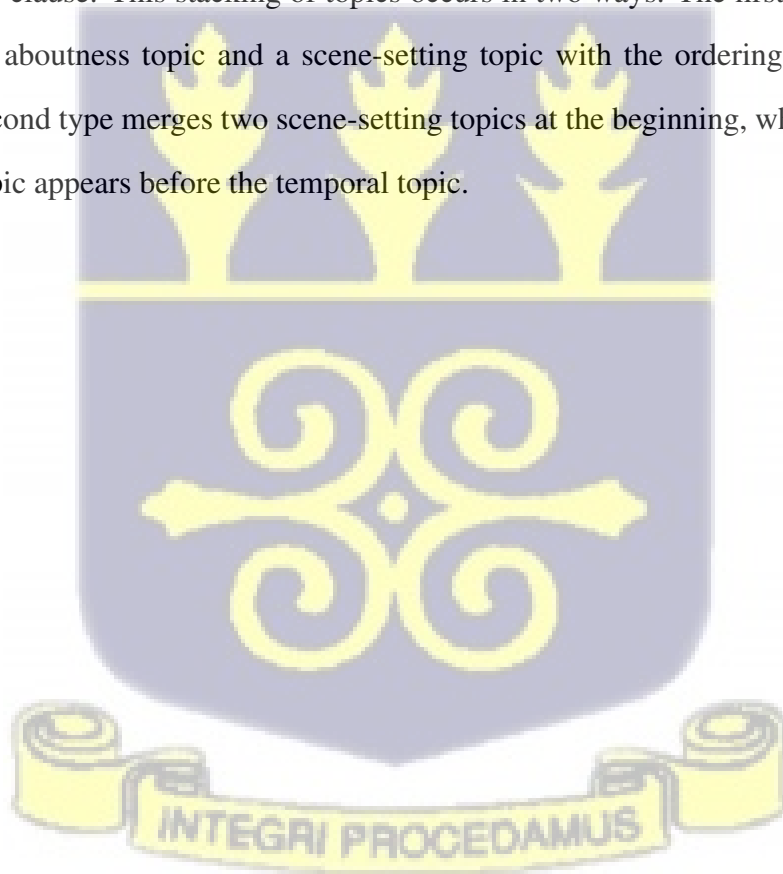
#### 4.5 Summary

The chapter discusses how topic is constructed in Ghanaian Sign Language. Following the aboutness and scene-setting approach, the study focuses on how these two topics are marked syntactically and interpreted. The study indicates that constituents representing aboutness topics appear in two patterns: (i) grammatical subjects and fronted objects, and (ii) left-dislocated and hanging constituents. Conversely, for scene-setting topics, the study shows that these are marked by (i) adverbial constituents and (ii) temporal constituents.

Syntactically, topic constituents in Ghanaian Sign Language are projected the left periphery, appearing before the rest of the clause or before a full clause. Moreover, these components do not appear in their bare form. They are accompanied by prosodic (manual and non-manual) markers. Moreover, the use of the manual hold is only evident in aboutness topic, which seems to be the only method for distinguishing between aboutness and scene-setting topics syntactically.

Intuitively, we have seen that topic constituents in Ghanaian Sign Language are identifiable from the preceding context and familiar to the interlocutors in a particular discourse through a referential link. Also, using the file card system, the topic is seen as the head of a certain file card for which various propositions are entered and stored by the interlocutors, particularly in the context of aboutness topic. In scene-setting, the topic functions by setting the scene for a restricted set of events to happen in the main clause. Here, the set of propositions needs to apply to the topic-type that introduces them. In sum, the use of intuition helps to clearly distinguish aboutness topic from scene-setting topic.

The research further indicates instances where topics can be merged into a single clause. This stacking of topics occurs in two ways. The first variation merges an aboutness topic and a scene-setting topic with the ordering being free. The second type merges two scene-setting topics at the beginning, where the adverbial topic appears before the temporal topic.



## CHAPTER FIVE

### CONCLUSION

#### 5.1 Introduction

The research study has mainly evolved around describing how information is structured or packaged to meet the communicative demands in the Ghanaian Sign Language . The primary goals were to study how focus and topic are constructed in Ghanaian Sign Language syntactically and semantically. Therefore, this chapter provides a summary of the research.

The structure of this chapter is as follows: [Section 5.2](#) offers an overview of the previous chapters, followed by a discussion of contributions to the current body of knowledge in [Section 5.3](#). The chapter concludes with suggestions for future research in [Section 5.4](#).

#### 5.2 Summary of Chapters

This thesis is made up of five (5) chapters. [Chapter 1](#) concerns a general introduction of the thesis, specifically what the thesis entails and what will be carried out in the thesis. In this chapter, the background of the study to be investigated is introduced followed by a background of Ghanaian Sign Language and a brief description of its linguistic features. Subsequently, the thesis outlines the problem statement, research objectives and questions, the scope of the study, and the need to conduct this research. In addition, it describes the methodological approaches used in gathering the data for this study.

[Chapter 2](#) mainly focuses on the literature relevant for the study, both spoken and sign languages. The chapter begins with an overview of the concept of in-

formation structure. The chapter further discusses two of the main concepts of information structure namely topic and focus. With regard to focus, the chapter reviewed research materials that demonstrate how focus is constructed cross-linguistically and the strategies used to identify focus. Concerning topic, the chapter also identifies the types of topic and how they are formed. The chapter concludes with the theoretical framework used for conducting the analysis of the data collected.

**Chapter 3** delves into a descriptive analysis of how focus is expressed in Ghanaian Sign Language. This chapter addresses the question by exploring the distribution of focus in Ghanaian Sign Language as well as its interpretation. It starts with an investigation of word order, a critical factor of information structure. The analysis shows that Ghanaian Sign Language employs a flexible word order, with SVO being the most frequently used. Thus, SVO was regarded as the underlying word order for the analysis.

The research further shows that three primary syntactic strategies namely doubling, ellipsis, and movement are employed to indicate focus. Regarding doubling, Ghanaian Sign Language shows that elements can be duplicated to mark focus. The focused element can be duplicated and found next to the original form or appear with an intervening node between the focus item and its copy. Regarding the movement strategy, Ghanaian Sign Language shows that arguments and predicates can encode focus in their canonical and non-canonical position. For example, subject focus in their canonical position takes a raised eyebrow prosodic marker, but when in a noncanonical position, (OVS<sub>FOC</sub> it appears unmarked. In cases of object-focus, it is unmarked in canonical position but marked for prosody when it moves. It is unclear what movement looks like in this language with respect to focus, however, prosodic features can help determine in which direction it moves. Furthermore, it is crucial to understand that a new subject focus with a given object can permit an OVS structure, whereas a new object focus with a given subject

cannot (Malte Zimmerman, personal communication, March 22, 2024). The collected data confirm these observations, showing that all OVS structures in focus constructions resulted from the subject being focused.

In terms of semantics, focus in Ghanaian Sign Language can be categorized into information focus and contrastive focus. Information focus is a type of focus that cannot be inferred from the given context. Conversely, contrastive focus is the type of focus that is inferred from the given context.

Chapter 4 explores the syntactic distribution and interpretations of topics in Ghanaian Sign Language. Syntactically, the study demonstrates that topic (aboutness and scene-setting) typically appears at the left periphery of the main clause, a common pattern observed across languages, although evidence suggests topics can also occur at the right periphery. Regarding aboutness topics, the syntactic integrations observed in Ghanaian Sign Language (see Jacobs 2001) include those that are within the main clause (subject and object arguments) and those that are externally integrated (left-dislocated topics and hanging topics). Additionally, in Ghanaian Sign Language, aboutness topics are separated from the main clause through a prosodic pause, which plays a crucial role in differentiating the topic from the rest of the clause. This feature is exclusively associated with internal arguments, namely the subject and the object. Scene-setting topics, on the other hand, are also attached externally to the main clause. Although they can be regarded as adjuncts, they create the domain in which the main clause occurs. These scene-setting topics identified are adverbial and temporal constituents.

In Ghanaian Sign Language, the interpretation of topic plays a key role in distinguishing between aboutness and scene-setting topic beyond the basic intuition of topic as old-information or a presupposed constituent that can be inferred from a given context. Unlike an aboutness topic, which may encompass a broad range of propositions, a scene-setting topic in Ghanaian Sign Language is restricted to a particular set of limited propositions.

### 5.3 Contribution to knowledge

By exploring the concept of information structure, this study adds to the existing literature on information structure in sign languages. The results illustrate how topic and focus are marked, which can be contrasted with findings in other sign languages. Unlike Catalan Sign Language, which exclusively employs the *reb* non-manual marker for in-situ focus expression (Navarrete-González 2019), Ghanaian Sign Language demonstrates that both in-situ and ex-situ focus use the *reb* non-manual marker. Additionally, in contrast to American Sign Language and Catalan Sign Language, where focus shifts to the left and right periphery (Neidle 2002, Navarrete-González 2016), respectively, Ghanaian Sign Language reveals that focus can shift to either the left or right periphery. Also, in Ghanaian Sign Language, the evidence suggests that the left edge of a focus construction is prosodically marked by a raised eyebrow (*reb*), regardless of the constituent being focused. Regarding topic, the evidence from Ghanaian Sign Language suggests that both aboutness topic and scene-setting topics can employ the same non-manual markers in marking topic unlike American Sign Language where each topic type has a set of non-manual markers that accompany it (Aarons 1994).

Having been the first study in the language, this research paves the way for further studies on information structure to be conducted which will be discussed in the following section. It is noticeable that the research on Ghanaian Sign Language is relatively recent and has not been thoroughly examined, however, this study contributes to the existing body of its research and documentation.

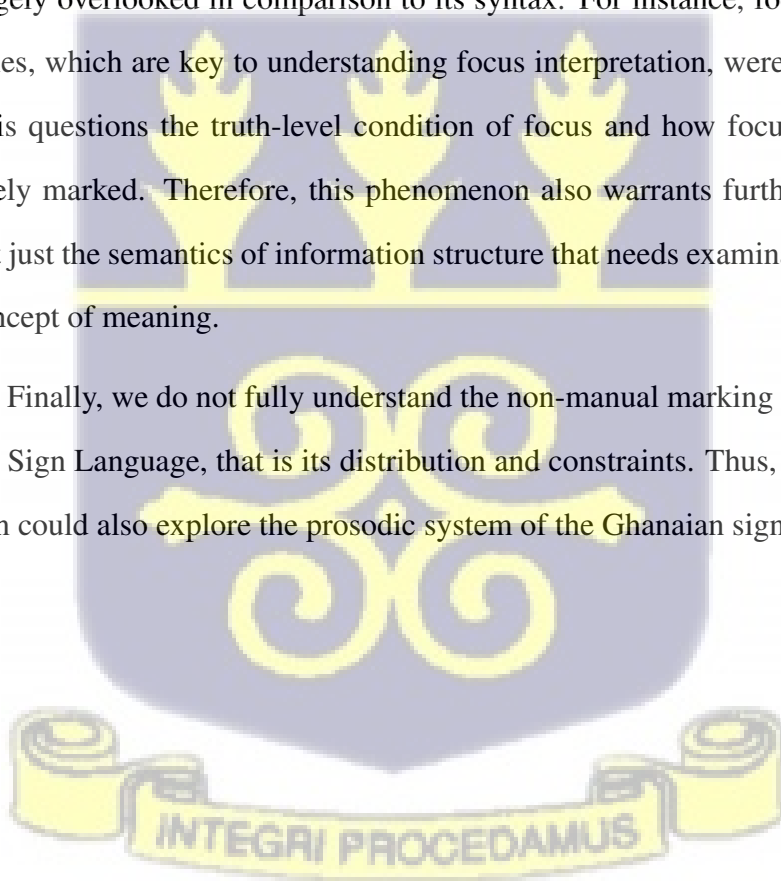
### 5.4 Further research

Clearly, it was not possible to explore all aspects of information structure within the limited timeframe, however, this research has shown that the syntax and semantics of the language need to be properly investigated.

For instance, due to lack of research, one cannot tell what the structure of a sentence looks like in the language. Thus, this has led to a research gap of whether focus is based-generated or moved, and if it moves, what direction does it move to. Moreover, although the study reveals that SVO might be the language's underlying word order, factors like the choice of verbs that can influence word order were not taken into consideration. This leads to another research idea that could go into the verbal system of the language. Another research could go into WH-constructions in Ghanaian Sign Language. In fact, a thorough investigation of the language's syntax is needed, right from phrase structures to complex structures.

The study of the semantics of information structure in the language has been largely overlooked in comparison to its syntax. For instance, focus-sensitive particles, which are key to understanding focus interpretation, were not investigated. This questions the truth-level condition of focus and how focus can be exhaustively marked. Therefore, this phenomenon also warrants further research. It is not just the semantics of information structure that needs examination, but also the concept of meaning.

Finally, we do not fully understand the non-manual marking system in Ghanaian Sign Language, that is its distribution and constraints. Thus, further investigation could also explore the prosodic system of the Ghanaian sign language.



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