

A Description of *Wh*-Movement in Tiv Using the Phases Approach

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Abstract

Although there are a number of existing studies on *wh*-movement in Tiv, this paper explores the subject using the Phases approach with the aim to provide a better understanding of how this universal syntactic phenomenon is parameterized in the language. Tiv is a Bantoid language within the Benue-Congo family, which is native to North-Central Nigeria. The study utilised the tenets of the Phases approach to analyse data obtained through interviews, meta-linguistic conversations with competent native speakers of Tiv as well as the intuitive perception of the researchers as Tiv native speakers. The study's specific objectives are to: provide a structural analysis of *wh*-questions in Tiv and to determine the nature of phases in Tiv. The study finds that the uninterpretable feature of *wh*-phrases are checked and deleted when such phrases are sent to Spell-Out. The C bearing a *wh*-feature merges with an object complement of a tensed verb or an object complement of a PP to form a *wh*-phrase which forms part of a *wh*-question. This study not only adds to existing literature, but it also opens up ways for further studies on the Phases approach, and for the analysis of *wh*-movement in Tiv using current trends in generative grammar.

Keywords: Tiv, *Wh*-movement, *Wh*-question, Phases approach

1. Introduction

The Tiv language is classified within the Southern Bantoid branch of the Bantoid group within the Benue-Congo family of the Niger-Congo family (Blench, 2011). Abraham (1940, p. 6) noted early on that “linguistic and ethnological similarities have proved that the language is part of the Bantu ethnic group that inhabited the area.” Tiv is native to parts of Benue, Taraba and Nasarawa States in Nigeria, and some parts of Cameroon (Blench, 2011).

This study examines *wh*-movement in Tiv using the Phases approach, in which a sentence is assumed to be built up step by step, or by phases constructed by the successive application of two basic building operations which are Merge and Move. Tiv is a head-initial language whose *wh*-parameter setting is characterized by both *awh*-in-situ strategy and a *wh*-movement strategy. The language has benefited from a good number of researches in the field of syntax, including *wh*-movement (Angitso, 2014; Ikima, 2015). However, the aforementioned works, although situated within the framework of generative grammar, have treated *wh*-movement within the scope of principles and parameters and minimalism, respectively. In the present study, the researchers investigate *wh*-movement in Tiv using the

Phases approach, in order to provide a structural analysis of *wh*-questions in Tiv and to determine the nature of phases in Tiv grammar. This would provide an updated, optimal and simpler account on *wh*-movement in the language. Importantly, the study provides further evidence of the capacity of Universal Grammar, and the usefulness of the phases approach to account for syntactic operations in human language.

2. Review of Related Literature

2.1 Movement

Movement has been studied within different stages of generative grammar. Chomsky (1957, 1965) treats movement as way of accounting for grammatical transformations. For instance, Chomsky argues that declarative and interrogatives are related, the latter derived from the former. In the Government and Binding framework, Radford (1988) opines that movement is motivated by three principles viz: the Structure-preserving Principle, the Extended Endocentricity Principle and the Extended Projection Principle. Radford (1988, p. 555) explains this three principles that when a given category moves from its original position to a landing site, the category cannot simply disappear from the extraction site altogether, but rather must remain in some invisible way at the extraction site. He refers to this invisible category at the extraction site as “ghost copy” of the moved category. Since this “ghost” will obviously be emptied of any lexical material, Radford assumes the principle that ‘any moved constituent X^n leaves behind at its extraction site an identical empty category $|X^n|_e$. This empty category is known as a trace, and the moved constituent is said to be the antecedent of the trace.

Within the minimalist framework, Carnie (2006, p. 319) opines that *wh*-words move to the specifier of a Complementizer Phrase (CP) to check the *wh*-feature just like Determiner Phrases (DPs) move to specifier of a Tensed Phrase (TP) to check a nominative case. Movement as a syntactic term is devised to explain certain grammatical structures where a syntactic category is seen and pronounced in one syntactic area and interpreted in another. For instance, an object (a *wh*-word) of a transitive verb in an interrogative sentence of English is moved to the Complementizer Phrase (CP), a position higher than the subject position of a sentence (Newson, Szecsényi, Tóth, Pap, Hordós & Vincze, 2006, p. 101).

Rizzi (2006, p. 99) asserts that movement is ubiquitous; it is a common attribute of the human language. Ilc (2009, p. 62) opines that there are two basic types of movement, namely NP-movement and *wh*-movement. Several other types of movement have been studied by Chomsky (1981), including complementizer movement, and adjunct movement. This study, however, focuses on *wh*-movement which concerns the movement of English *wh*-

words like *who*, *what*, *which*, among others, and their equivalents in other languages. This work describes *wh*-movement in Tiv and interrogates the phenomenon using the Phases approach.

2.2 *Wh*-movement

This refers to the movement of *wh*-words from where they are base generated to the complementiser position. In the Extended Standard Theory, Chomsky (1977) asserts that *wh*-movement leaves empty category traces. In contrast, Chomsky (1993) opines that *wh*-movement in minimalism leaves copies. Within the phases approach, the heads of phases vP and CP carry an EPP feature, which allow overt movement that presupposes abstract agreement in order to eliminate uninterpretable features. Chomsky (2015) argues that phases are the stages in the derivation, or nodes in the phrase marker, where the structure is transferred to the interface level, and as a result it becomes no longer available for further syntactic operations. The term *wh*-word refers to English question words that begin with *wh*-spelling (with the exception of *how*, which is also considered a *wh*-word). In the case of Tiv, it is the translation of those *wh*-words or their equivalent that are referred to as *wh*-words.

Previous studies on *wh*-movement in Tiv include Ikima (2015) and Angitso (2014). Ikima (2015) studied the syntactic parameters of movement in Tiv using the principles and parameters approach. The study examined and described the mechanisms and processes of *wh*-movement and NP-movement in Tiv. The researcher's set objectives include to: determine what triggers NP and *wh*-movement in Tiv, determine the various constraints of NP-movement and *wh*-movement in Tiv, examine how the language accounts for extraction sites of the types of movement operations in relation to the Trace Movement Principle, and to examine the various landing sites of the two types of movement in relation to the structure of the complementizer field. Ikima's findings identified the parameters for *wh*-movement in Tiv allowing multiple ways of forming *wh*-questions, namely in-situ and *wh*-movement strategies. For the movement strategy, interrogative words move into a higher dominating position. In the in-situ strategy, interrogatives words occupy the same syntactic position as the questioned constituent they represent.

Angitso (2014) examined question-word movement in Tiv. The author's objectives included: to analyse the nature of Q-word movement in Tiv and to examine the Q-word movement strategies in Tiv. His study showed that Tiv has potent Q-word movement that is defined by properties such as DP resumption when the extraction of the Q-word takes place at the subject position, and within the clausal adjunct position. Regarding movement of the Q-word from the clausal adjunct position, he observes that there are prepositions without

complement feature in Tiv. Therefore, it is either the entire PP is pied-piped to the force projection or a resumptive pronoun is left at the extraction site to strand instead of the extraction of the complement of the preposition, otherwise the construction would be ungrammatical. There are also prepositions that do not have strong complement feature: such prepositions treat DP resumption as an alternative; otherwise they can be stranded and pied-piped.

2.3 Derivation by phase

A phase is a cycle of derivation in the minimalist framework. Chomsky (2002) asserts that the derivation of a sentence proceeds phase by phase. Chomsky argues that phase is identified in terms of "proposition", which leads to a natural syntactic object, and that vP and CP are regarded as a phase. In other words, phases are predetermined in terms of syntactic category before the derivation is finally achieved. This work focuses on the properties of *wh*-movement and proposes that phase is identified in the course of the derivation, rather than already determined before the derivation starts. In particular, convergence makes a certain domain a phase.

One of the strong motivations for the phase system is the "Merge-over-Move" problem. Chomsky (1995) suggests that Merge takes priority over Move unless the latter is necessary for convergence. This preference leads us to a reduction in computational complexity because the Merge-over-Move assumption limits the possible continuations of a derivation. It allows for the selection of a more economical operation, given that Merge is less costly than Move.

Obata (2006, p. 3) contests Chomsky's assumption that vP and CP are pre-determined phases. She argues that a phase must be a convergent syntactic unit with the following criteria:

- (1) a. A phase is a convergent CP.
b. CP is a phase iff the CP contains no uninterpretable features.
- (2) The domain of a convergent CP is spelled-out "as soon as" it is qualified as a phase.

(Obata, 2006, p. 3).

In example (1), when a CP has uninterpretable features, it cannot become a phase. Then, Spell-out is postponed until the CP is identified as a phase. But, once the uninterpretable features are checked and deleted, the CP is qualified as a phase and the domain has to be spelled-out as soon as possible under (2). In other words, the derivation determines the phase-

hood of a CP in this system. Considering (1) and (2), above, the actual derivation would look like (3) below:

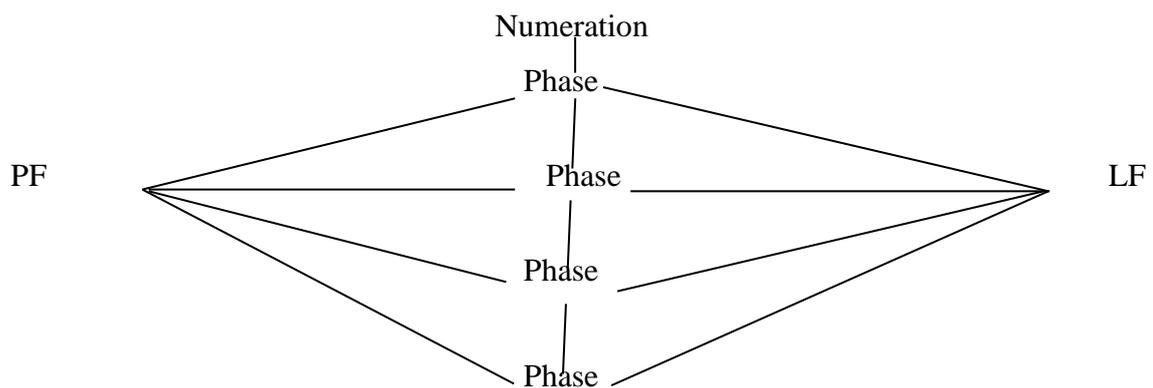
- (3) What do you think John bought_?
 a. [C John bought what]
 EPP [-Q] [+wh]
 b. [what C John bought what]
 [+wh] → EPP not convergent
 c. [C do you think [what C John bought ~~what~~]
 [+Q] [+wh]
 [whatC do you think [~~what~~ C ...]]
 EPP

Obata (2006, p. 4)

Cook and Newson (2007, p. 302) opine that instead of having a single point at which derivation is 'spelled out', i.e., the derivation splits into PF- and LF-relevant operations, as soon as certain parts of a structure are complete, they are sent off to the interface components for interpretation, effectively fixing them at that point.

The derivation may continue to build structures on top of the fixed part of the structure until another phase is complete and this will then be sent off to the interface components, continuing until the derivation is complete. This new conception of the computational procedure can be represented in the following way:

Figure 1: Computational Procedure



(Cook & Newson, 2007, p. 303)

From this perspective, there is no single point for Spell Out, but multiple points at which a structure is 'spelled out' in terms of both phonetic and semantic interpretation. As always, this needs to be seen as a model of competence, not performance, and as such this does not model how people process speech. The point is not that people 'produce' language in small chunks,

but that the grammar processes structures in chunks, thereby preventing certain grammatical operations from applying between certain parts of a structure.

A number of questions arise at this point about the details of this proposal. What, for example, counts as a phase and what does not? Moreover, how is long distance movement possible if a structure becomes fixed at each phase? To answer the first question, Chomsky claims two particular phrases constitute complete phases in the derivation: the vP, headed by the light verb, and the CP. Empirically, it is obvious why CP is chosen as a phase, as this corresponds to an often opaque node for movement in many of the past approaches to locality, such as Islands, Subjacency and Barriers. In Chomsky's *Barriers* framework (Chomsky, 1986), the VP was also identified as a potential barrier, carried forward to the assumption that vP constitutes a phase. Conceptually Chomsky claims that vP and CP have in common the fact that they represent certain semantically well-defined parts of a structure. The vP includes a predicate and all its arguments, including the external argument, and hence represents the basic proposition expressed by a clause. The CP is the final node of the clause including all other aspects of meaning added to the basic proposition, such as tense, mood and force. According to Chomsky (2001, p. 22),

Ideally phases should have a natural characterization: they should be semantically and phonologically coherent and independent. At SEM [the semantically relevant representation], vP and CP (but not TP) are propositional constructions. At PHON [the phonologically relevant representation] these categories are relatively isolable.

What could be derived from Chomsky's idea of phases is that sentences have two basic components that are relevant to the phonological aspect of language as well as the meaning derivation, which are CP (a position higher than the subject) and vP which embodies what could be likened to the traditional sentence comprising the subject and its predicate. The second point is that vP and CP are propositional units, in that all theta-roles are assigned in vP, and CP is a full clause including tense and force (Chomsky, 2000, p. 106). Therefore, either of them forms a semantic unit in terms of proposition. Finally, the edge of vP and CP seems to provide a potential reconstruction site. Having established that vP and CP are phases, Chomsky (2001) opines that movement in phases observes the Phase Impenetrability Condition (PIC). PIC is proposed by Chomsky (2000, p. 108) as:

- (4) In phase α with head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

Chomsky 2000 exemplifies PIC using *wh*-movement as follows:

- (5) [_{CP} who did you [_{vP} ~~you~~ see ~~who~~]?]

The example (5) has two phases (vP and CP), ‘who’ has to move from the lower phase to the higher phase. For the higher phase head C, the accessible domain in the lower phase is only the head of vP and its edge.

The phases approach presented above is the theoretical framework adopted for the present study. The goal of a linguistic theory is anchored on the adequacy criterion, and the need to fulfill explanatory adequacy is testimony to the myriads of theories that abound. This is all in attempt to use the best tenet that can account for the principles of language saturation. This necessitates the adoption of the Phases approach of Chomsky (2001). The Phases approach was introduced by Chomsky (2001) and it proposes that a sentence is often decomposed into two phases: CP and vP. Chomsky (2001) also opines that “propositional” categories CP with force indicator and (transitive) vP with full argument structure are phases. Chomsky asserts that defective TPs and vPs are not phases for the reason that they do not have an external thematic argument. The heads of the phases vP and CP carry an EPP feature, which allows overt movement that presupposes abstract agreement in order to eliminate uninterpretable features. Chomsky (2015) asserts that phases are the stages in the derivation, or nodes in the phrase marker, where the structure is transferred to the interface levels, and as a result it becomes no longer available for further syntactic operations.

3. Methodology

The study adopted a qualitative method for data collection and analysis. The data were sourced from five competent native speakers of Tiv. The informants were five adults – three males and two females – who have formal linguistics training on Tiv. The data were generated through interviews and targeted conversational settings. The researchers recorded the utterances of the informants, transcribed and translated them. The data were further validated by the researchers, using their intuitive perception as competent native speakers of Tiv. Portions of the recorded utterances which had conversational structures that displayed *wh*-characteristics were later isolated and subjected to formal analysis, using the theoretical tenets of the Phases approach.

4. Data Presentation and Analysis

The data are presented side by side with the analysis in a morpheme-by-morpheme glossing, and the analyses are done in line with the provisions of the Phases approach.

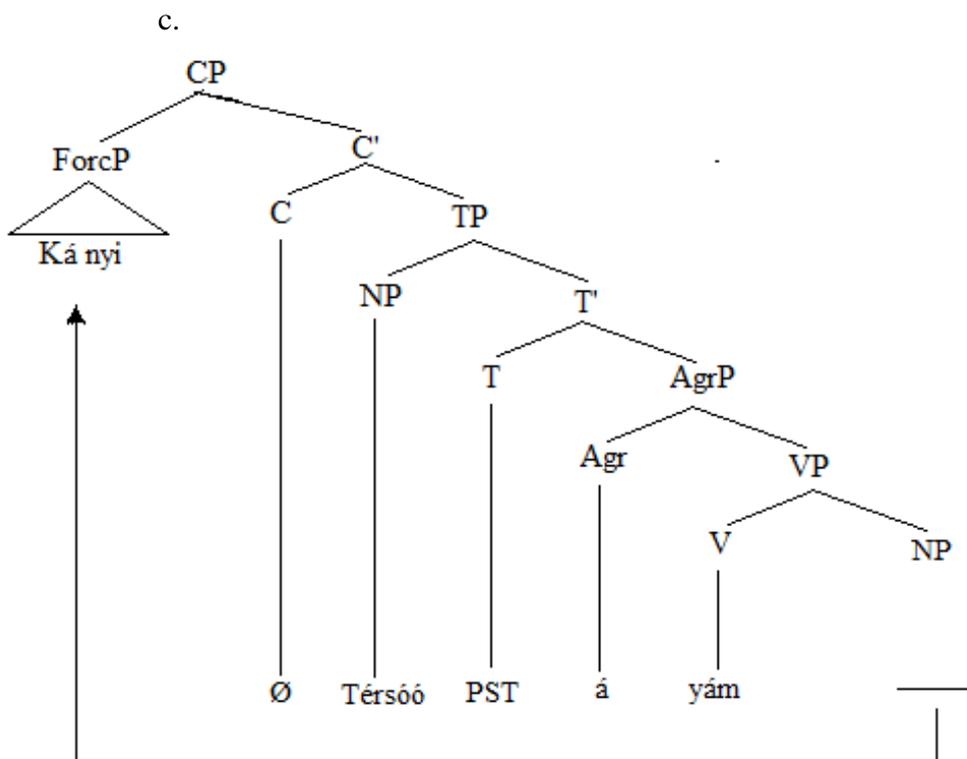
4.1 Wh-movement in Tiv

Tiv has question words which a speaker can use to query a hearer about a particular syntactic constituent. Such words do not begin with *wh*-spelling like those of English. They include: *áná* ‘who’ and *nyí* ‘what’, *hán* (-*ná*) ‘where’ *nán/nèná* ‘how’ *ú/í/á/m-mé* ‘how many’ *hán*

(*mò/mà*) ‘which’. In addition, *ù-*, and *sháci-ù* ‘for’ can combine with certain generic nominals to form Q-phrases in Tiv.

The data presented in this section are designed according to the Phases approach and the analyses are done side by side with the data in line with the provisions of the derivation by phase. The following examples are used to explain the Chomskyan notion of transformation, which supposes that certain sentences are derived from their related counterparts.

- (6) a. Térésóó yám ìkóndò
 Térésóó buy.PST cloth
 ‘Térésóó bought a cloth.’
- b. Ká nyí Térésóó á yám —?
 (FM what Térésóó AgrS.PST buy.PST —?)
 ‘What did Tersoo buy?’



The interrogative sentence (6b) above is derived from its declarative counterpart (6a), while (6c) is a structural representation of (6b). Using the phases approach, the verb *yám* ‘buy’ merges with its object complement DP *nyí* ‘what’ to form a convergent vP phase in (6a). The interrogative structure in (6c) comprises the phases CP and vP, where movement extracted the object complement of the transitive verb *yám* (buy), moving it upwards to the CP (a position higher than the subject position). This is in line with Chomsky’s (2002) assertion

that CP and the vP are phases. The CP in (6c) becomes a phase after movement is completed, in line with Obata's (2006, p. 3) assertion that "a CP is a phase iff (if and only if) the CP contains no uninterpretable features." Thus, the domain of a convergent CP in (6c) above is spelled-out as soon as it is qualified as a phase. This demonstrates clearly that CP and vP are phases in Tiv.

In line with the Phase Impenetrability Condition of Chomsky (2001), movement in Tiv is successive as in the example (7a) below:

- (7) [CP ka nyi u [vP ~~u~~ yam ~~nyɪ~~]?
 [CP_{FM} what you [vP ~~yɔu~~ buy ~~what~~]?
 'What did you buy?'

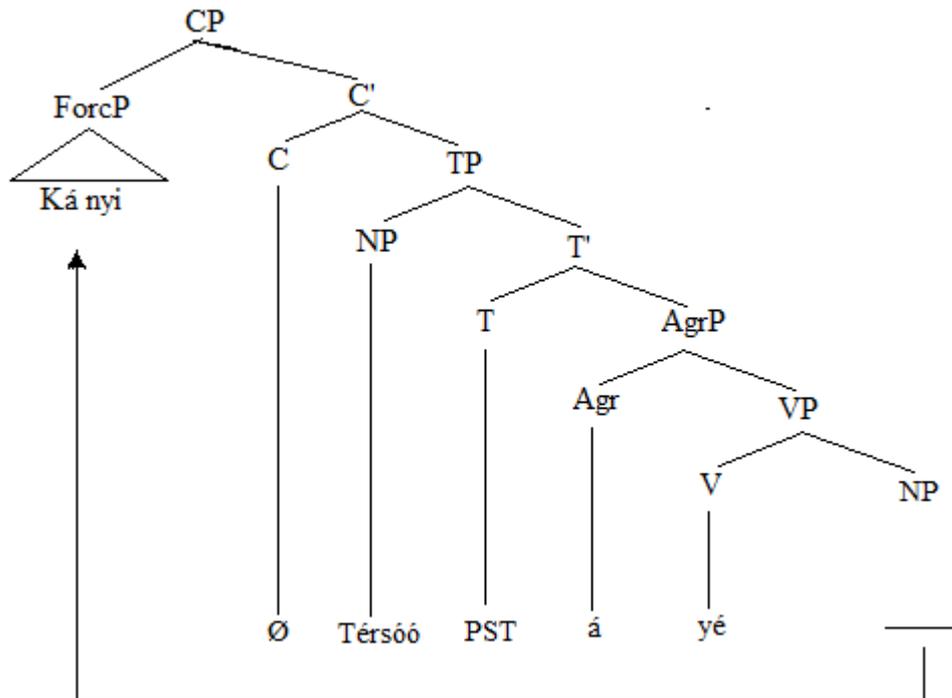
The *wh*-word *nyi* in (7) is first moved to the edge of vP at some point of the derivation. That is, the PIC requires that A'-movement targets the edge of every phase; it should be successive.

The generative line of enquiry presupposes that language is a natural object which, when acquired by a speaker, is utilised by the speaker to generate complex strings. The cognitive computations that manifest in the speaker's ability to towards his own language are not evident to him unless when the speaker is guided by a linguist. When humans speak by means of sounds (phonology) using words which are well-arranged (morphology and syntax), the major target is to derive meaning. The meaning level of language turns out to be the target of every speaker. In this instance, a speaker of Tiv understands the meaning of the *wh*-word *nyi* 'what' as the object of the transitive verb *yam* 'buy' of example (7) above. The minimalist program provides an economical approach that devises simpler and optimal ways analyzing the grammar of the human language.

The above analysis justifies the assumed SVO order of the Tiv language. Otherwise, it looks contradictory when a language's basic word order, say SVO, is known and some sentences (by grammatical transformations) appear to violate such a word order as well as violate the subcategorization frame of a transitive verb. A grammatical category is seen in one position and interpreted in another position. Chomsky (1965, p. 91) asserts that the lexical category verb is either [\pm transitive]. For example, the verb *yam* 'buy' has its subcategorization frame as [$+__\text{NP}$]. This means that the verb must be used with an object; the VP containing *yam* 'buy' as its head must have an object-NP for it to function properly, but the interrogative sentence (7) above, the VP is voided of an object. This is further illustrated in (8a) below, which is represented on the tree diagram (8b):

- (8) a. Ká nyí Térésó a yé
 (FM what Térésó AgrS.PST eat.PST —?)
 What did Tersoo eat?

b.



In (8) above, movement has extracted the object NP from the VP domain leaving behind a gap. The extracted object is in the CP position for feature valuation and feature checking which is in line with phases approach. This gap has been given various names at different stages of grammatical theorizing. Within the framework of Chomsky's (1977) 'On *Wh*-Movement (OWM), it is called a trace; in the minimalist framework (Chomsky, 1993, 1995), it is called a copy.

4.2 Traces versus copies of *wh*-movement in Tiv

It is significant to make reference to *wh*-movement in OWM that *wh*-movement in Tiv leaves either a filled pronominal or an unfilled (empty) traces, while movement in English leaves only empty traces (see Ikima, 2015). In contrast, movement in the minimalist framework is assumed to leave copies. The following data in (9) and (10) illustrate movement of a *wh*-phrase in Tiv leaving traces and copies:

- (9) [CP_{ForcP} kányí_i [TP *t_i* Térésèèr a yé *t_i*]]
 ([ForcP what_i [TP *t_i* Térésèèr he eat+pst*t_i*]])
 [what_i [TP *t_i* did Térésèèr eat *t_i*]]

- (10) [CP_{ForcP} kányí [TP ~~nyí~~—Térsèèr a yé ~~nyí~~]]
 ([_{ForcP} what [TP ~~what~~—Térsèèr he eat+pst ~~what~~]])
 [CP what [TP ~~what~~ did Térsèèr eat ~~what~~]]

In example (9), a trace is left at the extraction site which is coindexed with the Q-word at the CP field. Contrastively, in example (10) a copy of the moved element *nyí* ‘what’ is left at the extraction site as a replica or copy of the Q-word in the CP field. *Wh*-movement in Tiv can also leave a pronominal trace as in (11) below:

- (11) Ká nyí_i Sésùgh á témá shá **mín_i**?
 (FM what Sésùgh Agr.PST sit.PST on **it?**)
 ‘What did Sésùgh sit on?’

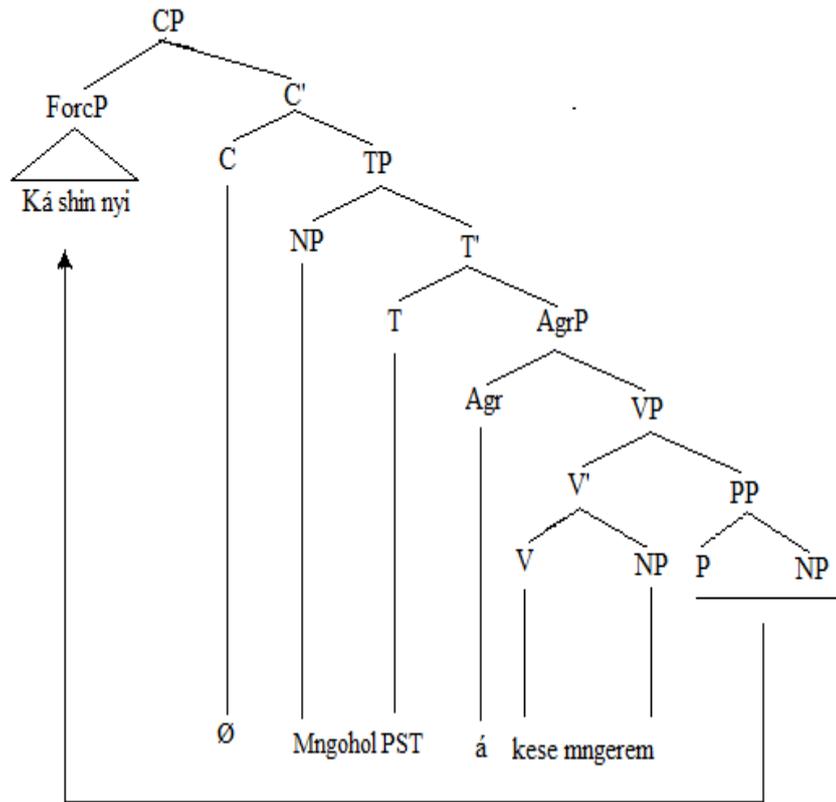
The OWM framework devised structural indices such as of those in example (11) above, in order to keep track of movement. The object NP in (11) has been moved, and an overt trace in form of a pronominal element has been inserted at the extraction site, which enables reconstruction. The question is how these pronominal elements interact with the process which creates them. The general assumption by Chomsky (2001) is that pronominal elements fill the gaps that would have otherwise been created by extraction and they enter into an anaphoric binding relation with the extracted elements which serve as their antecedents. In example (11), *mín* is left at the extraction site while *nyí* is moved to the CP; *nyí* and *mín* stand in an anaphoric binding relation, with the extracted element (*nyí*) serving as the antecedent of *mín*. Both are co-indexed with the same subscript to show that the two of them (*nyí* and *mín*) are co-referential.

4.3 Pied-piping in *wh*-movement in Tiv

In English, pied-piping occurs when a *wh*-expression drags its containing phrase with it to the front of the clause. In Tiv, the pied-piped material can be a noun phrase (NP), an adjective phrase (AP), an adverb phrase (AdvP), or a prepositional phrase (PP), as can be seen in the following examples and the tree diagram representations:

- (12) a. Mngohol kese mngerem shin jor
 (Mngohol fetch.PST water inside well)
 ‘Mngohol fetched water inside a well.’
- b. Ka shin nyi Mngohol á kese mngerem
 (FM in what Mngohol AGR fetch.PST water)
 ‘Inside what did Mngohol fetch water?’

c.



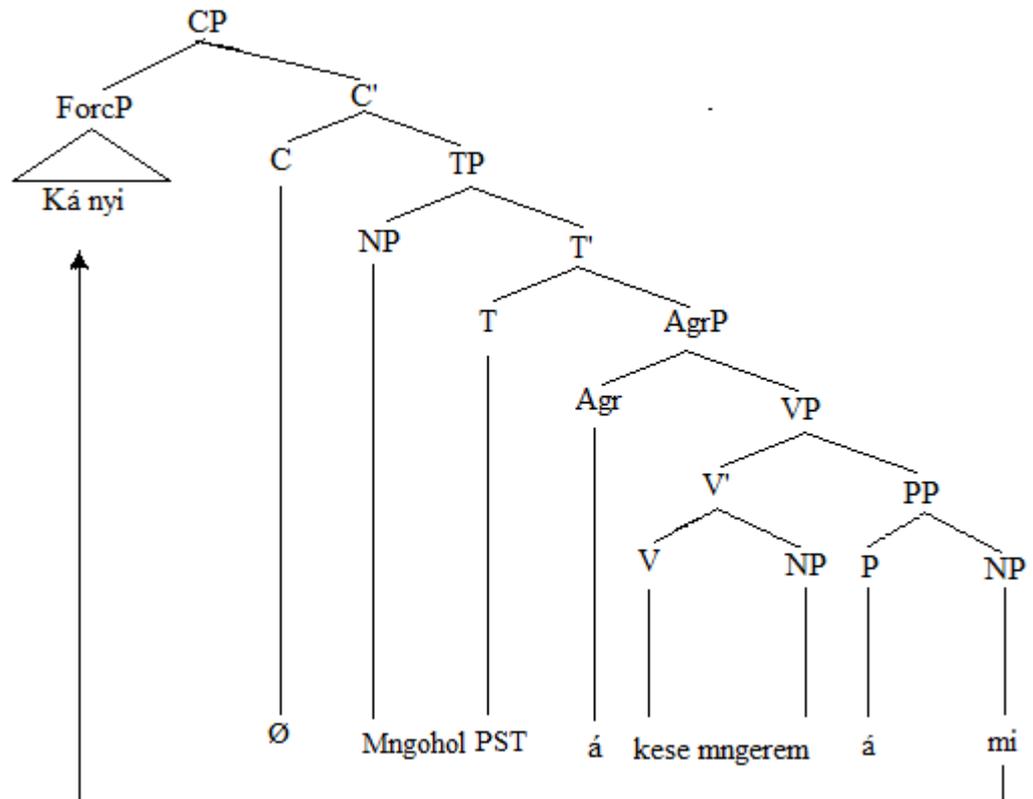
In (12a), the *wh*-word *nyi* ('what') is the complement of the preposition *shin* 'in'. In (12b, c), there is movement of the entire PP and the preposition is not stranded. Stranding the preposition is not possible in Tiv, as it would result to the ungrammatical sentence (13):

- (13) *Ka nyi Mngohol á kese mngerem shin?
 (FM what Mngohol AGR fetch.PST water in)
 *'What did Mngohol fetch water in?'

Consider another example:

- (14) a. Mngohol kese mngerem a kopu
 (Mngohol fetch.PST water with cup)
 'Mngohol fetched water with a cup.'
- b. Ká nyí Mngohol á kese mngerem a mi
 (FM what Mngohol AGR fetch.PST water with RP)
 'With what did Mngohol fetch water with?'

c.



In (14), the preposition *a* ‘with’ is followed by *mi* ‘it’, which is the pronominal trace of the moved element *kopu* ‘cup’ (object complement of the preposition *a*). This shows that pied-piping is not compulsory in Tiv. It is optional, as in English. However, the preposition can be left behind in Tiv only if there is a pronominal trace at the extraction site of movement, such as *mi* in (14b). This is an option to the manner of *wh*-movement in (15) below:

- (15) Ka sha nyi Mngohol a kese mngerem __?
 (FM with what Mngohol AGR fetch.PST water)
 ‘With what did Mngohol fetch water?’

Unlike in (14b) above, the entire prepositional phrase in example (15) is moved to the CP field without stranding any residue from the PP constituent.

5.1 Conclusion

This study provided a structural description of *wh*-movement in Tiv using the Phases approach. It established that CP and vP are phases in Tiv *wh*-questions, i.e. syntactic constituents which are essential to both the PF and LF levels of representation. The analysis demonstrated that in Tiv, a CP bearing a *wh*-feature merges with the object of either a tensed verb or a preposition to form a *wh*-phrase that forms part of a *wh*-question in Tiv. Pied-

pipng was shown to be an optional feature of *wh*-movement in Tiv. It is either that an entire PP that contains a *wh*-word is moved to the CP position, or the *wh*-phrase object of a preposition is moved and the preposition is left behind with a pronominal trace occupying its object complement position, with which it shares an antecedent-anaphor relation. This ensures that the preposition is not left stranded.

List of Abbreviations and Symbols: * = ungrammatical sentence; \longrightarrow = arrow indicating direction of movement; \pm = plus or minus a feature; AdvP = adverb phrase; Agr/AGR = agreement; AgrP = agreement phrase; C = complementizer; CP = complementizer phrase; DP = determiner phrase; EPP = extended projection principle; FM = focus marker; i, j, k = structural indices; LF = logical form; MP = minimalist program; NP = noun phrase; ~~nyi~~, ~~what~~, etc. = copies of movement; PF = phonetic form; PHON = phonologically relevant representation; PIC = Phase Impenetrability Condition; PP = prepositional phrase; PST/pst = past tense; Q = question; QW = question word; RP = resumptive pronoun; SEM = semantically relevant; representation; SVO = subject-verb-object; TP = tense phrase; V = verb; vP = transitive verb phrase; VP = verb phrase; *Wh*- = interrogative words beginning with *wh*; X, H, α = variables.

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