

DERIVING THE LEFT EDGE WH-PHRASE IN NATA WH-CONSTRUCTIONS

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1. Introduction

Nata is an endangered Bantu language spoken in Northwestern Tanzania, East Africa. Wh-phrases in the language are construed either to the right in sentence final position or to the left at the CP edge. The present analysis investigates how the left edge (ex-situ) wh-phrase is derived in Nata. The assumption underlying wh-constructions cross-linguistically is that, in wh-movement languages, the wh-phrase must front to a position within the CP domain in overt syntax (Rizzi: 1997, Cheng: 2009). But, contrary to English-type languages in which the wh-phrase moves to Spec,CP, the wh-phrase in Nata occurs to the right of the lexical complementizer *kuyá* (that) above TP. This is a prima facie evidence that wh-phrases in Nata do not move to Spec,CP and that they might be a position between CP and TP that hosts the moved wh-phrase. The main questions raised in this paper are: what is the licensing position of the moved wh-phrase in Nata and what are the properties of this position? The analysis proposed in this paper militates in favor of the need of splitting the CP into different functional projections and is mainly based on works done by Chomsky (2000, 2001); Rizzi (1997). The present paper is organized as follows: In section two are presented the typology of wh-phrases in Nata, section three presents some generalizations about the left edge wh-phrases as well as the data. In section four, the different theoretical assumptions are introduced; section five is about the analysis and the proposal, section six focused on some evidence in favor of the movement analysis and the last section concludes the paper.

2. Typology of wh-phrases in Nata

Nata has two main types of wh-phrases: Arguments which are divided into animate and inanimate, and adjuncts which are divided into temporal, locative, manner and rational. These wh-phrases exhibit different forms: The simple form (except temporal and rational); the complex form which is either made of the *copular + wh* or reduplicated (the case of the animate argument). The table in (1) below summarizes the typology of wh-phrases in Nata:

Table 1

TYPOLOGY		Simple forms	Complex forms	Glosses
Arguments	Animate	we	ne-we, we-wé	who
	Inanimate	ke	ne-ke	what
Adjuncts	Temporal	/	ɲiŋga-ke	when
	Locative	he, yáí	ni-he	where

	Manner	βwe	ne-βwe	how
	Rational	/	ne-ke	why

3. Some Generalisations and the data

The canonical word order in Nata is SVO and no object marking appears in wh-constructions. This section gives some facts related to wh-constructions in the language.

3.1 Ex-situ wh-constructions

The data in (1) below show matrix wh-phrases in Nata. These wh-phrases are cliticized with the copular. It has to be noted that in this language, any prosodic word bears a high tone as indicating the pitch. But wh-words seem not to behave as full-fledged words; they don't carry any high tone and constitute a prosodic phrase with the following word (as indicated by the brackets in (1a, b)). This type of wh-construction is used either for information seeking or to question discourse old information. In the later case, the speaker assumes that the addressee has some knowledge about the content of the question being asked.

- (1) a. **(ne-we** Johaná) (a-séeγ-ire)
COP-WH John SM1-love-PRF
“Who does John love?”
- b. **(ne-ke** Mariá) (a-rúg-ire)
COP-WH Mary SM1-cook-PRF
“What did Mary cook?”
- c. **ni-he** wa-a-tɔr-íre ri-bégi
COP-WH 2sgSM1-PST-put-PRF C5-bag
“Where did you put the bag?”
- d. **ne-βwe** Bobu a-kɔr-ire a-móɔtɔka
COP-WH Bob SM1-fix-PRF ppf-car
“How did Bob fix tcar?”
- e. **ɲi-ŋga-ké** a-β-aaná β-a-γik-íre
COP-time-WH ppf-C2-child SM2-PST-arrive-PRF
“When did the children arrive?”
- f. **ne-ke** u-témi-ire u-mw-aaná
COP-WH 2sgSM1-beat-PRF ppf-C1-child
“Why have you beaten the child?”

3.2 Wh-constructions versus cleft constructions

Wh-constructions seem to be structurally different from cleft constructions although they make of the same complex wh-phrase. In clefted wh-constructions, there is the presence of the relative clause. This is shown in the examples in (2) below:

- (2) a. ne-we a-tem-ire a-m-booorí rjáatʃo
 COP-WH SM1-hit-PRF ppf-C8-goat your [Wh-construction]
 “Who hit your goat?”
- b. ne-we u-jo u-no a-tem-ire a-m-booorí rjáatʃo
 COP-WH C1-Rel C1-Dem SM1-hit-PRF ppf-C8-goat your
 “Who is it that hit your goat?” [Clefted wh-construction]

3.3 The landing site of ex-situ wh-phrases

The sentence in (3) below is an example of ex-situ wh-phrase in embedded context:

- (3) méere a-ka-βóor-i kuyá ne-we johána a-rootʃ-é
 Mary SM1-PST-ask-FV that COP-WH John SM1-buy-FV
 “Mary asked who John saw”

The situation observed in the above sentence constitutes the main point of investigation in this paper. It appears that the moved wh-phrase does not land to Spec,CP as in English-type languages. It occurs to the right of the lexical complementizer. Does this mean that there is projection between CP and TP that hosts the moved wh-phrase in Nata? Before answering this question, it will be important to present the different theoretical assumptions underlying the analysis of the left edge wh-phrase in Nata.

4. Theoretical assumptions

The analysis I propose for the derivation of left edge wh-constructions in Nata is based on the following theoretical assumptions.

4.1 Chomsky (2000): Agree

Under the Agree principle proposed in Chomsky (2000), feature checking is established under a *probe – goal* relation. A probe is a head with uninterpretable features searching for a goal in its c-commanding domain. The goal is the c-commanded constituent having matching feature with the probe. When these two elements enter the derivation, their matching uninterpretable features are checked under agree and no movement is required. But, a head with a strong feature must have that feature checked in overt syntax immediately after the head is introduced in the structure. Consequently, a category B is displaced from

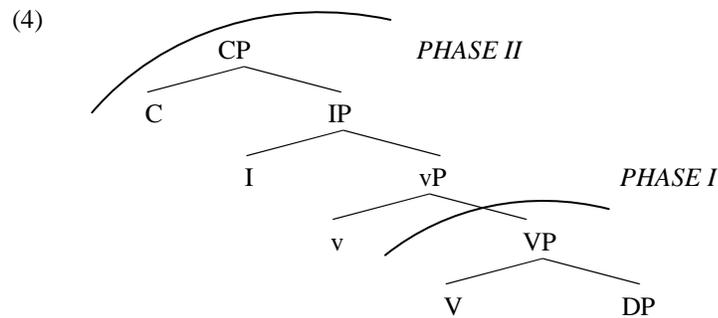
its based position because it is attracted by the strong feature of it c-commanding category A.

4.2 Chomsky (2001): Derivation by phase

Derivation by phase is an economy principle proposed by Chomsky (2001). In order to solve derivational complexities, this principle requires that derivations proceed by phase. A phase is a domain within which all derivational processes operate at the same time and where all features are checked. It is constituted of the phase head and the phase domain. When any derivation reaches a phase and all the features are checked, the phase domain (complement) is spelt-out and is invisible to further computations. Any movement must obey the Phase Impenetrability Condition (PIC):

“The domain of H is not accessible to operations outside HP. Only H and its edge are accessible to such operations” (Chomsky 2001:13).

Chomsky in his analysis argues that CP and vP should be considered as phases as illustrated below.



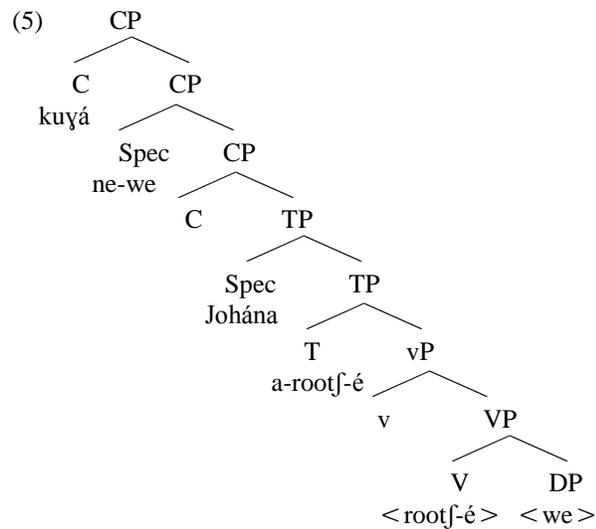
4.3 Rizzi (1997): The Split-CP Hypothesis

Rizzi (1997) proposes a system in which the CP splits into different functional projections such as Force Phrase, Topic Phrase, Focus Phrase and Finiteness Phrase. He argues that the Force Phrase by virtue of carrying the illocutionary force of the clause specifies whether the latter is interrogative or declarative in force and therefore hosts the lexical complementizer.

5. Analysis

5.1 The adjunction analysis

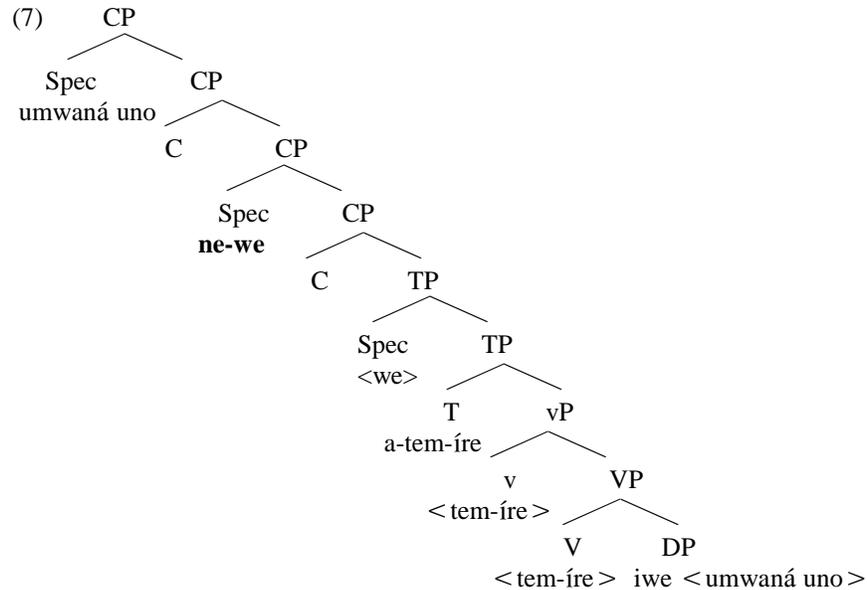
In the lines of the adjunction analysis, two CPs are created in order to host both the complementizer and the wh-phrase. The upper CP is headed by the complementizer while the specifier position of the lower CP hosts the moved wh-p as illustrated in (5):



The representation above seems to account for the linear word order of the different constituents in Nata. The question that arises at this level is what happens in case more than one element is construed in the CP domain. It appears that in Nata, topics and moved wh-p are moved in the CP domain and can co-occur in a single sentence together with the complementizer as shown below in (6):

- (6) Méere a-ka-βóor-i kuyá u-mw-aná u-no, ne-we a-tem-íre iwe
 Mary SM1-PST-ask-FV that ppf-C1-child C1-DemCOP-WH SM1-hit-
 PRF him
 “Mary asked that this child, who hit him?”

Once more, we can still adjoin another CP to host the topicalized constituent as represented in (7) below:



Although the Adjunction Analysis provides a licencing position for topicalized constituents and wh-phrases, it fails to account for word order restriction within the CP domain. The order Topic – Wh-P is licit whereas the order Wh-P – Topic is illicit in the language as illustrated by the ungrammaticality of the sentence in (8) below:

- (8) *ne-we u-mw-aná u-no, a-tem-íre iwe
COP-WH ppf-C1-child C1-Dem SM1-hit-PRF him

It is argued in this paper that the complementizer system is more complex in Nata and embeds different functional projections. One evidence in favor of this point is that the wh-phrase does not move to Spec,CP in Nata and that there might be a licensing position between CP and TP that hosts the moved wh-phrase in the language. Another interesting fact concerning wh-constructions in this language is that Wh-movement and focus constructions seem to exhibit the same properties namely:

- The presence of the focus copular in both focus and wh-constructions and felicity condition observed in question–answer congruence.
- No object marking is attested in both wh-constructions and in focus constructions.

Consider the example below in (9):

- (9) a. ne-we Wasato a-tem-íre
COP-WH Wasato SM1-hit-PRF
“Who did Wasato hit?”

- b. n-colin Wasato a-ya-tém-a
Foc-Colin Wasato SM1-PST-hit-FV
“Wasato hit COLIN”
- c. #Wasato a-ya-tém-a Colin
Wasato SM1-PST-hit-FV Colin
“Wasato hit Colin”

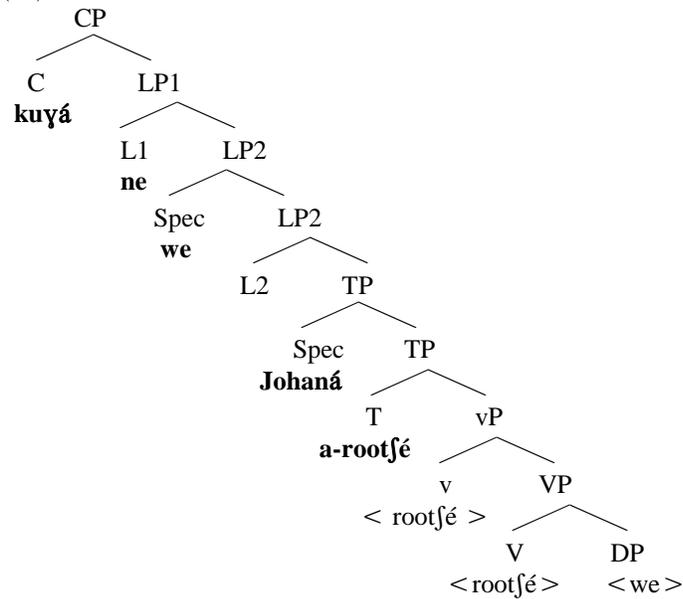
It appears from the above examples that in Nata, the constituent targeted in the wh-question must occupy the same position as the wh-phrase in the answer. This is seen through the felicity of the answer in (10b) where Colin is fronted in the clause initial position and the infelicity of (10c) where it occupies its based position. Another interesting fact is the presence of the focus copular in both situations. This is evidence that the moved wh-phrase and the focused constituent exploit the same structural position. In embedded context, the focused constituent also appears to the right of the complementizer as did the moved wh-phrase. This is also shown in the question – answer pair below:

- (11) a. Johána a-ka-βúγ-a **kuyá ne-we** Wasáto a-tem-íre
John SM1-say-PRF that COP-WH Wasáto SM1-hit-PRF
“Who did John say that Wasato hit?”
- b. Johána a-ka-βúγ-a **kuyá n-colin** Wasáto a-ya-tém-a
John SM1-PST-say-FV that Foc-Colin Wasáto SM1-PST-hit-FV
“John said that Wasato hit COLIN?”

It appears from what precedes that wh-constructions and focus constructions are similar in Nata and target the same structural position located between CP and TP. There is also a cross-linguistic evidence for the presence of a “focus marker” associated with wh-constructions in *Bantu languages*: Ikalanga (Letsholo: 2007); Tuki (Bilola: 2013); in *Kwa languages*: (Aboh: 2004). What is the nature and the function of this structural position?

In the first attempt to answer this question, I adopt Koopman and Szabolcsi (2000) idea of *Licensing Position (LP)*. I posit then that there are two LPs between CP and TP. One of which hosts the focus copular in its head position and the other one, the moved wh-P in its specifier position as shown in the tree diagram in (12) below:

(12)

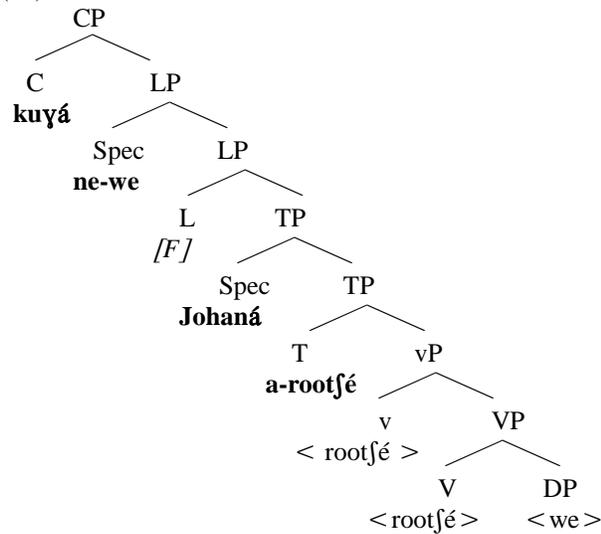


Although this LP analysis accounts for the word order of the different constituents in Nata, it fails to account for the focus *copular - wh-P* cliticization. In fact, we argued that the focus copular occupies the head position of LP1. Given that *wh*-movement involves XP-movement, there is no way for the *wh*-P to further move from an XP position to a head position. To solve this problem of two LPs, I posit for a unifying LP analysis in Nata with the following assumptions:

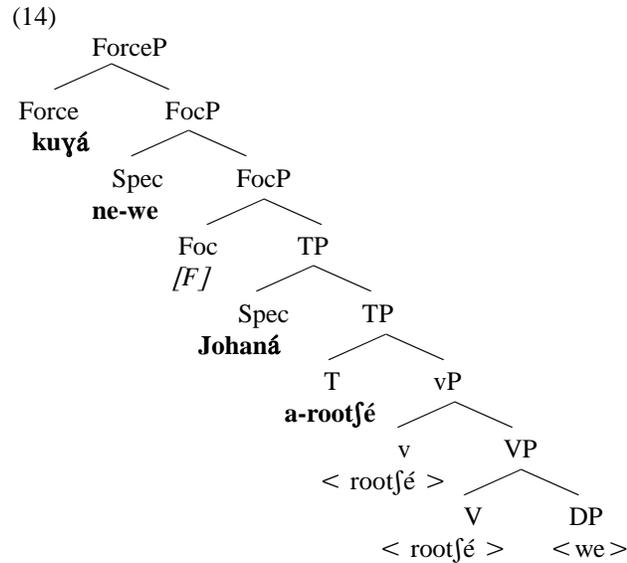
- There exists a unique LP that licenses the move *wh*-P in Nata.
- The focus copular is a clitic and is base-generated in Spec, LP. As a consequence, it can cliticize with the *wh*-P.
- The LP head is associated with a **focus feature**. I propose then that the focus feature is strong and triggers movement of the *wh*-P in Spec, LP.

The revised analysis of the LP is illustrated in the tree diagram in (13) here under:

(13)



This structure correctly account for the derivation of the left edge wh-phrase in Nata. But one question remains: what is the nature of this Licensing Position? We argued earlier that the LP encodes a strong focus feature in its head position that triggers the movement of the wh-phrase. What does this imply as far the nature of LP is concerned? Rizzi (1997) proposes a similar analysis whereby the wh-P moves to the specifier of a Focus Phrase (FocP). His analysis known as the Split-CP hypothesis militates in favor of the need to split CP into different functional projections such as ForceP and TopP. The ForceP by virtue of carrying the illocutionary force of the sentence heads the lexical complementizer. Following Rizzi's analysis, it appears that what we are presenting in Nata as the Licensing Position has the same characteristics as Rizzi's FocP. Along the lines of Rizzi's proposal, it is argued in this paper that the ForceP hosts Nata complementizer, and FocP replaces our former LP as represented here under:



In the above derivation, when the first phase is formed, the verb and the wh-phrase move at the same time. While the verb moves to the phase head (that is *v*), the wh-phrase adjoins to Spec,*vP* (this position is an escape hatch) while waiting for the second phase to be formed. After these movements, the phase domain (VP) is spelt out and becomes inaccessible for further operation given the PIC. When the second phase is formed, the verb successively moves from *v* to T in order to incorporate the tense and agreement marker. As for the wh-phrase, it further moves to Spec,FocP in order to check the strong focus feature of Foc. At this position, the wh-phrase cliticizes with the focus copular.

6. Evidence of movement: Islands

The notion of island originates from Ross (1969). He proposed in his analysis different island tests which are now considered to be standard diagnostics for movement. Chomsky (1986) further refers to these tests under the general principle of subadjacency in terms of barriers. As a matter of fact, movement must not cross more than one barrier. The different island constraints used in this analysis are the complex noun phrase constraint, the wh-island constraint and the adjunct island constraint.

6.1 Extraction from a complex NP

Any extraction out of a complex noun phrase in Nata is illicit as illustrated by the ungrammaticality of (15b).

- (15) a. Wasato a-ka-rór-a o-móto u-no a-tem-íre Musa
 Wasato SM1-PST-see-FV C1-person Rel SM1-hit-PRF Musa

“Wasato saw the person who hit Musa”.

- b. *ne-we Wasato a-rootʃ-é u-no a-tem-íre
 COP-WH Wasato SM1-see-FV Rel SM1-hit-PRF
 “*Who did Wasato see the person who hit?”

6.2 Extraction from a Wh-Island

No extraction from a wh-island is allowed in Nata as illustrated by the grammaticality of (16a) and the ungrammaticality of (16b):

- (16) a. ne-we Wasato a-βuy-íre Musa a-tem-íre
 COP-WH Wasato SM1-say-PRF Musa SM1-hit-PRF
 “Who did Wasato say that Musa hit?”
- b. * ne-we Wasato a-βuy-íre ne-we a-tem-íre
 COP-WH Wasato SM1-say-PRF COP-WH SM1-hit-PRF
 “*Who did Wasato say who hit?”

In (16a), the object wh-phrase successively moves from its base position to Spec, FocP of the embedded clause before moving to its target position which is the specifier position of the higher FocP. The derivation converges because no economy principle is violated. In contrast, the derivation in (16b) crashes because PIC is violated. In fact, the specifier position of the lower (embedded) FocP is already occupied by the subject wh-phrase, so the object wh-phrase cannot move past that subject wh-phrase.

6.3 Extraction from an Adjunct

As observed in the complex noun phrase and in the wh-island, any extraction from an adjunct island is also prohibited in Nata. The examples in (17) below are illicit because there has been an extraction within an adjunct clause, violating the PIC.

- (17) a. *ne-we Wasato a-rootʃ-é Musa háno a-tem-íre
 COP-WH Wasato SM1-see-FV while SM1-hit-PRF
 “*Who did Wasato see Musa while he hit?”
- b. *ne-ke Wasato a-rootʃ-é Musa háno a-tem-íre
 COP-WH Wasato SM1-see-FV while SM1-hit-PRF
 “*What did Wasato see Musa while he hit?”

7. Conclusion

The purpose of this paper was to investigate how the left edge wh-phrases are derived in Nata wh-constructions. It appears from the analysis that the complementizer system is complex in Nata and embeds different functional projections. It is argued that there is a licensing position (LP) between CP and

TP that hosts the moved wh-phrase in the language. It follows from this analysis that wh-movement are cyclic and obey the phase impenetrability condition. This argument was further supported by the different islands test such as the complex noun phrase constraint, the wh-island constraint and the adjunct island constraint. The resulting outputs provide strong evidence in favor of the need of splitting the complementizer system. It appears from this paper that the Force Phrase (by virtue of carrying the illocutionary force of the clause) hosts the Nata complementizer in its head position. As for the wh-phrases, they move to the specifier position of the Focus Phrase, located at the left periphery (below Force phrase and TopP). The analysis reveals that the focus head in Nata is associated with a Focus feature. It is proposed then that the Focus feature is strong and triggers movement of the wh-phrase to the Spec, FocP, wherein, the focus feature is checked in a spec-head configuration. This approach is more suitable to provide an elegant account of the derivation of left edge wh-phrases in Nata. As a result, the clause structure in this language is presented as follows:

[ForceP[Force *kuyá* (that)[TopP[Top[FocP_(WH) [Foc [TP]]]]]]].

References

- Aboh, E.O. (2004). *The Morphosyntax of Complement-Head Sequences: Clause Structure and Word Order Patterns in Kwa*. Oxford: Oxford University Press.
- Bilola, E. (2013). *The syntax of Tuki. A cartographic approach*. Amsterdam, John Benjamins Publishing Company.
- Chomsky, N. (1986). *Barriers*. MIT Press, Cambridge, MA.
- Chomsky, N. (1991). Some notes on the economy of derivations and representations. In Freidin, R. (ed) *Principles and Parameters in comparative grammar*. Cambridge, MA: MIT Press.
- Chomsky, N. (2000). Minimalist inquiries. The framework. In: Martin, R., et al. (Eds.), *Step by Step. Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press, pp. 89–155.
- Chomsky, N. 2001. Derivation by phase. In: Kenstowicz, M. (Ed.), *Ken Hale: A Life in Language*. MIT Press, Cambridge, MA, pp. 1–52.
- Koopman, H. and Szabolcsi, A. (2000). Verbal complexes. MIT, MA. London, England.
- Letsholo, R.M. (2007). Who is where: Deriving the right edge WH phrase in Ikalanga WH constructions. *Lingua* 117, pp. 986-1007.
- Rizzi, L. (1997). The fine structure of the left periphery. In L. Haegeman (ed.), *Elements of Grammar. Handbook in Generative Syntax*. Dordrecht: Kluwer, 281-337.
- Ross, J.R., 1967. Constraints on variables in syntax. Doctoral dissertation, MIT.