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Wh-Question and Focus Construction in Bengali: Word Order Variation and Acquisition

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Dedicated

to

My Daughter

SYEDA TANZEEHA SAJIDA

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ABSTRACT

In this study we have tested Bengali adult native speakers' word order choices with respect to information structure and have compared their preferences to the Bengali native children acquirers. Sentential word order scrambling is an essential property of Bengali language. One of the most important aspects of multiple word order possibilities in this language is their use as an indicative to determine various construction types such as declaratives, wh-questions and focus. Even though there are not enough researches have been done so far in Bengali, several studies (e.g. Simpson & Bhattacharya 2000, Banerji 2003, Bayer 2004) highlighted the word order issue of this language in recent years. However, most of these studies are based on the native speaker's intuitions and judgments. It is not always necessary that the grammatically possible word orders and the people's word order choices should be the same. Therefore, our present study has been conducted on Bengali word order scrambling to comprehend the variety of positional preferences by the Bengali native adults and the acquisition of word order scrambling by Bengali native children.

The study shows that Bengali word order scrambling is available in various type of sentences like declaratives, wh-questions and focus constructions. The scrambling is not at all optional in this language; in contrast it works as a diagnostic to determine the information structure of the sentence. According to the findings of this research, Bengali adults' word order preferences for declarative sentences are not the same as wh-questions. Moreover, information structure in Bengali motivates the adults to choose different word orders for the focus constructions with respect to wh-questions. For example, large numbers of Bengali adults prefer to put the focus element after the verb while they do not prefer the same thing for wh-questions. However, preverbal base generated and preverbal scrambling focus elements are also prominent in the adult data. In fact, Bengali language allows in-situ contrastive focus (i.e. focus element is base generated) and scrambling contrastive focus (i.e. focus element is moved from its base position). Therefore, Bengali adults use both

of these techniques to produce contrastive focus. Since most of the adults prefer scrambling to produce contrastive focus constructions, we can say that the contrastive focus scrambling bear strong information packaging and therefore the constituents of a sentence are rearranged in different word order. The study also revealed that in almost all cases, Bengali children pick up the technique of correlating information structure and word order scrambling quickly and regarding word order choices, they behave in the same way as the adults. However most of the children in our experiment prefer in-situ contrastive focus. Considering all limitations of our experiment we can say that Bengali children acquire the technique of in-situ focus early in compare to the other way of constructing contrastive focus.

In this study, we have designed a set of experiments to test the correlation between the word order scrambling and the information structure. Since it is necessary to find out the factors behind this correlation, one experiment has been designed for the adults and the other has been designed for the children. The main objective of these experiments is to collect natural responses from the Bengali adults and the children. Even though two experiments are not entirely identical with each other, we only consider the conclusive data-values to get a relatively concrete result.

The present study is concluded with an assumption that the study should be conducted in future with a larger amount of data. As a result, it will be possible to get more convincing answer.

INTRODUCTION

The central aim of our study is to examine Bengali word order variation with a particular emphasis on matrix wh-questions and contrastive focus constructions. Bengali is a South Asian Indo-Arian language. As we have already done our experiments, we have found that declaratives and wh-questions prefer different word orders in Bengali. Moreover, contrastive focus constructions are derived with different information packaging from wh-questions which motivates both of them to choose different word orders from each other. In addition, the child-experiment has discovered that, in most of the cases, Bengali children acquire information structure and word order scrambling quickly and they choose word orders in the same way as the adults.

According to Banglapedia (2003), the national encyclopedia of Bangladesh, nearly 230 million people speak this language. Bengali speakers enjoy the liberty of using a variety of sentential word orders, which is also available in many other South-Asian languages. It seems that Bengali syntax offers additional choices for word ordering and native speakers of this language can choose any of them without any kind of syntactic and semantic restriction. However, the provision of such optionality is completely against the spirit of the economy principle (Chomsky 1995) as found in Minimalist Programme (MP). The minimalist framework assumes that the only purpose for syntactic movement is the checking of features. In contrast, if we accept the optionality in word orders we have to allow two or more structures which are equally interpretable. However, it is only possible if we modify economy principle by stating that those structures are originated from different sources. In fact, this is not also plausible in minimalist framework. As a result, the economy principle totally defies the optionality and tries to explain the presence of word order variations in a different way.

Miyagawa (1997) offers arguments against 'true optionality' regarding Japanese scrambling. According to him, it is obvious that different word orders should carry different version of syntactic and semantic interpretation. Adger (2003) also demonstrates that German subject scrambling, an 'apparently optional movement operation' even also hold pragmatic meaning differences. Inspired by such

arguments, we can pose an important question in our present study about the correlation between word order and interpretation that prevails among Bengali declaratives, wh-questions and focus constructions.

The present study has two parts. Both the parts (namely 'Part One' and 'Part Two') are a combination of spontaneous data collection and experiment. Part one consists of a data set of 25 adults and part two consists of a data set of 10 children. In course of our experiments we highlight on word order patterns since we need to find the correlation between information packaging and word order sequences with respect to different types of Bengali sentences.

Since our final step to investigation is to find the acquisition process of Bengali wh-questions and focus constructions by native Bengali children, we should explore their acquisition process according to the guidance of Bengali adults' preferences. Therefore, we separate our study into two parts. In the first part, we shall look into the word order choices of adult native Bengali speakers. The result of this examination will then be compared to Bengali children's word order choices. In the course of this outline, our motivation will be to know how the information structure of Bengali declaratives, wh-questions and contrastive focus constructions affect the position of subjects, objects, adjuncts and verbs. This will also help us to sketch out the least marked order in this language, the order which is used to disambiguate, and the most frequent order. In this study, we will assume that the role of information packaging is relevant to answering this question. The best way to find such facts is to collect relevant data from an authentic database like oral corpora. However, such a database is yet to be available in Bengali. Hence, we have collected primary data from native adults. In our present research, first we need to investigate the declarative word order preferences of Bengali adult speakers. The result of this will be compared to their word order choices of wh-questions and then to their focus construction choices.

Each part of this study consists of two chapters. The first chapter of Part A will work as the theoretical base for the language of the Bengali adult group. In this chapter,

we shall frame out the nature and properties of Bengali declaratives, wh-questions and contrastive focus constructions. These will help us to get a number of predictions and formulate the research questions for adult native speakers' research.

In the second chapter, we shall verify our predictions with natural data and find out facts related to it. For this, we need a well-designed framework for collecting spontaneous responses from Bengali native adults. The second chapter will also provide the description of this experimental design and the methodology for collecting data. In the same chapter, we shall begin to analyze the data. We also need to check the descriptive statistics of different components of our data set and illustrate our findings with the help of graphs and tables. Simultaneously, we shall discuss our findings and results in this chapter. In the discussion section, we shall test our predictions and get a concrete standpoint in their support. Finally, we shall draw our conclusions and offer links for further research.

Our second part consists of the acquisition process of wh-questions and focus constructions. We know that wh-questions and focus are two closely related issues in the study of sentential word order acquisition of natural languages. Several studies have found that children start acquiring the basic word order of a target language at a very early stage of their learning process and that they show significant responses from the very beginning of language acquisition (e.g. Avrutin and Brun 2001, Westergaard 2009). Such studies lead us to be curious about how children who are in the process of acquiring an extremely free word-order language (i.e. Bengali language) behave. In a vivid research study, Sugisaki (2005) attempted to provide such substantiation by describing children's knowledge of the structural constraint on the reversed VO order. However, the word-order pattern of Japanese is not identical with that of Bengali. Along with this difference, Bengali allows many more variations in word-order types. Even though the word order for wh-questions and focus sentences in Bengali are more dissimilar from Japanese, we can at least get some ideas from such study that generally children show sensitiveness towards syntactic structures. Are they equally sensitive to information structure also?

Unfortunately relevant literatures on Bengali language do not provide any conclusive finding in this regard so far. Therefore, there is a vast scope to investigate how Bengali children who ranged in age from 3 years to 3 years, 1 month old familiarize themselves with the information structure and the syntactic behavior of the wh-questions and focus in course of the basic word order acquisition process. As there is no corpus-based support available to answer this question, we need to depend on the field data to come to a conclusion. We shall divide this part also into two chapters. In the first chapter of this part, we shall provide theoretical information regarding word order acquisition process. This will help us to figure out a theoretical direction to investigate the status of child Bengali. In the second chapter, we shall present our data, compare them to the adults and shall discuss their potentiality.

In short, our present study is based on the data that have been collected from Bengali adults and the children. It will enable us to compare the children's data with the data produced by the adults. This comparison will help us to find out the preferable word order(s) for Bengali wh-questions and focus constructions.

PART ONE

WORD ORDER VARIATION IN BENGALI WH-QUESTIONS AND FOCUS CONSTRUCTIONS

CHAPTER ONE

THEORETICAL FRAMEWORK: WORD ORDER VARIATION

1.1 Introduction

Word order flexibility is a very common property for a large number of human languages. Languages like Bengali, in contrast to English, shows evidence of a great flexibility with respect to word order. However, this does not mean that any type of ordering is acceptable in this language. Bengali has its own system of nominal inflections (i.e. case markers tag with subjects, objects, etcetera, and specify their role in the sentential domain) and this inflectional property allows clausal elements to take different positions in a sentence without violating their syntactic identities. On the basis of this syntactic liberty, subject, object and adjunct positions with positional restrictions can be reordered in the Bengali language. This effect is referred to as "scrambling" and according to transformational viewpoint we can interpret it as the leftward movement of the arguments. Therefore, it is syntactically possible to treat Bengali as a scrambling language. We may also assume that this scrambling feature of Bengali influences not only Bengali declaratives but also its wh-questions and focus constructions. However, Bengali is also commonly classified as wh-in-situ (Bayer 2004), which raises an important query: how does this scrambling phenomenon interact with the base generated wh-elements as in-situ positions? Specifically, if scrambling is a natural stylistic choice (as argued in Ross 1967, Saito 1989), it should affect all sentence-types equally. In that case, different word orders will result due to free variations of a hypothetical base word order. On the other hand, if scrambling is motivated by information structure, then wh-questions and focus constructions should behave differently from declaratives in their preferred word orders.

1.2 Sentential Word Order: Declaratives, Wh-questions and Focus

Many languages prefer different word orders to build their necessary information structure out of declaratives, wh-questions and focused sentences. Since Bengali bears a relatively free word order patterns, it offers a generous field for investigating issues concerning word order variation. In this regard, we can consider the studies on Hindi and Urdu (Gurtu 1985 and Mahajan 1990) which recognize scrambling as a kind of movement. According to Mahajan (1990), scrambling involves a movement operation leading to a change in the hierarchical structure. However, in our present

study, we focus on the positional variations of syntactic elements. Therefore, hierarchical structures will not be in our central spotlight. Since our area of study is Bengali, we need to first observe the in-situ facts of this language. Consider the following examples:

(1) Declarative:	lok-ti chobi ank-chilo Man-the picture draw.3.PST.Prog "The man was drawing a picture"	SOV
(2) Focus	**lok-ti**[1] chobi ank-chilo **man-the** picture draw.3.PST.Prog **The man** was drawing a picture.	SOV
(3) Wh-question	ke chobi ankchilo? who picture draw.3.PST.Prog "Who was drawing a picture"	SOV

The above set of examples is taken from conversational Bengali and belongs to the same register of speech. All three sentences provide essentially similar syntactic content (i.e. the subjects, objects and verbs are identical with each other in all three sentences) in a matching word order context. Now the question is whether these similarities are commonly found in this language. In fact, this question is not easy to answer without sufficient empirical evidence. However, we might expect that Bengali declaratives, wh-questions and focus constructions follow the same word order sequence. The problem with this supposition is that Bengali shows a considerable amount of variation while selecting word orders for declaratives, wh-questions and focus constructions. We can have a look at the following sets of examples (4-6) where the subject can be in different positions in each of the three types: declaratives, wh-questions and focus.

[1] In this paper, we use bold face to indicate new information focus, small caps for contrastive focus.

(4) Declarative: *John* gatokal boi-ti kine-chilo S Adjunct O V
John yesterday book-the buy.3.PST
"John bought the book yesterday."

boi-ti *John* gatokal kine-chilo O S Adjunct V
book-the John yesterday buy.3.PST
"John bought the book yesterday."

boi-ti gatokal *John* kine-chilo O Adjunct S V
book-the yesterday John buy.3.PST
"John bought the book yesterday."

boi-ti gatokal kine-chilo *John* O Adjunct V S
book-the yesterday buy.3.PST John
"John bought the book yesterday."

We can find the subject 'John' in all possible positions in different sentences. Indeed, the subject can even occupy the post verbal position in a sentence. Is this equally true for wh-questions and focus constructions? We can consider the following two sets where subject wh-questions and contrastive subject focus constructions show parallel behaviour to the declarative set of subject scrambling:

(5) Focus: **John** gatokal boi-ti kine-chilo S Adjunct O V
John yesterday book-the buy.3.PST
"John bought the book yesterday."

boi-ti **John** gatokal kine-chilo O S Adjunct V
book-the John yesterday buy.3.PST
"John bought the book yesterday."

boi-ti gatokal **John** kine-chilo O Adjunct S V
book-the yesterday John buy.3.PST
"John bought the book yesterday."

	boi-ti gatokal kine-chilo **John** book-the yesterday buy.3.PST John "John bought the book yesterday."	O Adjunct V S
(6) Wh-questions:	*ke* gatokal boi-ti kine-chilo who yesterday book-the buy.3.PST "Who bought the book yesterday"	WhS Adjunct O V
	boi-ti *ke* gatokal kine-chilo book-the who yesterday buy.3.PST "Who bought the book yesterday"	O WhS Adjunct V
	boi-ti gatokal *ke* kine-chilo book-the yesterday who buy.3.PST "Who bought the book yesterday"	O Adjunct WhS V
	boi-ti gatokal kine-chilo *ke* book-the yesterday buy.3.PST who "Who bought the book yesterday"	O Adjunct V WhS

However, these two sets do not tell us which declarative word order choice corresponds to which wh-question and focus choice respectively. Moreover, the frequency of their use and their naturalness is still unclear to us. Since these sets of subject scrambling do not give us any clue about the different information structure of these word order variations, we can assume that all are possible according to grammaticality judgments of Bengali native speakers. But, are they all equally natural and suitable for any context? We might get the impression that all given examples are information-neutral. In that case, word order differences should not affect the meaning of each sentence. As a result, it would be possible to prove that scrambling is a stylistic property for the Bengali language which makes everything equally possible. However, the problem of this suspicious assumption is that it ignores the natural possibility of meaning differences and encourages the optionality. We have already argued at the beginning of our study that optionality

should be ruled out due to the necessity of syntactic economy. In addition, this assumption fails to account for the presence of topic, focus and information packaging. In contrast, these sets of examples raise three important issues: a) since all three types of Bengali sentences can choose different subject positions, it should be equally possible for other syntactic elements like objects, adjuncts etc; and therefore they all clearly show word order scrambling. However, we still do not know whether wh-questions and focus always take the same word order sequence like declaratives correspondingly, b) even though we have already seen a number of examples of word order scrambling, the relation between scrambling effects and information structure is still unclear, and c) we have no precise idea about how information packaging correlates wh-questions and focus in terms of word order variation. Therefore, we need to know more details about Bengali declaratives, wh-questions and focus.

1.3 Bengali Declaratives

Declarative sentences are used when a speaker wants to make a statement. Whether it is a bold statement or a simple fact, the sole purpose of a declarative sentence is to give information. We have already seen that the word order pattern of Bengali declaratives is flexible. For example, Subject-Object-Verb (SOV) and OSV orders are commonly available for a simple transitive sentence.

(7) a. SOV: John amgach-ti dekh-lo.
John-Nom mango tree the-Acc see-3.PST
'John saw the mango tree.'

b. OSV: amgach-ti Johnn dekh-lo.
mango tree the-Acc Johnn-Nom see-3.PST
'John saw the mango tree.'

In Bengali, syntactic elements generally do not appear to the right of the verb in the unmarked case (Ramchand 1998). However, marked discourse conditions as well as less frequent individual preferences illustrate that word-orders like SVO and OVS are not impossible or ungrammatical in Bengali. We can consider the following examples:

(8) a. SVO: John dekh-lo amgach-ti.
John-Nom see-3.PST mango tree the-Acc
'What John saw was the mango tree.'

b. OVS: amgach-ti dekh-lo John .
mango tree the-Acc see-3.PST John-Nom
'The person who saw the mango tree was John.'

The English gloss of the two examples of (8) tells us that SVO and OVS word orders can bear quite different and emphasized information and, as a result, they clearly contrast with their default counterparts. These contrastive examples indicate that information structure may have the possibility to motivate the word order choices of Bengali speakers. Moreover, it is possible to think that Bengali speakers use the technique of different word order sequences according to the requirement of information structure. Now we need to observe the role of information structure in different word order variations to get a clearer view about this assumption.

1.3.1 Background: Information structure

Information structure has a close connection with the discourse functions of a language (Prince 1981, Lambrecht 1986). Two informational structural descriptions of propositions, namely 'topic' and 'focus', are very prominent in this formal organization of linguistic expression. According to this organization, 'topic' is used to convey the aboutness of a linguistic expression and it helps the new information to be conveyed. On the other hand, 'focus' provides either new or contrastive information by emphasizing a syntactic domain of a sentence. In the alternative case, we can say that the sentential discourse is organized by information packaging devices, such as topic, focus etcetera.

We have already learnt that the topic of a sentence bears the aboutness phenomenon which can generally be identified as what the sentence is about (Prince 1981). Topic can occupy different positions in a sentence. By and large the subject of a sentence plays the role as the sentential topic (Partee 1992). For this reason, in the most common cases, the starting point of a sentence is treated as the preferred position for

the topichood (Dyakonova 2004). Focus, in contrast, provides marked instructions about the information structure of a sentence. Kiss (1998) determines the types of focus more exclusively by doing a major split into Informational and Identificational Focus. She argues that focus can either introduce new entities or can reintroduce already mentioned information by putting it exhaustively in contrast. In the upcoming subsections we shall present a few examples to find the contrast between information focus and identificational focus. Before doing this, we need to learn more about the topic, since it is also equally important to know the distinction between topic and focus in the context of the sentential information structure.

1.3.1.1 Topic test

One of the common ways to identify topic is to ask someone about something or any person. Before doing this, we have to have a clear idea about the landing site of topic which generally coincides with the grammatical subject of the sentence. For example, we may consider the following sentence:

(9) *John* read the book in the morning.

In this sentence, the grammatical subject *John* overlaps with the sentential topic. Even though always there is a possibility for coinciding the topic and the grammatical subject in a same position, in most languages it is quite feasible for the topic to take any other position in a sentence. Moreover, we should remember that topic is a semantic element whereas grammatical subject is a syntactic element. In the following example, Huddleston (1984: 59) shows:

(10) a. In *Queensland* one can swim in the sea all year round

b. Close tabs are being kept on all *the radical students*.

We can see that the noun or noun phrase that typically expresses the topic can take position at the beginning (example 9), the middle (example 10a), or even at the end of a sentence (example 10b). Now we can apply a simple test to Bengali native speakers to see what their judgment is about topic. We asked a native speaker of Bengali the following:

(11) John shambondhe bolun
John about tell.PRS.2
'Tell about John.'

In reply to this request, the native speaker described John in three sentences:

(12) i. *John* desher baire bash kore. S O V
John country (the) outside live.3.PRS
'John lives outside the country'

ii *she (John)* shamproti bari esheche. S O V
he (John) recently home come.3.PRS.Prf
'Recently, John has come home'

iii. agami aek masher jonno *she (John)* deshe thakbe Adjunct S O V
next one month for he (John) country in the stay.3.FUT
'He will stay in the country for the next one month'

According to these three sentences, we can see that sentential topic takes the left peripheral position twice. The sentential topic takes the leftmost argument position even in the third sentence of that example. Since the speaker described *John* in a neutral way and gave all new information about *John*, he had used a word order that was basically SOV. We may thus assume that declarative sentences with topics generally follow this SOV word order. However, a Bengali matrix declarative sentence with derived word order can also show distinct topic structure. A DOSV or IOSDOV sentence indicates that the initial NP that is DO and IO respectively is a topic in each case, since we have already seen that the topic prefers to take the higher position in a sentence. Conversely, a DOSIOV or SIOVDO sentence (13 (ii or iii)) can be considered as contrastively focused. However, we shall talk about contrastive focus later; here we put this example to remind us that topic and focus can be connected in many ways:

(13) i. John Lisa-ke Chobi ti dilo
John-NOM Lisa-DAT Picture-ACC the give.3.PST
S IO DO V
"John gave the picture to Lisa."

ii. *Chobi ti* John Lisa-ke dilo
Picture-ACC the John-NOM Lisa-DAT give.3.PST
DO S IO V
"As for the picture, John gave it to Lisa."

iii. John Lisa-ke dilo CHOBI TI
John-NOM Lisa-DAT give.3.PST Picture-ACC the
S IO V DO
"What John gave to Lisa was **the picture**."

These examples make us curious about the relation between the scrambling phenomenon and information structure of Bengali. They show us some significant differences in information packaging when Bengali declaratives take part in scrambling. We can assume that (13i) expresses the most neutral information status for that sentence. On the other hand, in the example (13ii), the object is topicalized and it carries extra emphasis for the information structure of that sentence. We argue that the topic of a sentence prefers to be located at the left peripheral area. Since the object *Chobi-ti* in the example (13ii) occupies the left peripheral area of the sentence, we can say that the object is topicalized. On the other hand, in (13iii), the object occupies the post-verbal position and gets focused. Subsequently, it adds some more information for that sentence. Therefore, we can say that there are different ways of expressing the apparently same propositional content in Bengali.

1.3.1.2 New Information Focus Test

In this subsection, we are going to execute a relevant test to discuss new information focus. We shall present contrastive focus briefly in the following section. New information focus correlates with the questioned position in the relevant wh-question. Thus, in both (14) and (15) below, *John* expresses the information focus that identifies the one who bought the book (the topic) as John.

(14) A. Do you know who bought the book?
B. (It was) **John** (who) bought the book.

(15) (In all occasions I'm the one who buys books, but this time it was) John (who) bought the book.

We can assume that generally people give new information and put focus on some of the new information-bearing elements when someone asks them a question. Therefore, a question-answer set can be a suitable test for getting new information

focus in Bengali. Here we again use the utterance of a native speaker of Bengali to see how a native person uses new information focus. As a part of the test, we asked the following questions to an adult male native Bengali speaker. Our questions and his answers are as follows:

(16) i. Q.	John gatokal ki poRechilo?	S Adjunct O V
	John yesterday what read.3.PST	
	'What did John read yesterday?'	
A.	John gatokal **chithi-ti** poRechilo.	S Adjunct O V
	John yesterday **letter the** read.3.PST	
	'John read **the letter** yesterday.'	
ii.Q.	Ke chithi-ti dekhechilo?	S O V
	who letter the see.3.PST	
	'Who saw the letter?'	
A.	**Mona** chithi-ti dekhechilo	S O V
	Mona letter the see.3.PST	
	'**Mona** saw the letter.'	

Here we can observe again that according to the native speaker judgment, the new information focus is placed to call attention to a specific element, and is arranged in SOV word order in each case. On the other hand, we should also keep in mind that the new information focus marking is not the only reason to call attention to a constituent. According to Gundel (1999), if people think that a particular constituent of their speech requires prominence, they can use contrastive focus to make that constituent noticeable. In this way, there is a common possibility to coincide the new information focus and the contrastive focus. Examples 17, 18 and 19 are adapted from Gundel (1999) where we can see this overlapping phenomenon:

(17) We have to get rid of some of these clothes. That COAT you're wearing I think we can give to the Salvation Army.

(18) A. Who made all this great food?
B. **Bill**/BILL made the CURRY.

(19). A. Which of these clothes do you think we should give to the Salvation Army?

B. That **Coat**/COAT you're wearing (I think we can give away).

According to these three examples, the topic of the example (17), COAT bears a contrastive focus. On the other hand, in example 18, the constituent *Bill* bears both types of focus. Example 19 illustrates the preposing of new information focus along with its contrastive nature. In this way, new information focus and contrastive focus can be coincided with each other. As a result, the sentential structure and positional status are affected in all cases. In an alternative way, we can say that both types of focus (new information focus and contrastive focus) influence the word order. We can realize this influence with respect to the neutral word order perception.

1.3.1.3 Default Word Order in Bengali

We can assume that the position of topic or focus in a sentence is applied and activated on the basis of a hypothetically neutral word order. However, we can draw an outline of this highly conceptual phenomenon and make a strong assumption about the neutral word order for Bengali. Indeed, it is impossible to determine such a word order that is absolutely neutral. Since any kind of utterance is always at least to some extent contextually motivated, we can say that the default word order is more general and has the ability to be applied in many different conversations. Else, the word order does not have any specific context, and the speaker uses this word order with all new information when he or she is motivated to utter sentences out of the blue. We have already seen that both the topic test and the new information focus test tell us that SOV prevails as a common possible preference in Bengali native speakers' intuition. To check this intuition, we can again figure out a test to know what people say neutrally in a given situation. In this test, we can introduce three different situations where the first one has a topic; the second one demands some new information and the third one requires all new information. We want to see what the native speaker in Bengali thinks about the word order in these specific situations:

(20A) Situation 1# The speaker is requested to say something about John

Speaker: John sharadin boi paRe. S Adjunct O V

John all day long book.pl read.3.PRS

'John read books all day long.'

Situation 2# The speaker is asked: what did john buy yesterday?

Speaker: John gatokal ekti boi kinechilo S Adjunct O V

John yesterday a book buy.3.PST

'John bought a book yesterday.'

Situation 3# The speaker is asked: what is going on?

Speaker: John anekkhon dhore boi poRche S Adjunct O V

John a long time for book-(the) read.3.PRS.Prog

'John has been reading a book for a long time.'

We can get SOV word order in all three types of situations. In contrast, we can also consider other possible word orders in Bengali like SVO and OSV to determine that SOV order is felicitous in various contexts where as other orders are not felicitous in all of them. First, we can try to apply OSV order in the context of example (20A) where someone is asked to tell something about John:

(20B) Speaker: *boi sharadin John paRe O Adjunct S V

Or, *sharadin boi John pare Adjunct O S V

Or, *boi John paRe sharadin O S V Adjunct

It is really interesting that OSV order cannot go with any of the above mention sentences and as a result all three sentences become ungrammatical. Even it does not work with different positions of adjunct. Therefore, we can understand that OSV cannot be the default word order in Bengali. Now we can try SVO order for the same context:

(20C) Speaker: ?John sharadin paRe boi S Adjunct V O_{FOC}

Or, ?sharadin John pare boi Adjunct S V O_{FOC}

Or, ?John paRe boi sharadin S V O_{FOC} Adjunct

Unlike OSV, the SVO order does not produce ungrammatical sentences. However, SVO order makes all three sentences object-focused. Therefore, we have got focused objects with this word order which is not required in this context. Moreover, the speaker is asked to tell about *John* not about the *boi* 'book'. So, SVO cannot even produce expected information structure for this context. According to these examples, we can say that other word orders except SOV cannot go with all contexts.

As a result we can assume that SOV has the highest possibility to be the default or the most general word order for Bengali. The native speakers of this language can use SOV order in different situations.

1.4 Bengali Focus Constructions

We have already experienced how focus is one of the most delicate issues in the study of grammar. Focus is represented in different ways in different languages. However, focus itself has different classifications according to its properties and appearance. We have already found two types of focus that we can also define as new information focus and contrastive focus. This second type of focus which is also known as contrastive focus expresses exhaustive identification and occupies the specifier of a functional projection (Kiss 1998). On the contrary, as we saw before, the new information focus conveys new information and involves no syntactic recording. Consider the following example (Kiss 1998):

(21) Identificational Focus: It was to JOHN that they lent the book. (Exhaustiveness)
Information Focus: They lent the book to **John**

From this example, we can again see that information focus is based on contextual new information for a certain linguistic expression. The following table 1.1 (Neeleman et al. 2009) will help us to get the idea about the interactions among the contrastive and non-contrastive topic and focus:

Table 1.1: The Interactive Relation between Topic and Focus

	Topic	**Focus**
Non-contrastive	aboutness topic [topic]	new information focus [focus]
Contrastive	contrastive topic [topic, contrast]	contrastive focus [focus, contrast]

The table shows an integrated relation between syntactic operations and information structure. We can observe that the information structure of a topic and a focus is determined with respect to syntactic interpretive feature [topic], [focus] and [contrast]. Moreover, [±contrast] (i.e. the presence and absence of contrast which is determined by information structure) establishes a composite relation between the topic and focus. Therefore, we can say that Bengali focus (e.g. new information focus and contrastive focus) is also identified whether it is contrastive or not. Since it is not yet decided whether Bengali has a designated place for its focused elements, we should also consider the positional contrast in focus. In Bengali, it is commonly available that we find focused element remain in the base position. So, along with new information focus, Bengali contrastive focus can take part in scrambling or remain in-situ. In the following set of examples, we get a simple wh-question (22a) at the beginning. A straightforward answer to (22a) is the normal word order sentence (22b). Since we get new information from this answer, we identify this as information focus. Now, we suppose that the answer that has been given is wrong and someone is asked to correct it. In this situation, we can get identificational or contrastive focus. In this way, (23a) contrasts with (22b) and identifies the correct proposition with different ordering. (23b) and (23c) also do the same thing. However, their positions of focused elements are different.

(22) a. John ki rakhlo? SOV
John what put.3.PST
'What did John put?'

b. John **boi-ti** rakhlo SOV (new information)
John book the put.3.PST
'John put the book'

(23) a. na, KALOMTI John rakhlo OSV (exhaustiveness with contrast)
no, pen the John put.3.PST (scrambling)
'No, John put the pen'

b. na, John rakhlo KALOMTI SVO (exhaustiveness with contrast)
no, John put.3.PST pen the (scrambling)

b. na, John KALOMTI rakhlo SOV (exhaustiveness with contrast)
no, John pen the put.3.PST (in-situ)

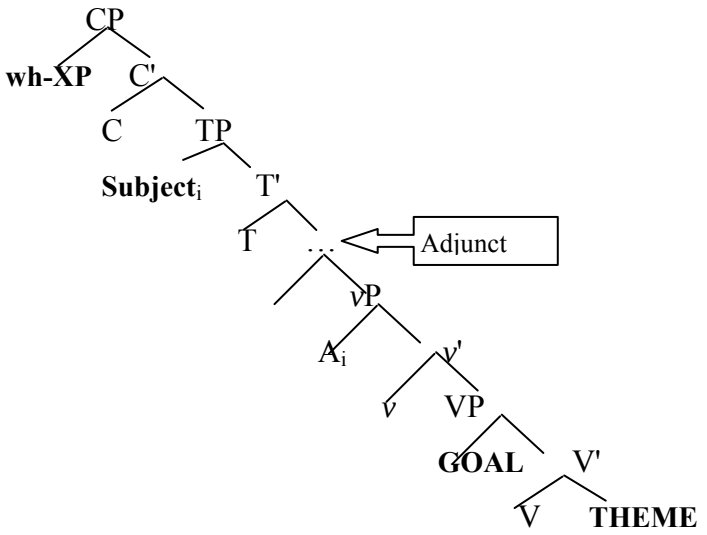
We have seen that contrastive focus also shows word order variation in Bengali. However, we do not know which position(s) are preferable for contrastive focus in this language. According to Kiss (1998) English contrastive focus is preposed into Spec-FP, whereas we do not even know yet if there is any designated position for contrastive focus interpretation for Bengali. Only relevant empirical evidence will be able to find any solution to this query.

1.5 Bengali Wh-questions

We know that wh-constructions typologically differ from other syntactic structures, as they involve potentially unbounded successive cyclic movement in many languages. Even though, our study will be limited within the positional contrasts of the elements, here we need to determine the in-situ nature of Bengali wh-questions. Therefore, we may try to build some hierarchical structure to understand the difference between the properties of wh-movement language and wh-in-ditu.

In English when wh-movement is occurred, the moved constituent lands outside of IP. We can say that the wh-XP is the moved interrogative element which can be an agent, theme, goal or any kind of adjunct. The following schematic tree diagram will help us to understand wh-movement:

(24)



As we know, wh-movement in English bears strong Q feature, the interrogative C looks like [C, clause-type: Q, *u*wh*]. The relevant example is stated below:

(25) [$_{CP}$ *what*[wh] *will*[present, ~~*u*clause-type~~: Q*]-$_C$[clause-type: Q, ~~*u*wh*~~]
[$_{TP}$ *Mona … see …*]]

Now we can see examples from other languages who also take part in wh-movement. The examples (source: http://norvin.dlp.mit.edu) are:

(26) Russian ***Čju*** on kupil mašinu?
whose he bought car
'Whose car did he buy?' (literally, "Whose did he buy car?")

Spanish ***Que*** compro Mona
what bought Mona
'What did Mona buy?'

French ***Qu'est***-ce qu'il a bu, le chat?
What-is-it that-he has drunk the cat
'What did the cat drink?'

In each case, the wh-element (bold italic) is moved and fronted. In contrast, wh-in situ carries weak [uwh] feature in C. As a result, there is no necessity for moving a wh-element from its base position. Here we can take a Bengali example and try to derive its feature checking process like in English:

(27)!! [$_{CP}$ kake[wh, uclause-type: Q]-$_{C}$[clause-type: Q, uwh] [$_{TP}$ John … valobashe …]]

O	S	V
Whom	John	love.3.PRS

'Whom does John love?'

However, the derivation gives us the wrong result, as Bengali needs no wh-movement at all to derive such a sentence. If we compare this wh-question to its declarative counterpart, we can see that OSV ordering, which seems to be derived by the movement of the wh-element is also available in Bengali declarative sentences.

(28) Mona-ke John valobashe

O	S	V
Mona-Acc	John-Nom	love.3.PRS

'John loves Mona'

Therefore in (27), we can assume that the wh-element has not been moved and stays as base generated. It might be possible to account for this fact according to LF-theory. LF-theory hypothesizes that the wh-phrase in a wh-in-situ language moves at LF, so the movement is not phonologically detected. Since our aim in this study is to find out the information structure properties and positional contrasts of different syntactic elements in S-structure, we do not have enough space to discuss LF-arguments.

At this point we should return to the Bengali language. The Bengali sentence in (27) is able to give us syntactic and semantic information regardless of the explanation of LF. There is no obligatory requirement that the wh-element move from its base position overtly or covertly. Moreover, if we compare the declarative sentence (28) with the corresponding wh-question, we find that no word order change is necessary in this case of Bengali. However, unlike this case, it is also possible to see that in some cases Bengali wh-questions can take different word orders from their declarative counterpart. Regardless of the solution to the question of wh-movement, it is clear that no wh-movement occurs at Bengali S-structure, the forms of which we can test on the surface.

However, other kinds of movement might be possible for this language. Scrambling, for example, does seem to affect Bengali wh-sentences. The following subsections will help us to understand the word order varieties for Bengali wh-constructions.

At the beginning of these sub-sections we would like to familiar with the wh-words in Bengali. The wh-pronouns are as follows:

Table 1.2: Wh-elements

Bengali	Gloss	Specification
Ke/ kake/kar	who/whom	Human
Ki	What	non-human
Kon	Which	Feature
Kakhon	When	Time
kivabe/ kaemon kore	How	Manner
kaeno/ ki jonno	why, what for	Reason
Kothay	Where	Place

1.5.1 Object wh-questions

Bengali object wh-questions take part in scrambling and as a result they can engage different positions in the sentence. Before we get into this scrambling, we need to recall our assumption that SOV is the basic word order for Bengali. Presumably, Bengali wh-expressions also follow this basic word order at least in the matrix clauses. Therefore, we can consider example (29) as the wh-base position in Bengali. On the basis of this, we can see how the wh-element in Bengali can occupy different positions.

(29) tumi kake dekhechile? S O V (Base word order)
you who.Acc. see.PST.2
'Whom did you see?'

(30) kake$_i$ tumi t_i dekhechile ? O S V
whom.Acc.you see. PST.2
'Whom did you see?'

(31) tumi t_i dekhechile kake$_i$? O V S
you see. PST.2 whom.Acc.
'Whom did you see?'

In (30), there might be a possibility to think that the wh-word moves from within VP to [Spec,CP] to check the [*u*wh] feature on it. However, no proof is so far available that Bengali has a strong [*u*wh*] that could force the wh-phrase to move to the front.

1.5.2 Subject wh-questions

In Bengali, the wh-subject can also occupy different positions in a sentence. We can find them in the initial position (32), the in-between position in the sentence as in (33) or they may appear in the final position like (34).

(32) ke barite eshechilo? S O V (Base word order)
who.Nom. house come. PST.3
'Who came to the house?'

(33) barite ke eshechilo? O S V
house who.Nom. come. PST.3
'Who came to the house?'

(34) barite eshechilo ke? O V S
house come. PST.3 who.Nom.
'Who came to the house?

1.5.3 Adjunct wh-questions

We can find Bengali adjunct wh-questions in the initial position (35), the in-between position in the sentence as in (36) and (37), or they may appear in the post verbal position (38).

(35) kakhon$_i$ tumi bari eshechile t_i? Adjunct S O V
when you home come. PST.2
'When did you come home?'

(36) tumi kakhon$_i$ bari eshechile t_i ? S Adjunct O V (Base word order)
you when home come. PST.2
'When did you come home?'

(37) tumi eshechile kakhon$_i$ barite t_i? S V Adjunct O
you come. PST.2 when home
When did you come home?'

(38) tumi barite eshechile kakhon? S O V Adjunct
you home come. PST.2 when
'When did you come home?'

Besides this, multiple wh-questions are also available in Bengali. However, multiple wh-questions are not included in our study; they will just help us to understand the range and area of word order scrambling in this language. Consider the glosses provided in the examples (39) and (40). We use wh-subject and wh-object in reverse order in these two sentences. As a result, we have found different information structure in (39) with compare to (40). In (39), sentential subject is known to the speaker and the status of the object is asked. In contrast, the example (40) does the opposite where the object is familiar to the speaker and (s)he asks about the sentential subject:

(39) ke ki pelo?
who.Nom. what.Acc. find. PST.3
'Who found what?'

(40) ki ke pelo?
what.Acc. who.Nom. fnd. PST.3
'What is found by whom?'

Even though these examples are not crucially relevant to our study, they tell us that Bengali wh-phrases take part in scrambling. In addition, they indicate that different word orders in Bengali have different information structures.

We have observed that this language allows rather various word orders based on verb final phenomenon in the formation of the surface level of matrix wh-questions. Moreover, in a few cases the wh-element is able to occupy any position in the sentence. The wh-element can even appear in the post-verbal position (we may recall the examples 31, 34, 37 and 38). We have so far found that, despite allowing scrambling in matrix wh-question ordering, Bengali prefers word orders which are based on SOV. Now the question is whether those variations which do not follow SOV word order are in same range as Bengali declaratives or not. We need empirical support to get a clear answer to this question. Simultaneously, it is also important to know whether these word order variants are information structure sensitive or these permutations

bear only stylistic value. From empirical evidence, we should look at the information structure in questions and the way it interacts with word order variations. More precisely, we can say what Engdahl (2006: 109) proposes, namely that 'the information packaging of questions, just like any utterances, reflects the information state of the speaker. Different contexts require different realizations of questions. By shifting the position of the wh-phrase, the speaker puts different questions up for discussion'.

We need to keep another thing in our mind. We have seen that wh-questions generally produce new information focus by seeking new information with the help of respective wh-elements. However, we know about another kind of focus. Now the question is: can wh-question also be in contrast? At this point we can recall our two previous examples in (41) and (42). These two examples tell us that wh-questions can play an indirect role to generate contrastive focus. Even though wh-questions are very naturally responsible for new information focus, they could also be in contrast. The following example clarifies this relation:

(41)	Q.	ke chobi-ti ank-te pare?	WhS O V
		who picture the draw-Inf can	
		'Who can draw the picture?'	
	A.	chobi-ti kebol JOHN ank-te pare.	O S V
		Picture the only JOHN draw.Inf can	
		'Only JOHN can draw the picture.	

In this example, the wh-word *ke* primarily bears new information focus. However, it is quite possible that the answer of *ke* in addition with the new information focus can produce contrastive focus. Therefore, we can say that wh-questions have an innate compatibility with the contrastive focus.

1.6 Prediction

During the discussion, we have raised a couple of questions regarding Bengali word order patterns which need empirical support to be answered. So far, we can observe

that Bengali language permits different grammatical word orders for declaratives, wh-questions and focus constructions as well. The examples which we have used by now do not give us a clear picture whether Bengali wh-questions and focus constructions follow the same word order as declaratives. In addition, syntactic interpretation of Bengali word order scrambling and its correlation with information packaging still needs empirical support to come to a conclusion. Before doing this, we can devise the main question for this research with the help of our observation and precise properties of Bengali syntax.

1.6.1 Main Question

The main questions presented in this study are the following:

1. What similarities and differences are available in word ordering patterns for Bengali declaratives, wh-questions and focus constructions?
2. How does Bengali word order scrambling correlate with its information packaging?

1.7 Conclusion

We shall search answers to our questions by doing experiment with Bengali native adults. In the next chapter, we are going to describe our research design and data treatment procedure. This will help us to get relevant data and move us one step forward to our findings.

CHAPTER TWO

RESEARCH DESIGN AND DATA STRUCTURE FOR ADULTS

The present study needs spontaneous and natural responses from Bengali native speakers to verify the observations and predictions that we have made in the previous chapter. Therefore, traditional questionnaire or semi-structured interview methods are not adequate to reveal the facts and resolve the problem. As a way out of this situation, we have designed an experiment for collecting natural data from Bengali adults. Our experiment has been developed on the basis of a definite null hypothesis.

2.1 The Null Hypothesis

Since our research question has already been devised, it will motivate us to formulate the null hypothesis for our present research experiment. The null hypothesis consists of two parts. We designate them as H_0A and H_0B:

H_0A: Bengali word order scrambling is purely stylistic and Bengali declaratives and wh-questions show the same word order variation.

If we successfully reject this hypothesis with the help of the result of our experiment, then we need to test the second part of our null hypothesis.

H_0B: Bengali word order scrambling is sensitive to information structure and wh-questions have the same information packaging as contrastive focus.

Since the first portion of H_0B is dependent on the rejection of H_0A, we need not to rule out this part again. In course of our experiment we should only try to prove the second portion of H_0B false that the wh-questions do not have the same information packaging as contrastive focus.

2.2 The Experiment

2.2.1 Participants

Participants were 25 Bengali native adult speakers aged between 18 years and 52 years. The male-female ratio of the participants was 13:12. All of the participants had the ability to read Bengali fluently. They were recruited from different work places in Dhaka, the capital of Bangladesh. All of them were permanent residents of Dhaka and they had been living there for at least five years. Therefore, despite having their own dialect, they had developed a common category of an urbanized

Bangladeshi city colloquial. This made our experiment free from any kind of undue dialectic interference. Along with this, it was also very important for this study to use such a sampling strategy which would allow us to cover the diversity of people's utterance. So, the obvious choice was a purposive sampling which was able to provide 'information-rich cases for in-depth study' (Patton, 1990) instead of probability sampling, which would be statistically representative among the population of interest (Green & Thorogood, 2004). To obtain the 'information-rich cases', both extreme and typical case sampling strategies were followed. In total, we tried to collect data from 30 adults. However, 5 among them were excluded afterwards due to their lack of competence of understanding and/or inadequate attentiveness to participate in this experiment. We visited the work places of selected participants to collect data from them. At the very beginning, we established a friendly relationship with the adult respondents for identifying their eligibility to participate in this study. Then we demonstrated the design of our experiment and asked them to participate in this study.

2.2.2 Materials and Design

Data collection instruments were developed based on the research questions. A draft design layout was developed for data collection before going to the field. However, this draft layout was finalized after the warm up trials of the adult participants.

To conduct this experiment, we introduced a specific kind of card game. We made two sets of cards where each set consisted of (4 x 5) cards. One syntactic element was written in each card, namely the case marked subject, case marked object, adjunct phrase and tensed verb. We have identified these two card-sets as C_1 and C_2 respectively. We have used C_1 for recording declaratives and wh-questions and C_2 for getting contrastive focus.

2.2.2.1 Declaratives

C_1, which was used to collect Bengali declarative sentences, consisted of four types of cards. Since we wanted to record Bengali sentences with subject, object, verb and adjunct, we had offered each participant the choice of four cards with one card of

each type in every single turn. Before doing this, we piled up cards according to their types; i.e. one column for all subject cards, one column for all object cards, etcetera. It is important to mention that we were careful about the meaningful information structure of sentences that participants were going to produce. Therefore, we maintained the vertical series of each column unaffected. In every single turn, participants were offered to pull the topmost card from each column. We only horizontally shuffled columns with each other and kept the vertical arrangement of each column unchanged. In this way, every participant could make one meaningful sentence with four types of syntactic elements in each turn. Another important thing to mention here is that we wrote syntactic elements like Subject/Object/Adjunct/Verb in the under leaf of cards. So, participants initially could not see which syntactic element was written there. It made the experiment free from any presupposed word order. Participants collected four cards from four different columns one by one, kept them in a random order and then turned those cards over to see what was written there. Then (s)he arranged those cards by him/herself and made a meaningful sentence. After finishing the first sentence, the participant went for the second one. In this way, the procedure of the experiment went on. The following example helps us to understand how a participant performed his or her task:

(1) Cards received by a participant:

rakhlo	John	Gacher niche	bag-ti

Sentence arranged by the participant:

John bag-ti gacher niche rakhlo.

We can see the whole process in the following diagram.

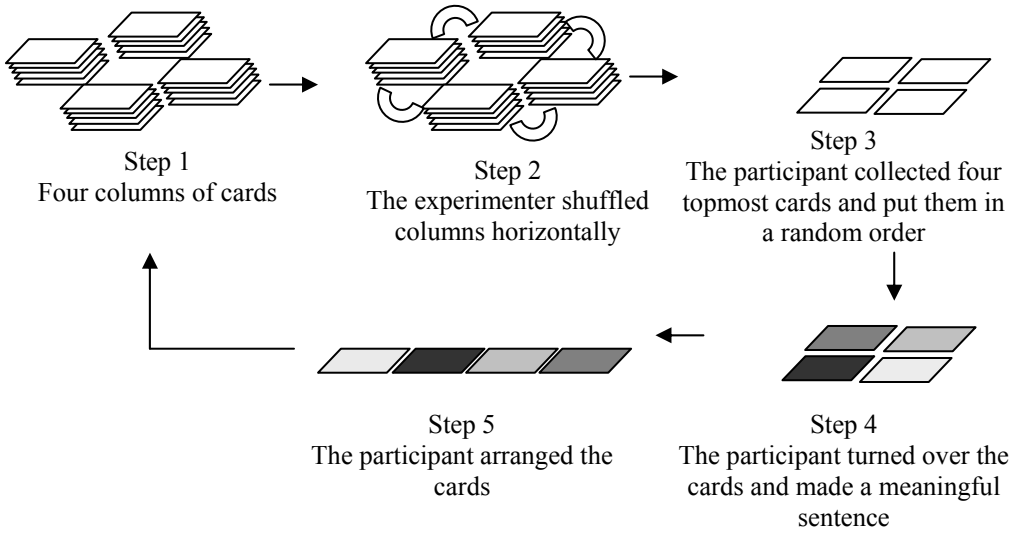


Figure 2.1: The Card Distribution Procedure for the Declaratives

2.2.2.2 Wh-questions

The collection of Bengali wh-questions was also done by using the C_1 card set. However, this time some changes were made to motivate the participant to ask questions. Therefore, we applied a trick. In each time after finishing the shuffle, the experimenter took a card first and then asked the participant to collect the rest of the cards. In this way, they missed one syntactic element every time and were able to get only three cards instead of four at a time. Naturally, it prompted them to ask questions, and they did so. We would like to mention here that we put some secret mark in every column and thus we were able to take different types of syntactic elements in each turn. For example, we might take the subject card in the first turn, the object card in the next turn, etcetra. This made the participant ask different types of wh-questions in every turn. We can see this process in the following diagram:

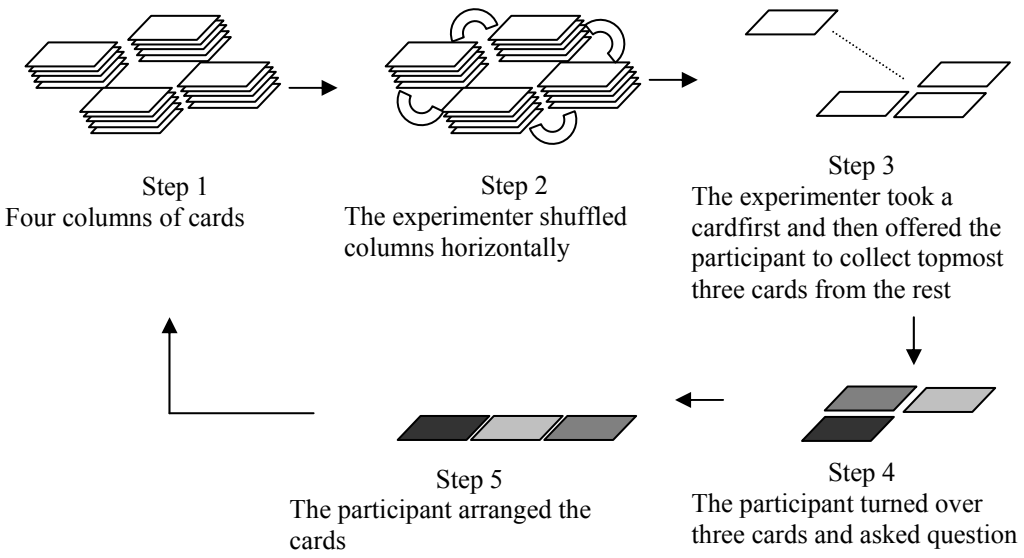


Figure 2.2: The Card Distribution Procedure for the Wh-questions

In this way the participant was motivated to ask *what-who-where* questions about different types of missing information. However, the production of the *why* question was also important for our experiment. Since *why*, as opposed to other wh-questions, requires extra syntactic elements to make its corresponding answer, the above-mentioned design is not so far capable of adapting the appropriate response from a participant. Therefore, we used a simple technique to collect *why* responses from participants by requesting them to ask *why* questions on the basis of each declarative sentence. For example, one participant might build a declarative sentence in his or her declarative session as follows:

(2) John gacher niche juta rakhlo
John tree-GEN under the shoe put.PST.3
'John put the shoe under the tree.'

At the time of his/her wh-question session, (s)he was requested to ask a *why* question with this sentence. As a result, (s)he could produce a sentence like:

(3) John kaeno gacher niche juta rakhlo?
John why tree-GEN under the shoe put.PST.3
'why did John put the shoe under the tree?'

In this way, we got his/her word order choice for a *why* question. We incorporated this technique with our design to get the word order choices for all types of wh-questions. All attempts provided four types of wh-questions: what-who-where-why. It is important to mention here that wh-word *which* questions were used during the warm-up period, as *which* questions were not included in the performing session of the experiment.

2.2.2.3 Focus Constructions

The process of collecting samples of Bengali focus constructions was almost the same as the collection process for declaratives. However, this time we used card set C_2 instead of card set C_1. In this session, C_2 was presented in front of participants and they were requested to make declarative sentences like before. In C_2, we had also (4 x 5) cards where one syntactic element was mismatched with the corresponding cards of C_1. Since the participant had already had the experience of C_1, (s)he expressed the natural reaction while getting wrong information from C_2. Therefore, (s)he tried to correct this sentence and put focus on a particular syntactic element. Now we can consider the following example:

(4) Cards received by a participant:

rakhlo	John	rastar pashe	bag-ti

However, in declarative session (s)he got the card | gacher niche | istead of the card | rastar pashe |

As (s)he got wrong information-card, (s)he corrected the information and arranged the senence like this:

John bag-ti rakhlo GACHER NICHE.

The following diagram will help us to understand this design:

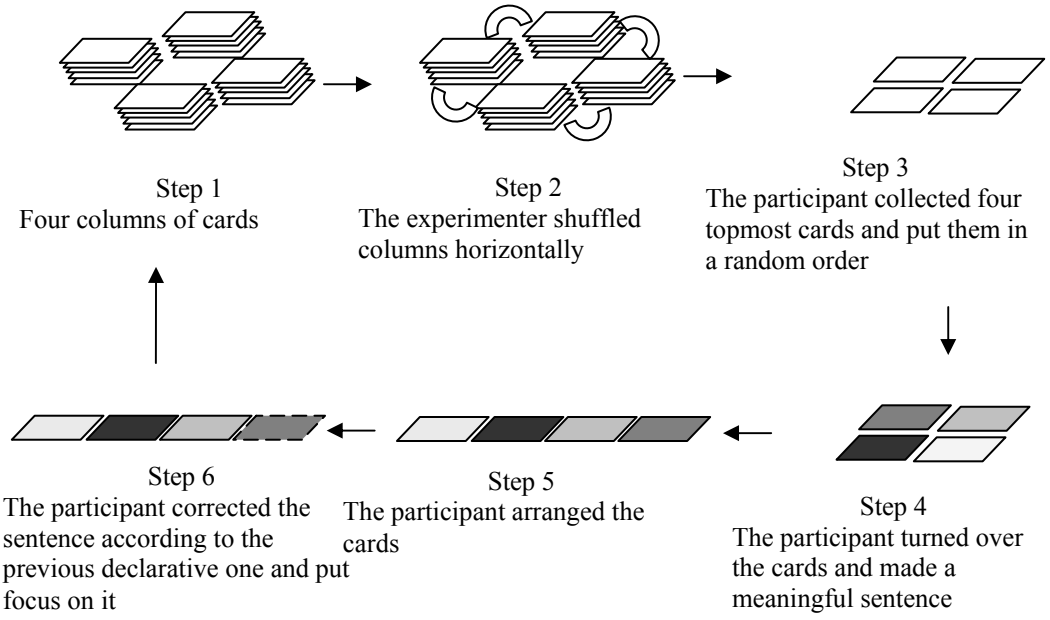


Figure 2.3: The Card Distribution Procedure for the Contrastive Focus

2.3 Procedure

Before implementing the above-mentioned design, three warm-up trials were carried out to introduce the participant to this sentence-making game in response to a prompt from the experimenter. We have already mentioned that all warm-up trials used *which* questions. At the start of each warm-up trial, the experimenter provided four syntactic elements of a sentence separately and asked the participant to make a grammatical declarative sentence with those elements. After finishing this declarative part, the experimenter changed the mode of the experiment. He again provided four syntactic elements but in this turn he took away the object element and asked the participant to make a wh-question by using *which*. If the participant did all of these steps successfully, the experimenter moved forward to the third level. This time the participant was again provided with four cards. However, in this time one syntactic element was distinct from the previous declarative turn as we have seen in the description of the main experiment. The participant built the sentence first. The experimenter then asked him/her to check the information of that sentence with the declarative one. He also requested him/her to correct the sentence if that did not match the previous one. The participant tried to correct the sentence by applying

contrastive focus on a particular element of it. The experimenter did this warm-up trial twice more with new sentences to make the participant quite familiar with this experiment. These made the participant ready for the test. During the test, if the participant failed to produce a response, the experimenter reminded him/her to take their time but did not repeat any of the prompts. All questions concerned transitive actions. This was to ensure parity between the argument wh-questions (what and who), which (for warm up trial), by their nature, require a direct object, and the adjunct wh-questions (how and why).

In the final experiment, the participants were tested in individual sessions lasting approximately 30 minutes each. Participants produced declaratives and focus constructions in the same session and wh-questions in a different session. The procedure was the same as described in the design and warm-up trials. The participants received written information on cards. They were instructed to make sentences in different rounds and produce their word order choices spontaneously. The experimental sessions were recorded on a digital voice recorder.

2.4 Data Treatment and Scoring

Limited-scale cyclical processes of data collection and data analysis have been adapted in this study. In the course of the experiment, necessary hand notes were taken. Along with this, a digital voice recorder was used as a back up to avoid the loss of any kind of data. During the fieldwork period each transcript was read at least two times to explore what type of observations arise in relation to the research questions. All the transcribed data and the field notes have then been translated into English from the local language of Bengali. It is also important to mention that scoreable responses included those in which all necessary syntactic elements were produced.

2.4.1 Annotation Schema and Data Coding

In order to study Bengali word order variation on the basis of our collected data, we developed an annotation schema to annotate the declarative, wh-questions and focus

constructions with relevant word order information. We annotated 100 declarative sentences, 150 wh-questions and 75 focus constructions for the designated five positions. The following table can give us a brief detail of these positions:

Table 2.1: Positional Description of Sentential Constituents

Positions	Description
Position 1	Initial position of a sentence
Position 2	Neither initial not preverbal position of a sentence
Position 3	Preverbal Position
Position 4	Position for the verb of a sentence
Position 5	Post-verbal position of a sentence

As we can see in the table, all positions are determined with respect to verb. According to our theoretical discussion, Bengali verbs remain base generated in matrix clause structure. Since we have seen that generally Bengali language prefers verb finality, a sentence with four syntactic elements should locate its verb in the position 4. As a result, the position 4 becomes the basis of the scrambling of other syntactic elements. We can say that all non-verbal elements in a Bengali sentence generally move around the verb. On the other hand, our theoretical findings also say that the SVO structure in matrix clause is only possible in highly marked word order situations. If any sentence requires a post-verbal position, the position 5 in that case is filled up. However, at least one preverbal position should be empty in such case. One more important thing is we have got only one post verbal position in our recorded data. It does not mean that the Bengali language only allows one syntactic element after the verb. As we do not have any sentence with more than one post-verbal element, it would be unnecessary to create more post-verbal positions. Therefore, we fix the position of the verb in the number 4 and one post-verbal element in the number 5 to get a simple look at our argument. We distribute other elements like subject, object and adjunct in the context of pre-verbal or post-verbal position. We may assume that each position can be filled up by any of the syntactic elements like case marked subject (S), case marked object (O), locative adjunct phrase (Loc) and verb

(V). In this study, we annotated these elements according to their bracketed abbreviations. For wh-questions and focus constructions, we specify subject, object and adjunct elements in more detail by 'WH' and 'FOC' prefixes where necessary (see example 6 and 7). Along with this, we used 'Wh' to designate the *why* element in the adjunct-why question (example 8). Now we can consider some examples and try to see their annotation:

(5) Robin rasta-r paS-e amgach-ti dekh-lo S Loc O V
Robin road side (the) mango tree the see-3.PST
'Robin saw the mango tree by the side of the road.'

(6) ke Rasta-r paS-e amgach-ti dekh-lo? WHS Loc O V
who Roadside(the) mango tree the see-3.PST
'Who did see the mango tree by the side of the road?'

(7) **ROBIN** amgach-ta dekh-lo rasta-r paS-e FOC**S** O V Loc
Robin mango tree the see-3.PST roadside (the)
'Robin saw the mango tree by the side of the road.'

(8) Lisa keno gach-er nich-e juta rakh-lo? S Wh Loc O V
Lisa why tree the under shoe (the) put-3.PST
'Why did Lisa put the shoe under the tree?'

In the process of positioning elements, there is a possibility that two 'neither initial not preverbal' elements (such as two adjuncts that can be positioned in between position 2 and position 3) can come together. In such case, we use (2') to designate the element which is closer to the preverbal position. We observe that we have five determined positions from which we can fill four positions at a time with four syntactic elements (we consider both the position 2 and position 2' in a 'neither initial not preverbal position' of a sentence). If we have a post-verbal element, in that case one preverbal position should be empty; in other cases we do not get any post-verbal element and the position 5 should be empty. As a result, we can use any four of the total positions at a time. Since Bengali allows any of the above mentioned non-verbal syntactic elements in each position, we can build a complete annotation schema for our data structure like this:

Word order Position = N_x N_x N_xVN_x

[where N = {empty, 1,2, 2', 3 and 5} and X = {S, O, Loc}]

This will work as the basic coding of our data. The following example shows how we can apply coding to our collected data.

(9) **ROBIN** amgach-ta dekh-lo rasta-r paS-e FOC**S** O V Loc
Robin mango tree the see-3.PST roadside (the)
''Robin saw the mango tree by the side of the road''
1_{FOCS} 3_O 4_V 5_{Loc}

We will follow this format to present our raw data. We will divide all data into three types of tables, namely declaratives, wh-questions and focus (see Appendix). These tables will help us to view the status of the participants' word order choices. In the declarative section, each participant produced four sentences. We can see that most of these sentences consistently choose the same word order. However, this does not mean that other sentences, which prefer different word order patterns, are ungrammatical. According to our judgment, they are also quite grammatical Bengali sentences; nevertheless their word order preferences are different..

2.5 Results and Discussion

Before starting the analysis of our raw data, we need to verify our two judgments that we have done in the theoretical discussion area. We have already assumed that Bengali is a verb final language. This does not mean that post-verbal elements are strictly prohibited in this language, but their frequency may be low. We have tested this assumption with our collected data. The result is in the table stated below:

Table 2.2: Preference for the final position of verb in different types of sentences by the Bengali adults

Types of Sentences	N	Final Position of Verb (%)	Non-final Position of Verb (%)
Declarative	100	97	3
Wh-questions	124	93.55	6.45
Focus	75	80	20

We can easily see from this table that all types of Bengali sentences mostly prefer verb finality. The table also shows that non-final position of the verb is quite possible; nevertheless, their percentage is lower than the verb final positions. The proportion of non-final verb position among declaratives, wh-questions and focus also indicates another interesting fact. The percentage of verb non-final wh-questions is higher than that of declaratives. In the same way, verb non-final focus construction frequency is higher than that of wh-questions. Since we already know that wh-questions and focus constructions bear a different information structure than declaratives, it is therefore quite possible to think that marked information structure has a close relation with post-verbal positions. We will account for this fact later on in our discussion. On the basis our data-support that the verb finality is effectively available in the Bengali language, we can also try to find the most common word order or as well the base word order for this language. The histogram as stated below tells us the basic word order in Bengali language:

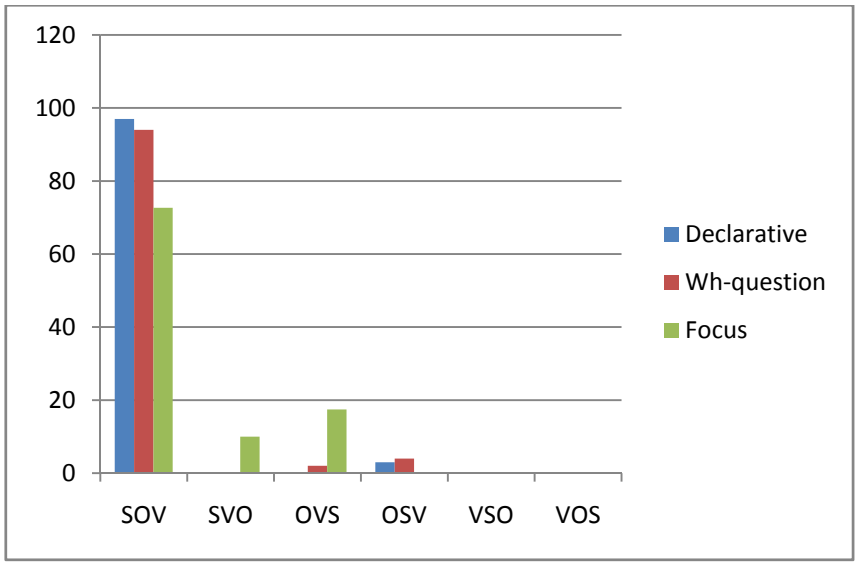


Figure 2.4: The word order preferences by Bengali adults

2.5.1 Bengali Declaratives and Wh-questions

As SOV is the basic word order for Bengali; we can compare the different positional preferences of sentential subjects, objects and adjuncts on the basis of this word

order. We start out by manipulating the raw data and trying to count the percentage of the positional choices of Bengali native speakers while they use declaratives and wh-questions. We arrange all data according to subjects, objects and adjuncts of different types of sentences.

Table 2.3: Constituents Positions of Declarative and Wh-Subject in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Declarative subject	97 (97/100)	3 (3/100)	0 (0/100)	0 (0/100)
Wh-subject	52 (13/25)	24 (6/25)	20 (5/25)	4 (1/25)

Table 2.3 shows that, in terms of declarative subject positions, the proportion that was scored as Position 1 was 97%, and Position 2 only 3%. The preverbal position 3 and the post-verbal position 5 do not get any kind of preference for declarative subject. This high frequency of subject positioning suggests that Bengali native adults almost always prefer to put the subject in the initial position of a sentence. Since our first null hypothesis argues that scrambling is a stylistic phenomenon for Bengali, so we can expect that Bengali wh-questions also show an identical level of high frequencies for the initial positioning of the subject. However, our data tells us a different story. Bengali adults choose the initial position for wh-subject most frequently. However, they also use position 3 and position 4 for this syntactic element. Despite this preference, in a few cases, post-verbal wh-subject is also available in their language. These statistics make our null hypothesis suspicious. If the adult native speakers of Bengali choose these positions only for any kind of stylistic purpose, the result of the table data should be random. We have already got the idea from our theoretical discussion area that wh-questions bear a different type of information packaging in comparison to declaratives. Along with this, declarative sentences can even take different word order structure while they put any of their particular syntactic elements in the topic position, or they are emphasized through new information focus.

The table also shows us that position 1 and position 2 are nicely preferable for wh-subject. On the other hand, declarative subjects almost exclusively prefer position 1. We know from our theoretical discussion that the declarative subject and topic naturally coincide in position 1 in Bengali. Here we can see that wh-subject can also take that position, and according to our data, this possibility scored a good number, too. Since wh-subjects mainly bear new information focus, as we have seen before, it is obvious that they do not take any topic position of a sentence. The very high frequency of declarative subject in position 1 tells us that there is a possibility of merging the declarative subject and the sentential topic in that position. Therefore, it looks like Bengali has a very high structural position for topic. Now the question is whether this is the only topic position for Bengali. Our observation tells us that even though Bengali data indicates a high topic place in position 1, that place is not necessarily the only position for topic at all. Without being a topic, wh-subject can take position 1 also, and in that case either there is no topic available in the sentence or the topic of the sentence is moved somewhere else. On the other hand, wh-subjects are evacuated from position 1 and go to position 2 or 3 when something else takes over that high topic position. It is important to notice that just because of wh-subject, it does not mean that it has to be right next to the verb. It just means that it is not in the topic position. As a result, from looking at the subject, Bengali does not have any single position for new information so far. All of these things indicate how the declarative subject mismatches with the wh-subject in terms of word order positioning. Table 2.3 also shows that declarative subjects prefer either position 1 or position 2 where as wh-subject could be in the position 1, position 2 and position 3. It raises the question whether there is at all any designated position for new information available in Bengali.

According to these different positionings of wh-subject, we can say so far that there is no fixed position for new information in Bengali. As we want to know the information structure sensitiveness of Bengali word order scrambling, we were always careful in the field to maintain the neutrality of data generation. While generating the declarative sentences, Bengali native speakers almost equally prefer one position for placing the subject of the sentence. From this, we might sketch an

assumption that Bengali native adults prefer sentence initial positions for subjects when they produce information neutral sentences. However, this assumption is ruled out since wh-subject can occupy any other positions. Therefore, we can assume that these differences of word order choices lead them to take part in scrambling to express the right information through their utterances. Now, we should test this assumption with their preference for object positions and adjunct positions. The following two tables show these facts:

Table 2.4: Constituents Positions of Declarative and Wh-Object in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Declarative object	1 (1/100)	15 (15/100)	84 (84/100)	0 (0/100)
Wh-object	0 (0/25)	4 (1/25)	96 (24/25)	0 (0/25)

Table 2.5: Constituents Positions of Declarative and Wh-Adjuncts in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Declarative adjunct	2 (2/100)	82 (82/100)	13 (13/100)	3 (3/100)
Wh-adjunct	16 (4/25)	72 (18/25)	12 (3/25)	0 (0/25)

Table 2.4 tells us again that Bengali natives have a preferred position for the sentential object. According to our data, the frequency of preferring position 3 for the object is 84 in every 100 sentences. This level of frequency is pretty identical with the declarative subject positioning preference. We can see that wh-objects also select position 3 at the highest rate. This raises a possibility that position 3 might be the right place for putting new information in Bengali. However, this possibility is also ruled out since wh-subjects do not show any kind of unconditional affinity for position 3. Therefore, position 3, despite getting strong support from the declarative object and wh-object, still fails to capture a designated position for the new information in Bengali. We can also consider the positions of adjuncts. If there was

a specific position for new information in Bengali, the adjunct should prefer that same position for new information also. However, the fact does not show us anything like this. According to table 2.5, both the declarative adjunct and wh-adjunct do not like to appear frequently in position 3. On the other hand, they like to take position 2 more frequently.

One important thing we should mention here is that we get two adjuncts commonly in the case of Bengali *why* questions. In our raw data, we coded their positions with 2 and 2'. So, position 2 in the table has been calculated with the total number of *why* and temporal locative wh-adverbs. According to this table, we can assume that position 2 is the most preferable for Bengali adjuncts. However, fixing the position of adjunct is always difficult in any language, as they do not take any argument position of the verb. Despite this fact, adjunct position in Bengali declaratives is pretty consistent and they mostly prefer position 2 for them. However, wh-adjunct is also possible in position 1 and position 3, as our data tells us. Therefore, we cannot find any consistent place where wh-subject, wh-object and wh-adjunct like to hang out for new information. In contrast, they have their different preferable positions in a sentence. We can say that word order changes in Bengali are subject to information structure; the left peripheral position is highly marked for topic and the rest of the positions are for new information, whereas these positions are chosen by the subject, object and adjunct distinctively.

As a matter of fact, Bengali declaratives clearly behave differently from wh-questions in the context of word order variation and subsequently they take part in scrambling. Therefore, we can understand that scrambling in Bengali is clearly motivated by different types of information phenomena, and it results due to different information structure. We can make a resolution that the scrambling that occurs in Bengali is not at all due to any kind of stylistic reason. They are significantly information structure-sensitive, and therefore they take part in scrambling to transmit the expected information. This inference automatically voids the possibility of selecting identical word orders for Bengali declaratives and wh-questions. If Bengali declaratives and wh-questions would show the same word

order variation, in that case there would be a chance to think of scrambling as stylistic, which is not true at all. As a result, we can clearly comprehend that scrambling is quite sensitive to information structure, which makes significant differences in word order variation between Bengali declaratives and wh-questions.

2.5.2 Wh-questions and Contrastive Focus Constructions

In this section, we need to test whether wh-questions and contrastive focus constructions behave identically in the context of sentential word order variation. Along with this, we also want to know how the information packaging influences these word order choices. First of all we need to compare wh-subject with focus subject to know whether there is a positional similarity available in between them. The following table shows us the relevant facts:

Table 2.6: Constituents Positions of Wh and Focus Subject in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Wh-subject	52 (13/25)	24 (6/25)	20 (5/25)	4 (1/25)
Focus-subject	40 (10/25)	32 (8/25)	0 (0/25)	28 (7/25)

According to this table, the mismatches between wh-subject and focus subject is clearly significant. Even though both of them mostly prefer position 1, the result of the rest of the positions is quite different. The choice for wh-subjects in the post-verbal position is almost negligible whereas focus subjects have a strong preference for that position. On the other hand, focus subject does not like Position 3 at all , the immediate preverbal position. In contrast, one-fifth portion of positional choices for wh-subject goes to that position. The preference for position 2 is consistently similar for both types of sentences. As we know, unlike contrastive focus, wh-questions motivate to generate new information. This different information packaging should play an important role to choose the preferred word order. Due to information packaging, focus subject does not prefer the most to be in the first position. If we add up the frequency of position 2 and position 5, it will be higher than position 2. Therefore, we can say that the left peripheral high topic position in Bengali fails to

attract the contrastive subject focus, and along with this, the focus subject mostly prefers to stay outside the *v*P. According to our data, it is not possible to locate a fixed position for contrastive subject focus, however we can at least see that it has a strong reservation for the immediate preverbal position and has least preference for the initial topic marked position 1.

Table 2.7: Constituents Positions of Wh and Focus Objects in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Wh-object	0 (0/25)	4 (1/25)	96 (24/25)	0 (0/25)
Focus-object	0 (0/25)	68 (17/25)	28 (7/25)	4 (1/25)

In context of contrastive object focus, our table shows us that both the wh-questions and contrastive focus constructions prefer preverbal positions in almost all cases. However, contrastive focus object, unlike wh-object, does not show any unconditional preference for position 3. In contrast, it prefers to take position 2. Therefore, we can assume that contrastive focus object also prefers to be evacuated from the domain of *v*P and to stay outside of it. The same thing happens with contrastive adjunct focus in Bengali. The following table shows us that contrastive adjunct in Bengali prefers the places which are in the outside of *v*P.

Table 2.8: Constituents Positions of Wh and Focus adjuncts in Adult Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Wh-adjunct	16 (4/25)	72 (18/25)	12 (3/25)	0 (0/25)
Focus-adjunct	52 (13/25)	28 (7/25)	8 (2/25)	12 (3/25)

The most significant part of this table is the positional preference for focus adjuncts. More that 50% of cases prefer position 1 for the focus adjunct. Since adjuncts get more liberty to move, presumably the information structure of contrastive focus motivates them more to take part in scrambling until they stay outside the *v*P.

All of these facts tell us that scrambling is a precisely information sensitive phenomenon in Bengali. Declaratives, wh-questions and focus constructions in Bengali prefer specific types of word orders to generate the required information. In this study, we have found that there is a group of mechanisms that work to control this word order scrambling and select the preferred word order in an appropriate context. We may point these mechanisms with the help of three discourse notions: topic, new information focus and contrastive information focus. In Bengali, the topic (i.e. aboutness topic) highly prefers the left periphery location and therefore, most of the time it attracts the declarative subject towards that position. However, new information focus that does not bear any topic property naturally feels no attraction to that position. Moreover, we have also seen that new information focus only occupies the left peripheral position whether there is no topic available in the sentence or not. Our data also shows that declarative object and adjunct also behave differently in comparison to the word order choices of wh-object and wh-adjunct. Even though we could not find any designated new information position in Bengali, all of these new information focus elements always try to avoid the topic position and take different positions in a sentence with the help of scrambling. So, in Bengali, scrambling is used as a tool to generate appropriate information structure. It also disproves that scrambling is a purely stylistic notion for Bengali language. In fact, scrambling is always information sensitive and plays the key role in information packaging. We have applied this finding to compare Bengali wh-questions and focus constructions. Our third mechanism, the contrastive focus, always likes to take place outside the *v*P, whereas new information focus does not have any reservation to stay outside the *v*P. Here, we have also found that the sentential structure of Bengali is extremely motivated by information packaging. We know that wh-questions basically bear new information. Nevertheless it can additionally bear contrastive information. As we have seen in our theoretical discussion, the main purpose of wh-questions is to seek new information. On the other hand, new information cannot work at all in contrastive focus construction since it is not possible to make contrast out of the blue. Our study shows that this deviation directly influences the word order in this language. The contrastive focus element in a sentence is strongly reluctant to stay in the *v*P domain. This mismatch between wh-questions and

contrastive focus constructions confirms that both of these types have different information packaging. Subsequently, both of our null hypotheses become void, and as a result we can establish the word order differences among declaratives, wh-questions and focus constructions. Along with this, we have found from this study that Bengali word order scrambling maintains an innate correlation with information packaging.

In the following part of our study, we shall use these findings to get the status of wh-questions and focus-construction acquisition in Bengali. We shall compare the data of the Bengali adult control group with the data of Bengali children. In the next section, our focus will be on constructing an experimental design for the children, and we will try to get the acquisition status of Bengali wh-questions and focus constructions by them.

PART TWO

ACQUISITION OF WH-QUESTIONS AND FOCUS CONSTRUCTIONS IN BENGALI

CHAPTER THREE

THEORETICAL FRAMEWORK: WORD ORDER ACQUISITION

3.1 Child Language Acquisition

Language acquisition is a process by which the language capability develops in a human. Several approaches to language acquisition are available in relation to children's acquisition of word order. According to generative models, children get the conception of major word order parameters from Universal Grammar (UG) at an early stage and at the same time they also acquire the language-specific rules along with necessary functional set of laws and structures (see Roeper 1999, 2007, Westergaard 2009). In contrast, constructivist works argue for the role of input. This approach asserts that the role of syntactic structure is not important at all in children's early production of language. As Tomasello (2006) demonstrates, cross-linguistically language acquisition is started with simple inputs like 'item-based chunks'. In course of time the acquirers (i.e. the children) start adapting the variety of different 'lexical item-based constructions' (Tomasello 2006). Besides these approaches, the micro-cue-based model of language acquisition (Westergaard 2009) argues that children are sensitive to micro-cues (e.g. clause types, wh-words, verb position, word order variations etcetera) and they are able to identify the minor syntactic distinctions in the input at an early age.

In the study of Bengali sentential word order, it is worthwhile to compare children's choices with that of adults. We need to see how syntactically they are motivated and carry micro-information. Moreover, children's knowledge of information packaging is equally important to understand the process of language acquisition. We have already learnt that the flexibility of sentential word order in Bengali offers adult native speakers of this language the choice of the suitable word order according to the guidance of information packaging. If the children have the same range of psycholinguistic understanding about information packaging, they should behave same as the adults. On the other hand, children can show different behavior in word order choices if their knowledge of the information structure of a sentence needs more maturity and development.

3.2 Word Order Acquisition

Several studies on child language have shown that word order acquisition of the target language starts at an early stage (Brown 1973, Radford 1990, Pinker 1994). Studies on French (Déprez & Pierce 1993), Dutch (Schaeffer 2000a), Russian (Avrutin & Brun 2001), German (Höhle et al. 2001) and Norwegian (Westergaard 2009) have at least one common finding that syntactic knowledge of word ordering patterns is acquired by the children at an early age and there is a sensitive relation between the meaning and the structure of the word orders in a target language. Precisely, we can say that the underlying information structure of the word order motivates the syntactic structures of an acquirer. As a result, the languages which allow word order scrambling are considerably influenced and directed by their required information structure. Since the word order of Bengali language is triggered by scrambling in many ways, the role of information structure should be also very prominent with respect to its word order acquisition.

We have already done an experiment regarding the word order choices of Bengali adults. So, now we need to compare our findings with that of Bengali children. It is important to mention here that some studies on the acquisition of free word order languages support the dominance of the default word order in child speech (Park 1970, Platzack 1996) while others point out an exclusive way of using word orders by the children which is considerably deviated from the adults (Brown 1973, Bowerman 1973, Snyder & Bar-Shalom 1998). We can explain this contrast in the light of the Bengali language. If we try to collect natural data from Bengali children, we may find two possibilities. Children may select sentential word orders similar to adult native Bengali speakers or they can behave differently from the adults. First, we can check a couple of natural intuitions of Bengali children's word order choices:

(1) Declarative: John sharadin boi-ti porlo — S Adjunct O V
John whole day book the read.3.PST
'John read the book for the whole day'

(2) Wh-question: John sharadin ki porlo — S Adjunct WhO V
John whole day what read.3.PST
'what did John read for the whole day?'

(3) Focus: John BOI-TI sharadin porlo S O Adunct V
John book the for the whole day read.3.PST
'As for the book, John read for the whole day'

Or,

sharadin John BOI-TI porlo Adjunct S O V
for the whole day John book the read.3.PST
'What John read for the whole day was the book'

According to these examples, we may expect that Bengali children and adults should select the similar word orders for declaratives and wh-questions. As we have seen in the first two examples (1 and 2), the word order of wh-question copy the declarative word order. In contrast, example 3 shows us that the focus construction at least this sentence prefers different word order from its declarative and wh-counterpart. By considering these examples we can say that Bengali word order acquisition may also vary with respect to different types of sentences. In the next chapter, we will verify this possibility by comparing our collected data to get the real picture.

Research on the acquisition of comparatively free word order languages can highlight the type of information which is available to children at the stage of multi-word production. Languages with word order variation use this property to generate different information packaging. By adapting such a property, children who are in the process of acquisition, start understanding the underlying linguistic structures and their variation. In course of this procedure, (s)he also needs to learn the knowledge of constraints on the use of these various orders. Several researchers (Hoekstra & Jordens 1994, Barbier 1993 and Schaeffer 2000a) have argued that children initiate their acquisition process with syntax only. Schaeffer's (2000a) approach argues that a discourse-related feature – 'specificity' is responsible for scrambling in Dutch. In her study, she has suggested that, due to the absence of the pragmatic concept of 'non-shared knowledge', young Dutch children fail to mark specificity on the direct object DP correctly. As a result, the specificity feature is not vividly specified in Dutch children's grammar. Schaeffer points the inconsistent scrambling features in child Dutch due to this reason.

It is possible to incorporate Schaeffer's findings with Bengali child language if our child study will tell us that Bengali children are more sensitive to the syntax of word order choices than corresponding underlying information packaging. In this way, we will be able to get support from Schaeffer's study. However, Avrutin & Brun (2001), in their experiment on Russian children, argue against Schaeffer's study and discover that even children under 2 years of age are quite capable of determining the pragmatic referentiality feature correctly in Russian. According to the observation of Avrutin & Brun, this quality is highly naturalistic in child Russian. Another more recent study on Norwegian children (Wetergaard 2009) confirms within the model of micro-cues that the children show early sensitivity to patterns of information structure. She points that children pick up syntactic and information structure related micro-cues very quickly at their early age and from that time they are capable to combine their syntax with relevant information structure. These assumptions raise an alternative possibility for our child study. Here we can recall the findings of our adult study that scrambling is quite sensitive to information packaging in Bengali and wh-questions and focus constructions have their own way to express necessary information structure by selecting suitable word orders. In our previous section, we have also seen (example 1 to 3) that Bengali native children's word order intuitions are not radically dissimilar from the adults. In fact, the children only behave a little differently when they are attempted for contrastive focus constructions. With respect to declaratives and wh-questions, Bengali children may show adult-like behavior. We should try to get the actual result from our collected field data. Our findings will get support from Avrutin & Brun and Westergaard if we find Bengali children consistently sensitive to the information packaging of Bengali word order choices.

3.3 The acquisition of scrambling

The acquisition of scrambling is closely connected with the acquisition of information structure and at this point our aim is to determine how these two things correlate each other. We have already seen two possible consequences of Bengali

word order acquisition: either Bengali children become sensitive enough to information structure at the age of 3 or they can only concentrate on the syntactic properties at that age.

Schaeffer (2000a, 2000b) believes that object scrambling in Dutch is motivated by a specificity feature. According to her, specificity is a nominal expression which is "understood to be referential if it has a "fixed referent" in the (model of the) world, meaning that it can be identified by the speaker and/or by one of the people whose propositional attitudes are being reported" (Schaeffer 2000a: 24). She argues that [+specific] objects undergo scrambling whereas [-specific] objects do not show any scrambling property. She also predicts that children at their early stage of acquisition use the skill of scrambling optionally since their concept of specificity is not correlated with scrambling at that time. We can observe the results in the following set of examples (Schaffer 2000a):

(4) a. Dat Marieke **een (bepaald/zeker) boek** gisteren gekocht heeft
that Marieke a certain book yesterday bought has
'That Marieke bought a certain book yesterday'

b. Dat Marieke gisteren **een (of ander) boek** gekocht heeft
that Marieke yesterday a/one or other book bought has
'That Marieke bought some book or other yesterday'

In this study, Schaeffer detects two developmental stages in scrambling acquisition which we can define as the one-to-two years phase and the two-to-three years phase. At the first phase, she observes that the word order scrambling demonstrated by the children is quite optional. On the other hand, from the second phase onwards the children show 'adult-like' behavior, and they can scramble the specific object (over negation) obligatorily. Her central claim is that the Dutch children use scrambling optionally due to their inadequate ability of marking the specificity feature. She also claims that such a phenomenon depends on the acquisition of concept of 'Non-Shared Knowledge' (see Roksolana Mykhaylyk and Heejeong Ko. 2008). She

explains that young children cannot distinguish the differences between discourse related and non-discourse-related object DPs due to their insufficient knowledge of this specific pragmatic principle. As a result, the object marking becomes inconsistent in child language which also makes the syntactic scrambling irregular.

However, in our study, all of our participants are around three years old. According to Schaeffer's observation, their word order scrambling ability should be adult-like. Since we do not have any participant who is aged between 1 and 2 years, it is not possible for us to construct an idea about their optionality of word order scrambling at that period of age. Another important difference with Schaeffer's study is that we need to investigate Bengali word order scrambling in a general context. In contrast, Schaeffer highlighted the specificity feature in child Dutch. Therefore, we do not think we can apply the complete result of Schaeffer's study on child Bengali. However, we may concentrate on a part of her study, namely the non-shared knowledge phenomenon (2000a). If we are able to prove that the detail knowledge of information packaging in Bengali is 'non-shared' between the adults and the children even at their age of three, in that case there will be good point to say that the child Bengali is different from adult language with respect to word order scrambling. As a result, it will be possible to think that, due to this 'non-shared' knowledge, Bengali children take more time to acquire high level information packaging like focus constructions and adjunct positions selection. On the other hand, our study may also support Avrutin and Brun (2001) and Westergaard (2009) as well if we find that children behave like adults while selecting word orders for different types of Bengali sentences.

Avrutin and Brun (2001) confronted Schaeffer's (2000a, 2000b) claim about underspecification of specificity in child grammar. They define 'specificity' and 'non-specificity' in their study as: "an intuitive pre-theoretical sense" and describe it as: "specific expression denotes an individual already mentioned in the conversation and, therefore, familiar ("old") with respect to a given discourse" (Avrutin and Brun 2001:70). They interpret preverbal elements of Russian as specific and postverbal as non-specific. We may consider their (Avrutin and Brun 2001) following examples:

(5) a. **Mal'čik** činit igrušku.
(the) boy-NOM is-fixing (a/some)toy-ACC
'The boy is fixing a toy.'
b. **Igrušku** činit mal'čik.
(the)toy-ACC is-fixing (a-some)boy-NOM
'A boy is fixing the toy.'

Avrutin and Brun (2001) in their study, try to investigate the knowledge of young Russian children about the correlation between word order and specificity. On the other hand Westergaard (2009) argues that the children are sensitive to micro-cues in the input. She also argues that the children are equally sensitive to information structure at an early stage and therefore it is quite possible that they acquire the same grammar as the adults. Despite these similarities, she observes that sometimes the children produce non-target-consistent structure. According to Westergaard, these things happen as the children account for in terms of economy principles in acquisition. Now we should be back in our study. If we find the children's word order preferences for different types of sentences are matched with the adults' choices to all extent, we may have that chance to incorporate the result of the work of Avrutin and Brun (2001) and Westergaard (2009) with our study. Now, we need to manipulate our field data to know which of the above mentioned studies is closer to the status of child Bengali.

3.4 Consequences for acquisition

Now, on the basis of the discussion of previous works on word order acquisition we can make the following predictions:

The first, most obvious prediction is that we expect the SOV order is predominant in Bengali word order acquisition. Along with this we imagine that children start with the basic structures (Hyams 1987, Platzack 1996), i.e. SOV.

The second prediction would be that Bengali children are quite sensitive to information structure. Therefore, they can quickly pick up the techniques of

scrambling and they use it according to the necessity of the information structure.

In our present study, we examine the development of the relationship between information structures (topic, focus, contrast) and corresponding formal devices. Among the various means which are typically used to encode information structure, priority will be given to the study of word order. The questions addressed in this domain include the following:

- Do Bengali children correlate the information packaging with the sentential word order scrambling in the same extent as Bengali adults?

In the following chapter, we shall build an experimental design and test how Bengali children behave in the context of scrambling.

CHAPTER FOUR

RESEARCH DESIGN AND DATA STRUCTURE FOR CHILDREN

4.1 The Null Hypothesis

We have already disproved two null hypotheses in the study of word order choices by Bengali adults. At this point, we again make a new null hypothesis to get the result of our study on child Bengali. We can formulate the third null hypothesis as follows:

H_0C: Bengali children do not acquire sufficient knowledge of information packaging in any kind of word order scrambling even at the age of three, and their word order choices are completely optional, which is highly contrastive to Bengali adults

Our aim is to reject this hypothesis with relevant empirical evidence. Therefore, in the following sections we shall design an experiment and compare its results with the result of our adult participants.

4.2 The Experiment

4.2.1 Participants

Participants were 10 monolingual Bengali-speaking children aged between 3and 3;1. They were recruited from two day care centers in Dhaka, Bangladesh. In total, 17 children were tested, of whom 7 were subsequently excluded due to their lack of competence to participate in this experiment. The following reasons accounted for this exclusion: Children who failed to ask at least one question during the warm up period (3 children, all of whom attempted to answer rather than ask questions), failed to produce at least five correctly-formed (making grammatical sentences with Subject, object and locations) wh-questions over the course of the study (2 children), or failed to complete the study due to lack of attentiveness (2 children).

4.2.2 Materials

In this experiment, a toy robot, a toy donkey and a remote controlled CD player were used in combination to provide responses to the children's questions. The sentential orders of the answers are presented in randomly different sequences to allow for counterbalancing for question order. Four colourful pictures (each picture contained a single sequence and action) were used to create the situation about

which questions were to be asked. A small piece of cardboard was used to hide characters from the children where necessary.

4.2.3 Design

The experiment was conducted in three rounds. In the first round, the experimenter motivated each participant to describe the actions in the pictures. Each participant then produced declarative sentences according to the guideline of four pictures respectively. In the second round, the participants asked questions with four types of wh-words: what-who-where-why. It should be mentioned here that we used the wh-word *which* in the warm-up period of our child study. So, we did not include *which* questions in the performing session of the experiment. After completing Bengali wh-questions, we started our third round of this experiment. At this point we tested the children with Bengali focus constructions. In this session, a wrong and silly statement was presented about the pictures which they had already viewed. As a natural reaction, each participant spontaneously corrected the wrong statements by applying focus on a particular element.

4.2.4 Procedure

Before describing the procedure, we need to admit that the children experiment was not the same as the adult experiment. In our first experiment (the adult one), we used word-cards and asked the participants to make sentences with them. Since our aim was to create a context free situation for our adult participants, we did not provide any pictures for them. We can understand that a complete picture might have the possibility to be more context-bound, and it could also have extra pragmatic cues for the participants. First, we collected our adult data and then we tried to apply the same test to our children participants. Unfortunately, the children participants were not capable of producing sentences with the word-cards that we used for the adults. We also tried to provide the relevant picture with each word-card to help the children understand the whole thing. However, this process did not work out successfully. As we had collected the adult data by this time and we did not have enough time to arrange a new design for the adults again, we built a slightly different experiment by using pictures instead of word-cards for the children. We

would like to mention here that we are aware of the consequences of having two different experiments for a single study. Since we had to conduct two different experiments, the results are not as reliable as we would have got from using the same experiment. Therefore, there will be a chance of some odd data influencing our results. As a solution to this unintentional problem, we should mainly consider the large proportional differences (at least more than 10%) between the adult and child data. Moreover, we should always keep our eyes on the naturalness of the data structure which will prevent us from digging up any wrong findings. With these things in mind, we now try to describe the procedure of the children experiment.

First, we frame out the key components of the experiment procedure and then illustrate them with necessary examples. We had three rounds in this experiment. The three rounds, each of which was presented on a different session on one of three consecutive days (with the two warm-up trials presented immediately before the first test session on Day 1). We started the experiment by introducing the pictures to the child participants. Simultaneously, we were making them familiar with the characters in the pictures (the pictures are below), which all were easily able to do. The experimenter took a picture and asked a participant to tell him what was in the picture. Participants described the pictures by uttering declarative sentences. In the second round, the experimenter introduced each participant to the 'talking robot' toy, and explained that the robot would speak only to answer questions which the child had put to him. The experimenter explained that he would help the child, by telling him/her what (s)he should ask.

Picture – 1 Picture – 2 Picture - 3 Picture - 4 Picture – 5

Figure 4.1: The Pictures which We Used to Collect Data from the Children

Two warm-up trials were used to introduce the child to the game of asking the robot questions about Picture-5 (the rat and the old man) in response to a prompt from the experimenter. All warm-up trials used *which* questions. At the start of each warm-up trial, the experimenter placed the picture (Picture-5) behind a cardboard screen, out of the view of the child. The experimenter then performed the relevant action behind the screen and said, "The rat took one of the chocolate buttons [or, one of the colours] from the shirt of grandpa. Let's ask the robot: /which button did the rat take from the shirt? / Can you ask this? Say it after me 'which button did the rat take from the shirt?' and again 'which button did the rat take from the shirt? '. In the majority of cases the child produced the appropriate wh-question. We found three different word orders for this question. The questions are listed below:

(1) a. dadu-r jama theke idur kon botam-ti nilo
grandpa shirt from (the) rat (the) which botton the take.3.PST
'Which botton did the rat take from the shirt of Grandpa?'
Adjunct S WhO V

b. idur kon botam-ti dadu-r jama theke nilo
rat (the) which botton the grandpa shirt from (the) take. 3.PST
'Which botton did the rat take from the shirt of Grandpa?'
S WhO Adjunct V

c. kon botam-ti dadu-r jama theke idur nilo
grandpa shirt from (the) rat (the) which botton the take. 3.PST
'Which botton did the rat take from the shirt of Grandpa?'
WhO Adjunct S V

These different word orders will inspire us to think about the acquisition of scrambling in Bengali. The experimenter then operated the CD player, in order to have the robot produce an appropriate response (e.g. the rat took the last chocolate button from the shirt), which the experimenter and/or the child then enacted with the characters of the pictures. This made the participant ready for the test. During the test, the experimenter selected the relevant character(s) as necessary, placed them behind a screen and, out of view of the child, performed the relevant action (where appropriate) and tempted the participant to ask questions. Participants got candies as a prize after completing each successful question. In the course of the experiment, if

a child failed to produce a response, the experimenter reminded him/her to ask the robot but did not repeat any of the prompts.

For the third round of the experiment, the robot was replaced with a toy donkey. The experimenter introduced the foolish donkey and demonstrated to each participant to ask questions like in the previous round. He also explained to the participants that they should correct the foolish donkey if it would produce wrong answers. The experimenter displayed the pictures one by one and simultaneously presented relevant but wrong statements in a recorded donkey voice with the help of the CD player. For example, the experimenter showed Picture-2 and asked the donkey to say what was in the picture. The donkey replied foolishly and described the picture as follows:

(2) sheal ar kumir jomi-te football khel-ch S Loc O V
(the) fox and (the) crocodile field in the football (the) play-3.PRS Prog
'The fox and the crocodile are playing football in the field.'

Since the answer was wrong, the child participant reacted naturally and corrected the information as stated below:

(3) sheal ar kumir jomi-te LANGOL tan-ch S Loc **O** V
(the) fox and (the) crocodile field in the plough (the) pull-PRS Prog.3
'What the fox and the crocodile do is pulling the plough in the field.'

In this way, the participant corrected the statement by putting focus on a particular element of that respective sentence. Presumably, there was a chance for a child to be motivated by the word order of the donkey and he or she could just copy that word order while putting focus on it. To avoid this situation, we selected the word orders for donkey in random.

4.3 Results and Discussion

In our adult study, we have found that Bengali is a verb final language. Bengali adults mostly prefer to put the verb in the final position of a sentence. However, we have also seen in the adult study that the percentage of verb non-final wh-questions is 3.45% higher than that of declaratives. In the same way, the frequency of the verb

non-final focus construction is 13.55% higher than that of wh-questions. We may recall the adult verb-finality table again as Table 4.1:

Table 4.1: Preference for the final position of verb in different types of sentences by the Bengali adults

Types of Sentences	N	Final Position of Verb (%)	Non-final Position of Verb (%)
Declarative	100	97	3
Wh-questions	124	93.55	6.45
Focus	75	80	20

Now we want see what the Bengali children prefer. Have they also a preference for the verb finality like the adults? Alternately, they might make different choices. We have tested this assumption with our collected children data. The result is in the table below:

Table 4.2: Preference for the final position of verb in different types of sentences by the Bengali children

Types of Sentences	Final Position of Verb (%)	Non-final Position of Verb (%)
Declarative	95 (38/40)	5 (2/40)
Wh-questions	70 (35/50)	30 (15/50)
Focus	83.78 (31/37)	16.22 (6/37)

We can easily compare these two tables and see that even the children also prefer verb finality for all types of Bengali sentences in most of the cases. However, both the groups behave same in the context of declarative sentences; children do not choose verb finality as adults do for the other types of sentences. As for wh-questions, Bengali children prefer non-final verb positions in 30% of cases while the adult percentage for that position is very low (6.45%). If we try to investigate the reason for this, we will see that most of the wh-non-final verb positions in the child data are occupied by the wh-adjunct *why* question (60% (12/20) of total wh-non-

final verb positions). According to our adult study, we have found that Bengali adjuncts do not have any designated position in a sentence and they get more liberty for sentential positional preference than others. Therefore in the context of wh-questions, Bengali children might prefer post-verbal positions for the wh-word *why*. In other cases, they also prefer verb finality like Bengali adults. The following examples will help us to understand this fact:

(4) ke kolar gari-ti ghorer moddhe chala-chhe WhS O Loc V
who banana car the room in the drive-3.PRS Prog
'Who is driving the banana car in the room?'

(5) kachhop kothay garto khur-che S WhLoc O V
(the) tortoise where the hole dig-3.PRS Prog
'Where is the tortoise digging hole?'

(6) sheal nodi-te kakra dhor-che kaeno S Loc O V Wh
(the) fox river in (the) crab catch-3.PRS Prog why
'Why is the fox catching crabs in the river?'

In the first two examples are quite similar to the adult preferences. However, example 6 is a verb-non-final wh-interrogative sentence. According to our adult study, this type of verb-non-final wh-question is not very frequently available in Bengali adult language. Even though, we found such constructions available in child Bengali, in most of the cases post verbal wh-element is *why*. If we exclude *why* questions, we can see that Bengali children also prefer verb finality in wh-constructions. In the next section (4.3.1) where we are going to compare Bengali declarative and wh-questions with the children and the adults, we shall see that disparity and dissimilarity between Bengali adults and children is not prominent at all in the context of declarative and wh-questions.

We need to mention another important thing before we move to investigate the positional preferences of word order by Bengali children. In our adult study, we have mentioned the procedure of determining word order positions with respect to

verb. We may recall here that Bengali-verb prefers to be in its base position and generally it does not move to any higher position. As a result, it is rare and difficult to give an example of Bengali verb scrambling. On the other hand, the non-verbal elements of a sentence can move frequently. However, we have not found any designated position for Bengali subject, object or adjunct in our adult study. Therefore, we try to analyze the word order positions only with respect to verb. We have already determined the sentential positions in the adult study. Here we shall use the same positions where Position 1 is for the initial position of a sentence, Position 2 is for the place which is neither the initial nor the preverbal position of a sentence, Position 3 is the Preverbal Position, Position 4 is the place for the verb of a sentence and Position 5 is treated as the Post-verbal position of a sentence. Now we need to observe the word order choices of Bengali children and compare their choices to the preferences of Bengali adults.

4.3.1 Declaratives and Wh-questions in Child Bengali

According to our study, Bengali adults mostly prefer sentential position 1 (97%) for declarative subjects. Their choices for other positions are found very low. Moreover, they have preference only for preverbal positions. In contrast, if we compare Bengali children data we can find that children also highly prefer preverbal positions for the declarative subject. However, unlike Bengali adults, their choices are mainly distributed between position 1 and position 2. Even though they also show a very small amount (2.5%) of post-verbal subject positioning preference, these numbers are not noteworthy to draw any kind of assumption. The following examples will show the positional preference of the children in the context of declarative sentences:

(7) Position 1: Jerry gharer moddhe kolar-gari-ti chala-chhe S Loc O V
Jerry room in the banana car the drive-3.PRS Prog
'Jerry is driving the banana car in the room.'

(8) Position 2: gharer moddhe Jerry kolar-gari-ti chala-chhe Loc S O V
room in the Jerry banana car the drive-3.PRS Prog
'Jerry is driving the banana car in the room.'

(9) Position 3: gharer moddhe kolar-gari-ti Jerry chala-chhe Loc O S V
room in the banana car the Jerry drive-3.PRS Prog
'Jerry is driving the banana car in the room.'

(10) Position 5: gharer moddhe kolar-gari-ti chala-chhe Jerry Loc O V S
room in the banana car the drive-3.PRS Prog Jerry
'Jerry is driving the banana car in the room.'

Since position 3 and the position 5 do not have that much considerable value in their account, we should concentrate on the other positions. Compare to adults, the children choose position 1 for the declarative subject in the most of the cases. However unlike adults, children's preference for position 2 is noticeably higher than that of Bengali adult native speakers. The reason behind higher percentage should be investigated. According to our raw data, we have found 9 sentences out of 40 which prefer to put their sentential subjects in the position 2. It raises a simple query: if the subject is in the position 2, in that case which element occupies the position 1? Interestingly the position 1 is filled up by the locative adjunct in all cases. Since adjunct does not have any agreement with the verb and Bengali adjuncts get more freedom to move (as we have seen in our adult study), children's preferences for the subject in the position 2 is not at all distinct from the subject in the position 1.In fact, both of the subject positions (1 and 2) bear underlying SOV order. Moreover, if we add up the position 1 value with position 2 value in the children data, we shall get a figure (70% + 22.5% = 92.5%) which is quite similar to the adults (97%). The following table will give us a clearer view:

Table 4.3: Constituents Positions of Declarative Subject in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	97 (97/100)	3 (3/100)	0 (0/100)	0 (0/100)
Child	70 (28/40)	22.5 (9/40)	5 (2/40)	2.5 (1/40)

Therefore, we can say so far that Bengali adults and children both choose similar types of subject positions in the context of information neutral sentence structures.

Now we need to check the status of wh-subjects. We know that Bengali adults choose the initial position for wh-subject most frequently. However, they also use position 2 and position 3 for this syntactic element. Moreover, in a few cases, a post-verbal wh-subject is also available in their language. The following table will help us to understand the fact:

Table 4.4: Constituents Positions of Wh-Subject in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	52 (13/25)	24 (6/25)	20 (5/25)	4 (1/25)
Child	20 (2/10)	0 (0/10)	80 (8/10)	0 (0/10)

The reason behind these different choices is Bengali wh-questions bear special information structure (i.e. new information focus) in comparison to Bengali declaratives. Since the wh-subject correlates with new information focus closely, we need to know what the Bengali children do in this context. Interestingly, Bengali children show the least amount of word order variation in this case. 8 out of 10 participants (80%) prefer position 3 which is apparently a mismatch between the adults and the children. According to our adult data, almost all Bengali native speakers prefer to put wh-subjects before the verbs. We can exclude 4% of post-verbal choices of the adults, which is basically one single sentence in the whole data set. We can assume that the only post-verbal example might be dialect influenced or some kind of individual preference. However, both the groups still have dissimilarities between them as the adults occupy all the positions before the verb for the wh-subject. In contrast, the children only prefer position 3 and position 1. According to our adult data analysis, we have observed that the adult group could not avoid the experience of sentence initial declarative high topic positions. Even though no topic is available in the wh-question, Bengali adults still tend to prefer position 1. In contrast, Bengali children prefer to put new information in the position 3. Even though our adult study did not give us any designated position for the new information focus, we think that Bengali children at this specific age are clearly aware

that wh-subject is different from declarative subject in terms of information structure. Therefore, they mostly prefer one position for wh-subject as they have previous experience of generating declarative sentence construction. Now we can consider a few examples to obtain the real picture of Bengali children preference for the wh-subject:

(11) kolar gari-ti ghorer moddhe ke chala-chhe O Loc WhS V
banana car the room in the who drive-3.PRS Prog
'Who is driving the banana car in the room?'

(12) ke kolar gari-ti ghorer moddhe chala-chhe WhS O Loc V
who banana car the room in the drive-3.PRS Prog
'Who is driving the banana car in the room?'

They do not bother with the dislocation of the adjunct. In the course of our following discussion, we will also see that our children participants are always away from the positional uniformity of Bengali adjuncts. Now, we consider the following tables to learn about the different types of wh-elements and to try to understand the similarities and differences between the preferences of the adults and the children in this regard. The following tables illustrate some interesting facts about the object and adjunct positions in Bengali declaratives and wh-questions:

Table 4.5: Constituents Positions of Declarative Object in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	1 (1/100)	15 (15/100)	84 (84/100)	0 (0/100)
Child	0 (0/40)	15 (6/40)	85 (34/40)	0 (0/40)

Table 4.6: Constituents Positions of Wh-Object in Adult and Child Bengali

Types	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	0 (0/25)	4 (1/25)	96 (24/25)	0 (0/25)
Child	10 (1/10)	50 (5/10)	40 (4/10)	0 (0/10)

Table 4.7: Constituents Positions of Declarative Adjunct in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	2 (2/100)	82 (82/100)	13 (13/100)	3 (3/100)
Child	30 (12/40)	62.5 (25/40)	5 (2/40)	2.5 (2/40)

Table 4.8: Constituents Positions of Wh-Adjunct in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	16 (4/25)	72 (18/25)	12 (3/25)	0 (0/25)
Child	40 (4/10)	20 (2/10)	30 (3/10)	10 (1/10)

Table 4.5 tells us that, like Bengali adults, children also have a similar preferred position for the sentential object. According to our data, the children go for position 3 to place the declarative object in 85% cases. In comparison to the adult data, this rate is quite similar and consistent. Interestingly, both the adult and the children choose position 2 in a same range (15% each) as a second option for the placement of the declarative object. On the other hand, in the case of wh-object, table 4.6 shows that the children's choices are distributed in all preverbal positions. However, we have already discussed our observation that in many cases Bengali children do not distinguish between position 2 and position 3. They take the both of them as the sentence non-initial preverbal positions. In this regard, we can find 50% + 40% = 90% preferences (see table 4.6) for sentence non-initial preverbal wh-object positions which is quite identical with the adult Bengali. We can consider the following examples:

(13) nodir tir-e kachhop ki khur-che Loc S WhO V
(the) river on the bank (the) tortoise what dig-3.PRS Prog
'What is the tortoise digging on the bank of the river?'

(14) kachhop ki nodir tir-e khur-che S WhO Loc V
(the) tortoise what (the) river on the bank dig-3.PRS Prog
'What is the tortoise digging on the bank of the river?'

We can observe that in a broad sense Bengali children follow the adult structure even in the case of wh-object. However, child Bengali behaves differently in selecting word orders for wh-adjunct. According to adult data, we have found that there is no designated position for the adjunct in Bengali language. Therefore, adult Bengali speakers determine the position of adjuncts according to the required information structure and with respect to the positions of subjects, objects and verbs. As a result, we may assume that Bengali children face difficulties in acquiring the adjunct position in sentential word order. Our assumption is evident in table 4.8 where we can see that the children place wh-adjuncts everywhere. In contrast, Bengali adults mostly prefer position 2 as this is the most general place for adjuncts in Bengali. In child Bengali, the pre-verbal positions for adjuncts are almost equally distributed. This means that the children prefer pre-verbal positions to place the wh-adjunct but their knowledge of a default place for the adjunct is not acquired yet. With respect to the comparison between declaratives and wh-questions, child Bengali is pretty identical with adult language in many ways. Now we try to discuss the focus constructions in Bengali, a strongly information structure-motivated phenomenon.

4.3.2 Contrastive Focus Constructions in Child Bengali

In this section, we need to compare adult contrastive focus constructions with children in the context of sentential word order variation. Along with this, we also want to know how the information packaging influences these word order choices. The following table shows us a comparative picture of the location of focus subjects in Bengali adult and child speech respectively:

Table 4.9: Constituents Positions of Focus Subject in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	40 (10/25)	32 (8/25)	0 (0/25)	28 (7/25)
Child	75 (9/12)	25 (3/12)	0 (0/12)	0 (0/12)

According to this table, both of the groups mostly prefer position 1, the result of the rest of the positions is quite different. According to the table, no child participant chooses the post-verbal position for focus-subject while 28% adults prefer that position. On the other hand, none of these two groups likes position 3, the immediate preverbal position for focus subject. The preference for position 2 is nearly similar for both groups. Despite this similarity, in most of the cases, children are more identical with their declarative subject construction (see table 4.3). So we can assume that Bengali children acquire the procedure of in-situ focus quickly. As we have learnt from our adult studies that the contrastive focus constructions are produced in two formats: a) in-situ focus and b) scrambling focus. So far our child data shows that in-situ contrastive focus are prominently available in their acquisition process. However, we do not have sufficient data to say that Bengali children face serious problem to produce scrambling focus constructions. As a result, we do not think that Bengali children behave differently from the adults with respect to contrastive focus constructions. Our data confirm that Bengali children pick up one of the two contrastive focus generating technique at their early age of language acquisition. We may consider some examples of focus subject, object and adjunct to get the real view of the situation:

(15) JERRY gharer moddhe kolar-gari-ti chala-chhe **S** Loc O V
Jerry room in the banana car the drive-3.PRS Prog
'As for Jerry, he is driving the banana car in the room.'

(16) sheal ar kumir jomi-te LANGOL tan-che S Loc **O** V
(the) fox & crocodile field in the plough (the) pull-3.PRS Prog
'What the fox and the crocodile are pulling in the fields is the plough.'

(17) NODI-TE sheal kakra dhor-che **Loc** S O V
river in (the) (the) fox crab catch-3.PRS Prog
'In the river, the fox is catching crabs.'

In the focus adjunct example, children use the technique of scrambling. Since we can assume that the children are in the process of acquiring information packaging,

they sometimes try to apply their knowledge in word order scrambling. The following table shows us this fact:

Table 4.10: Constituents Positions of Focus Object in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	0 (0/25)	68 (17/25)	28 (7/25)	4 (1/25)
Child	33.33 (4/12)	0 (0/12)	66.67 (8/12)	0 (0/10)

Since the children have some odd choices for focus-object scrambling, we might argue that child Bengali does not follow the way that the adults use. We may consider the following example which we have found in our raw data:

(18) **??** GARTO khur-che kachhop nodir tir-e **O** V S Loc
a hole dig-3.PRS Prog (the) tortoise (the) river on the bank
'The tortoise is digging a hole in the bank of the river.'

This word order is really odd in Bengali. The intended meaning which we have included in the gloss is not at all go with this word order sequence. However, we have got this sentence 4 times out of 12 attempts in our data. Moreover, we should not forget that we have two different tests. So, it is quite possible to get unusual results due to this different test. On the other hand, position 3 where most of the children prefer to put the focus object is the base position for the object in Bengali grammar. As a result, we can say that the Bengali children put the object focus in in-situ position and in this way they do not use the process of scrambling for positioning the focus object.

Therefore, the contrastive focus object in child language does not prefer to be evacuated from the verb domain and does not stay outside of it. The same thing happens with contrastive adjunct focus in Bengali. The following table shows us that contrastive adjunct in Bengali child language also does not prefer the places which are outside of the verb domain.

Table 4.11: Constituents Positions of Focus Adjunct in Adult and Child Bengali

Group	Preverbal (%)			Post-verbal (%)
	Position 1	Position 2	Position 3	Position 5
Adult	52 (13/25)	28 (7/25)	8 (2/25)	12 (3/25)
Child	38.46 (5/13)	30.77 (4/13)	30.77 (4/13)	0 (0/13)

The most important part of this table is that children do not have any special preference for a specific position in this regard. They are almost all over the pre-verbal positions.

As we discussed above, child Bengali is quite identical to the adult language with respect to declarative sentences and wh-questions. Only there are two situations where the Bengali children do not directly follow the adults. The children do not care about the position of adjuncts and they are not very capable to use scrambling in the focus constructions. Since Bengali language does not offer any designated position for adjuncts, it is natural that we may find adjuncts in all possible positions. So, such type of difference is not strong enough to say that the Bengali children have a different grammar from the adults. On the other hand, contrastive focus constructions demands high level of information packaging. Bengali children capture the techniques of information structure quickly and produce in-situ contrastive focus constructions. Even though our data has failed to confirm that the Bengali children can produce scrambling in the contrastive focus constructions, we cannot point it as a big contrast between the adults and the children. Since we have a different test for the children and it is also possible that there are some other factors like economy (Westergaard 2009) involved which motivate them to produce in-situ contrastive focus constructions. Moreover, it is also true that our child data is not conclusive enough to determine tendency of Bengali children holistically. As a result, we should sketch our finding that Bengali children acquire the word orders quickly and their choices of word orders are so far the same as the adults in all most all types of sentences.

As we have predicted that the Bengali children might have different grammar than the adult is not true. We have found that the children are not at all highly contrastive to the adults which reject our null hypothesis. We can say that the child Bengali is not in a contrast with the adult language.

CONCLUSION

The present study was conducted among the Bengali adult native speakers and Bengali Children in Bangladesh from June to August 2009. A set of well-formed experimental design were employed to understand the word order variations and word order acquisition process of Bengali language. A total of 25 adults and 10 children participated in the experiment. Three research questions were set out for the study to investigate whether word order scrambling was a stylistic process or not. If it was not stylistic in that case how did it correlate the information packaging with different types of Bengali sentences? In addition, the status of word order scrambling acquisition by the Bengali children was asked to be tested.

This study comes up with the conclusion that Bengali word order scrambling is highly sensitive to the information structure. There is no way to use it stylistically with respect to Bengali grammar. Bengali children also have that knowledge from their early age of acquisition. The present study shows that the default word order in Bengali is SOV. The adult speakers prefer different word orders for producing different types of sentences. Since the word order scrambling is not stylistic in this language, the word orders of declaratives and wh-questions are not always same. As we know that the wh-questions bear new information focus, this type of sentences have different word order patterns from the contrastive focus constructions. According to the present study, contrastive focus constructions are derived with different information packaging from wh-questions which motivates them to choose different word orders from each other.

The findings of the adult study are applied into the Bengali children who are aged around three years. The target of this investigation is to know whether the Bengali adults and the children have the same grammar of scrambling with respect of information packaging. The experiment shows that in the context of declaratives and wh-questions, the Bengali children are quite identical to the adults. In addition, the child-experiment discovers that, in most of the cases, Bengali children acquire information structure and word order scrambling quickly and they choose word orders in the same way as the adults. However, Bengali children in most of the cases, produce contrastive focus constructions by putting focus in the base position.

As we have learnt from our adult study that the Bengali grammar allows in-situ contrastive focus and scrambling contrastive focus. In our data structure, we have got the view that adults use both of the ways. However, Bengali children use the in-situ focus mainly. Despite their single choices, it is not possible for us to say that the children are quite different from the adults. The reason is the amount of such kind of data is not sufficient enough to say that the children behave differently from the adults while they produce focus constructions. We should remember that we performed two slightly different tests for the adults and the children respectively. Moreover, the data produced by the children is small in size. Therefore, we can say that the child data is not conclusive enough to challenge our assumption about the similarity of behaviors between the adults and the children with respect to word order choices.

Finally, we can say that we need a large amount of data to get conclusive findings about the word order acquisition by the Bengali children. In this way, our child experiment is capable to open more possibilities for the further research in this field.

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APPENDIX- I

ADULT DATA

Declarative sentences

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
2	50	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc}\ 2_S\ 3_O\ 4_V$
3	45	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
4	26	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
5	26	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
6	23	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
7	20	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
8	22	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
9	20	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
10	25	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
11	23	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
12	21	F	$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
13	23	F	$1_S\ 3_O\ 4_V\ 5_{Loc}$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_{Loc}2_S\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
14	26	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
15	18	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
16	23	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
17	23	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
18	24	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 3_O\ 4_V\ 5_{Loc}$
			$1_S\ 3_O\ 4_V\ 5_{Loc}$
19	22	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
20	23	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
21	34	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
22	37	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
23	18	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
24	52	M	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$
25	28	F	$1_S\ 2_{Loc}\ 3_O\ 4_V$
			$1_O\ 2_S\ 3_{Loc}\ 4_V$
			$1_S\ 2_O\ 3_{Loc}\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V$

Wh-questions

Wh-Subject

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
2	50	M	$1_{Loc}\ 2_{O}\ 3_{WHS}\ 4_{V}$
3	45	M	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
4	26	M	$1_{Loc}\ 3_{O}\ 4_{V}\ 5_{WHS}$
5	26	M	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
6	23	F	$1_{Loc}\ 2_{O}\ 3_{WHS}\ 4_{V}$
7	20	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
8	22	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
9	20	F	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
10	25	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
11	23	M	$1_{Loc}\ 2_{O}\ 3_{WHS}\ 4_{V}$
12	21	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
13	23	F	$1_{WHS}\ 2_{O}\ 3_{Loc}\ 4_{V}$
14	26	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
15	18	M	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
16	23	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
17	23	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
18	24	F	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
19	22	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
20	23	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
21	34	M	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
22	37	M	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
23	18	F	$1_{Loc}\ 2_{WHS}\ 3_{O}\ 4_{V}$
24	52	F	$1_{WHS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
25	28	F	$1_{Loc}\ 2_{O}\ 3_{WHS}\ 4_{V}$

Wh-Object

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
2	50	M	$1_{Loc}\ 2_{S}\ 3_{WHO}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
3	45	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
4	26	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
5	26	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
6	23	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
7	20	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
8	22	F	$1_{Loc}\ 2_{S}\ 3_{WHO}\ 4_{V}$
9	20	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
10	25	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
11	23	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
12	21	F	$1_{S}\ 3_{WHO}\ 4_{V}\ 5_{Loc}$
13	23	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
14	26	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
15	18	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
16	23	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
17	23	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
18	24	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
19	22	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
20	23	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
21	34	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
22	37	M	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
23	18	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$
24	52	F	$1_{Loc}\ 2_{S}\ 3_{WHO}\ 4_{V}$
25	28	F	$1_{S}\ 2_{Loc}\ 3_{WHO}\ 4_{V}$

Wh-Adjunct Locative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_{S}\ 2_{O}\ 3_{WHLoc}\ 4_{V}$
2	50	M	$1_{S}\ 2_{WHLoc}\ 3_{O}\ 4_{V}$
3	45	M	$1_{S}\ 2_{O}\ 3_{WHLoc}\ 4_{V}$
4	26	M	$1_{S}\ 2_{WHLoc}\ 3_{O}\ 4_{V}$
5	26	M	$1_{S}\ 2_{WHLoc}\ 3_{O}\ 4_{V}$
6	23	F	$1_{S}\ 2_{WHLoc}\ 3_{O}\ 4_{V}$
7	20	F	$1_{S}\ 2_{WHLoc}\ 3_{O}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
8	22	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
9	20	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
10	25	F	$1_{WHLoc} 2_S\ 3_O\ 4_V$
11	23	M	$1_S\ 2_O\ 3_{WHLoc}\ 4_V$
12	21	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
13	23	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
14	26	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
15	18	M	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
16	23	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
17	23	F	$1_{WHLoc}\ 3_O\ 4_V\ 2_S$
18	24	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
19	22	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
20	23	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
21	34	M	$1_{WhLoc}\ 2_S\ 3_O\ 4_V$
22	37	M	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
23	18	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$
24	52	F	$1_{WhLoc}\ 2_S\ 3_O\ 4_V$
25	28	F	$1_S\ 2_{WHLoc}\ 3_O\ 4_V$

Wh-Adjunct Causative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
2	50	M	$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V\ 5_{Wh}$
3	45	M	$1_S\ 2_{Loc} 2'_O\ 3_{Wh}\ 4_V$
4	26	M	$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc} 2'_S\ 2_{Wh}\ 3_O\ 4_V$
5	26	M	$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
			$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
6	23	F	$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
7	20	F	$1_S\ 2'_{Wh} 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc} 2'_{Wh}\ 3_O\ 4_V$
			$1_S\ 2_{Loc} 2'_O\ 3_{Wh}\ 4_V$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
8	22	F	$1_S\ 2_{Loc}\ 2'_O\ 3_{Wh}\ 4_V$
			$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
9	20	F	$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
10	25	F	$1_{Loc}2'_{Wh}\ 2_O\ 3_S\ 4_V$
			$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc}2'_{Wh}\ 2_S\ 3_O\ 4_V$
11	23	M	$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
			$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
12	21	F	$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
			$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V\ 5_{Wh}$
13	23	F	$1_S\ 2_O\ 3_{Loc}\ 4_V\ 5_{Wh}$
			$1_S\ 2'_O\ 2_{Loc}\ 3_{Wh}4_V$
14	26	F	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
15	18	M	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_S\ 2'_O\ 2_{Loc}\ 3_{Wh}4_V$
16	23	F	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
17	23	F	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc}\ 2'_S2_O\ 3_{Wh}\ 4_V$
18	24	F	$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
			$1_S\ 2'_{Wh}\ 2_O\ 3_{Loc}\ 4_V$
19	22	F	$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 3_O\ 4_V\ 5_{Wh}$
20	23	F	$1_S\ 2_{Loc}\ 3_O\ 4_V\ 5_{Wh}$
			$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
21	34	M	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc}2'_{Wh}\ 2_S\ 3_O\ 4_V$
22	37	M	$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
			$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
23	18	F	$1_{Wh}\ 2_S\ 2'_{Loc}\ 3_O\ 4_V$
			$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$
24	52	F	$1_S\ 2'_{Wh}\ 2_{Loc}\ 3_O\ 4_V$
			$1_{Loc}2'_{Wh}\ 2_S\ 3_O\ 4_V$
25	28	F	$1_S\ 2_{Loc}\ 2'_{Wh}\ 3_O\ 4_V$

Focus

Focus subject

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
2	50	M	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
3	45	M	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
4	26	M	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
5	26	M	$1_{FOCS}\ 3_{O}\ 4_{V}\ 5_{Loc}$
6	23	F	$1_{Loc}\ 3_{O}\ 4_{V}\ 5_{FOCS}$
7	20	F	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
8	22	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
9	20	F	$1_{O}\ 2_{Loc}\ 4_{V}\ 5_{FOCS}$
10	25	F	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
11	23	M	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
12	21	F	$1_{Loc}\ 2_{O}\ 4_{V}\ 5_{FOCS}$
13	23	F	$1_{O}\ 2_{Loc}\ 4_{V}\ 5_{FOCS}$
14	26	F	$1_{FOCS}\ 2_{O}\ 3_{Loc}\ 4_{V}$
15	18	M	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
16	23	F	$1_{FOCS}\ 2_{O}\ 3_{Loc}\ 4_{V}$
17	23	F	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
18	24	F	$1_{O}\ 2_{Loc}\ 4_{V}\ 5_{FOCS}$
19	22	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
20	23	F	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
21	34	M	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
22	37	M	$1_{FOCS}\ 3_{O}\ 4_{V}\ 5_{Loc}$
23	18	F	$1_{O}\ 2_{Loc}\ 4_{V}\ 5_{FOCS}$
24	52	F	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
25	28	F	$1_{O}\ 2_{Loc}\ 4_{V}\ 5_{FOCS}$

Focus Object

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$
2	50	M	$1_{S}\ 2_{FOCO}\ 3_{Loc}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
3	45	M	1_{S} 2 $_{Loc}$ 3 $_{FOCO}$ 4_{V}
4	26	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
5	26	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
6	23	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
7	20	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
8	22	F	1_{S} 2 $_{Loc}$ 3 $_{FOCO}$ 4_{V}
9	20	F	1_{Loc} 2 $_{S}$ 3 $_{FOCO}$ 4_{V}
10	25	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
11	23	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
12	21	F	1_{S} 3 $_{Loc}$ 4_{V} 5 $_{FOCO}$
13	23	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
14	26	F	1_{Loc} 2 $_{S}$ 3 $_{FOCO}$ 4_{V}
15	18	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
16	23	F	1_{Loc} 2 $_{S}$ 3 $_{FOCO}$ 4_{V}
17	23	F	1_{Loc} 3 $_{FOCO}$ 4_{V} 3 $_{S}$
18	24	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
19	22	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
20	23	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
21	34	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
22	37	M	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
23	18	F	1_{Loc} 2 $_{S}$ 3 $_{FOCO}$ 4_{V}
24	52	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}
25	28	F	1_{S} 2 $_{FOCO}$ 3 $_{Loc}$ 4_{V}

Focus Adjunct Locative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	41	M	1_{S} 2 $_{FOCLoc}$ 3 $_{O}$ 4_{V}
2	50	M	1_{S} 2 $_{FOCLoc}$ 3 $_{O}$ 4_{V}
3	45	M	1_{S} 2 $_{FOCLoc}$ 3 $_{O}$ 4_{V}
4	26	M	1_{S} 2 $_{FOCLoc}$ 3 $_{O}$ 4_{V}
5	26	M	1_{S} 3 $_{O}$ 4_{V} 5 $_{FOCLoc}$
6	23	F	1_{O} 3 $_{FOCLoc}$ 4_{V} 5 $_{S}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
7	20	F	$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$
8	22	F	$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$
9	20	F	$1_{S}\ 2_{O}\ 3_{FOCLoc}\ 4_{V}$
10	25	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
11	23	M	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
12	21	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
13	23	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
14	26	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
15	18	M	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
16	23	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
17	23	F	$1_{S}\ 2_{FOCLoc}\ 4_{V}\ 5_{O}$
18	24	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
19	22	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
20	23	F	$1_{O}\ 3_{S}\ 4_{V}\ 5_{FOCLoc}$
21	34	M	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
22	37	M	$1_{S}\ 3_{O}\ 4_{V}\ 5_{FOCLoc}$
23	18	F	$1_{S}\ 2_{O}\ 3_{FOCLoc}\ 4_{V}$
24	52	F	$1_{O}\ 2_{FOCLoc}\ 4_{V}\ 5_{S}$
25	28	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$

APPENDIX- II

CHILD DATA

Declarative sentences

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{O}\ 3_{S}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
2	3	F	$1_{Loc}\ 2_{O}\ 4_{V}\ 5_{S}$
			$1_{S}\ 2_{O}\ 3_{Loc}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Lok}\ 2_{S}\ 3_{O}\ 4_{V}$
3	3,1	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{O}\ 3_{S}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
4	3,1	M	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
5	3	M	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{O}\ 3_{Loc}\ 4_{V}$
6	3	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{O}\ 4_{V}\ 5_{Loc}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
7	3,1	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
8	3	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
9	3,1	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
10	3,1	F	$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{O}\ 4_{V}$

Wh-questions

Wh-Subject

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
2	3	F	$1_{WHS}\ 2_{O}\ 3_{Loc}\ 4_{V}$
3	3.1	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
4	3.1	M	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
5	3	M	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
6	3	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
7	3.1	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
8	3	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$
9	3.1	F	$1_{WHS}\ 2_{O}\ 3_{Loc}\ 4_{V}$
10	3.1	F	$1_{O}\ 2_{Loc}\ 3_{WHS}\ 4_{V}$

Wh-Object

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{S}\ 2_{WHO}\ 3_{V}\ 4_{Loc}$
2	3	F	$1_{S}\ 2_{WHO}\ 3_{V}\ 4_{Loc}$
3	3.1	F	$1_{S}\ 2_{WHO}\ 3_{V}\ 4_{Loc}$
4	3.1	M	$1_{Loc}\ 2_{S}\ 3_{WHO}\ 4_{V}$
5	3	M	$1_{Loc}\ 2_{S}\ 3_{WHO}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
6	3	F	1_{S} 2 $_{WHO}$ 3 $_{V}$ 4_{Loc}
7	3.1	F	1_{S} 2 $_{WHO}$ 3 $_{Loc}$ 4_{V}
8	3	F	1_{S} 2 $_{Loc}$ 3 $_{WHO}$ 4_{V}
9	3.1	F	1_{Loc} 2 $_{S}$ 3 $_{WHO}$ 4_{V}
10	3.1	F	1_{WHO} 2 $_{Loc}$ 3 $_{V}$ 4_{S}

Wh-Adjunct Locative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	1_{S} 2 $_{WHLoc}$ 3 $_{O}$ 4_{V}
2	3	F	1_{S} 2 $_{O}$ 3 $_{WHLoc}$ 4_{V}
3	3.1	F	1_{S} 2 $_{O}$ 3 $_{WHLoc}$ 4_{V}
4	3.1	M	1_{S} 2 $_{O}$ 3 $_{WHLoc}$ 4_{V}
5	3	M	1_{WHLoc}2 $_{S}$ 3 $_{O}$ 4_{V}
6	3	F	1_{S} 2 $_{O}$ 3 $_{WHLoc}$ 4_{V}
7	3.1	F	1_{WHLoc}2 $_{S}$ 3 $_{O}$ 4_{V}
8	3	F	1_{S}2 $_{WHLoc}$ 3 $_{O}$ 4_{V}
9	3.1	F	1_{S}2 $_{O}$ 3 $_{V}$ 4_{WHLoc}
10	3.1	F	1_{WHLoc}2 $_{S}$ 3 $_{O}$ 4_{V}

Wh-Adjunct Causative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	1_{Loc} 2_{S}2' $_{WH}$ 3 $_{O}$ 4_{V}
			1_{Loc} 2_{S}2' $_{O}$ 3 $_{WH}$ 4_{V}
			1_{S} 2_{Loc}2' $_{O}$ 3 $_{V}$ 4_{WH}
2	3	F	1_{S} 2_{Loc}2' $_{O}$ 3 $_{V}$ 4_{WH}
			1_{WH} 2_{S}2' $_{Loc}$ 3 $_{O}$4$_{V}$
3	3.1	F	1_{S} 2_{Loc}2' $_{O}$ 3 $_{V}$ 4_{WH}
			1_{WH} 2_{S}2' $_{Loc}$ 3 $_{O}$4$_{V}$
4	3.1	M	1_{S} 2_{Loc}2' $_{O}$ 3 $_{V}$ 4_{WH}
			1_{WH} 2_{S}2' $_{Loc}$ 3 $_{O}$4$_{V}$
5	3	M	1_{S} 2_{Loc}2' $_{O}$ 3 $_{V}$ 4_{WH}
			1_{WH} 2_{S}2' $_{Loc}$ 3 $_{O}$4$_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
6	3	F	$1_{S}\ 2_{WH} 2'_{Loc}\ 3_{O}\ 4_{V}$
			$1_{WH}\ 2_{S} 2'_{Loc}\ 3_{O} 4_{V}$
7	3.1	F	$1_{S}\ 2_{Loc} 2'_{O}\ 3_{V}\ 4_{WH}$
			$1_{WH}\ 2_{S} 2'_{Loc}\ 3_{O} 4_{V}$
8	3	F	$1_{S}\ 2_{Loc} 2'_{WH}\ 3_{O}\ 4_{V}$
9	3.1	F	$1_{S}\ 2_{Loc} 2'_{O}\ 3_{V}\ 4_{WH}$
			$1_{WH}\ 2_{S} 2'_{Loc}\ 3_{O} 4_{V}$
10	3.1	F	$1_{S}\ 2_{Loc} 2'_{O}\ 3_{V}\ 4_{WH}$
			$1_{WH}\ 2_{S} 2'_{Loc}\ 3_{O} 4_{V}$

Focus

Focus subject

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
2	3	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
3	3.1	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
4	3.1	M	$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
5	3	M	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
6	3	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
7	3.1	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
8	3	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
9	3.1	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$
			$1_{Loc}\ 2_{FOCS}\ 3_{O}\ 4_{V}$
10	3.1	F	$1_{FOCS}\ 2_{Loc}\ 3_{O}\ 4_{V}$

Focus Object

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$
2	3	F	$1_{Loc}\ 2_{S}\ 3_{FOCO}\ 4_{V}$
3	3.1	F	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$
4	3.1	M	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
5	3	M	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$
			$1_{Loc}\ 2_{S}\ 3_{FOCO}\ 4_{V}$
6	3	F	$1_{S}\ 2_{Loc}\ 3_{FOCO}\ 4_{V}$
7	3.1	F	$1_{FOCO}\ 2_{Loc}\ 3_{V}\ 4_{S}$
8	3	F	$1_{FOCO}\ 2_{S}\ 3_{V}\ 4_{Loc}$
9	3.1	F	$1_{FOCO}\ 2_{Loc}\ 3_{V}\ 4_{S}$
10	3.1	F	$1_{FOCO}\ 2_{Loc}\ 3_{V}\ 4_{S}$

Focus Adjunct Locative

Participant Serial	Age (years)	Sex (M/F)	Chosen Word Order
1	3	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{O}\ 2_{S}\ 3_{V}\ 4_{FOCLoc}$
2	3	F	$1_{O}\ 2_{S}\ 3_{FOCLoc}\ 4_{V}$
3	3.1	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
4	3.1	M	$1_{S}\ 2_{O}\ 3_{FOCLoc}\ 4_{V}$
5	3	M	$1_{O}\ 2_{S}\ 3_{V}\ 4_{FOCLoc}$
6	3	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
7	3.1	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$
8	3	F	$1_{FOCLoc}\ 2_{S}\ 3_{O}\ 4_{V}$
			$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$
9	3.1	F	$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$
10	3.1	F	$1_{S}\ 2_{FOCLoc}\ 3_{O}\ 4_{V}$