

## X-Bars In *Across The Gulf*

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### Abstract

With the assumption that there are structural ambiguities in Dul Johnson's novel *Across the Gulf*, this paper set out to find and disambiguate any sentence that conveys multiple meanings due to its structure. Sixteen questionnaires carrying five different sentences each were administered to a cross section of Bingham University students. Having numbered the questionnaires, odd numbers were narrowly selected for data presentation and analysis. It was discovered that there was no structural ambiguity. Also, the fact that all the sentences had multiple (though mostly wrong) interpretations lays credence to the claim that all locutionary acts are subject to illocutionary indeterminacy. The selected sentences were presented in tree diagrams, using Kornai and Pullum's version of X-bar theory. X-bar is a descriptive theory of syntax invented by Chomsky in 1970. Some of its claims were reconstructed by Andras Kornai and Geoffry Pullum in 1997.

**Keywords:** Disambiguation, One Replacement, Sentence Structure, X-bar

### Introduction

There is a difference between reading a sentence within a given context and reading the same in isolation. It is much easier to determine the actual or intended meaning of a sentence in a given context, than it is to determine the actual or intended meaning of the same when read outside a given context. The researcher went forth to find the possibility of deriving different readings from the selected sentences used in *Across the Gulf*, if the sentences are considered in isolation.

This is an interdisciplinary work because, though it is a language study, it can be placed under syntax; it can also be placed under semantics. X-bar, the theory upon which this work is based, is a theory in syntax. *Across The Gulf* is a novel written by Dul Johnson.

## Theoretical Framework

Due to the inadequacy of the theory of sentence structure in its representation of sentence constituents, the x-bar theory was introduced. The theory of sentence structure analyses sentences using a flat structure, thereby placing all categories (clause, phrases and words) on the same level hierarchically. Using one replacement as a constituency test, Carnie (2013) shows that the theory of sentence structure cannot account for all sentences. Therefore, there is the need for a more articulated structure which the x-bar theory presents.

X-bar theory takes into cognizance the importance of showing intermediate constituents in the analysis and representation of sentence structures. According to Carnie (2013), in the earliest form of x-bar theory, the N' in the tree diagram for a noun phrase was written as an N with a bar over it. This overbar or macron is the origin of the "bar" in the name of the theory. X is a variable that stands for any category. E.g adjective, noun, verb, noun phrase, e.t.c. the common notations used in a noun phrase (NP) tree diagram, using this theory, are:

Phrasal level	$NP = N'' = N''' = N^{m''}$
Intermediate level	$N' = N'$
Word/head level	$N = N^{\circ}$

That means NP is equivalent to, or the same as  $N''$  or  $N'''$  or  $N^{m''}$ ;  $N'$  is equivalent to, or the same as  $N'$ ; N is equivalent to, or the same as  $N^{\circ}$ . The same principles of equivalent notation apply for a prepositional phrase (PP), an adjectival phrase (Adj. P), and other phrasal categories.

X-bar theory was invented by Chomsky (1970). Jackendoff (1977) expounded it, and Radford (1988) presented a more complete description of the theory in his introductory textbook titled *Transformational Grammar: A First Course*. In a paper titled "The X-bar Theory of Phrase Structure", Kornai and Pullum (1) claim that the content of X-bar theory has very little substance in its claims. Instead of initiating a new theory however, they reconstructed some of its claims, such that bar-level projections are relegated and the notion of 'head of' is considered principal.

## Definition of Terms

### Disambiguation

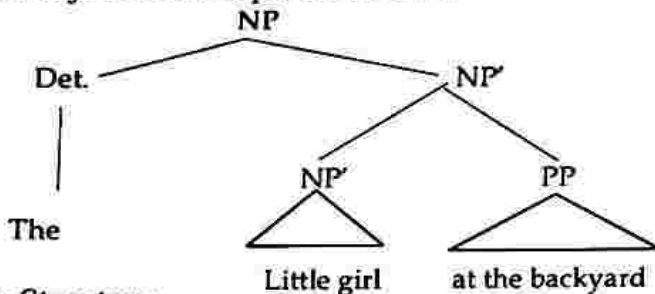
To disambiguate a sentence is to find ways of ensuring that it has only one possible reading. It is usually much easier to give the correct

interpretation of a sentence in a given context, than it is to interpret a sentence in isolation; 'correct interpretation' here means an interpretation that corresponds to the intended meaning of the speaker. Using the following sentences, Lobner (46) observes that apart from lexical ambiguities, the syntactic structure of a sentence may be ambiguous:

- (a) She watched the man with the binoculars.
- (b) Flying planes can be dangerous.
- (c) John and Mary are married.

### One Replacement

Using *one replacement* test to draw a noun phrase tree diagram within the framework of x-bar theory, any category that does not carry some sense when replaced by the word 'one' cannot be considered as an intermediate category. For instance, a tree diagram for the NP: *The little girl at the backyard* can be represented thus:



### Sentence Structure

Radford, et. al. (292) observes that through a principle called merger, phrases, clauses, and sentences are formed. They however postulate that although all phrases and sentences are formed by a simple binary merger operation, one cannot randomly combine any pair of lexical, phrasal, or clausal categories. Every grammatical sentence has an underlying rule which can be used to generate hundreds and thousands of other sentences.

### "Across the Gulf"

*Across the Gulf* is a novel written by Prof. Dul Johnson. It tells a story of war, love and enmity. Among many perspectives, one can claim that it is a love story especially as it reflects the power of bloodline, and the natural and unstoppable romance that can happen between two people who should be enemies during a war.

Ofala and Ifunanya were madly in love with each other and were about to get married during the civil war. In fact, Ofala had paid Ifunanya's bride price already. But an explosion happened which parted the two lovers and threw Ifunanya into Janbut's arms. Janbut was a young promising Nigerian soldier, a medical practitioner from the enemies' camp. He struggled to win Ifunanya's heart and eventually succeeded after great resistance. He deflowered her. The war ended. Everyone, except Kalu (Ifunanya's church-dedicated father), thought that Ofala was killed during the war. But everyone, except Kalu, was wrong. Ofala showed up like a ghost.

Ifunanya tried to explain to Ofala that she was not the virgin he knew, but the man was too excited, too impatient to listen to her confession. He pushed for the continuation of the wedding arrangements. To his shock, he discovered after the wedding that Ifunanya was not a virgin and she was pregnant for another man. After a long period of estrangement, he forgave her. He was strong enough to keep the secret and accept the child as his own. He raised the child, nurtured him, fathered him, made him a man, only for Ikenna (the enemy within) to divulge the secret. This made Ofala to lose Nnanna, his beloved son whom he had invested so much in. Nnanna went in search of his biological father. Ofala became a murderer.

### **Methodology**

Sixteen questionnaires carrying five different sentences each were administered. Among the sixteen questionnaires, only five questionnaires with odd numbers were taken for analysis. They are: Questionnaire 1, questionnaire 3, questionnaire 5, questionnaire 7, and questionnaire 11. Narrowing further, only sentence 1 and 3 were taken from each questionnaire.

The respondents were a cross section of Bingham University students. There was no specific number of students from each department or level. The researcher simply administered questionnaires to students that were available.

For each sentence, ten interpretations were collected, but only five were randomly selected for analysis.

For X-Bar presentation and analysis, only sentence one was selected from each of the five questionnaires hitherto selected for data presentation and analysis.

Data Presentation and Analysis  
Questionnaire 1

S/N	SENTENCE	INTERPRETATIONS	CHAPTER
1	As they walked across the compound, a light, gentle breeze blew over them and the fresh air caressed Nnanna's nostrils. (p. 235)	<p>(a)Nnanna loved the feel of atmosphere around him.</p> <p>(b)A breeze blew over them.</p> <p>(c)Walking across the compound, a gentle wind blew and Nnanna breathed fresh air through her nostrils.</p> <p>(d) Nnanna had a running nose.</p> <p>(e)As they walked or strolled, they felt comfortable with the weather as the air was cool.</p>	
3	If this was his mother, then she must have been really beautiful. (p. 238)	<p>(a)He is handsome.</p> <p>(b)The mother was really beautiful.</p> <p>(c)She really is his mother and she is so beautiful.</p> <p>(d)He is also a fine person.</p> <p>(e)His mum was very pretty, a beautiful woman in and out.</p>	

**Questionnaire 3**

S/N	SENTENCE	INTERPRETATIONS	CHAPTER
1	It must be the way she was jumping when she was fighting, and hitting him. (p. 56)	(a)She was jumping and fighting, hitting him. I guess he was too tall for her, that is why she jumped.  (b)She was involved in an altercation with someone that ended violently.  (c)She hurt him with rough fight  (d)something happened to her when she was jumping and hitting him while fighting him.  (e)There is something about how she jumped while she was fighting him.	
3	She was already his wife, but they needed to formalize it - at least to satisfy her parents, and especially her father, who had remained confident that Ofala would come back. (p. 58)	(a)They were already copulating but, for her parents' sake, they had to formalize it... especially her dad, patiently waiting for his daughter's return.  (b)Her parents wanted her married so as to stop Ofala from marrying her.  (c)The parents of the lady didn't want him to be with their daughter.  (d)The wife's father does not believe his daughter is officially married so he wants the other suitor, Ofala, to marry his daughter.  (e)She was married to him but they had not formalized it. They need to do so to satisfy her parents especially her father who was confident that Ofala would return.	

Questionnaire 5

S/N	SENTENCE	INTERPRETATIONS	CHAPTER
1	But Chizurum had convinced him when she told him that she knew many things that women would buy instantly when he got to Kano. (p.129)	<p>(a)Chizurum persuaded him that there are many things women would buy when they visit Kano.</p> <p>(b)Chizurum has been to Kano to know the items women will like.</p> <p>(c)Chizurum is a girl and was talking out of experience, about what women can do for money.</p> <p>(d)Chizurum wanted him to get something for her when he got to Kano.</p> <p>(e)Chizurum persuaded him that she knew what women will buy when he got to Kano.</p>	
3	Since he returned home, Janbut had done everything possible to put Okigboli behind him, to keep Ifunanya out of his mind, but it was difficult. (p. 130)	<p>(a)Janbut tried to forget about Okigboli and Ifunanya but he found it hard.</p> <p>(b)Okigboli and Ifunanya were dead.</p> <p>(c)Okigboli and Ifunanya are dead.</p> <p>(d)Janbut tried to forget about his past and put Okigboli behind him but it was so hard for him to do so.</p> <p>(e)This means Janbut has had a misunderstanding with Okigboli and Ifunanya probably because they cheated on him together.</p>	

Questionnaire 7

S/N	SENTENCE	INTERPRETATIONS	CHAPTER
1	He was being tempted to restart his own, and would have commenced work if he had not transferred his bank accounts to Okigboli recently. (p. 167)	(a)He was not prepared to start and had less fund. (b)He was a victim of fraudulent activities, leading to inability to carry out his plans. (c)He was tempted to restart his own, but he couldn't because he had already transferred his bank accounts to Okigboli. (d)He needed his bank account to commence work, and he was tempted to start his own. (e)He wanted to start his business but he lend his friend the money.	
3	In fact, the joke about him was that he had lost his first wife to a rival because he spent more nights drinking palm wine than he did with her. (p. 173)	(a)Women need care and attention and he spent more nights drinking, neglecting his wife. (b)The man had more time for his friends than he had for his wife and so she left him. (c)His wife left him because he spent most nights drinking palm wine rather than spending time with her. (d)His wife was sexually deprived, so she left him for someone that could satisfy her needs. (e)He hardly spends time with his wife.	



## Questionnaire 11

S/N	SENTENCE	INTERPRETATIONS	CHAPTER
1	He climbed down and his assistant followed. (p. 206)	<p>(a) He went out and his personal assistant followed him.</p> <p>(b) He was followed by his assistant. He led by example.</p> <p>(c) He stepped down and his assistant stepped down too.</p> <p>(d) When he was coming down, his assistant followed him down.</p> <p>(e) His assistant followed him as he went down.</p>	
3	It had too many stories about it, apart from the fact that it was also the road that led to the sacred pond, which she dreaded. (p. 209)	<p>(a) The story is complicated and aside that, it's the road that leads to the sacred pond.</p> <p>(b) There were too many stories about the road to the sacred pond that she dreaded.</p> <p>(c) There were too many stories about it, but the similarity was the road that led to the sacred pond, which was in her dream.</p> <p>(d) There were so many reasons to fear going to the sacred pond.</p> <p>(e) The road had too many stories about it, regarded with great fear and apprehension.</p>	

## 7. Observations

## Questionnaire 1

In questionnaire 1, sentence one had five completely different interpretations. The only interpretation that is close to the literal meaning of the sentence given is that of respondent (c), even though he/she used 'her' instead of 'his'. Respondent (d) simply created a connotative meaning. Sentence three had two interpretations that are

almost the same as the sentence given - (b) and (e). The others are misinterpretations.

### **Questionnaire 3**

Sentence one had only one close interpretation: (d). all the others were misinterpretations. All the responses to sentence three can simply be regarded as misinterpretations.

### **Questionnaire 5**

For sentence one, only response (e) has the same sense with the given sentence; all the other four responses are misinterpretations. For sentence three, only response (a) has a similar sense with the given sentence. The other four are misinterpretations.

### **Questionnaire 7**

For sentence one, only response (c) has the same sense as the given sentence; all the other responses are misinterpretations. For sentence three, respondents (a) and (c) were close to the truth, but they failed to add that it was a joke! All the other responses are misinterpretations.

### **Questionnaire 11**

Only response (b) is different in interpretation from sentence one. All the other responses are within the same semantic field. Respondent (b) and (e) were almost perfect in their interpretations. All the other responses are misinterpretations.

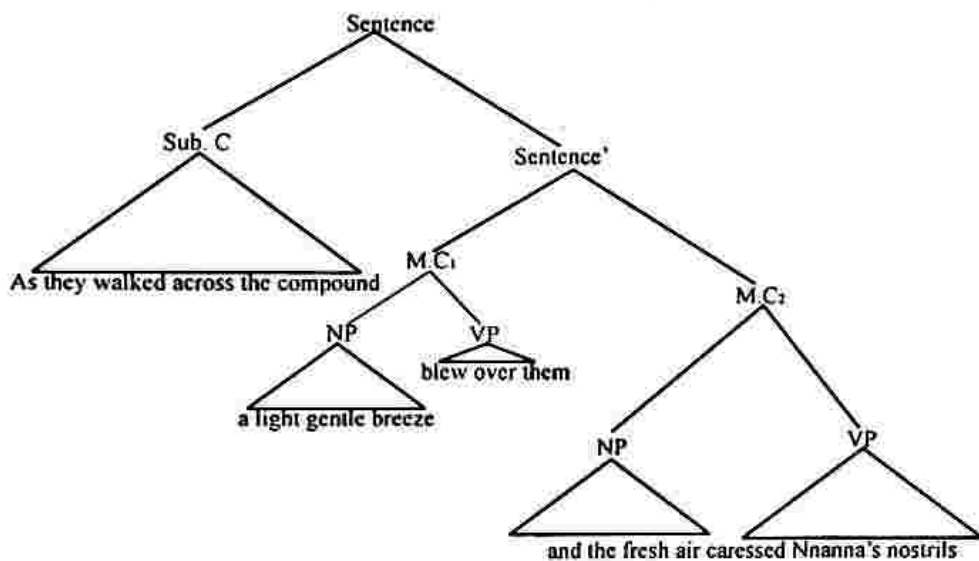
### **Summary of Observations**

Due to the fact that the sentences given for interpretation were taken out of context, many of the sentences were misinterpreted by the respondents. This is a proof that all locutionary acts are subject to illocutionary indeterminacy. Also, it was observed that no two respondents gave two different, but correct interpretations. This is evidence that Dul Johnson wrote his novel in a clear and unambiguous manner. Therefore, there is no need for disambiguation.

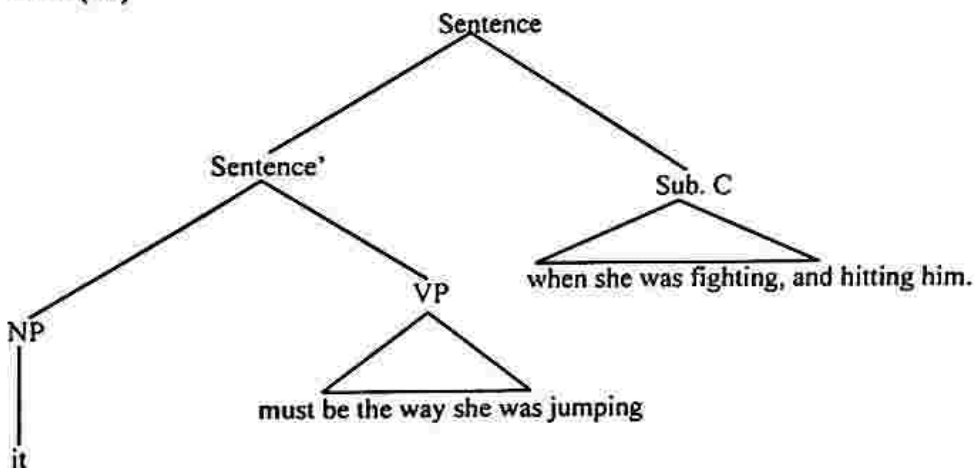
### **X-Bar Analysis**

As they walked across the compound, a light, gentle breeze blew over them and the fresh air caressed Nnanna's nostrils. ( p. 235)

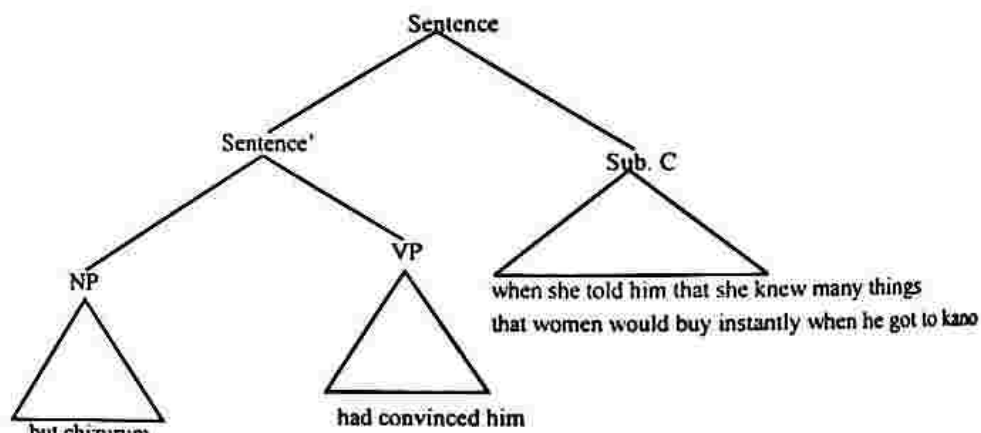
X-Bars In *Across The Gulf*



It must be the way she was jumping when she was fighting, and hitting him. (56)

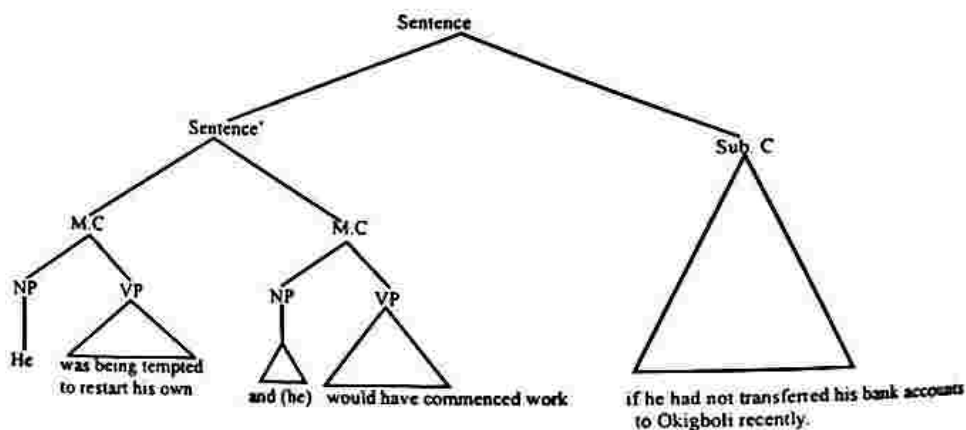


But Chizurum had convinced him when she told him that she knew many things that women would buy instantly when he got to Kano. (129)



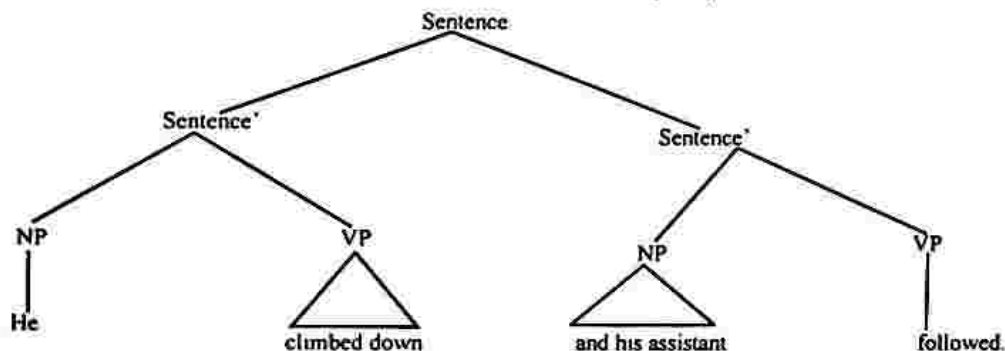
When she told him that she knew many things that women would buy instantly when he got to But Chizurum had convinced him Kano.

He was being tempted to restart his own, and would have commenced work if he had not transferred his bank accounts to Okigboli recently. (167)



He was being tempted to restart his own and (he) would have commenced work if he had not transferred his bank accounts to Okigboli recently.

He climbed down and his assistant followed. (206)



### Summary/conclusion

X-bar theory is a theory of syntax invented by Chomsky (1970). *Across the Gulf* is a novel written by Prof. Dul Johnson, a renowned professor of English; a novelist, a playwright and a film maker. Sixteen questionnaires carrying five different sentences each were administered to a cross section of Bingham University students, with the assumption that there could be structural disambiguation in the novel. Among the sixteen questionnaires, only the five questionnaires with odd numbers were taken for analysis. Narrowing further, only sentence 1 and 3 were taken from each questionnaire.

For each sentence, ten interpretations were collected, but only five were randomly selected for analysis. It was observed that no two respondents gave different but correct interpretations of any sentence. Thus, there was no need for disambiguation.

For X-Bar presentation, only sentence one was selected from each of the five questionnaires hitherto selected for data presentation and analysis. Just so as to represent intermediate categories in the tree diagrams, some main clauses are simply regarded as sentences.

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## APPENDIX

### X-BARS 'ACROSS THE GULF': DISAMBIGUATION OF GARDEN PATH SENTENCES

#### QUESTIONNAIRE

SECTION A: The following sentences are taken out of context. Please give the simplest interpretation of the sentences in the spaces provided.

1. As they walked across the compound, a light, gentle breeze blew over them and the fresh air caressed Nnanna's nostrils. (235)

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1. When Ifunanya told him that she was pregnant, the first thing that came to his mind was the name to give the child. (236)

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2. If this was his mother, then she must have been really beautiful. (238)

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3. I knew I was not going to get her back, but from her, I would get to know about you. (239)

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4. Janbut was discovering answers to many of the questions that had nagged at his mind since his departure from Okigboli while kumbut was discovering answers to the questions that had troubled his mind since his experience at Ikenna's house and all through the journey to Fabut. (240)

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