



Wh-interrogatives in Dholuo: A Minimalist Analysis

Olyvent Majiwa, Phyllis Mwangi & Stephen Orago

Kenyatta University, Kenya

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Abstract

The order of wh-interrogative constituents varies in different languages. Some languages front the wh-words while others do not. The central concern for this study is to find out where Dholuo lies concerning the positioning of wh-interrogatives. This paper is guided by this objective: to account for the position of wh-interrogatives in Dholuo using the Derivation by Phase Theory. Two programmes from Ramogi TV: *Pur gi Ohala* (Agribusiness) and *Penj Laktar* (Ask the Doctor), were sampled purposively. Introspection was also employed to supplement the information gathered from the press. Different types of wh-interrogative sentences were extracted from the recorded interactive sessions of the two programmes. The qualitative research design was employed to analyse the data. The analysis revealed that movement in Dholuo wh-interrogative phrases is optional. Fundamentally, it was confirmed that Dholuo wh-interrogatives can be accounted for using Derivation by Phase. However, the article recommends that Derivation by Phase be extended to accommodate languages like Dholuo where wh-interrogatives are interpretable without overt movement. Further, the findings in this article can be integrated in preparing Dholuo grammar teaching materials as well as automated language processing models for the language.

Introduction

Wh-interrogatives have gained centrality in Syntax particularly in Generative Grammar, this is because they involve movement, feature-checking and cross-linguistic variation within Universal Grammar. Although question formation is a universal phenomenon, languages differ significantly when it comes to licensing and interpretation of wh-elements. While some languages front the wh-word, others do not. This leads to remarkable typological differences in the positioning of wh-phrases. Within generative syntax, the said variation has been handled in terms of feature strength, the role of the complementiser and the timing of syntactic operations. In Derivation by Phase Theory, the assertion is that *ex situ* or obligatory movement languages require overt wh-fronting due to strong [+wh] features on Complementiser (C) (Radford, 2006; Gao, 2021), while wh-in-situ languages permit wh-phrases to remain in their base positions due to weaker [+wh] features (Cheng, 2003; Gao, 2021).

Cross-linguistically, Dholuo is not different from other languages in relation to question formation. For instance, Dholuo has two main types of interrogatives: yes/no and wh-interrogatives. Omondi (1982) groups these questions as **yes** or **no** and **special**. Okombo (1997) distinguishes the two types of questions that seek confirmation and information. This paper aims to examine the phenomenon of wh- movement in the Dholuo language using the Minimalist Programme (MP), within the broader Phase Theory (Chomsky, 2000, 2001, 2008).



Literature Review

Studies have been done on the properties of wh- interrogatives since the 1960s. Gao (2021) uses a Phase-based approach in examining the Chinese and English wh-interrogatives movement. He posits that the head C in English possesses a robust [+wh] characteristic. The process of extracting the wh-phrase from its object position occurs concomitantly with copying the wh-word into Spec-C for feature valuation. Movement in English is mandatory. He observes that, unlike English, Chinese is a null spec language where the head of a complementizer carries a weak [+wh] specifier feature, leading to an *in-situ* construction. Many scholars, like Cheng (2003), hold the same position as Gao (2021).

Gao (2021), give an example in 1b of the wh-phrase *shenme* 'what' in Chinese which remains *in situ* since it cannot be checked. This *in situ* question differs from the English wh-question, shown in number (1a). Gao notes that wh-phrases in Chinese can be fronted to the scope. However, the remnant movement of the rest of the sentence remains opaque in Chinese and, therefore, cannot be raised to spec-CP. He adds that Chinese sentences become ungrammatical if wh-phrases are submitted to the scope position. The same applies to *Shenme*; it becomes ungrammatical if fronted to the scope-marking position.

1. a) Who bought what?
b) Ni mai-le shenme? (Mandarin Chinese)
You buy-Per.F what?
"What did you buy?"
(Gao, 2021, p. 9)

This study formed a theoretical basis for this paper since both employs the DbP framework. However, this paper looks at Dholuo wh-interrogatives, while Gao studied Chinese. Unlike Chinese, which is a wh-in-situ language, Dholuo wh-questions indicate optional movement since wh-*in situ* and wh-fronting word orders are possible.

Denham (2000) studies Babine-Witsuwiten (BW), an Athabaskan language. He argues that wh-movement in BW is optional. BW has a rigid SOV word order. Denham's research demonstrated that in BW, basic matrix questions display unrestricted variation in the placement of the wh-phrase. BW permits the wh-phrase to be fronted to the scope, to remain *in situ*, or to undergo partial wh-movement. The relevance of Denham's study to our paper lies in examining diverse word order patterns in wh-movement. The investigation serves as a valuable resource for this article as it explores a similar phenomenon in the context of Dholuo.

Radford (2006) looks at wh-movement in English using the Minimalist approach. He argues that English allows wh- movement in wh-interrogatives. English wh-questions are CPs that attract contracted auxiliary moves to C through head movement, whereas a wh- expression ascends to spec-C via wh- movement. Radford posits that interrogative C possesses an edge feature [EF] that induces an interrogative wh-word to shift to spec-C, an A-bar position. He notes that the English language employs wh-*in-situ* interrogative structures, predominantly in echo questions to reiterate and inquire about a statement previously made by someone. However, whereas English treats wh-*in-situ* as echo questions, Dholuo treats wh-*in situ* questions as real questions which demand answers. Since Radford employs DbP, his study has theoretical relevance to this paper in finding out if there is movement in Dholuo wh-*in situ*.

Ojwang (2008) looks at the construction of questions designed to elicit "yes" or "no" answers in *Encoding Polar Questions in Dholuo*. He provides descriptive data to exemplify the semantic, syntactic



and pragmatic properties of Dholuo polar questions. Ojwang predominantly utilises two strategies in his approach: the implementation of interrogative question particles and verb affixation. He looks at particles that encoded polar questions in Dholuo, which include *bende* (verb to be), *donge* (right or 'I confirm that it is true'), *kose/koso* (can, expressing the notion of possibility and suggestion) *ni* (is it true?), *kare* (so), *di dang* (could, expressing possibility in present tense), and *diwang* (could, future possibility). He examined the modifications applied to verbs via affixation. Ojwang' focuses on yes or no questions but he does not focus on Dholuo wh-interrogatives. This paper focuses on Dholuo questions but specifically wh- interrogatives in regard to their position in a sentence using Derivation by Phase Theory.

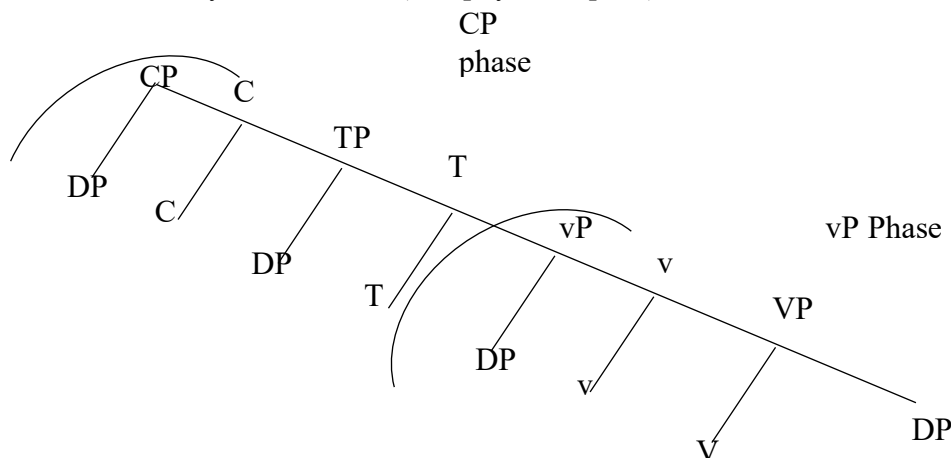
Omondi (1982) examines the syntactic structures of Dholuo using the Transformational Generative Grammar. She attested the existence of Dholuo wh-interrogatives, which she calls special questions since they seek specific information. Omondi looks at the main difference between wh-questions and statements in Dholuo in terms of intonation. She establishes that a wh-interrogative and a statement in Dholuo can only be distinguished using intonation. Omondi's work is relevant to the present research on wh-interrogatives because it provides lists of Dholuo wh-interrogatives. However, using Derivation by Phase, this paper looks at different types of wh-interrogatives and their positions in a sentence whereas hers focused on distinguishing wh-interrogatives from statement sentences.

Theoretical Framework

Chomsky (2000) came up with the DbP, which posits that Syntactic derivations are formulated in segments referred to as phases. These phases are processed separately. DbP, which was further refined in Chomsky (2001& 2008), is a specific approach within the Phase Theory. It can be seen as the implementation component of the Phase Theory. Derivation by phase describes how sentences are built step by step or incrementally, ensuring that one phase is complete before moving to another.

In the Derivation by Phase approach, a derivation cycle is called a phase. Chomsky (2008) states that a phase is defined as a "proposition" in terms of syntactic category. He specifies that vP and CP are derivational units known as phases. Phases are propositional entities given that all theta-roles are assigned in vP, whereas CP is a complete clause that includes tense and force (Chomsky, 2008). In addition, the edge of CP and vP are potential reconstruction sites. According to the phase-based model, a clause is structured as follows.

2. Phase-based syntactic model (Murphy, 2018 p. 20)





According to Chomsky (2008), all syntactic relations in Phase Theory entail a relationship between the probe (P) and the proximal goal (G); the probe and G search for a nearby matching goal to reduce the search time and to satisfy feature-checking requirements. An expression (EXPR) is constructed from syntactic objects (SO), which enter the process of derivation carrying features (F). The features may be interpretable or uninterpretable. The SOs are construction heads, called Core Functional Categories (CFC). They consist of a light verb (*v*), a complementiser (C), a tense (T), and nouns (N). Once the merger and agreement are satisfied, the CFC permits mergers (internal and external mergers), and the Agreement of P and G. Syntactic processing occurs in phases. After each phase, a portion of the already-formed syntactic structure is conveyed simultaneously to the PF and LF. Phase Impenetrability Condition (PIC) prevents additional phase operations and renders the phase argument inaccessible to further syntactic operations. According to Chomsky (2001, p.7), the Phase Impenetrability Condition dictates that: In a given phase α with head H, the domain of H is inaccessible to operations from outside; only H and its edge are accessible. (Chomsky, 2001, p.7).

Chomsky (2015) posits that clause type is expressed in the functional head C, which may carry a Q-feature in interrogative clauses. The interrogative C has an edge feature (EF) that attracts a wh-phrase to its specifier position, Spec-CP. The said Q-feature on C is uninterpretable and is checked by an element bearing an interpretable wh- or Q-operator feature. For purposes of fulfilling this requirement, the wh-element moves to Spec- CP. As a result, the uninterpretable feature on C is eliminated.

Chomsky notes that cross-linguistic variation in wh-movement comes about because the features on C are activated differently. Languages in which the EF/Q-feature is strong exhibit overt wh-movement, while those with a weak feature permit covert movement at LF. In effect, the feature strength associated with C is what determines whether a wh-phrase surfaces in Spec-CP. This article employs the Derivation by Phase to Dholuo wh-construction to determine whether a wh-phrase raises to Spec-CP.

Method

This title delineates the research design, the sample and sampling method, the data collection method, data presentation and analysis, and ethical considerations.

Research Design

Kothari (2004, p. 31) defines a research design as the setup of parameters for data collection and analysis that combines economy and relevance to the research goal. Mugenda & Mugenda (2003) define descriptive research design as collecting data to evaluate the hypothesis or address enquiries on the subject's present condition in the scope of the research. The present article employs qualitative descriptive design since it involves recorded spoken data in the form of wh-interrogatives that are then transcribed. The design enables the paper to adequately and comprehensively explain Dholuo's wh-interrogative phenomenon using the Derivation by Phase approach.

Sample Size and Sampling Procedure

Dornyei (2007) states that the primary objective of sampling is to identify individuals or products that can yield comprehensive and diverse insights into the phenomenon being studied. Purposive sampling, according to Okombo and Tromp (2006, p. 82), focuses on a population regarded as trustworthy for the research. This article purposively samples Ramogi TV of Royal Media House from other 66 TV stations.



A rating report by Geopoll, ranked by viewership in 2024, established that Ramogi TV has 4,391,000 viewers and was among the top 15 TV stations in Kenya out of the 66 TV stations. It is because of the latest popularity rating by Geopoll that this study purposively settled for Ramogi TV over other Dholuo TV stations. Apart from its ratings, Ramogi TV uses the South Nyanza dialect of Dholuo, the dialect from which article draws its data.

Out of the 66 TV stations, Communications Authority of Kenya (CAK) lists only seven television channels broadcasting in Dholuo: Lolwe TV, Ramogi TV, Luo TV, Ngima TV, Onagi TV, Kala TV, and Mayienga TV. Out of the seven through purposive sampling the study settled on Ramogi TV. Its two programmes were purposively sampled that is: *Pur gi Ohala* (Agribusiness), aired on Ramogi TV every Thursday for thirty minutes from 7.30 to 8.00 pm and *Penj Laktar* (ask the Doctor), aired for sixty minutes daily, from 6:00 pm to 7:00 pm. The study recorded a total of six episodes, three from each programme, and transcribed them. Ramogi TV programmes like *Injili Kadho*, *Duol*, *Rameny Piny*, and *Mos gi Tich*, which entail conversations but are not using the question-and-answer format were not suitable for our purposes.

Data Collection Procedure

Spoken data in form of wh-interrogatives were collected from two Ramogi TV programmes. The two programmes, *Pur gi Ohala* and *Penj Laktar*, were tape-recorded then transcribed. The study recorded a total of six episodes, three from each programme. The native speaker's intuition and competence were employed to isolate and to transcribe the wh-interrogative constructions from the recorded data. Introspective data elicitation method was also used to fill in the gaps or supplement the spoken data. To avoid distortion and potential misinterpretation, the identified Dholuo wh-interrogatives were verified by three competent native speakers of the South Nyanza dialect of Dholuo.

Data Presentation and Analysis

This study starts by distinguishing the various kinds of wh-questions in Dholuo in accordance with the first objective. The questions are showcased in the interlinear format as in Mwangi (2001). Thus, the presentation appears in three lines, as shown below.

3. **Ng'a** ma biro? (Dholuo)
Who C.is coming (one-to-one correspondence)
"Who is coming?" (Gloss)

In relation to the position of the wh- words in a sentence, the Derivation by Phase Theory is employed. The intention is to determine whether the uninterpretable [Q] and the EPP feature on head C are responsible for the displacement of the wh-phrase leading to wh-movement in Dholuo interrogatives. This paper also establishes whether PIC holds in Dholuo wh-interrogatives. Bold and italicised typefaces indicate a pertinent structure in the discussion.

Further, the analysis of the generated wh-interrogatives is presented in tree diagrams that branch in a binary manner. The tree diagrams capture the CP and vP phases and the valued features, resulting in the displacement of the wh-phrase. Arrows are used to depict movement within a tree diagram.

Logistical and Ethical Considerations

The researcher obtained a letter of research authorisation from Kenyatta University's Graduate School. The research permit allowed the researcher access to the relevant people at Ramogi TV to obtain consent to record the sampled programmes. To avoid breaching privacy, the researcher sought verbal permission from the corroborators who participated data collection.



Results

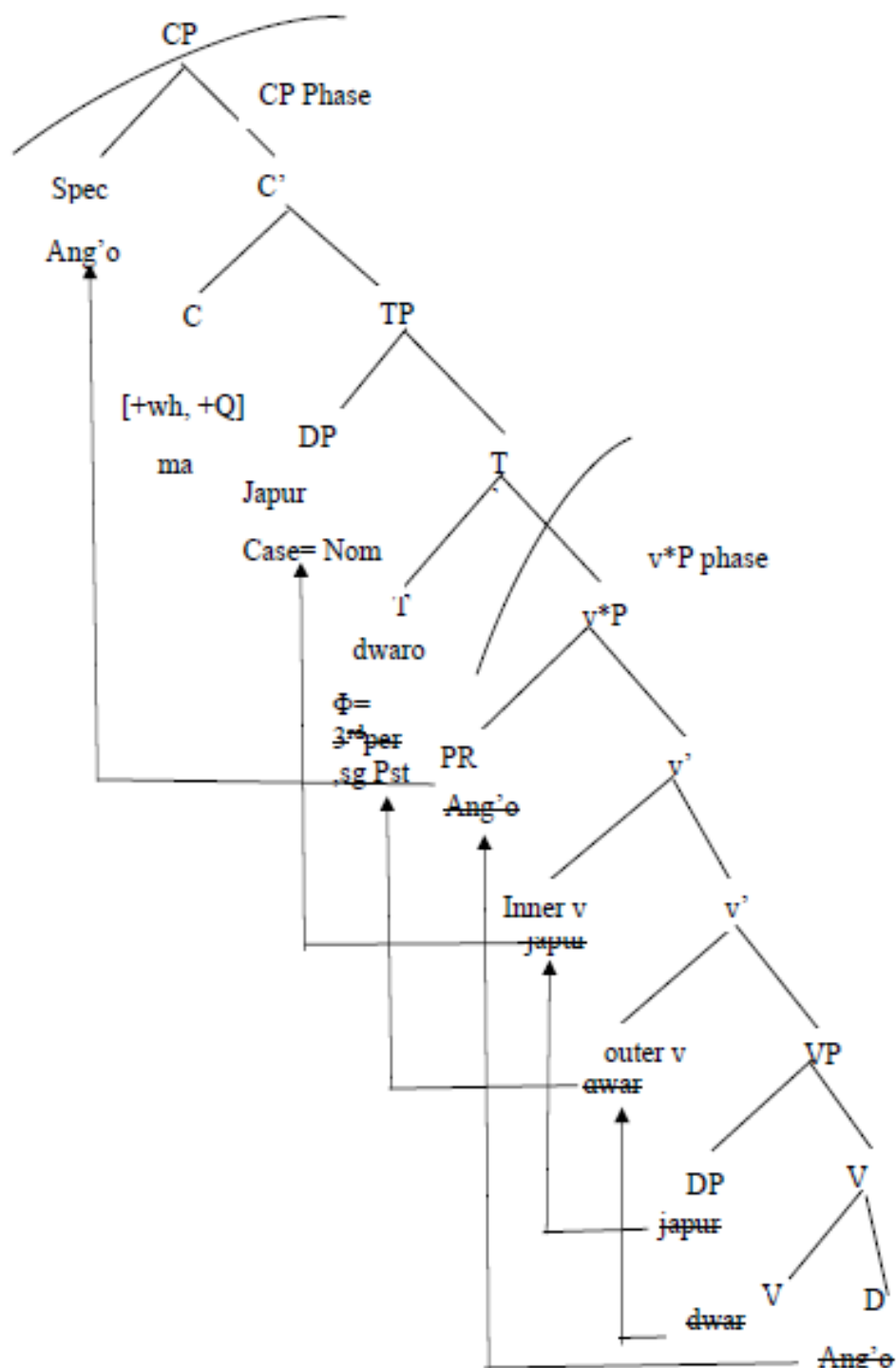
This section gives the results and findings based on this paper's objective which is to account for the Dholuo wh-interrogatives constructions featuring arguments using the Derivation by Phase Theory.

Fronted wh-Internal Arguments: Dholuo wh-internal arguments originate post verbally since they are complements of verbs. There is full wh- movement of an internal argument. From its base after the verb, the wh-complement moves through the edge of the vP phase in compliance with the Phase Impenetrability Condition (PIC) and finally to Spec-CP. However, there is no T-C movement because, unlike English, Dholuo has neither do-support nor subject-auxiliary inversion in forming wh-interrogative constructions. The empty complementiser *ma* asserts itself next to the moved wh-expression. *Ma* is an empty complementiser, not a scope marker as illustrated in number 5. The derivation begins with example (4a), which is derived from (4b) after the merge and movement take place.

4. a) *Ang'o ma japur dwaro?*
What C farmer- want?
'What does a farmer want?'
- b) *Japur dwaro ang'o?*
Farmer want what?
'What does a farmer want?'



5. Internal Wh- Arguments movement of **ang'o** (what)





The derivation commences by picking lexical items (henceforth LI) from the lexical array (henceforth LA). We choose content words {*japur* (farmer), *dwaro* (want), *ang'o* (what)} and functional categories {C, v}. Sentence 9b has a transitive verb *dwaro* (want), which requires a complement (object). V *dwaro* merges with its complement, the DP *ang'o*, an internal argument, to create the V-bar. The V-bar merges with the Spec VP (external thematic argument) to form the VP {*japur dwaro ang'o*} (what does a farmer want?). The derivation continues in the tree diagram 5, the first outer little v* merges with the VP, and it selects V since it is a probe leading to the movement of *dwaro* from V to the outer v*. Radford (2006) posits that the little v* head bears strong inflectional features that attract the lexical verb V, leading to the movement of verb like *dwaro* (want) from V to v*. The merge between the outer v* and VP forms a v*-bar. The inner v* merges with the v*-bar to form a v*P. Chomsky (2015) states that the inner specifier represents the light verb's external argument, while the light verb's edge feature attracts the light verb's outer specifier.

Consequently, the DP *japur* (farmer) raises from [Spec VP] to the inner v* and gets deleted in [Spec VP]. The inner v* *japur* (farmer) merges with the v*-bar, and the v*-bar merges with [Spec v*P], which is the outer spec of the v*P. In the VP, the word *ang'o* (what) shifts from its complement place to the [Spec v*P]. This movement also makes the wh-word *ang'o* accessible to the phase head C. The formed v*P then gets merged with the head T probe. T selects the first v* *dwaro* (want) for valuation of its tense feature to be marked; the verb *dwaro* (want) gets deleted from the head v* and moves to head T. Additionally, the head T includes an Extended Projection Principle (EPP) feature that causes the DP *japur* (farmer) to migrate to [Spec TP], forming *Japur + dwaro + ang'o*. After that, the TP and head C merge and the head C select T. It also carries the [Tense, EF].

Chomsky (2007, p. 19) posits that the agreement between the subject and verb (number and person) is derived in C. He states that in a scenario with no subject-auxiliary inversion, as in figure 5 these features are lowered to the verb *dwaro* (wants). The TP merges with the C. Head C has [+wh, +Q], which makes *ang'o* move to [Spec, CP] for its features to be evaluated. *Ang'o* is an interrogative wh-word and therefore, the head C having [+wh, +Q, EPP], *ang'o* meets these conditions; hence, it moves from [Spec v*P] to [Spec-CP] and gets deleted in spec v*P. On the same note, the complementiser *ma* gets asserted in head C. *Ma* is not present in the *in situ* construction (4b), but in the fronted wh-word, as in (4a). It is an empty complementiser; it adds no meaning in interpreting the wh-interrogative *ang'o* (what). In the derivation of the Dholuo internal argument, *ang'o* originates from the base location to the Spec-CP. This type of movement of internal wh-argument from the DP to CP is known as full movement in DbP.

This same phenomenon is present in Gichuka (Muriungi et al, 2014), where an internal wh- argument undergoes full wh-movement as in (6b). In Gichuka and Dholuo full wh-movement is possible. The internal wh-arguments move from the base position to spec-CP. When an internal wh-argument is fronted, then it must be accompanied by the focus marker *ni*, which is added to the wh-phrase to form the phrase *nimbi*, as illustrated in (6b). In Dholuo, the complementiser *ma* asserts itself next to the moved internal wh-argument too. However, the *ma* in Dholuo fronted wh- argument adds no meaning in the interpretation of the moved wh-word. It is an empty complementiser. From figure 5 it is evident that subject-verb inversion does not exist in Dholuo. Muriungi illustrates DbP's full wh-movement in Gichuka in internal arguments using the examples in 6 (a) and (b).

6. a) *Kairitu karugire mbi?* (wh-*in situ*)
The girl cooked what?
'What did the girl cook?



- b) *Ni- mbi kairitu karugire?* (full wh-movement)
FOC-what girl cooked?
'What did the girl cook?' (Muriungi, 2014, p. 4)

Fronted Wh- External Argument

We now embark on the phase structure of subject wh-interrogatives. Before we begin our derivation, (7a) and (7b) as external argument. The tree diagram under Figure 8 presents the following analysis.

7. a) *Nyasuna onyiewo buk.*
Nyasuna bought book.
'Nyasuna bought the book.'
b) *Ng'a ma onyiewo buk?*
Who bought book?
'Who bought the book?'

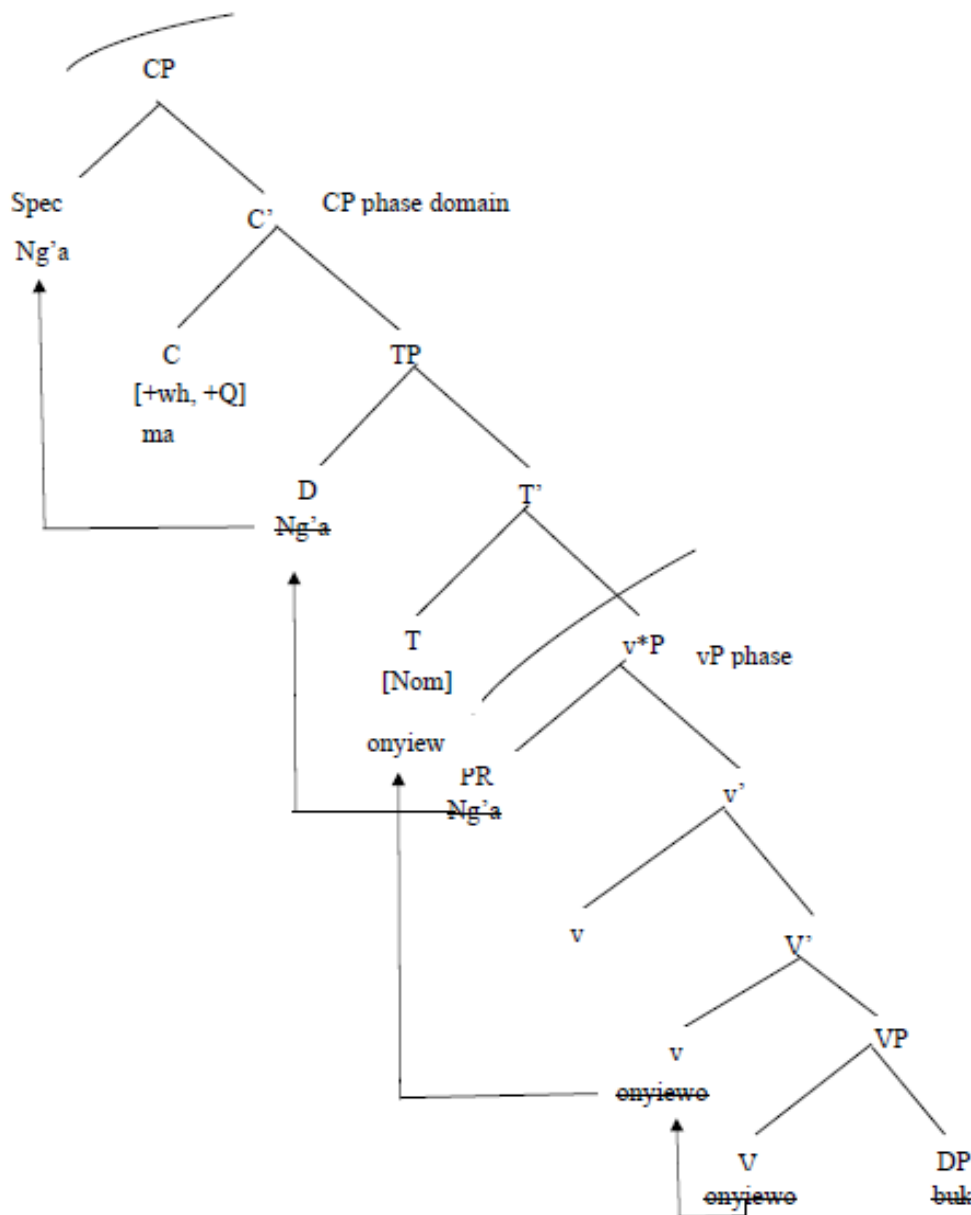
Sentence (7a) is a declarative clause in which the lexical subject *Nyasuna* appears in a preverbal subject position. In the corresponding wh-question in (7b), the interrogative word *ng'a* (who) appears in exactly the same position. Therefore, the wh-subject does not show any discernible movement.

Studies assert that wh-subjects often appear to remain in place because the structural position used for subjects is also the position occupied by the interrogative feature of C, (Huang, 1982; Chomsky, 2000, 2001& 2008). This means that the wh-subject can satisfy both subject-related requirements (agreement and EPP on T) and interrogative requirements (wh-features on C) without changing the surface order. This claim is in conformity with Vacuous Movement Hypothesis (VMH) which states that when a wh-phrase originates in a position that is already on the path to the landing site of wh-movement, its movement is structurally present but produces no visible change in surface order (Huang, 1982). Thus, although the wh-subject undergoes the same grammatical process as other wh-phrases, this process does not produce any overt arrangement.

The analysis explains why in 14b the wh-word *ng'a* appears in the same position as the subject in 14a. The present study adopts VMH in analysing *ng'a* (who). The tree diagram in 8 is a diagrammatic representation of 14b above.



8. Fronted External Wh-argument



The tree diagram can be summarised as follows: [CP *ng'a* C [EPP] [v*P v*[EPP] [VP *onyiewo buk*]]]. Then, select the LI from the LA. Only the content words are selected, {*ng'a*, *onyiewo*, *buk*} and the functional categories {C,v}. A VP projection is created when the verb *onyiewo* merges with its complement DP *buk*, forming [VP *nyiewo buk*]. The derivation takes place in a bottom-up fashion. The DP *buk* (book) does not move; it has already been spelled out, since its features can be checked and interpreted right as the DP. The VP *onyiewo buk* (bought book) then merges with the head v* of the v*P shell to form a v*-bar. *onyiewo* (bought) moves from V to outer v for its tense feature to be evaluated.



The vP phase has multiple specifiers; the inner Spec vP represents the external argument, the internal argument *buk* (book) remains post-verbal. The v*-bar merges with the inner [Spec v*P]. The [Spec v*P] has the DP *ng'a*; consequently, *ng'a* in Spec v*P is not in a case position. For its case feature [case = Nom] to be valued, it must move to Spec T through probe head T, which has EF and AF [case, EPP]. *Ng'a* merges with T-bar to form a TP, the TP then merges with C to form a C-bar. Probe C has [+wh, +Q] and EPP features.

Our clause has not yet been typed as a question in TP. For this to happen, as demanded by the Clausal Typing Hypothesis, it must move from the Spec TP to Spec-CP. Cheng (2003) posits that every clause must be typed as interrogative or declarative. Typing wh-interrogative *ng'a* (who) requires fronting the wh-word *ng'a* to the Spec-CP through the Spec-head agreement. The presence of [+wh, +Q] in C triggers the movement of *ng'a* from Spec TP to Spec-CP. This movement causes the sentence to be typed as a wh-question, as indicated in tree diagram (8).

The Vacuous Movement Hypothesis (VMH) is also possible in languages such as Scottish Gaelic and English (Carnie, 2021). The word order is the same in both languages as can be seen in both the statement and the wh-interrogatives illustrated in (9a) and (9b). However, Carnie points out that there is evidence suggesting the movement of wh-subject even though there is no change in the word order as seen in 9. but it is vacuous hence not altering surface word order.

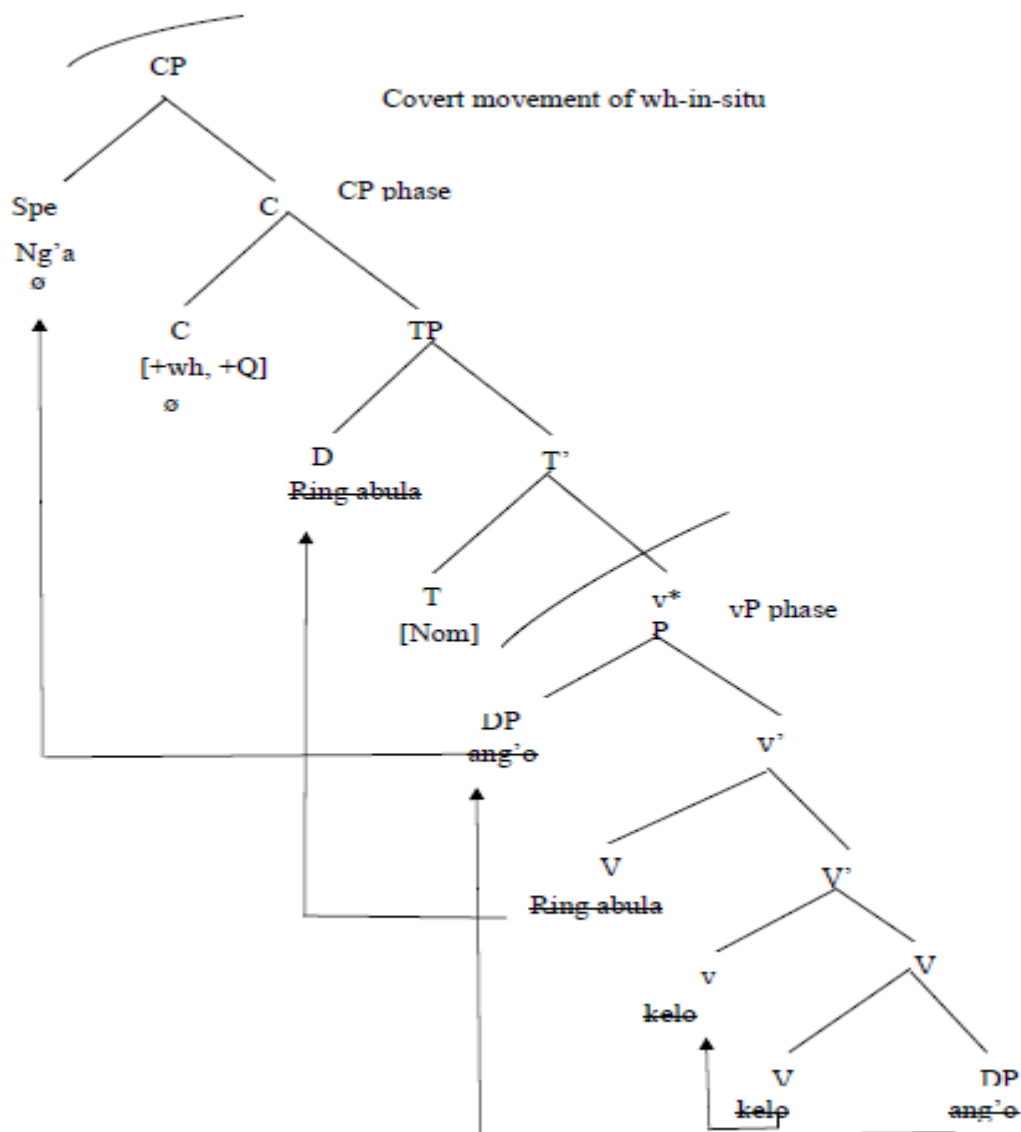
9. a) Calvin ate the beef waffles.
- b) Who ate the beef waffles?

In situ Wh- Arguments in Dholuo

Chomsky proposes that C carries a weak [+WH] specifier in wh-*in situ* types of languages like Mandarin Chinese. He argues that in such languages, wh-phrases move at LF just as they do in overt syntax. Since both types of movement are driven by shared features; these are the EPP, the wh-feature, and the question operator [+wh, +Q, +EPP]. To put this in the Dholuo context, example 17 below can be derived as follows:

10. a) Ring abula kelo tuo nyarogno?
Roasted meat causes kidney failure?
'Roasted meat causes kidney failure?'
- b) Ring abula kelo ang'o?
Roasted meat causes what?
'What does roasted meat cause?'

Going by Derivation by Phase theory, the derivation for (10b) can be accounted for as shown below in (11).

11. *In situ* wh-arguments in Dholuo.

The *in situ* construction in (11) can be derived as follows. The derivation starts by selecting the LI from the LA. We choose content words {*ring abula* (roasted meat), *kelo* (causes), *ang'o* (what)} and functional categories {v, C}. The verb *kelo* (causes) takes the direct object *ang'o* as its complement. Consequently, the V *kelo* and the object DP *ang'o* merge to generate the VP projection. The VP's argument is external and thematic *ring abula*, which is situated in the specifier position of v*P, leading to [v*P *ring abula* [v*[VP *kelo ang'o*]]]. In the v*P phase, the [wh] feature of *ang'o* (what) is not checked, and the agreement feature of head v* in v*P is not valued. The phase v*p merges with null head T. In its governing area, the head T searches for a goal. Two goals are offered. First is the subject DP *ring' abula* (roasted maize), and second is the object wh-word *ang'o* (what). However, in [Spec TP], the [+wh] cannot be checked,



given that the T lacks the [+wh] feature. The [+wh] feature of *ang'o* (what) remains unchecked within TP. The subject *ring abula* (roasted meat) is merged externally in Spec v*P. It raises to Spec TP to satisfy the EPP feature on T.

Since v*P is a phase, and for *ang'o* (what) must move to the edge Spec v*P for it to remain accessible to probe C in regards to Phase Impenetrability Condition. The formation of the CP phase comes next. The TP projection merges with the null phase head C, which has [+wh, +Q]. null head C then merges with null Spec-CP position. C probes and agrees with *ang'o*'s [+wh] feature across the phase boundary before spell-Out. The weak specifier feature of the head C covertly attracts the [+wh and Q] feature present in *ang'o* (what), which is then checked and deleted. This derivation takes place based on the Feature Attraction Hypothesis. Chomsky (2002, p. 5) posits that each lexical element has bundles of features responsible for any movement taking place.

So far, it is clear that wh-movement in Dholuo is optional since it permits both wh-movement and wh-*in situ* strategies. This optionality in movement is also explored by other scholars, like Chepngetich et al (2020), Kipsigis, Sabel (2000) for Bahasa Indonesia and Kikuyu, Matu (1991) for Kiswahili, Muriungi (2015) for Gichuka, Lassadi (2003) for French, Denham (2000) for Babine Witsuwit'en, and Soltan (2010) for Egyptian Arabic, among others, display optionality in wh-movement.

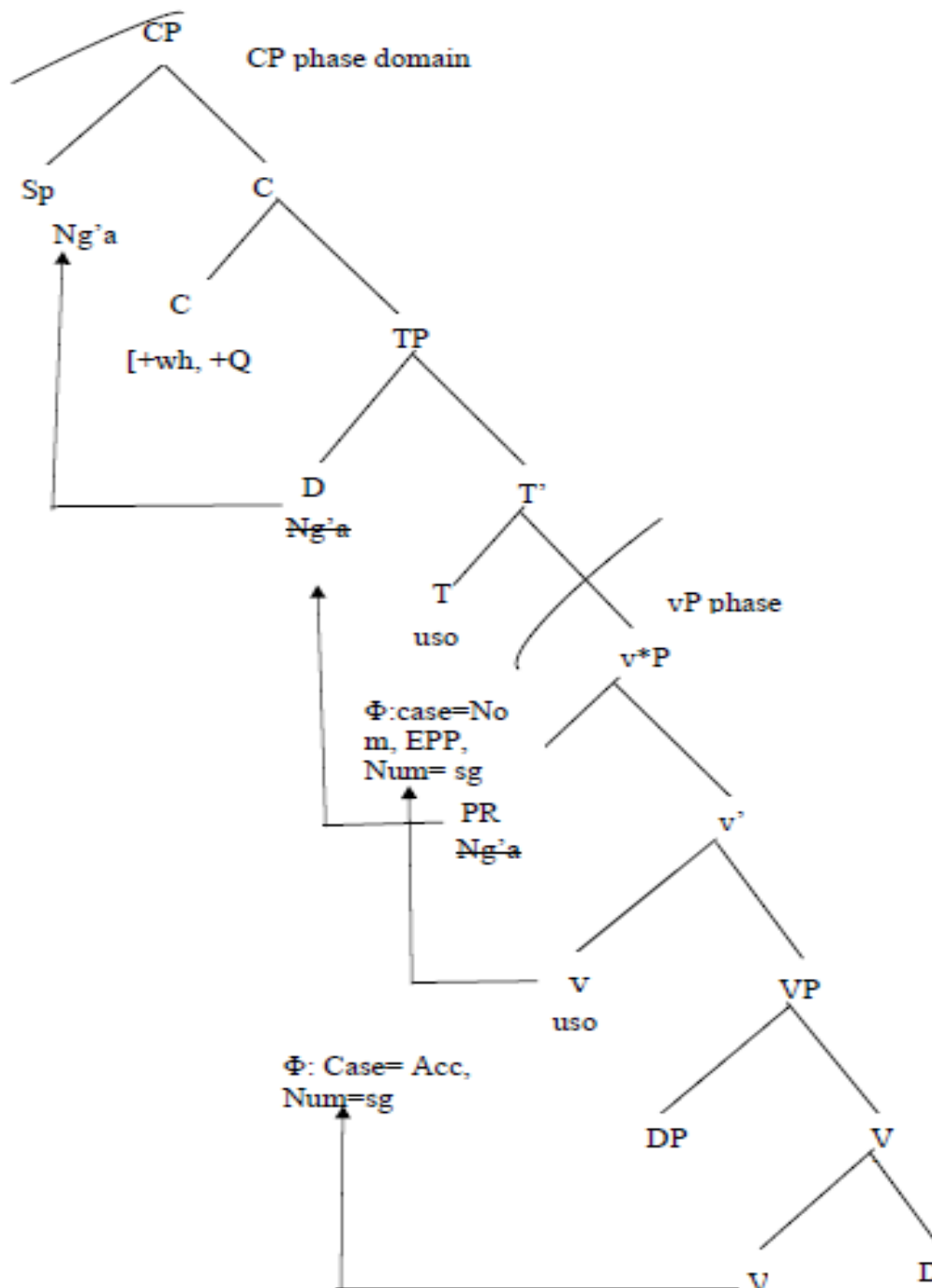
Multiple Wh- Interrogative Arguments

So far, all the questions examined in this paper have a single interrogative wh-expression. However, Dholuo also has multiple wh-interrogatives. In Dholuo's multiple wh-questions, only one wh-expression moves to the left periphery of the clause as in (12) below, accounted for in tree diagram (13).

12. *Ng'a* *ma* *uso* *ang'o?*
 Who C selling **what?**
 'Who is selling what?'



13. Multiple Wh- Interrogative Arguments movement (Partial)



Derivation precedes as follows: *uso* (sell) merges with *ang'o* (what) to form the VP *uso ang'o* (selling what). The VP then merges with the light affixal verb *v* to create a *v'*. As seen below, the light *v*, being



a probe, triggers the movement of *uso* (selling) from head V to T. Phase vP is formed when the external argument *ng'a* (who) merges with the v'. Probe v agrees and assigns the complement *ang'o* (what) the accusative case. The domain of VP becomes impenetrable to any external probe C or T due to PIC. Probe T and C are in phase CP; search for a local goal, and the only available goal is *ng'a* (who) at the edge of the vP phase. T assigns *ng'a* (who) an invisible nominative case, and C causes it to move to Spec-CP to satisfy EF on C.

Multiple wh-interrogatives in Dholuo behave the same way as English multiple interrogatives (Radford, 2006). In both languages, the superiority effect directs the movement. Radford (2006) describes the superiority effect as a priority given to the subject wh-phrase moving to the Spec-CP, unlike the object wh-phrase. In both languages, one wh-word remains *in situ* while the other is preposed.

Discussion

This paper's main objective was to account for the Dholuo wh-interrogatives constructions featuring arguments using the Derivation by Phase Theory. It is emerging that Dholuo wh-internal arguments originate post verbally since they are complements of verbs. There is full wh- movement of an internal argument. From its base after the verb, the wh-complement moves through the edge of the vP phase in compliance with the Phase Impenetrability Condition (PIC) and finally to Spec-CP. However, there is no T-C movement because, unlike English, Dholuo has neither do-support nor subject-auxiliary inversion in forming wh-interrogative constructions. The empty complementiser *ma* asserts itself next to the moved wh-expression. As pointed out earlier, *ma* is an empty complementiser, not a scope marker.

Concerning the Dholuo wh-external argument, it became evident that they go through vacuous movement. This kind of movement occurs due to the AF inherited from C to T and from v* to V, as well as the EF. The AF and the EF yielded an A-bar movement. However, this movement is considered silent since it does not alter the word order in the interrogative from the statement from which the interrogative is derived.

This article also looked Dholuo wh-*in situ* interrogatives in external and internal arguments. It must be emphasized that this study considers Dholuo *in situ* wh-interrogatives not as echo questions; instead, they are genuine question constructions like their fronted (*ex situ*) counterparts. In the Dholuo *in situ* wh-interrogatives, the [WH] feature on the wh-word agrees with the weak specifier feature on the matrix, and the [u-WH] of the wh-word gets checked and deleted. The weak cross-over of the wh-expression from the base position to the Spec-CP results from the Clausal Typing Hypothesis. Since the *in-situ* interrogatives are genuine questions, they are typed as interrogatives.

Finally, in Dholuo, multiple interrogatives, only one wh-word moves to the left periphery of the clause. C triggers the movement of a wh-word expression, such as *ng'a* (who), from Spec TP to Spec-CP, as the wh-internal argument remains in the base-generated position, as seen in *Ng'a ma uso ang'o?* (Who sells what?).

Conclusion

This study has looked at Dholuo wh-interrogatives using Minimalists' Derivation by Phase Theory. It is notable that Dholuo has a rich and systemic inventory of wh-expressions.

Also manifested is the fact that both *in situ* and *ex situ* strategies are employed in question formation in Dholuo. This applies to both wh-arguments and adjuncts. Our findings also suggest that *ma*, obligatory in *ex situ* wh-interrogative constructions, is a complementiser and not a focus marker.



Evidently, Dholuo wh-arguments do not exhibit morphological distinction between subject and object forms. Finally, Derivation by Phase successfully accounts for the distribution of Dholuo wh-expressions. However, in its current form, Derivation by Phase revolves around movement. There is need to revise or extend it to accommodate languages like Dholuo, in which wh-interrogatives are interpretable without overt movement. Dholuo can therefore inspire research into the Minimalist thrust that minimises movement and pays more attention to the interfaces.

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