

The Syntax of *Wh*-Questions in Gichuka

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Abstract

This study investigated *wh*-question formation in Gichuka, an SVO Bantu language spoken in Kenya. The study established that Gichuka forms *wh*-question using the four strategies, namely: *wh-in situ*, full *wh*-movement, partial *wh*-movement, and intermediate strategy. In *wh-in situ*, the *wh*-phrase does not move. In full *wh*-movement, the *wh*-phrase moves to the beginning of the sentence. In partial *wh*-movement, the *wh*-phrase moves to an intermediate Spec, CP. In the intermediate strategy, the *wh*-phrase moves to an intermediate Spec, CP, or a Spec of the matrix CP, followed by movement of the subject to position above CP, a Topic position. These findings are similar to those of Muriungi (2003) who established that Kitharaka, a related Bantu language forms questions using the four strategies. As in Muriungi (2003), the study established that subjects cannot be questioned *in situ*.

Keywords

Wh-in Situ; Full *Wh*-Movement; Partial *Wh*-Movement; Intermediate *Wh*-Movement; Gichuka; Bantu

1. Background to the Study

According to Fromkin, Robert, Neil, & Harry (2001), one of the linguistic universals is that all languages have a way of asking questions. Different languages have various ways of forming *wh*-questions which include full *wh*-movement, partial *wh*-movement and *wh-in situ*.

In English, the *wh*-word moves from the underlying object position to the beginning of the question as shown in (1) below:

- (a) You bought a bicycle (object).
(b) *You bought what?
(c) What did you buy? (Full *wh*-movement) (Anisa, 2009; Kristin, 2000; Puskas, 1997; Sabel & Zeller, 2004;

Norberto, 2004).

1(b) is ungrammatical because the *wh*-word has remained in the position of the object that is the position after the verb. This is not allowed in English. However, (1b) is grammatical as an echo question.

To formulate questions on adjuncts in English, the *wh*-word moves from the underlying position of adjuncts, the position after the verb, to the beginning of the question as shown below:

2. (a) He writes quickly (adjunct)
(b) *He writes how?
(c) How does he write?
3. (a) He writes everyday (adjunct)
(b) *He writes when?
(c) When does he write?
4. (a) He writes for fun? (adjunct)
(b) *He writes why?
(c) Why does he write? (full *wh*-movement).
5. (a) He writes on a paper (adjunct)
(b) *He writes where?
(c) Where does he write? (full *wh*-movement). (full *wh*-movement in English is described and analyzed in Chomsky's seminar paper on *wh*-movement) (Chomsky, 1977).

Typically, English only allows full *wh*-movement. This accounts for the ungrammaticality of the examples in (1b), (2b), (3b), (4b), and (5b).

In some languages, the *wh*-word can remain *in situ*, that is, it is not moved at all. It remains in the position where we find the corresponding non-*wh*-phrase. This is evident in Kiswahili and Kikuyu.

When forming object *wh*-questions in Kiswahili, the *wh*-word can remain in the canonical position of the object. It appears after the verb, the position where we also find the object. This is *wh-in situ*.

6. (a) Mtoto alipiga mbwa (object)
Child beat dog
"Child beat the dog"
- (b) Mtoto alipiga nini? (*wh-in situ*).
Child beat what?
"What did the child beat?"

When forming adjunct *wh*-questions in Kiswahili, the *wh*-word can remain in the canonical position of the adjunct as shown in (7):

7. (a) Mtoto alienda shuleni (statement with a locative adjunct)
Child went school
"The child went to school"
- (b) Mtoto alienda wapi? (*wh-in situ*)
Child went where?
"Where did the child go?"
8. (a) Mtoto alienda asubuhi (statement with a time adjunct)
Child went morning
"The child went in the morning"
- (b) Mtoto alienda lini?
Child went when?
"When did the child go?"
9. (a) Mtoto alienda shuleni kwagari (statement with a means adjunct).
Child went school by bus.
"The child went to school by bus."
- (b) Mtoto alienda shuleni vipi? (*wh-in situ*).
Child went school how?
"How did the child go to school?"
10. (a) Mtoto alienda shuleni kusoma (statement with a reason adjunct).
Child went school to read
"The child went school to read."

(b) Mtoto alienda shuleni kwa nini? (*wh-in situ*).

Child went school why?

“Why did the child go to school?”

In addition to Kiswahili’s allowing *wh-in situ*, it also allows full *wh*-movement. This is where the *wh*-word moves from its canonical position to the beginning of the sentence. The moved *wh*-phrases in Kiswahili typically contain the particle *ni* in Bantu, which is referred to as the focus marker as shown in (11b) and (12b):

11. (a) Mtoto alienda shuleni (adjunct).

Child went school

“The child went to school”

(b) Ni wapimtoto alienda? (adjunct full *wh*-question)

Where child went

“Where did the child go?”

12. (a) Mtoto alipiga mbwa (object)

Child beat dog

“The child beat the dog.”

(b) Ni nini mtoto alipiga? (Object full *wh*-question).

What child beat

“What did the child beat?”

In Kikuyu, *wh-in situ* is allowed. The *wh*-word remains in the underlying position of objects, adjuncts and subjects. According to Clements and Ford (1979) Kikuyu *wh*-phrases stay in their base position in the overt syntax as shown in (13) and (14):

13. (a) Kamau onire ngui (object)

Kamau saw dog

“Kamau saw a dog”

(b) Kamau onire ndui? (Object *wh-in situ* question).

Kamau saw what.

“What did Kamau see?”

14. (a) Wangari athire cukuru (adjunct)

Wangari went school.

“Wangari went to school”

(b) Wangari athire ku? (adjunct *wh-in situ* question)

Wangari went where?

“Where did Wangari go?”

According to Bergvall (1987), Kikuyu also allows partial *wh*-movement where the underlying *wh*-word moves from its canonical position to some intermediate position of the sentence as shown in (15).

15. Maria etikitie nindui John agurire?

Maria believes what John bought?

“What does Maria believe John bought?”

According to Clements (1984), Kikuyu also allows full *wh*-movement where the *wh*-word moves to the front of the sentence as shown in (16):

16. Nikū Ngugi augire atiKamau nionire Kaanake?

Where Ngugi said that Kamau saw Kaanake?

“Where did Ngugi say that Kamau saw Kaanake?”

Typically Kikuyu uses three strategies in forming *wh*-questions that is, full *wh*-movement, *wh-in situ* and partial *wh*-movement. Moved *wh*-phrases bear the focus marker morpheme *ni*. *wh*-phrases, that are *in situ* not bearing *ni*. The particle *ni* is therefore diagnostic of movement in Kikuyu and Bantu languages in general German allows partial *wh*-movement where the *wh*-word moves to the middle of the sentence. According to McDaniel (1986) the scope of *wh*-phrase moved to the middle of the sentence is marked by a *wh*-expletive which appears in initial position of the sentence, (17):

17. Was glaubst du welchen Mantel Jakob heute angezogen hat?

What do you think which coat Jacob put on today?

In example (20a) “was” in German is “what” in English. It is a *wh*-expletive, that is, it carries no meaning; it is only a requirement when constructing *wh*-questions in German for reasons of scope. The contentive *wh*-

phrase “which coat has been partially moved.”

2. Statement of the Problem

It is a linguistic universal that all languages have strategies of questioning. These strategies include full *wh*-movement, *wh-in situ* and partial movement. While it is documented that English only allows full *wh*-movement; German allows partial *wh*-movement and full-*wh* movement; Kikuyu, Dholuo, Kitharaka, Zulu and Babine Witsuwiten allow full-*wh* movement, partial *wh* movement and *wh in situ*, the strategies of forming *wh*-questions in Gichuka are not known and have not been documented. Therefore, the study investigated and documented these strategies and located these strategies in the general cross-linguistic *wh*-question formation strategies.

3. Objectives

- i) To discuss the strategies of formulating object, subject and adjunct *wh*-questions in Gichuka.
- ii) To describe the structural representations of objects, subjects and adjunct *wh*-questions in Gichuka.

4. Results and Discussion

The presentation in this section is guided by the two research objectives.

The first objective was to establish and discuss the strategies of formulating object, subject and adjunct *wh* questions in *Gichuka*. From the literature review, it was stated that cross linguistically, there are three strategies of forming *wh* questions. They include full *wh* movement/ex situ, *wh in situ* and partial *wh* movement. In full *wh* movement the *wh* phrase moves to the specifier of CP of the matrix clause while in partial *wh* movement, the *wh* phrase moves to the specifier of CP of an embedded clause. *Wh in situ* does not involve any movement.

4.1. Objects

Objects in English are questioned by two *wh*phrases; what and **who**. The equivalents of these in Gichuka are ‘**mbi**’ and ‘**uu**’ Consider the affirmative sentence in 18(a):

18(a) kairitu karugire irio

Girl cooked food

S V O

“The girl cooked food”

To question the object “irio”, the *wh* phrase can move to the initial position of the sentence. This strategy is full *wh* movement/ex situ as in 18(b).

18(b) Nimbi kairitu karugire? (full *wh* movement)

f-what girl cooked

“What did the girl cook?”

As evident in 18(b), the focus marker “ni” is added to *wh* phrase to form “nimbi”. However if the focus marker is not added the sentence becomes ungrammatical as shown in 18(c):

*18(c) Mbi kairitu karugire?

What girl cooked

The object “irio” can also be questioned by moving the *wh* phrase to the middle of the sentence as shown in 18(d).

18(d) **Kairitu nimbi** karugire? (intermediate *wh* movement)

Girl **f-what** cooked

“What did the girl cook?”

In 18(d), The *wh* phrase appears in the intermediate position. This is the intermediate strategy. In this strategy, the *wh* phrase moves to a position immediately after the subject of the sentence. The focus marker “**ni**” is added just as in the case of full **wh** movement. However, if the focus marker is not added to the *wh* phrase after the movement, the question becomes ungrammatical as shown 18(e).

*18(e) Kairitu **mbi** karugire?

Girl **what** cooked

The *wh* phrase can also remain in the canonical position of the object. This means that the *wh* phrase does not move at all.

18(f) **Kairitu** karugire **mbi?** (*wh in situ*)

Girl cooked **what**

“What did the girl cook?”

As shown in (4f), the *wh* phrase remains in the position of the object but no focus marker is added. However if the focus marker added the sentence becomes ungrammatical as in 18(g):

*18(g) **Kairitu** karugire **nimbi?**

Girl cooked **f-what**

Full *wh* movement, intermediate strategy and *wh in situ* are also possible in complex sentences. Consider the complex affirmative sentence in 19(a).

19(a) John etikitie mwende augire kairitu karugire irio. (complex sentence)

John believe Mwende said girl cooked food

“John believes Mwende said the girl cooked food”

To question the object “irio”, the *wh* phrase can move to the initial position of the sentence. A focus marker “**ni**” is added.

19(b) **Nimbi** John etikitie Mwende augire kairitu nikarugire?

f-what John believe Mwende said girl cooked

“What does John believe Mwende said the girl cooked food?”

If the focus marker “**ni**” is not added, an ungrammatical construction is made as shown in 19(c).

*19(c) **Mbi** John etikitie Mwende augire kairitu nikarugire?

What John believe Mwende said girl cooked

The object “irio” can also be questioned by moving the *wh* phrase to the specifier of CP of the second embedded clause.

This is partial *wh* movement. Consider 19(d).

(19d) John etikitie **nimbi** Mwende augire kairitu nikarugire (PM)

John believe **f-what** Mwende said girl cooked

“What does John believe Mwende said the girl cooked?”

In 19(d), the movement of the *wh* phrase to the second embedded clause. It’s evident that the focus marker “**ni**” is added to it.

The *wh* phrase can also move to the specifier of CP of the most embedded clause having the focus marker “**ni**” as shown in 19(e).

19(e) John etikitie Mwende augire **nimbi** kairitu karugire? (PM)

John believe Mwende said **f-what** girl cooked

“What does John believe Mwende said the girl cooked?”

If the *wh* phrase moves to a position after any of the embedded clauses, a focus marker must be added to it. However, if it is not added, the question becomes ungrammatical as shown in 19(f) and 19(g).

*19(f) John etikitie **mbi** Mwende augire kairitu nikarugire?

John believes **what** Mwende said girl cooked

*19(g) John etikitie Mwende augire **mbi** kairitu karugire?

John believes Mwende said **what** girl cooked

It is also possible to move the *wh* phrase to a position that immediately follows the subject. This is the intermediate strategy in complex questions.

19(h) John nimbi etikitie Mwende augire kairitu nikarugire? (IM)

John **f-what** believe Mwende said girl cooked

“What does John believe Mwende said the girl cooked food?”

19(i) John etikitie Mwende **nimbi** augire kairitu nikarugire? (IM)

John believe Mwende **f-what** said girl cooked

“What does John believe Mwende said the girl cooked?”

In 19(h) and 19(i), the focus marker is added to the *wh* phrase. Malformed questions are formed if the focus marker is not added shown in 19(j) and 19(k).

*19(j) John **mbi** etikitie Mwende augire kairitu nikarugire? (IM)

John **what** believes Mwende said girl cooked

*19(k) John etikitie Mwende **mbi** augire kairitu nikarugire? (IM)

“John believe Mwende **what** said girl cooked.”

Wh in situ is also possible in a complex sentence. The *wh* phrase remains in the position where we find the object ‘irio’.

19 (l) John etikitie Mwendu augire kairitu karugire **mbi**? (*wh in situ*)

John believes Mwendu said girl I cooked **what**?

‘What does John believe Mwendu said the girl cooked?’

The focus marker is not present in 19(l) as the *wh* phrase has not moved. However, if we add a focus marker ‘ni’ to the *wh* phrase the sentence is ungrammatical. Consider 19(m).

*19(m) John etikitie Mwendu augire kairitu karugire **nimbi**?

John believes Mwendu said girl cooked **f-what**?

The other object *wh*-phrase which is “**uu**” is seen to behave the same as “**mbi**” in different constructions.

There is the addition of a focus marker whenever the *wh* phrase moves. However, in the case of the *wh* phrase “**uu**”(who) the focus marker “**ni**” is added even if in most cases “**i**” is usually omitted and becomes optional.

Therefore, the *wh* phrase becomes “**n(i)uu**” or “**nuu**”. Consider 19(n) and 19(o).

19(n) **Nuu** murimi aringire? (*wh* full-movement)

F-who Murimi beat?

“Who did Murimi beat?”

19(o) Murimi **nuu** aringire? (intermediate *wh* movement)

Murimi **f-who** aringire?

“Who did Murimi beat?”

If no focus marker is added, the *wh* questions become ungrammatical as shown in 19(p) and 19(q):

*19(p) **Uu** Murimi aringire? (FM)

Who Murimi beat?

*19(q) Murimi **uu** aringire? (IM)

Murimi **who** beat?

“Who did Murimi beat?”

In case the *wh* phrase does not move at all, then no focus marker is needed.

19(r) Murimi aringire **uu** (*wh in situ*)

Murimi beat **who**?

“Who did Murimi beat?”

Therefore it is ungrammatical to add a focus marker if the *wh* phrase has not moved.

*19(s) Murimi aringire **nuu**? (*wh in situ*)

Murimi beat **f-who**

“Who did Murimi beat?”

From the data in (18) and (19) above, the following observations can be made.

- i) There are four strategies involved in forming object *wh* questions in Gichuka. These are, *wh* full movement, partial *wh* movement, intermediate *wh*-movement and *wh in situ*.
- ii) Whenever the object *wh*-phrases “**mbi**” and “**uu**” move, the focus marker ‘ni’ must be added to them.
- iii) If the *wh* phrase remains *in situ*, no focus markers are needed.

4.2. Subjects

Subjects *wh* questions are formed by *wh* phrases “**what**” and “**who**” which are “**mbi**” and “**uu**” in Gichuka respectively.

Consider the sentence in 20(a). The subject of the sentence is ‘Kairitu’-girl.

20(a) Kairitu karugire irio.

Girl cooked food.

S V O

“The girl cooked food.”

To question the subject “girl”, full *wh* movement is possible, as in 20(b).

20(b) **Nuu** arugire irio? (full *wh* movement)

f-who cooked food.

‘Who cooked the food?’

20(b), Shows that it is possible that the *wh* phrase “**uu**” has moved. This is because of the addition of a focus

marker ‘**ni**’. This movement is evident as the sentence is ungrammatical if a focus marker is not added, as shown in 20(c).

*20(c) **Uu** arugire irio?

Who cooked food.

Wh in situ is not possible when constructing subject *wh* questions. This explains the ungrammaticality of 20(f):

*20(f) **Uu** arugire irio? (*wh in situ*)

who cooked food

“Who cooked the food?”

In a complex sentence the subject *wh* phrase can move to the beginning of the sentence as in 21(a):

21(a) **Nuu** John etikitie Mwende augire niarugire irio? (full *wh* movement)

F-who John believes Mwende, said cooked food?

“Who does John believes Mwende said cooked food?”

The focus marker “**n**” is added however if it is left out the sentence becomes ungrammatical.

*21(b) **Uu** John etikitie Mwende augire niarugire irio?

Who John believe Mwende said cooked food?

Partial *wh* movement is also evident in a subject *wh* question as shown in 21(c).

21(c) John etikitie**nuu** mwende augire niarugire irio? (partial *wh* movement)

John believes **f-who** Mwende said cooked food.

“Who does John believe Mwende said cooked the food?”

In 21(c), the *wh* phrase moves to a position after the second embedded clause.

The focus marker “**n**” is added to the subject *wh* phrase when it moves. If the focus marker is left out, the sentence becomes ungrammatical as in 21(d).

*21(d) John etikitie **uu** Mwende augire niarugire irio?

John believes **who** Mwende said cooked food?

The subject *wh* phrase can also move to a position that immediately follows the subject as in 21(e) and 21(f)

21(e) John**nuu**etikitie Mwende augire niarugire irio? (intermediate *wh* movement)

John **f-who** believe Mwende said cooked food.

“Who does John believe Mwende said cooked food?”

21(f) John etikitie Mwende **nuu** augire niarugire irio? (intermediate *wh* movement)

John believe Mwende **f-who** said cooked food.

“Who does John believe Mwende said cooked food?”

In both movements, the focus marker “**n**” is added to the *wh* phrase. However if it is left out, again the sentence becomes ungrammatical as in 21(i) and 21(j).

*21(i) John etikitie Mwende **uu** augire niarugire irio?

John believe mwende **who** said cooked food?

*21(j) John **uu** etikitie Mwende augire niarugire irio?

John **who** believe mwende said cooked food.

Wh in situ is not possible in subject *wh* questions.

*21(k) John etikitie Mwende augire **uu** arugire irio? (*wh in situ*)

John believe Mwende said **who** cooked food?

The *wh* “phrase **mbi**” (what) has the same distribution as “**uu**”(who). When moved, a focus marker is added to the *wh* phrase. We add focus markers “**ni**” to “**mbi**” and “**n**” to “**uu**”. In both *wh* phrases, *wh in situ* is impossible when forming subject *wh*-questions.

From the data in (20) and (21) above the following observations are made.

(i) In order to form a subject *wh* question, movement is compulsory. Therefore, full *wh* movement, partial *wh* movement and intermediate *wh* movement are involved.

(ii) It is impossible to form a subject *wh* question when the *wh* phrase is *in situ*.

(iii) Focus markers are added to the *wh* phrases. “**ni**” is added to the subject *wh* phrase “**mbi**” while “**n**” is added to the subject *wh* phrase “**uu**”.

Table 1 is showing the strategies for objects and subjects.

From **Table 1**, the object *wh* questions allow all the strategies of formulating *wh* question while the subjects allow full, partial and intermediate *wh* movement.

The subjects do not allow *wh in situ*.

Table 1. Strategies of *wh* question formation for objects and subjects.

Strategies				
Objects	Full ✓	Partial ✓	Intermediate ✓	<i>Wh in situ</i> ✓
Subjects	✓	✓	✓	X

4.3. Adjuncts

The adjuncts *wh* questions answer the questions when, where, how and why. We begin by investigating the strategies involved in forming questions using the adjunct ‘when’.

4.3.1. When

Consider the sentence 22(a). The adjuncts is “muramuko”.

22(a) kairitu karugire irio muramuko.

Girl cooked food Monday.

“The girl cooked the food on Monday.

To question the adjunct “muramuko” the *wh* phrase “**ri**” can move to the initial position of the sentence as shown in 22(b):

22(b) **Niri** kairitu karugire irio? (full *wh*-movement)

F-when girl cooked food?

“When did the girl cook food?”

The *wh* phrase “**ri**” is added a focus marker “**ni**” when it moves. If the focus marker is not added the sentence is ungrammatical.

*22(c) **Ri** kairitu karugire irio?

When girl cooked food?

The intermediate *wh* movement is also evident in this adjunct.

22(d) Kairitu **niri** karugire irio? (intermediate *wh* movement)

Girl **f-when** cooked food

“When did the girl cook food?”

Just as in the case of full *wh* movement a focus marker is added to the *wh* phrase. If the focus marker is left out the sentence becomes ungrammatical.

*22(e) Kairitu **ri** karugire irio?

Girl **when** cooked food.

Wh in situ is possible with adjunct *wh* phrase “**ri**”.

22(f) Kairitu karugire irio **ri**? (*wh in situ*)

Girl cooked food **when**?

“When did the girl cook food?”

As evident in 22(f), the *wh* phrase does not contain a focus marker. This is because it has not moved at all. It is ungrammatical to add a focus marker “**ni**” if the *wh* phrase has not moved as in 22(g):

*22(g) Kairitu karugire irio **niri**?

Girl cooked food **f-when**?

Consider a complex sentence such as 23(a):

23(a) John etikitie Mwendu augire kairitu karugire irio muramuko.

John believe Mwendu said girl cooked food Monday.

“John believes Mwendu said the girl coked the food on Monday.”

To question “muramuko” full *wh* movement can be allowed as shown in 23(b)

23(b) **Niri** John etikitie Mwendu augire kairitu nikarugire irio? (full *wh* movement)

F-when John believe Mwendu said girl cooked food.

“When does John believe Mwendu said the girl cooked food?”

A focus marker “**ni**” is added to the *wh* phrase. However if it is left out, the sentence becomes ungrammatical as in 23(c).

*23(c) **Ri** John etikitie Mwendu augire kairitu nikarugire irio.

When John believe Mwendu said girl cooked food.

Partial *wh* movement is also possible as in 23(d) and 23(e)

23(d) John etikitie **niri** Mwende augire kairitu karugire irio? (partial *wh* movement)

John believe **f-when** Mwende said girl cooked food

“When does John believe the girl cooked food?”

23(e) John etikitie Mwende augire **niri** kairitu karugire irio? (partial *wh* movement)

John believe Mwende said **f-when** girl cooked food.

“When does John believe the girl cooked food?”

In 23(d) above, the *wh* phrase moves to the position after the most embedded clause while in 23(e) the *wh* phrase moves to the position after the second embedded clause. The focus marker “**ni**” is added to the *wh*-phrase when the *wh* moves. If no focus marker is added after the movement, the sentence is ungrammatical as in 23(f) and 23(g).

*23(f) John etikitie **ri** Mwende augire kairitu karugire irio?

John believe **when** Mwende said girl cooked food?

*23(g) John etikitie Mwende augire **ri** kairitu karugire irio?

John believes Mwende said **when** girl cooked food?

The adjunct “**when**” also allows intermediate *wh* movement where the *wh* phrase moves to the position after the subject in a complex sentence as in 23(h) and 23(i):

23 (h) John **niri** etikitie Mwende augire kairitu nikarugire irio? (intermediate *wh* movement)

John **f-when** believe Mwende said girl cooked food?

“When does John believe Mwende said the girl cooked food?”

23 (i) John etikitie Mwende **niri** augire kairitu nikarugire irio? (IM)

John believes Mwende **f-when** said girl cooked food?

“When does John believe Mwende said the girl cooked food?”

If the focus marker is not added in the sentences 23(h) and 23(i), they become ungrammatical as in 23(k) and 23(l) respectively:

*23(k) John **ri** etikitie Mwende augire kairitu nikarugire irio?

John **when** believes Mwende said girl cooked food.

*23(l) John etikitie Mwende **ri** augire kairitu nikarugire irio?

John believes Mwende **when** said girl cooked food.

It is also possible to question the adjunct “kairitu” using *wh in situ* as in 23(m).

23(m) John etikitie Mwende augire kairitu karugire irio **ri**? (*wh in situ*)

John believes Mwende said girl cooked food **when**?

“When does John believe Mwende said the girl cooked food?”

When the *wh* phrase does not move, no focus marker is added. If it is added the sentence is ungrammatical as in 23(n).

*23(n) John etikitie Mwende augire kairitu karugire irio **niri**?

John believe Mwende said girl cooked food **f-when**

4.3.2. Where

Consider sentence 24(a). The adjunct is “nchikoni”.

24(a) Kairitu karugire irio nchikoni.

Girl cooked food kitchen.

“The girl cooked the food in the kitchen.”

To question the adjunct “nchikoni”, full *wh* movement is possible as in 24(b):

24(b) Niku kairitu karugire irio? (full *wh* movement)

F-where girl cooked food.

“Where did the girl cook food?”

The *wh* phrase is added a focus marker “**ni**”.

If not added the sentence becomes ungrammatical as in 24(c).

*24(c) **Ku** kairitu karugire irio?

Where girl cooked food?

It is also possible to ask about the adjunct “nchikoni” using intermediate *wh* movement as shown in 24(d):

24(d) Kairitu **niku** karugire irio? (intermediate *wh* movement)

Girl **f-where** cooked food?

“Where did the girl cook food?”

Just as in full *wh* movement in 24(b) above, the focus marker “**ni**” must be added to the *wh* phrase whenever it moves. The sentence is ungrammatical without the focus marker “**ni**”. Consider 24(e):

*24(e) Kairitu **ku** karugire irio?

Girl **where** cooked food?

Wh in situ is also possible in the above sentence. The *wh* phrase does not move, therefore no focus marker is added as shown in 24(f).

24(f) Kairitu karugire irio **ku**? (*wh in situ*)

Girl cooked food **where**?

“Where did the girl cook food?”

If the focus marker is added, the sentence then becomes ungrammatical.

*24(g) Kairitu karugire irio **niku**?

Girl cooked food **f-where**?

In a complex sentence such as 25(a), the same rules are seen to apply.

Consider the sentence 25(a). The adjunct is “*nchikoni*”.

25 (a) John etikitie Mwende augire kairitu karugire irio *nchikoni*. (complex sentence)

John believe Mwende said girl cooked food kitchen.

“John believes Mwende said the girl cooked food in the kitchen”.

To question the adjunct “*nchikoni*” full *wh* movement is possible as in 25(b).

25(b) **Niku** John etikitie Mwende augire kairitu nikarugire irio? (full *wh* movement)

F-where John believe Mwende said girl cooked food.

“Where does John believe Mwende said the girl cooked food?”

The focus marker “**ni**” is added to the *wh* phrase whenever it moves. If it’s left out, the sentence is ungrammatical as in 25(c).

*25(c) **Ku** John etikitie Mwende augire kairitu nikarugire irio?

Where John believe Mwende said girl cooked food

Partial *wh* movement is also possible when questioning the above adjunct. Always the focus marker is added to the *wh* phrase whenever it moves as in 25(d) and 25(e):

25(d) John etikitie **niku** Mwende augire kairitu karugire irio? (partial *wh* movement)

John believe **f-where** Mwende said girl cooked food?

“where does John believe Mwende said the girl coked food?”

25 (e) John etikitie Mwende augire **niku** kairitu karugire irio? (partial *wh* movement)

John believe Mwende said **f-where** girl cooked food?

The *wh* phrase moves to the position after the second embedded clause as in 25(d) and to the most embedded clause as in 25(e):

Intermediate *wh* movement is also possible (see 25(f) and 25(g)).

25(f) John **niku** etikitie Mwende augire kairitu nikarugire irio? (IM)

John **f-where** believe Mwende said girl cooked food

“Where does John believe Mwende said the girl cooked food?”

25(g) John etikitie Mwende **niku** augire kairitu nikarugire irio? (IM)

John believe Mwende **f-where** said girl cooked food.

“Where does John believe Mwende said the girl cooked food?”

Just as in full *wh* movement and partial *wh* movement the focus marker must be added to the *wh* phrase whenever it moves. Otherwise ungrammatical constructions result if the focus marker is not added, as in 25(h) and 25(i).

*25(h) John **ku** etikitie Mwende augire kairitu nikarugire irio? (IM)

John **where** believe Mwende said girl cooked food.

*25(I) John etikitie **ku** Mwende augire kairitu nikarugire irio? (PM)

John believes **where** Mwende said girl cooked food?

Wh in situ is also possible when questioning adjuncts. However a focus marker is not added to the *wh* phrase since no movement is evident as in 25(j).

25(j) John etikitie Mwende augire kairitu karugire irio **ku**? (*wh in situ*)

John believe Mwende said girl cooked food **where**
 If the focus marker is added, the sentence becomes ungrammatical as in 25(k).
 *25(k) John etikitie Mwende augire kairitu karugire irio **niku?** (*wh in situ*)
 John believe Mwende said girl cooked food **f-where**.

4.3.3. How

Consider sentence 26(a). “Kabora” is the adjunct.

26(a) Kairitu karugire irio kabora.
 Girl cooked food slowly
 “The girl cooked food slowly”

To question the adjunct “kabora” full *wh* movement is possible as shown in 26(b):

26(b) **Natia** kairitu karugire irio? (full *wh* movement)
F-how girl cooked food
 “How did the girl cook food?”

The *wh* phrase must be added a focus marker “**ni**” whenever it moves. This explains the ungrammaticality of 26(c):

*26(c) **Atia** kairitu karugire irio? (full *wh* movement)
How girl cooked food

Intermediate *wh* movement is also possible. There is a focus marker that is added to the *wh* phrase see 26(d):

26(d) Kairitu **natia** karugire irio? (intermediate *wh* movement)
 Girl **f-how** cooked food.
 “How did the girl cook food?”

It is ungrammatical to have the above statements without a focus marker “**ni**” as in 26(e)

*26(e) Kairitu **atia** karugire irio?
 Girl **how** cooked food.

Wh in situ can also be used to question the adjunct above as in 26(f):

26(f) Kairitu karugire irio **atia?** (*wh in situ*)
 Girl cooked food **how**.
 “How did the girl cook food?”

It’s ungrammatical to add a focus marker “**ni**” to the *wh* phrase if no movement is evident as shown in 26(g).

*26(g) Kairitu karugire irio **niatia?** (*wh in situ*)
 Girl cooked food **f-how**

The same distribution is evident in a complex sentence as in 27(a).

27(a) John etikitie mwende augire kairitu karugire irio kabora (complex sentence)
 John believe Mwende said girl cooked food slowly.
 “John believes Mwende said the girl cooked food slowly.”

The adjunct “kabora” can be questioned using full *wh* movement as in 27(b).

27(b) **Natia** John etikitie Mwende augire kairitu nikarugire irio? (full *wh* movement)
F-how John believe Mwende said girl cooked food
 “How does John believe Mwende said the girl cooked food?”

It’s ungrammatical to construct the above sentence without the focus marker “**ni**” as in 27(c)

*27(c) **Atia** John etikitie Mwende augire kairitu nikarugire irio? (full *wh* movement)
How John believes Mwende said girl cooked food.

Partial *wh* movement is also possible as the *wh* phrase can move to a position after the most embedded clause and the second embedded clause as shown in 27(d) and 27(e) respectively.

27(d) John etikitie **niatia** Mwende augire kairitu nikarugire irio? (partial *wh* movement)
 John believe **f-how** Mwende said girl cooked food.
 “How does John believe mwende said the girl cooked the food?”

27(e) John etikitie Mwende augire **niatia** kairitu karugire irio? (partial *wh* movement)
 John believe Mwende said **f-how** girl cooked food.
 “How does John believe Mwende said the girl cooked the food?”

The same rule applies in intermediate *wh* movement. The focus marker must be added to the *wh* phrase as in 27(f) and 27(g):

27(f) John **natia** etikitie Mwende augire kairitu nikarugire irio? (intermediate *wh* movement)

John **f-how** believe Mwende said girl cooked food.

“How does John believe Mwende said the girl cooked food?”

27 (g) John etikitie mwende **niatia** augire kairitu nikarugire irio? (intermediate *wh* movement)

John believe Mwende **f-how** said girl cooked food .

“How does John believe Mwende said the girl cooked food?”

However if the focus marker in 27(d), 27(e), (13f) and 27(g) is not added ungrammatical construction are made. Consider 27(h) and 27(i).

*27 (h) John etikitie **atia** Mwende augire kairitu nikarugire irio? (partial *wh* movement)

John believe **how** Mwende said girl cooked food

*27 (i) John **atia** etikitie Mwende augire kairitu nikarugire irio (intermediate *wh* movement)

John **how** believe Mwende said girl cooked food.

Wh in situ is also possible, as in 27(j).

27(j) John etikitie Mwende augire kairitu karugire irio **atia**? (*wh in situ*)

John believe Mwende said girl cooked food **how**

“How does John believe Mwende said the girl cooked food?”

However the focus marker “**ni**” is not added when the movement is evident . If it’s added then ungrammatical construction is made, as in 27(k).

*27(k) John etikitie Mwende augire kairitu karugire irio **niatia**? (*wh in situ*)

John believe Mwende said girl cooked food **f-how**.

4.3.4. Why

Consider the sentence 28(a). The adjunct in the sentence is “karia”.

28(a) Kairitu karugire irio karia

Girl cooked food eat

“Why did the girl cook food?”

To question “karia”, full *wh* movement is possible as shown in 28(b).

28(b) **Niki** kairitu karugire irio? (full *wh* movement)

Why girl cooked food

“Why did the girl cook food?”

The *wh* phrase “niki” is used for “why”. It has remained in its original form even after the movement.

Consider 28(c).

28(c) Kairitu **niki** karugire irio? (intermediate *wh* movement)

Girl **why** cooked food

“Why did the girl cook food?”

The above sentence demonstrates intermediate *wh* movement in which the original form of the word “why” which is “**niki**” does not change.

It’s also possible to question the adjunct using *wh in situ* as in 28(d).

28(d) Kairitu karugire irio **niki**? (*wh in situ*)

Girl cooked food **why**.

Interestingly, the *wh* phrase does not change its form in any of the positions. This is a distinctive feature of the adjunct “why” in Gichuka. This is because in questioning all other adjuncts the focus marker “**ni**” is added to the form of the **wh** phrase.

Consider a complex sentence in 29 (a).

29 (a) John etikitie Mwende augire kairitu karugire irio karia (complex sentence)

John believes Mwende said girl cooked food to eat.

“John believes Mwende said the girl cooked food to eat”.

To question “karia” full *wh* movement is possible as in 29 (b).

29(b) **Niki** John etikitie Mwende augire kairitu nikarugire irio? (full *wh* movement)

Why John believe Mwende said girl cooked food.

“Why does John believe Mwende said the girl cooked food?”

It’s also possible to question “irio” using partial *wh* movement. This will involve the *wh* phrase moving to the position after the most embedded clause as in 29(c) and 29(d) respectively.

- 29 (c) John etikitie **niki** Mwende augire kairitu nikarugire irio? (partial *wh* movement)
 John believe **why** Mwende said girl cooked food.
 “Why does John believe Mwende said the girl cooked food?”
- 29 (d) John etikitie mwende augire **niki** kairitu karugire irio? (partial *wh* movement)
 John believe Mwende said **why** girl cooked food.
 “Why does john believe Mwende said the girl cooked food?”

The same rule applies in partial *wh* movement, that is, the original form of the *wh* phrase does not change at all. Consider the sentence 29(e).

- 29(e) John etikitie Mwende augire kairitu karugire irio **niki**? (*wh in situ*)
 John believes Mwende said girl cooked food **why**.
 “Why does John believe mwende said the girl cooked food?”

In conclusion, the *wh* phrase “**niki**” for “why” does not behave like all other adjuncts in forming *wh* questions.

The following is a summary of *wh*-Question formation using the adjuncts:

- (i) All the adjuncts allow full *wh* movement, intermediate *wh* movement, partial *wh* movement and *wh in situ*.
- (ii) All moved adjunct *wh* phrases add the focus marker “**ni**” except the “**why**” *wh* phrase which does not change its form whether moved or not.

Table 2 shows a summary of all the strategies involved in questioning objects, subjects and adjuncts.

From **Table 2**, it is evident that objects and adjuncts allow all the strategies of *wh* question formation except the subjects that do not allow *wh in situ*.

4.4. Structural Representation of Objects, Subjects and Adjuncts

In order to address the second objective which was to describe the structural representations of object, subject and adjunct *wh* question in Gichuka, the researcher focused formation of *wh* questions in Gichuka.

Principles and Parameters Theory recognizes that all languages have syntactic phenomena which are handled in structural terms (Chomsky, 1992; Chomsky & Lasnik, 1993; Culicover, 1997). The theory also states that all languages have a similar syntactic configurations referred to as x-bar schema.

According to the theory, a phrase must contain a maximal projection, a specifier, an intermediate, a head and a complement. The structure of phrases therefore is as shown in **Figure 1**.

(Culicover, 1997) represents a full structure of any sentence as shown in **Figure 2**.

4.4.1. Full *Wh* Movement

This *wh* movement involves the *wh* phrase moving to the specifier of CP of matrix clause. This strategy is allowed when questioning the objects, subjects and adjuncts.

Consider sentence (a):

- 30(a) Kairitu karugire irio (simple sentence)
 Girl cooked food
 “The girl cooked food”
- (b) Nimbi kairitu karugire? (object *wh* question)
 F-what girl cooked

Table 2. Strategies of *wh* question formation for objects, subjects and adjuncts, Summary of Strategies of *Wh*-question formation in Gichuka.

		Full <i>wh</i> movement	Partial <i>wh</i> movement	Intermediate <i>wh</i> movement	<i>Wh in situ</i>
Objects	“mbi”(what)	√	√	√	√
	“uu”(who)	√	√	√	√
Subjects	“mbi”(what)	√	√	√	x
	“uu”(what)	√	√	√	x
Adjuncts	“ri”(when)	√	√	√	√
	“ku”(where)	√	√	√	√
	“atia”(how)	√	√	√	√
	“niki”(why)	√	√	√	√

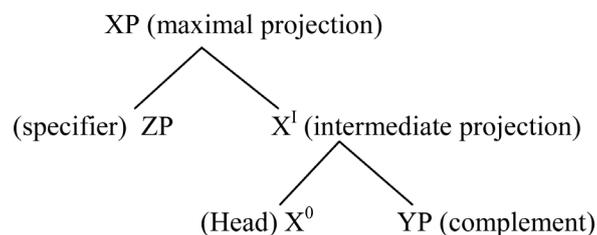


Figure 1. The structure of phrases in X-bar theory.

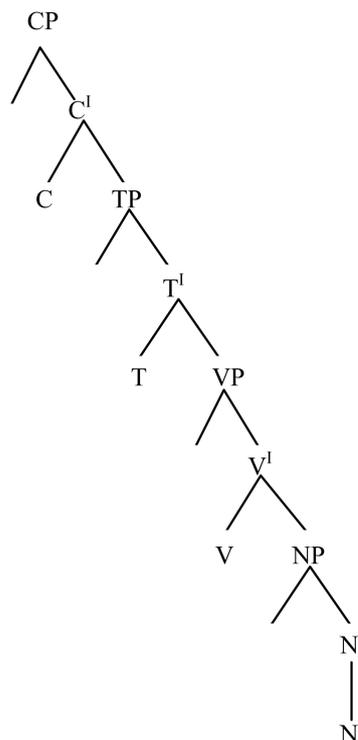


Figure 2. The structure of a sentence.

“What did the girl cook?”

Figure 3 shows the movement of the *wh* phrase “mbi” to the specifier of CP of the matrix clause.

In a complex sentence the same distribution is evident as in (31).

(31) **Nimbi** John etikitie Mwende augire kairitu nikarugire?

f-what John believe Mwende said girl cooked.

“**What** does John believe Mwende said the girl cooked?”

The structure is shown in Figure 4.

The *wh* phrase “mbi” moves to the specifier of CP of matrix clause. The focus marker “**ni**” is added to it to form the object *wh* question.

For the subjects, the *wh* phrase moves from the position of the subject to the specifier of CP of matrix clause as shown in (32).

(32) **Nuu** John etikitie Mwende augire niarugire irio?

F-who John believe Mwende said cooked food.

“Who does John believe Mwende said cooked the food?”

The structure is shown in Figure 5.

The adjuncts *wh* full movement can be represented as in (33)

(33) **Niri** John etikitie Mwende augire kairitu nikarugire irio?

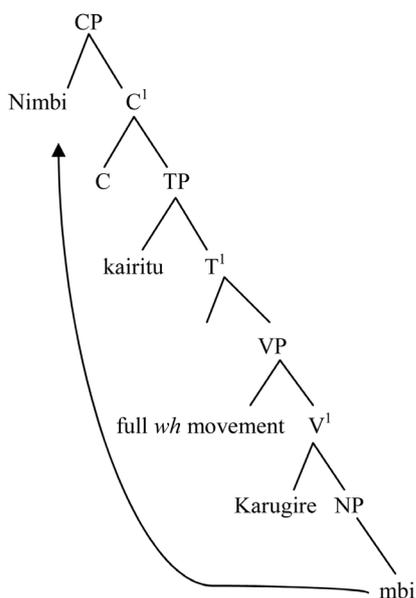


Figure 3. Full *wh*-movement in Gichuka.

F-when John believe Mwende said girl cooked food.
 ‘When does John believe Mwende said the girl cooked food?’

Figure 6 shows full movement of an adjuncts *wh*-phrase.

4.4.2. Partial *Wh* Movement

This strategie involves the *wh* phrase moving to the specifier of CP of the most embedded clause or the second embedded clause. This strategy is allowed when forming object, subject and adjunct *wh* question in Gichuka.

In a complex sentence as in (34), the *wh* phrase moves from the position of the subject to the specifier of CP of the second embedded clause.

- (34) John etikitie **nuu** Mwende augire niarugire irio? (subject *wh* question)
 John believe **who** Mwende said cooked food?
 ‘Who does Mwende believe cooked food?’

This movement is shown in Figure 7.

This movement can be seen in adjuncts as in (35).

- (35) John etikitie **niku**Mwende augire kairitu nikarugire irio? (adjunct partial *wh* movement)
 John believe **f-where** Mwende said girl cooked food.
 ‘Where does John believe Mwende said the girl cooked food?’

Adjunct partial *wh* movement can be shown syntactically as in Figure 8.

4.4.3. Intermediate *Wh* Movement

This strategy involves the movement of the *wh* phrase to the specifier of CP¹ while the subject is topicalized, and moves to the specifier of topic phrase. Therefore in this strategy, there is topicalization in addition to the *wh* movement. Consider (36).

- (36) John **nimbi** etikitie Mwende augire kairitu nikarugire? (object *wh* question)
 John **f-what** believe Mwende said girl cooked.
 ‘What does John believe Mwende said the girl cooked?’

In the example in (36), the *wh*-phrase ‘nimbi’ has moved to the specifier of CP, while the subject has been moved to the specifier of Topic phrase as shown in Figure 9.

4.4.4. *Wh in Situ*

This strategy does not allow any movement of the *wh* phrase. This means that the *wh* phrase remains in the underlying position of the objects, subjects and adjuncts during the formation of the *wh* question. However, this

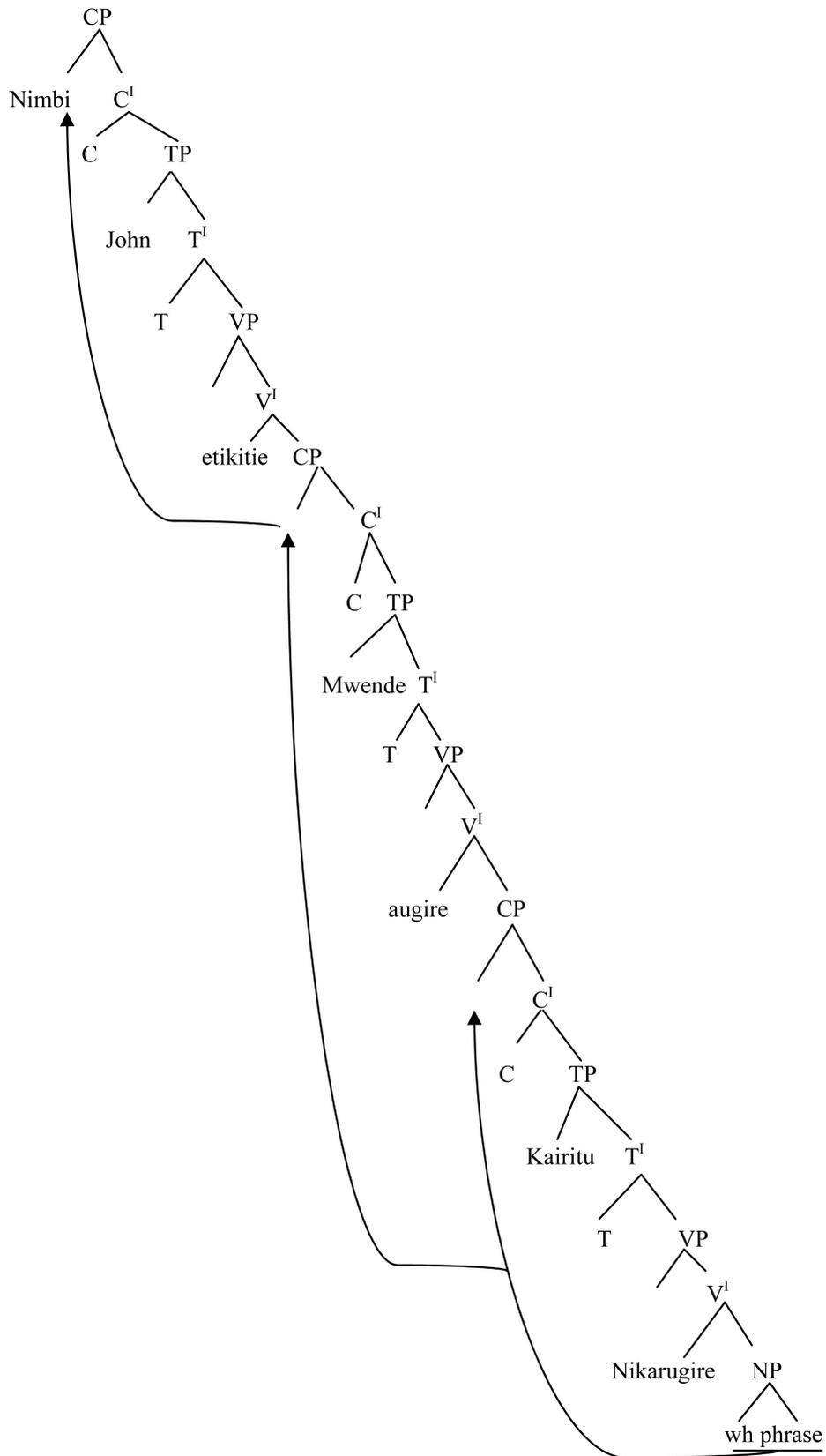


Figure 4. Full *wh*-movement in a complex sentence.

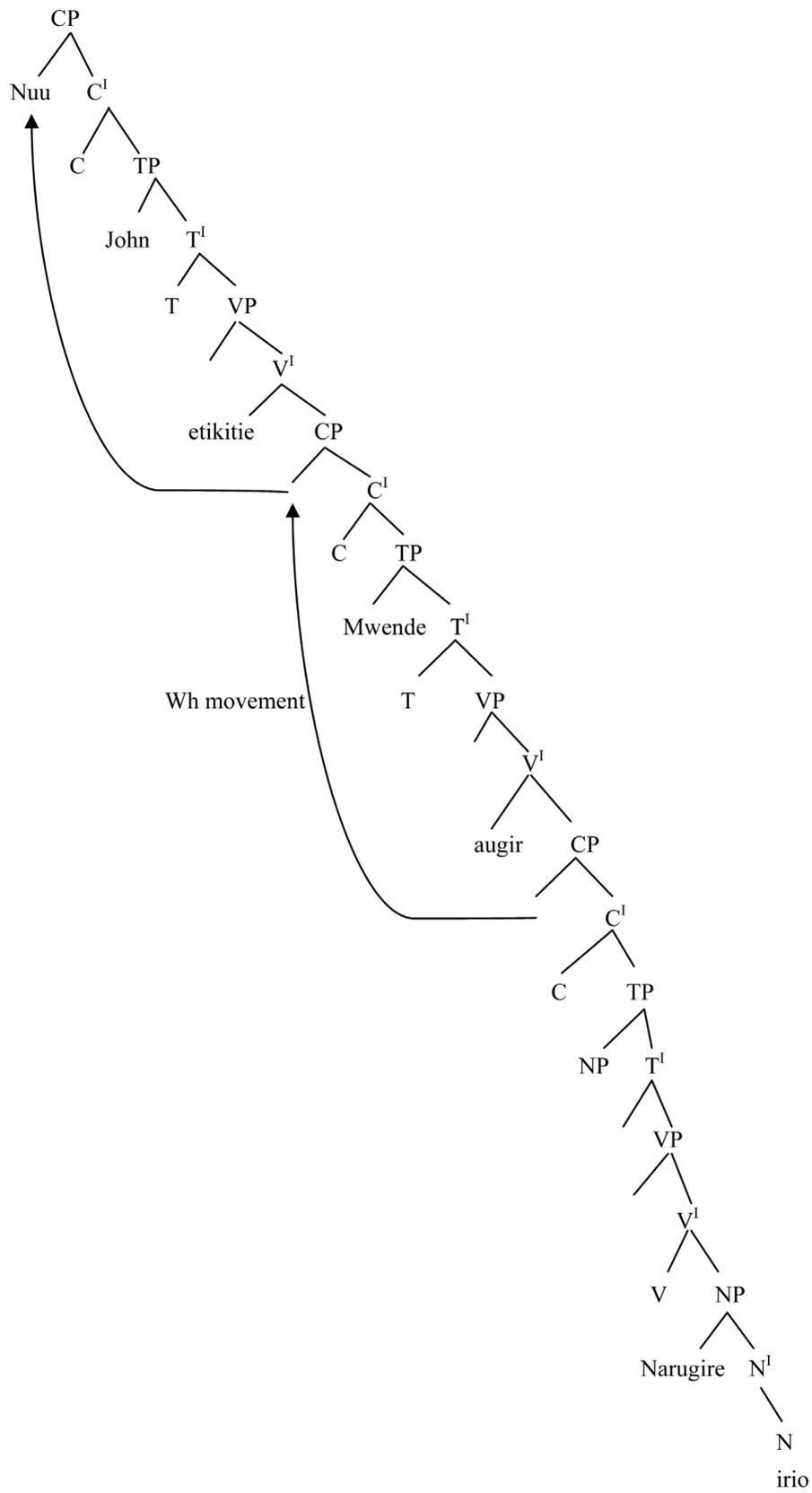


Figure 5. Full *wh*-movement of a subject in a complex sentence.

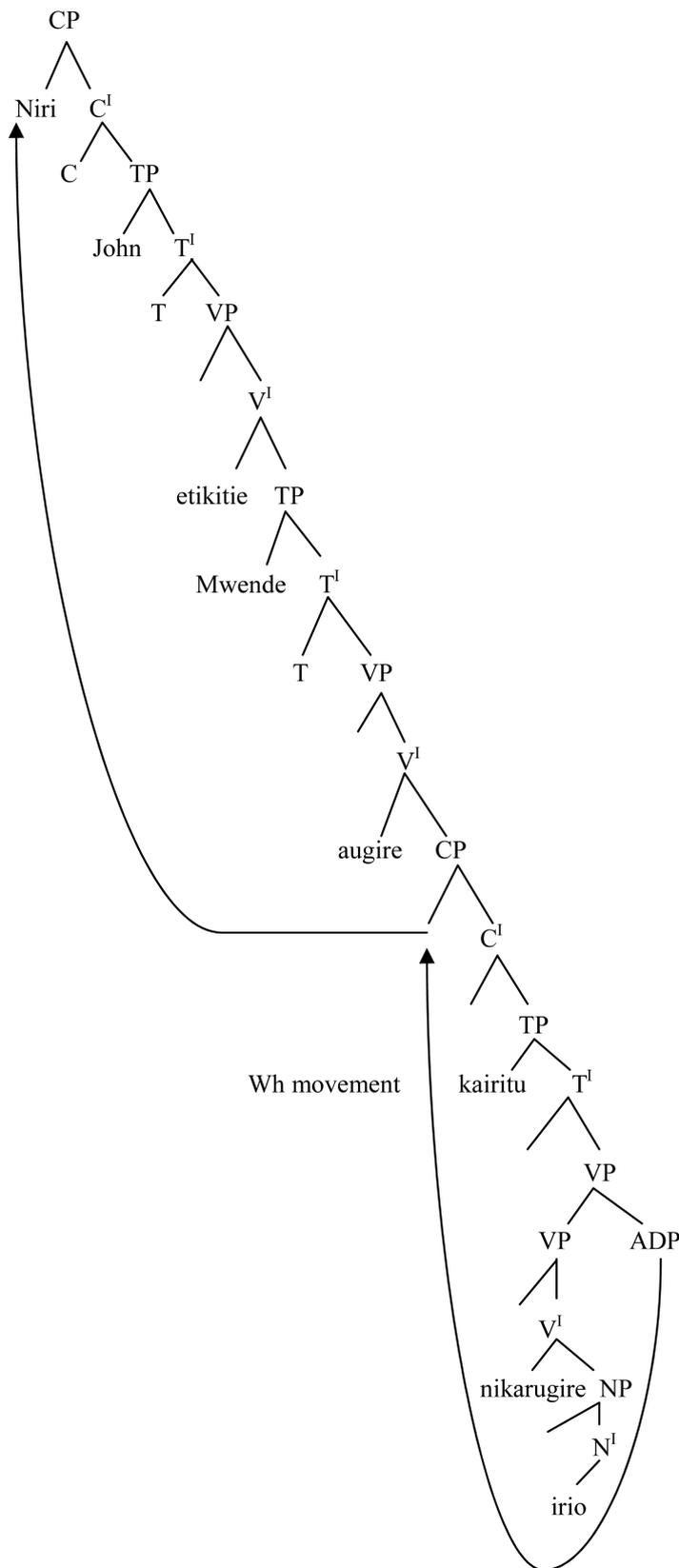


Figure 6. Full *wh*-movement of an adjunct *wh*-phrase.

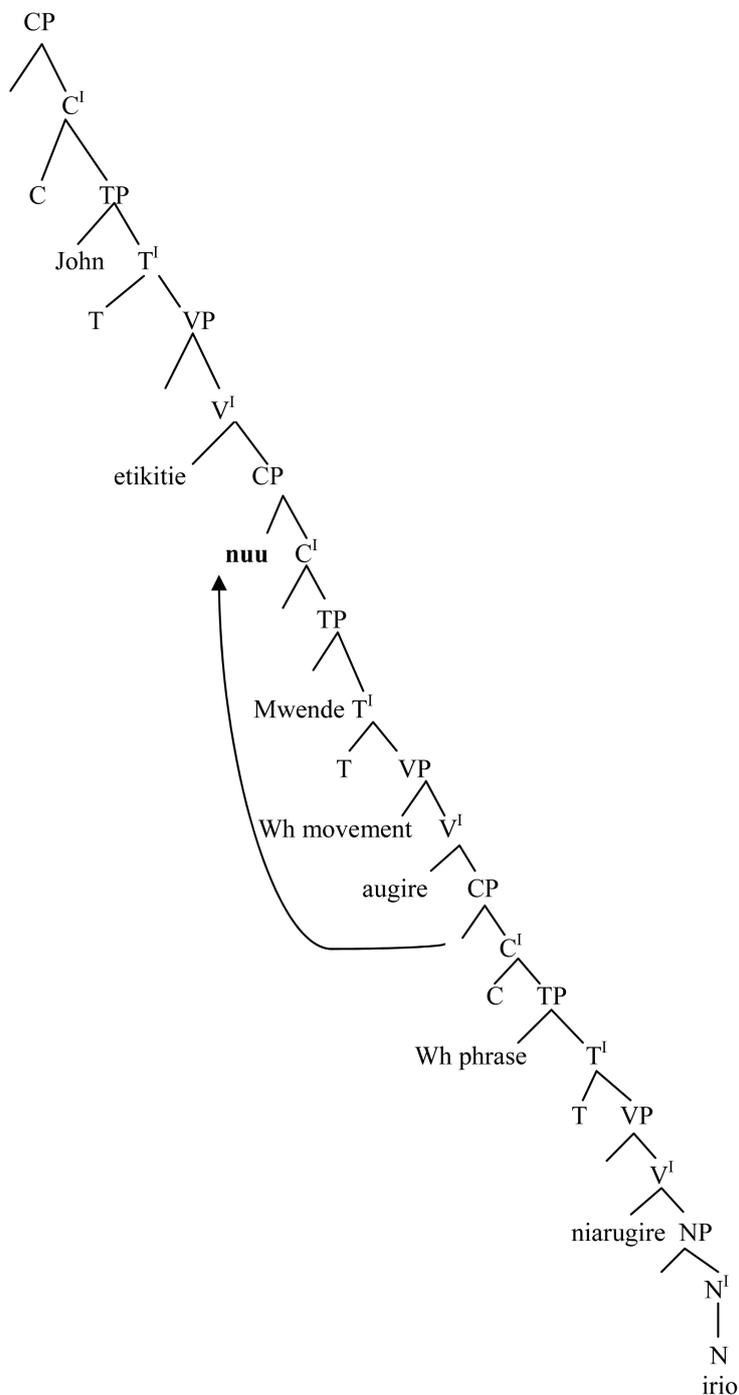


Figure 7. Partial *wh*-movement of a subject *wh*-phrase.

strategy is not allowed in subject *wh* questions as discussed earlier.

In a simple sentence (37), object *wh in situ* question can be represented as in Figure 10.

(37) Kairitu karugire **mbi**.

Girl cooked **what**.

“What did the girl cooked?”

In a complex question (38), it can be represented as Figure 11:

(38) John etikitie Mwende augire kairitu karugire **mbi**? (object *wh* question)

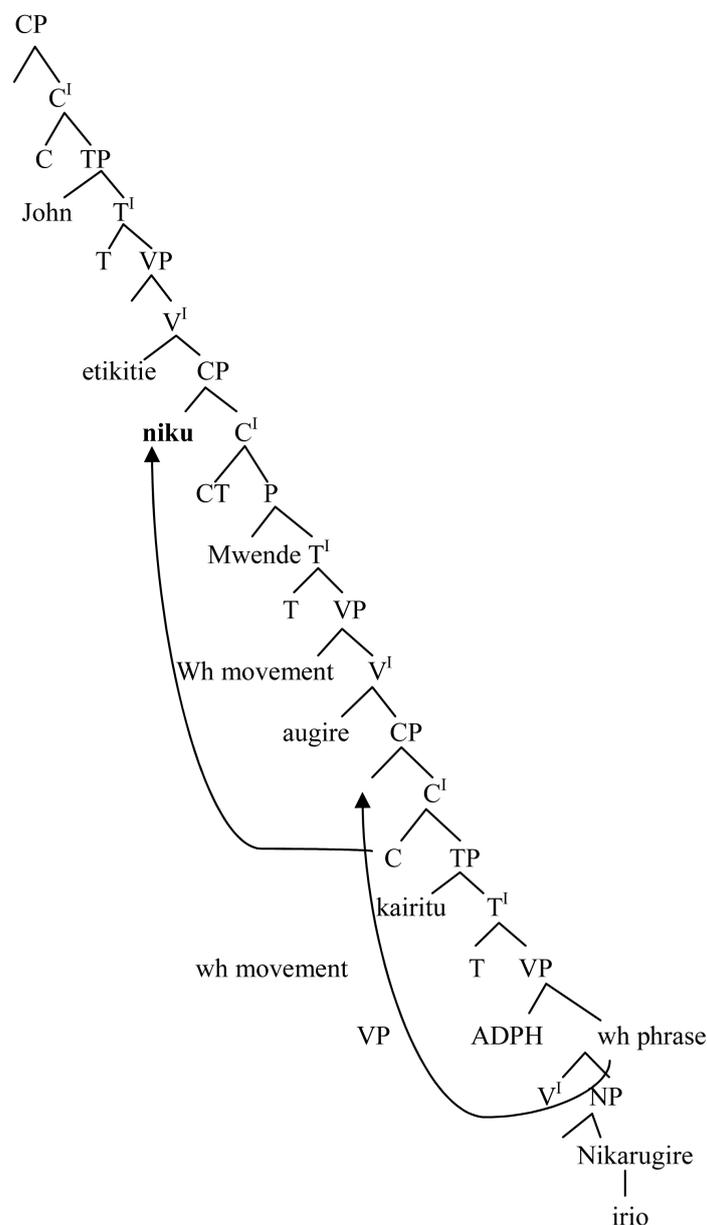


Figure 8. Partial *wh*-movement of an adjunct *wh*-phrase.

John believe Mwende said girl cooked **what**

“What does Mwende believe the girl cooked?”

The same distribution is shown in adjunct *wh in situ*. Consider (39).

(39) John etikitie Mwende augire kairitu karugire irio **ku**?”

John believe Mwende said girl cooked food **where**.

“Where does John believe Mwende said the girl cooked food?”

The structure is shown in **Figure 12**.

As shown in **Figure 12**, the *wh* phrase is not moving at all, therefore the focus marker is not added.

5. Conclusion

(1) *Awha* phrase in Gichuka can move from its canonical position to a position in the specifier of CP of the matrix clause (full *wh* movement), it can also land in a position of the specifier of CP of the most embedded or

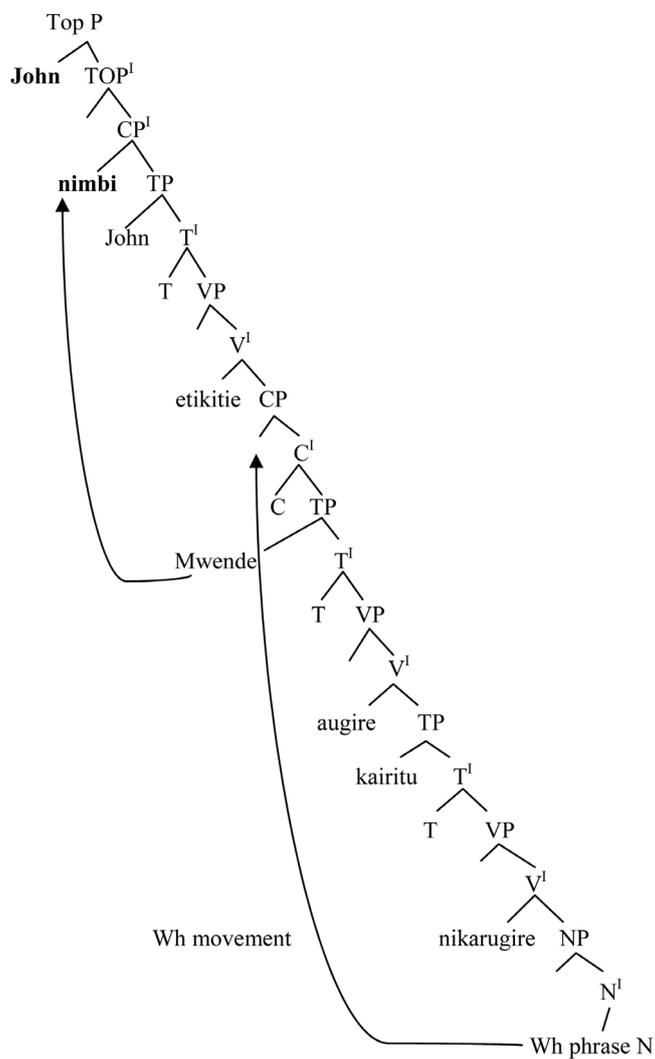


Figure 9. Intermediate *wh*-movement.

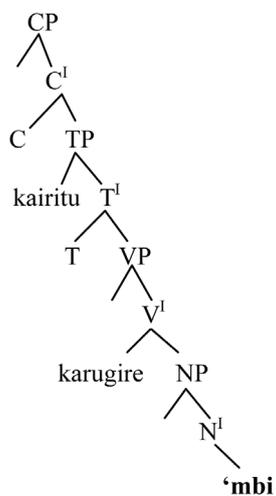


Figure 10. *Wh-in situ* in a simple sentence.

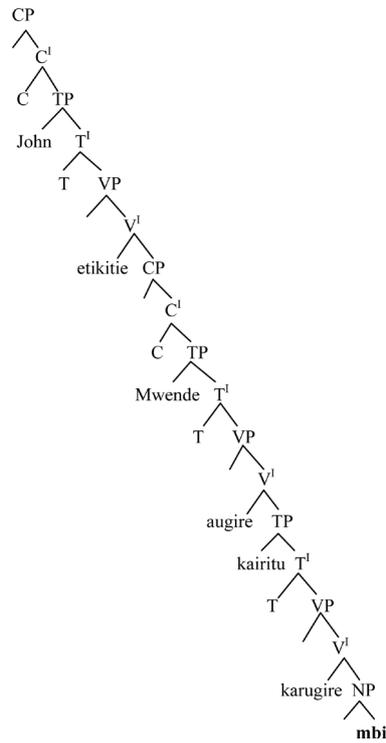


Figure 11. *Wh-in situ* in a complex sentence.

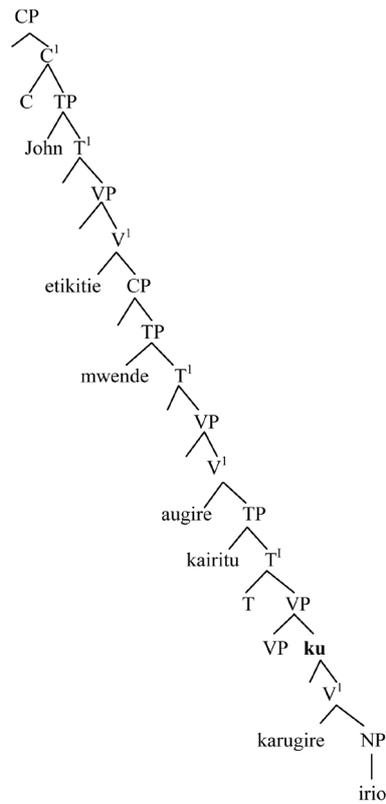


Figure 12. Adjunct *wh-in situ* in a complex sentence.

second embedded clause (partial *wh* movement) and it can remain in the underlying position of objects and adjuncts (*wh in situ*).

(2) *Wh in situ* is not allowed in forming subject *wh* questions.

(3) Intermediate *wh* movement is also evident in Gichuka where the *wh* phrase moves to the specifier of CP^I while the topicalized constituent (subject) moves to the specifier of Top.

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