

## Corpus approach to the typology of content questions in Yorùbá

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### Abstract

Our observation of usage data of content questions in Yorùbá and a review of the few available studies on them show discrepancies between both. Two issues are of particular interest to us. First, we consider the morphosyntactic specifications of items that invoke content questions in the language. There are two main lines of argument on this: one, a contention that overt verbs and nominal operators instantiate these questions, and two, a position that such questions are best initiated by covert Inter-P particle. Second, we study proper placement of the Yorùbá language among world languages in the light of Cheng's Clause Typing Hypothesis (CTH). Extracting 2909 content question tokens from a corpus of 1,017,302 words, we infer that (1) content questions are formed by overt items, two particles – *dà* and *ńkọ́*, and four nouns – *ta*, *kí*, *èlọ́* and *èwo* (with verbs completely excluded); (2) content questions in Yorùbá are initiated in-situ. We justify our second inference contending that the dislocation of questioned arguments to the left periphery in Yorùbá does not invoke interrogative mood but for focusing that is determined by discourse need.

**Keywords:** Content question, Corpus approach, Clause typing hypothesis, Q-particle, Q-word

### 1. Introduction

In this study, we present a formal derivational account of content questions in Yorùbá. Available literature on this aspect of the syntax of the language has been marked with a number of conflicting views. Given the illustrations in (1) below, for example, a common view in the literature is that Yorùbá is an ex-situ language; that displacement of question words or constituents to the Spec-CP is an indication that Yorùbá content questions are formed by the movement strategy that dislocates Q-operators to the clause-initial position. (Yusuf, 1992; Ilori, 2010 & 2017; Akanbi, 2011 & 2016; Adebisi & Akanni, 2019).

1. (i) (a) [<sub>TP</sub> *È* *fé* *èwo* *nínú* *àwọn* *ìwé* *wònyí*]  
 2pl want Q-word in PL book Dem  
 'You want which among these books?'  
 (b) [<sub>CP</sub> *Èwo*<sub>i</sub> [<sub>C</sub> *ní* [<sub>TP</sub> *è* *fé* \_\_\_<sub>j</sub> *nínú* *àwọn* *ìwé* *wònyí*]]]  
 Q-word Foc 2pl want in PL book Dem  
 'Which do you want among these books?'

- (ii) (a) [<sub>TP</sub> *Owó* *tí* *o* *ti* *jẹmí* *jé* *èlọ́*]  
 Money that 2sg ASP owe 1sg be Q-word  
 'The money you have owned me is now how much?'

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(b) [<sub>CP</sub>Èlò<sub>i</sub> [<sub>C</sub>ni [<sub>TP</sub>owó tí o ti jẹ mí jé ---<sub>i</sub>]]]  
 Q-word Foc money that 2sg ASP owe 1sg be  
 'How much money do you now owe me?'

(iii) (a) [<sub>TP</sub>Ó bí mēlòó]  
 3sg born Q-word  
 'It gave birth to how many?'

(b) [<sub>CP</sub>Mēlòó<sub>i</sub> [<sub>C</sub>ni [<sub>TP</sub>ó bí---<sub>i</sub>]]]  
 Q-word Foc 3sg born  
 'How many did it give birth to?'

Contrary to this view and others that will be identified later, we take a position that Yorùbá is typologically an in-situ language whose Q-force is completely spelt out on overt question elements. We shall extend this position contending that all content questions are formed by external merge that requires no movement of any kind, and that the perceived content questions related movement in the (b) constructions above primarily serves a thematisation purpose, not to initiate or type content questions in the language.

## 2. Methods and Framework

This section introduces two important components of the work: the data and the framework employed to analyse it.

### 2.1 Data

There are three types of elements used to instantiate content questions in the Yorùbá language. These are (i) nominal operators, (ii) predicate particles and (iii) reason-phrase. Each of these is illustrated in (2-4) respectively below.

2. i) *Ta ni ó ní wùrà?*  
 Q-word FOC 3SG have jewel  
 'Who has jewel?'
- ii) *Èwo ni wàá mú sàya nínú àwọn omòbìrìn mí?*  
 Q-word FOC you-TNS take do-wife among 3PL daughter my  
 'Which will you marry among my daughters?'
- iii) *Èlò ni a san fún Jèsù?*  
 Q-word FOC we pay to Jesus  
 'How much did we pay Jesus?'
- iv) *Ki ni olórún bẹ̀rẹ̀lówó wa?*  
 Q-word FOC god ASP ask in-hand us  
 'What does God require of us?'
3. i) *Èniyàn tí a fé rí nkó?*  
 Person that we want see Q-part  
 'What about the person we want to see?'
- ii) *Jehófà Olórún Èlìjà dà?*  
 Jehovah God Elijah Q-part

'Where is Jehovah, the God of Elijah?'

4. *Èéṣe tí ibínúre fìgbóná?*

Q-phrase that anger 2SG is hot

'Why are you furious?'

In (2), four elements are identified as the question words in the sentences they occur. These are nouns in Yorùbá (see Awobuluyi 2013). In addition to their nominal status, they inherently bear interrogative feature in the language. This is why they are sometimes called question operators (Ilori, 2010 & 2017). It would be noticed that at each point of their occurrence, they are immediately followed by the focus marker of the language, *ni*. We will explain the syntactic and semantic motivations for this collocation later. It suffices to say here that against previous studies (see Ilori, 2010 & 2017), the nominal content question markers in Yorùbá are just four, neither less nor more<sup>1</sup>.

The forms represented as question particles in (3) have been called various names in the literature. Of specific interest is Awobuluyi (2013) as well as Oye and Abimbola (2014) where the verbal status of these items is contended. While the latter argues that the items are interrogative verbs given their predicative functions in clause structures, the former explains that they lack crucial and essential morphosyntactic features of verbs in the language and they should accordingly be excluded from the verbal list of the language. We dwell on this debate in section 3 below.

While (2) and (3) include instances of the two individual or single items that project content interrogative force in the Yorùbá language, the example in (4) presents the merging of not a single word but a phrase that means 'why is it' or simply 'why' in all the tokens of its occurrence in our corpus. This *why* question type in Yorùbá has another operator, *ki ni ìdí*. Given its peculiarities, we hope to discuss its syntax and semantics in a future publication.

In the present study, we will attend to only the first two types of question operators illustrated in (2 & 3). We do this extracting 2909 content question tokens from a corpus of 1,017,302 words compiled from 144 translated texts, part of *Research library: Yorùbá Watchtower Publications (1987-2016)*<sup>2</sup>. Table 1 below shows the token frequency of each of the questions words and particles identified above.

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<sup>1</sup>Two among these, *èlò* and *èwo* are often contracted or compounded with some other categories to instantiate adverbial interrogative constructions. These are nouns – *ibi* (place), *ibá* (manner), *ìgbà* (time/season/period) – and a verb, *mu* (to take). In the tokens of such contractions, *èlò* combines with verb while *èwo* occurs with nouns. Examples are provided below.

- a) Ibo (ibi+èwo) ni o wà? 'where are you?'
- b) Ìgbà wo (ìgbà+èwo) ni wà á wá? 'When will you come?'
- c) Báwo (ibá+èwo) ni ó ṣe rí? 'How is it?'
- d) Mèlòó (ìmu+èlò) ni kí á rà? 'How many should we buy?'

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**Table 1. Corpus information for question operators**

Q-operator	Status	Lemma form	Frequency	Percentage
Ewo	word	/-o/, wo and èwo	1036	35.6%
Eló	word	èló, mélòó	226	7.9%
Ta	word	Ta	399	13.7%
Kí	word	Kí	1078	37%
Dà	particle	Dà	74	2.5%
Nkó	particle	Nkó	96	3.3%
			TOTAL= 2909	100%

As table 1 shows, among the four question words identified, only *èwo* has three lemma forms. The reason for this has been hinted earlier. It participates in invoking such questions as where, when and how, and occurs independently in profiling 'which'. In fact, Akinlabi's (2016) report demonstrates that Yorùbá does not have a simple word or single morpheme for where, when and how questions. His position is not far from the truth because such words are structurally complex. In the tokens where these questions are used in our corpus, the language employs the *wo* (which) morpheme to construct these: which place, which time and which manner respectively. In addition, *wo* is used freely with all kinds of nouns as many of our examples in the rest of the study will show. The relative productivity of these content question operators may give interesting information on some aspects of their usage. For instance, one might want to know why *kí* is so productive that it bears 37% of the entire tokens despite having a single lemma. We may also be interested in why the particles attest to the lower level of frequency than the words. One may proceed to enquire how the information here would appear in a more balanced corpus built from all genres possible. These are interesting questions to answer. However, they are beyond our interest in the current study. Here, we are simply interested in the structural distributions of the elements, as well as how these help to clause type Yorùbá content question in relation to other languages.

It is important to state that our study is corpus based not corpus driven. Therefore, our analysis is qualitative. The interpretation of the corpus data used for illustrations relies heavily on the intuition of the researcher guided by Cheng's (1991, 2003 & 2009). In addition, in the literature, content questions are technically referred to as wh-questions. This derives from the morphology of the elements that instantiate this construction type in English. We will freely switch these terms in this study, but more of the former in our analysis of Yorùbá data, especially for convenience. For the same reason, these phrases: wh-particle and wh-word often used in the literature on content questions are consistently rendered *Q-particle* and *Q-word* in the rest of this study, except in direct quotations especially from Cheng's studies that serve to frame our arguments.

## 2.2 Framework: Cheng's Clause Typing Hypothesis

We adopt Cheng's (1991, 2003 & 2009) Clause Typing Hypothesis for our analysis. This hypothesis suggests that "sentences are clause typed in language as interrogative... by using typing particles in wh-in situ languages or by using syntactic wh-movement in non-wh in situ languages" (Olaogun, 2012, p. 13). The validity of this hypothesis has been questioned, especially regarding its crosslinguistic plausibility (Nkemnji, 1995; Aboh and Pfau, 2011; Olaogun, 2012 & 2018). These studies argue that sentences are typed as interrogatives by Inter head. Yet, based on usage data, we demonstrate in the present study that this hypothesis explains almost perfectly how content question in Yorùbá are constructed and typed. The extract below summarises the essential argument of the hypothesis.

Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C<sup>0</sup> is used or else fronting of Q-word to the Spec of C<sup>0</sup> is used, thereby typing a clause through C<sup>0</sup> by Spec-head agreement (Cheng 1991:29)

This hypothesis strictly classifies world languages into two families based on their content question constructions. The first group is a family of languages that permit content question words to move to clause-initial position for forming content questions, as in English and German (see Schulz & Roeper, 2011; Villiers, Villiers & Roeper, 2011). The second is a class of languages that do not permit such movement for the same reason, Madarin Chinese, French and Portuguese for some two examples (Cheng and Rooryck, 2000). The former are termed ex-situ languages while the latter are in-situ. What licenses the movement or non-movement of the content question words in a language is the presence or absence of a question particle, which in itself is also licensed in a language by the presence of overt *yes-no* or polar questions element(s). This implies that the nature of a language's polar questions is significant to the typology of its content questions. Cheng argues that 'in-situ languages invariably possess at least one of two ways of constructing yes-no questions. This could be either by means of some overt element (particle, special inflection or agreement), or morpho-phonological process (local tonal accent), which often occurs at one or other periphery of the clause, as in French (Cheng and Rooryck, 2000). This means that an ex-situ language excludes the possibility of special markers for polar question and thus must move wh-elements or operators out of the matrix clause to the left peripheral (or right peripheral depending on a language word order mechanism). Cheng presents deductive premises to show that English, for instance, belongs to the latter family in which the movement of Q-words is mandatory for wh-questions clause typing requirement.

This classification seems too strong. Some languages, French for one example (Hamlaoui, 2009), *have been shown to exhibit both fronted and in-situ wh-constituents*. This suggests that as plausible as the hypothesis is, languages around the world have parametric variations, which may constrain how far it can be applied. Cheng (2009) addresses a particular issue where a covert movement of wh-in-situ may be involved, especially where scope-taking properties of wh-phrases are concerned. In the case of Yorùbá, as we hope to demonstrate hereunder, though at the consequent output, this classification is valid yet there are language specific constraints.

Given the licensing requirement of the presence of at least one overt marking item for yes-no questions in wh-questions in-situ languages, the question that arises here is whether Yorùbá has *special* yes-no question overt markers. Well, the answer is yes. Traditionally, three of such markers have been identified employing morphological and functional considerations (Yusuf, 1992; Ilori, 2010 & 2017; Olaogun, 2010). See examples (5-7) below.

1. i) *Ayò'ó mọ owó tójú*  
Ayo HTS know money keep  
'Ayo knows how to save money'
- ii) *Njé Ayò'ó mọ owó tójú?*  
Q-part Ayo HTS know money keep  
'Does Ayo know how to keep money?'
2. i) *Baba yín sì wàlááyè*  
father your still be alive  
'Your father is still alive'

ii) *Ṣé baba yín sì wàláàyè?*  
 Q-part. Father your still be alive  
 'Is your father still alive?'

3. i) *O gbó mi*  
 2SG hear me  
 'You heard me'

ii) *O gbó mi bí?*  
 2SG hear me Q-part  
 'Can/did you hear me?'

Given that the clause typing hypothesis claims that should there be an instance such as is attested in (5-7), the language must have either overt or covert q-particles in content questions that will obligatorily clause type the language as in-situ. Accepting this is true, then the question expected here is not whether Yorùbá has question particles, but what are these particles in the language and what is the nature of their occurrence and possible language specific constraints on their distribution? We attempt answering these questions in subsequent sections. Before then, though, it is important to state that the Cheng's distinctive properties for Q-particles, given in (8) below do not find absolute application in the Yorùbá language. The Q-particles in the language have a language specific parameter not identical with the sort identified in the languages with which Cheng was familiar. Notwithstanding, they possess other features that indicate that they are best analysed as Q-particles in the language.

#### 4. Properties and function of typing particles

- (i) Typing Particles are generated in  $C^0$ .
- (ii) If a language has a typing particle, it will always be able to appear in matrix clauses and embedded clauses
- (iii) Overt wh-particles determine question force for certain kinds of wh-phrases, especially in languages whose wh-words function as indefinites as well as interrogatives, or better put where the meaning of the wh-words is ambiguous. This is because in languages, which allow a non-overt wh-particle, the wh-words are never ambiguous: they are always interpreted as interrogative. Therefore, the presence of the overt wh-particle has a functional reason: to resolve ambiguity.

(Cheng 1991:34-37)

As we will show hereunder, because the Q-particles in Yorùbá occur in predetermined special structures that exclude either an IP or TP to which a CP can attach at either of the two peripheries, the first property of a typing particle according to Cheng is altered in Yorùbá. Instead, the particles function essentially as predicates of their specific clause type (see section 3 below). The other two properties/functions are observed to have straight application in the language. Moreover, q-particles and Q-words that feature in content questions in the Yorùbá language occur overtly in strictly mutually exclusive constructions. The reasons for this will be obvious soon. It is safe to mention quickly here that Q-feature on each of these two classes of wh-constructions is equally fully interpretable on them with no one being ambiguous. Henceforth, we shall be talking about content questions with q-particles and those with Q-words.

#### 3. Content questions with q-particles

We have identified two Q-particles in the Yorùbá language. These are further illustrated in (9-10) below. The categorial status of these items and their distributional constraints form parts of the perplexing questions in Yorùbá syntax addressed here. Oye and Abimbola (2014) hold the position that these items have in them inherently fully specified [V]-feature right from the lexicon because of their (secondary) predicative role whenever used in the language (also see Akanbi, 2011). This



argument contrasts Ilori's (2010: 63) view whose study “does not regard these items as verbs because they lack *crucial verbal properties*” in the language” (italics mine). It also opposes Awobuluyi's (2013: 71-73 & 90; 176-77) sub-grouping of **dà**, **ńkọ́**, with **kẹ̀/wẹ̀** and **ni** (a focus marker), and his functional definition of verbs in the language, which “limits the possibility of **dà** and **ńkọ́** as verbs in Yorùbá. The definition assumes that verbs in the language are the word(s) functioning as the predicator(s) of a sentence and are at the same time compatible with the short pronouns” (Oye & Abimbola, 2014:2-3).

5. *Awon elésè tí ó pa Jésù dà lénìí?*  
 3PL sinner that HTS kill Jesus Q-part in-today  
 'Where are the sinners who killed Jesus today?'

6. *Bí ẹnìkàn bá ẹ̀ ọ́ ńkọ́?*  
 If person possibly offend 2SG Q-part  
 'What if someone offend you?'

Well, before justifying the primary categorial status of the Q-words in (9-10) as Q-particles, we concur with each of the two opposing schools of thoughts because the items concerned (i) lack crucial verbal properties and (ii) serve predicative function in the language. Our point of agreement may seem in a sense rather illogical. Actually, the crux of the opposing views is in the concept of predicate and how it is attested in Yorùbá. We will briefly discuss this concept, and use our understanding to adjust one of the ideas, providing a reason why the concerned items are particles yet predicators in their specific constructions. We begin by reconstructing the arguments in (11) and (12) below.

#### 7. **Awobuluyi (2013)**

- a. All verbs must structure-select short pronouns as subjects in clauses or sentences. (p. 90.)
- b. Items **dà** and **ńkọ́** are not verbs because they do not structure-select short pronouns as subjects in any clause or sentence structures in Yorùbá (pp. 92-93.)

#### 8. **Oye and Abimbola (2014)**

- a. No sentence exists without a predicator (p. 6)
- b. Items **dà** and **ńkọ́** predicates all interrogative sentences in which they occur. (p.6)
- c. Therefore, **dà** and **ńkọ́** are verbs (given the argument structure projected in the vP-layer and the force exerted in the ForceP) despite lacking some crucial features that mark other items classified as verbs in the language. (p.14)

The reconstructions given above raise basically two questions. First, what is a clause structure in human language? Second, what two types of clause structures can be identified in language, and how are they attested in Yorùbá?

### 3.1 Q-particles in clause structures

Arguments (11) and (12) are deductively valid in that the conclusions follow directly from the preceding premises. However, a consideration of the questions they raised as we hinted above gives us opportunity to see what the latter possibly ignored. The first question is repeated in (13) below for convenience.

#### 9. *What is a clause structure in human language?*

The answer is simple and uncontroversial. A clause structure is a construction composed of “two phrases, one functioning as the subject and the other as the predicate” (Delahunty & Garvey, 2010:58). In (14-16) below, we have some examples of clause structures in Yorùbá, where the subject is italicized and the predicate bolded.

10. *Àgbònrín fò dá lápa*  
'The stag jumped and broke its arm'
11. *Ayò tó pa àgbònrín to fò dalápá dúdú bi èédú.*  
'The Ayo who killed the stag that broke its arm is as black as charcoal'
12. *Àgbònrín ti ó fò dá lápa dà nínú àwọn wònyìí?*  
'Which among these is the stag that jumped and broke its arm?'

In addition to occurring before the predicate, as shown in all the instances of (14-16), subjects often occur as the phrase that represents something about which something is said by the predicate, or about which the predicate asks or answers a question. In (14-15) the subjects represent the things about which the predicates describe and answer specific questions, while in (16) the predicate asks a question about the subject. In essence, the subject in a clause structure has no semantic role of its own except the one assigns to it by the predicate. So what is a predicate?

This question has received robust attention over centuries, and continues to interest thinkers. For instance, in Moro (1997, 2000), Dryer (2007), Crystal (2008), Oliver (2010), a predicate is understood as an item or structure that holds the central interpretation of a clause (a sentence), meaning that a predicate is the constituent or constitute that basically determines the core function of a clause. Without a predicate, a clause would be a string of words that has no functional value whatsoever. Crystal (2008, p. 381) presents a clearer definition of the term by viewing it as “a term in the analysis of grammatical functions, to refer to a *major constituent* of sentence structure, traditionally associated with a two-part analysis in which all obligatory constituents other than the subject are considered together”. A *major constituent* is a functional component of a larger construction, which bears most part of the information of the latter.

Given that in a clause structure of human language a predicate phrase is crucial because it 'packages' the most significant item(s) of the clause, we are then set to answer the second question posted earlier repeated in (17) below for convenience. This will help to locate where an adjusted view is needed between (11) and (12) above.

13. ***What two types of clause structures can be identified in language, and how are they attested in Yorùbá?***

Many types of clause structures have been identified in language depending on the theoretical model one employs. Some of these are main or independent clause, subordinate or independent clause, infinitival clause, etc (Aissen, 1987; Gelderen, 2013). However, in the light of Dryer (2007), clause structures can be divided into two classes: verbal and non-verbal types. This classification obtains from the nature of the element that serves the semantic exponent of the predicate phrase of the clause, a predicator. A predicator is the item around which the entire information of the predicate phrase is 'packaged', the exponent of the predicate. In (14-16) above, *fò*, *dúdú* and *dà* constitute predicators respectively in the Yorùbá data.

In a situation where the predicate has a verb as its exponent item, usually a lexical or main verb, the clause structure is verbal (Gelderen, 2013). Verbs in Yorùbá are parametric rules. One of these rules is the premise in (11a). It says: *all verbs must structure-select short pronouns as subjects in clause or sentence structures*. Following this, the Yorùbá data in (14-15) are verbal clauses in that they remain well-formed in (18-19) where the subject phrases are replaced by short pronouns while the ungrammaticality of (20), in which the subject of (16) is replaced with a short pronoun leads us to the other clause type, non-verbal.

14. *Ó fò dá lápa*  
3SG jump break in-arm  
'It jumped and broke (its) arm'



15. *Ó dúdú bi èédú*  
 3SG black like charcoal  
 'He is as black as charcoal'

16. \**Ó dà nínú àwọn òkété yíí?*

If it is true that all verbs structure-select short pronouns as subjects in clause structures of Yorùbá (which we contend is valid in the verbal system of the language), then (20) is ill-formed because *dà* is not a verb considering (11a). If it is not a verb but a predicator considering the grammaticality of (16) where *dà* is an exponential predicator that activates the predicate phrase of the clause structure, then what sort of predicator is it? To answer this question, consider Dryer's (2007: 224-275) analysis and classification of clause structures.

Dryer identifies both verbal and non-verbal clauses. Whereby the former obviously activates the predicate phrase of the clause by a verb while in the latter the exponential item of a clause's predicate is not a verb, that is, the predicator does not have the properties of verbs but belong to some other category(s) in a language. He presents explicit descriptions of three varieties of non-verbal clause types across languages of the world. These are clauses with (i) adjectival predicates, (ii) nominal predicates and (iii) locative predicate. Of interest here is non-verbal clause type with locative predicate, though all of these seem to be empirically supported in the Yorùbá language. Apart from primarily servicing content questions as the core q-particles, in all their tokens both in our corpus and elsewhere used in the Yorùbá language, *dà* and *ńkọ́* are (sometimes choice specifying) locative predicators which initiate locative predicates in interrogative clause structures. This reflects in the thematic role assigned the same subject argument in the answer to the interrogative force of the clause structure in which they are used. Consider (21) and (22) below. In (22a-b) the two verbs *wà* and *ní* are locative copulas in the language. In all cases where an answer is given to an interrogative clause, which has a predicate activated by *dà* or *ńkọ́*, the declarative answer pair must have a locative copula (or a lexical equivalent).

17. (a) *Ayò tí ó pa Àgbòrín dúdú dà?*  
 Ayo that HTS kill stag black Q-part  
 'What about the Ayo who killed a black stag?'

- (b) *Àgbòrín Ayò ńkọ́ nínú gbogbo Àgbòrín wònyí?*  
 Stag Ayo Q-part among all stag these  
 'Which is Ayo's stag amidst all of these (stags)?'

18. (a) *Ayò wà ní inú igbó*  
 Ayo be LOC inside bush  
 'Ayo is in the bush'

- (b) *Àgbòrín Ayò ní èyí tí mo fí ọwọ́ bà yíí*  
 Stag Ayo be this that 1SG use hand touch this  
 'Ayo's stag is this that I touch'

Another argument for *dà* and *ńkọ́* as locative predicators in the Yorùbá language is in the formal and functional nature of the complements they take. These items usually occur last at the right peripheral of interrogative sentences. Sometimes they permit complements though. However, they strictly select the complement structure and semantics. In a situation where a complement is permitted, it must be a prepositional phrase headed by the locative preposition *ní*, this in turn specifically assigns grammatical inessive case to the argument following it. Consider the illustrations (23-24) below.

19. a) *Àwọn ipadàbèwò rẹ dà ní àdúgbò yíí?*  
 3PL return-visit 2sg Q-part LOC street this  
 'Where are your return-visits in this street?'

b) *Olowó ànà dà ní inú ayé asán yíí?*  
 money-owner yesterday Q-part LOC inside earth vanity this  
 'Where are those who once had riches in this world of vanity?'

20. a) *Èyíńkó ní inú àwọn ọ̀rò tí a sọ kalẹ̀ yíí?*  
 this Q-part LOC inside 3PL word that 1PL say on-ground this  
 'What about this of all that has been spoken?'

d) *Àlufáàńkó níńú ìjọ̀ yíí?*  
 pastor Q-part LOC-inside congregation this  
 'Where is the pastor in this congregation?'

This complement specific structure is not a peculiar structural property of just the two question particles but a distinguishing exponential characteristic of all locative non-verbal predicators of the language. Some examples are given in (25-26) in which two other such predicators share as complement a locative initiated prepositional phrase. This is always the case in the grammar of Yorùbá. These other items are not used for *Wh*-questions because the interrogative force on them is light and functionally conditioned by a presupposed or given information in a discourse context. However, they all, both the Q-particles and others similar to them, share one feature. Whether used for question or not, they select their subject argument for focusing. They are emphasis markers. Little wonder they are in complementary distribution with *ní* the primary focus marker in the language. Soon, we will show that this in part is the reason why the NP's of the content question clauses in which *dà* and *ńkó* overtly occur do not need any focus motivated structural movement because these items inherently have interpretable focus feature which emphasises the NP element of their subject phrase. When covert, the focus marker must merge with the NP constituent that precedes the null slot of the Q-particles.

21. *Irú egbé Ade kẹ̀ ní àdúgbò mi?*  
 Kind mate Ade EMP-part LOC street my  
 'The sort of Ade (to dare me) in my street?'

22. *Ìgbéyàwó wẹ̀ ní ayé tí kò sí owó yíí?*  
 Wedding EMP-part LOC earth that NEG be money this  
 'Wedding in this world of no money?'

Given the distribution and function of *dà* and *ńkó* in the Yorùbá language as explained above, one can quickly locate what we must adjust in the argument in (12) above. Not all clause structures or sentences are activated by verbs in the Yorùbá language. The elements *dà* and *ńkó* lack essential and crucial V-features therefore they are not verbs in the language. However, they exponentially activate non-verbal predicates in content interrogative sentences.

Furthermore, they are not complement of N in a NP (or DP) construction. Our observation is that the structure of the Yorùbá NP has a rule that permits no insertion of adverbs between the N-head and its complement. Compare (27) and (28) below. The ungrammaticality of (27b) is an illustration of the constraint the language places on the N-head and its complement in the language, indicating that adjuncts are not permitted between the head of the NP and its complement. In contrast, (28b) is grammatical despite the insertion of the adjunct, showing that the structure where the *dà* item occurs is a clause not an NP in the language.

23. (a) *Ọ̀jògbón Awobuluyi wó?*  
 Professor Awobuluyi Q-word  
 'Which professor Awobuluyi?'

(b) \**Ọ̀jògbón Awobuluyi tún wó?*

24. (a) *Ọ̀jògbón Awobuluyi dà?*  
 Professor Awobuluyi Q-part  
 'Where is Professor Awobuluyi?'

(b) *Ọ̀jògbón Awobuluyi tún dà?*  
 Professor Awobuluyi again Q-part  
 'Where is Professor Awobuluyi again?'

For convenience, we call this clause structure *Emphasis Specific Clause* (ESC). All overt instances of Q-particles are found only in ESC structures. **This is the very reason the Yorùbá Q-particles are not generated in CP** of the language against Cheng's (1991) prediction or set properties. The two items are neither verbs nor Q-words in the language, however when used in constructions, they bear the interrogative force, and the constructions always possess content question interpretation in the language. Such expressions as those in which these items occur are best described as content questions.

The second property of Q-particle that types a language as an in-situ is, as given in (8ii) above, the types of clauses a Q-particle can occur. A comparison of formations in (29) and (30) confirms that Q-particles in Yorùbá can occur both in matrix and embedded clauses.

25. a) [*Gbòngò àwọn Ajéríí Jèhófà dà ní ìlú yìí?*]  
 Hall 3PL witness Jehofa Q-part LOC town this  
 'Where is Jehovah's witnesses Hall in this town?'

b) [*Gbogbo àwọn ará-ilé oko-ìyàwó dà*]  
 All 3PL neighbours bride-groom Q-part  
 'Where are the neighbours of the bridegroom?'

c) [*Àsìkò tiwa yìí ñkọ́*]  
 Season ours this Q-part  
 'What about our time?'

d) [*Àwa gan-an lénikànkán nínú ayé èsù yìí ñkọ́*]  
 1pl in-particular each-one LOC-interior world devil this Q-part  
 'What about each one of us in this Satan's world?'

26. a) [<sub>TP</sub> *Arìnrìnàjò náà bèrè [pé Gbòngò-ìjòba àwọn ajéríí Jèhófà dà ní ìlú yèn]*]  
 Traveller the ask that hall-kingdom 3PL witness Jehovah Q-part LOC town that  
 'The traveller asked where the kingdom-hall of Jehovah's witnesses was in that town'

b) [<sub>TP</sub> *Adarí-ètò sọ [pé gbogbo àwọn ará-ilé oko-ìyàwó dà]*]  
 Master-of-ceremony said that all 3PL neighbour bridegroom Q-part  
 'The master-of-ceremony demanded the presence of the bridegroom's neighbours'

c) [*Ó n báalọ ní bíbèrè [wípé àsìkò tiwa yìí ñkọ́?]*]  
 3sg ASP continues LOC asking that season ours this Q-part  
 'He continued by saying what about our time?'

d) [*Àlufáà náà ké [pé àwa onígbagbọ gan-an nínú ayé èsù yìí ñkọ́]*]  
 pastor the shout that 1PL believer in-particular in world devil this Q-part  
 'The Pastor shouted that what about us Christians in this satanic world'

Mentioned earlier, the Q-particles do not occur in basic declarative matrix clauses in the language despite that they can occur in matrix clauses. All the examples in (29) are matrix clauses in the Yorubá language, but they are specifically ESC clauses whose core predicator is a Q-particle. In addition, in (30) the Q-particles are also found in embedded structures in which all of the matrix clauses in (29) are each embedded in larger TP constructions. Therefore, the Q-particles in Yorubá satisfy the second principle of recognising typing particles in in-situ languages.

The final principle presented in (8iii) demands a description of Q-particles and Q-words (see section 5). In the meantime, let me first introduce the Q-words and the nature of their occurrence in content word interrogative constructions.

#### 4 Content questions with Q-words

The overt presence of Q-particles in content question formations is optional. Often, discourse need determines the use of either. In most content questions in which the particles are covert, Q-words are used. As shown earlier, there are only four Q-words in the language, against the eight in previous studies (Ilori 2010, for instance). These are *ta* (who), *kí* (what), *èwo* (which), *èlò* (how many/much). Each of these can occur independently in NP phrases and fully receive interpretation as content questions as illustrated in (31) below. The meanings of such formations are complete in themselves, leading to the conclusion that content questions with Q-words are instances of verbless (interrogative) sentences in the language, similar to the constructions with Q-particles. However, they also occur in CP-TP structures, either as the question N or as the complement of the question NP phrases illustrated in (32-33).

27. (a) *Ayò wo*  
Game which  
'Which game?'
- (b) *Ènìyàn mèlòò' ( ìmú'èlò)*  
Person how-many  
'How many people?'
- 28 (a) *ta ni wón fẹ́ rí?*  
Who FOC 3PL want see  
'Who do they want to see?'
- (b) *kí ni o mò tí ọlórún máa se fún àwọn ẹlẹ́sẹ̀ bíi Júdási?*  
What FOC 2SG know that God will do to 3PL sinner like Judas  
'What do you think God would do to sinners like Judas?'
- (c) *èwo ni o máa mú se aya nínú àwọn ọmọge ibejì yìi*  
Which FOC 2SG will take do wife among 3PL lady twins this  
'Which will you choose as wife between the twin sisters?'
- (d) *èlò ni mo san fún ọba ọgo*  
How(much) FOC 1SG pay for king glory  
'How much did I pay the king of glory?'
29. (a) *Ọkọ ta ni o wà ní àná?*  
car who FOC 2SG drive in yesterday

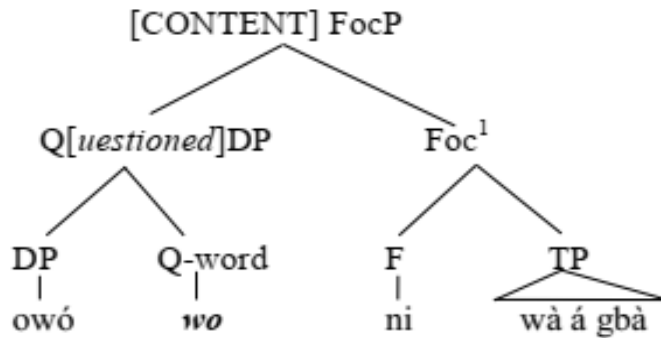
- 'Whose car did you drive yesterday?'
- (b) *Irú òsì kǐ ní ó lè sọ àlufáà dì olè?*  
 Type poverty what FOC HTS can make pastor be thief  
 'What can a pastor lack that can make him become a thief?'
- (c) *Irú ènìyàn wò ní ó yẹkí a jé?*  
 sort person which FOC 3SG should 1PL be  
 'What sort of person should we be?'
- (d) *Ìmu<sup>13</sup> èlò ní kǐ a rà*  
 Count how(many) FOC that 1PL buy  
 'How many should we buy?'

The Q-words are not usually used in the written form of the language without merging them to full clausal constructions. Beyond being parts of an NP as in (31) constituents with full sentential interpretation, speakers of the language sometimes use them in isolation in asking questions without compromising any meaning whatsoever. It is important to note that it is only the two illustrated in (31) that can be so used, the remaining two (*kǐ* and *ta*) are not often used in isolation without the focus marker as in *ta ní* (who?), *kǐ ní* (what?).

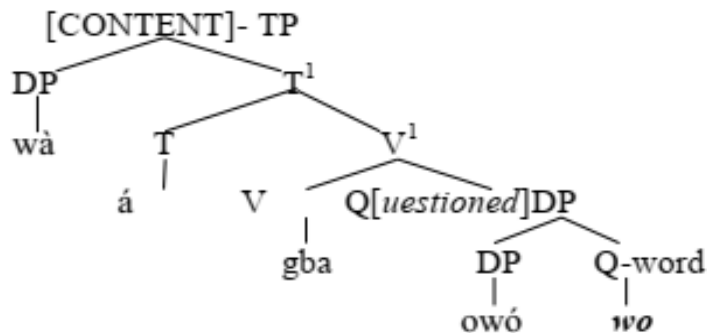
In (32), the Q-words are single words occupying Spec FocP position. This is a position specifically occupied by focused NP. In (33) however all the expressions are complements within argument structures that immediately dominate Foc.P. While this Spec-Foc.P tells us one significant truth about the nature of questioned argument as explained in section 5 below, it adds nothing to the typology of wh-questions in the language. These items can occur in the same argument structures right within TP or IP clause constructions and still maintain their question status. They invariably spread and type the entire clause constructions as content question constructions in the language. Consider the examples in (34) and the two diagrams that follow in (35) below.

30. (a) *Ayò[ó] fé rí ta ní ní inú ilé yíí*  
 Ayo-HTS want see Q-word FOC in inside house this  
 'Who did Ayo want to see inside this house?'  
 OR  
 'Ayo wanted to see whom inside this house?'
- (b) *Taye máa jẹ kǐ ní?*  
 Taye will eat Q-word FOC  
 'What will Taye eat?'  
 OR  
 'Taye will eat what?'
- (b) *Wàá gba owó wò?*  
 2sg-HTS take money Q-word  
 'Which money will you take?'  
 OR  
 'You will take which money?'
- (c) *Àwọn oko tí o tí rà tí da èlò?*  
 3PL farm that 2SG has buy has be how(many)  
 'How many farms have you bought?'  
 OR

(a)



(b)



In the two structures above, that is 35(a&b), the Q-word is merged to a preceding argument that it questions. When the questioned item moves, the Q-word is pied-piped along. However, in whatever structure the Q-word occurs for question formation, its scope is spread to the entire formation. For this reason, despite that the formation in 35(a) is basically a focused projection with the focus marker as the head, wh-question force spread over the entire construction justifying the merging of [WH] to Foc.P. The same thing obtains in 35(b) where the structure should have received a simple declarative force, however the Q-word spreads its question force from its attached position at the right peripheral of the clause to the entire sentence converting it to an interrogative. For this reason, in that phrase-marker, we attached [WH] to the Tense maximal projection.

A common property of content question operators, either particles or words, is that in each construction a marker selects an argument to question, and the selected argument must obligatorily occur to the left of its question assigner. In the case of particles, in addition to selecting the argument, they also exponentially predicate the entire clause structure in which they occur. Therefore, they do not move at all, and the argument so selected for questioning is also obligatorily immobile. However, as we have said before, Q-word form part of the argument structure, specifically occurring in position marked for various items that serve as qualifiers of NP-head in the language. Therefore, for whatever structural or thematic reason an argument structure including Q-word moves, the question word is pied-piped along. In this way, it can be said that 35(a) is largely derived from 35(b), though the derivation is rather for focus need not to form another wh-question. The discourse need for 35(a) is completely different from that of 35(b). While the question raised by the latter can be answered simply by singling out the questioned DP as in 36(a) below, 36(b) is the appropriate response for the former, whereby the DP includes the focused construction in its full or truncated form. The responses (36) show that none of the question form is an echoed variant of the other, the difference only lies in their discourse need: one only receives more thematisation than the other.



1. (a) *Owó yìí*  
Money this  
'This money'
- (b) *Owó yìí ni (wàágbà)*  
Money this FOC (you-will take)  
'It is this money you will take'

Wh-questions in Yorùbá usually require a degree of emphasis. In the case of the constructions involving particles, the emphasis is coded in the particles themselves making no room for the focus marker. The Q-words on the other hand do not have inherent emphasis feature like the particles, therefore they often co-occur with the focus marker for emphasis sake. Both *èlò* and *èwo* (and its variants) can be used with no need for emphasis. In this case, they remain in-situ without the attachment of the focus marker. Consider 37(a) below. When these same items are to be thematised, they are moved to the clause left periphery immediately followed by a focused marker as in 37(b). The question has already been formed when these items occur in-situ; the movement is to the clause initial position for thematisation, which Yorùbá does by focus strategy.

2. a) i) *O máámú èwo nínú àwọn asọ méjèèyìí?*  
2SG will take Q-word in-inside 3PL cloth two these  
'You will take which between these two cloth?'
- ii) *Adégbà èlò ní ọwọ e?*  
Ade receive Q-word in hand your  
'Ade received how (many/much) from your hand?'
- b) i) *Èwo ni o máámú nínú àwọn méjèèjì yìí?*  
Q-word FOC 2SG will take in-inside 3PL two these  
'Which will you take between these two?'
- ii) *Èlò ni Adégbà ní ọwọ e?*  
Q-word FOC Ade receive in hand your  
'How (much/many) did Ade receive from you (or your hand)?'

In the case of the other two Q-words, as said before, they are never used without the focus marker. This means they are always emphasised either when in-situ or moved to clause left periphery. Examples are in (38).

3. a) i) *O fẹ́ jẹ kí ni?*  
2SG want eat Q-word FOC  
'You want to eat what?'
- ii) *Kí ni o fẹ́ jẹ?*  
Q-word FOC 2sg want eat  
'What do you want to eat?'
- b) i) *Ayọ̀ọ́ rí ta ni ní ọjà?*  
Ayo-HTS see Q-word FOC in market  
'Ayo saw whom in the market?'
- ii) *Ta ni Ayọ̀ọ́ rí ní ọjà?*  
Q-word FOC Ayo-HTS see in market  
'Whom did Ayo see in the market?'

The Q-word can be merged to any argument no matter the structural case such an argument might have been assigned, be it nominative, accusative, genitive, etc. In this situation, the argument with which the Q-word co-occurs is the primary questioned item while the question scope of the overt Q-word attached spreads throughout the entire structure. However, when moved to the clause initial position for emphasis through focus strategy, the head-N of the argument structure in which a Q-word occurs may have to be modified, sometimes replaced by an appropriate nominal. For instance, (39) below could have as many questions as the number of possible NP in the structure to which a Q-word can be attached, each focused by movement to the clause initial position.

4. *Jésù kú fún àwọn ẹlẹ̀sẹ̀*

Jesus die fun 3PL sinner  
'Jesus died for sinners'

(a) QUESTION: *Ènìyàn wo ni ó kú fún àwọn ẹlẹ̀sẹ̀*  
Person Q-word FOC 2SG die for 3PL sinner  
'Who died for sinners?'

RESPONSE: *Jésù ni* 'It was Jesus'

(b) QUESTION: *Ènìyàn wo ni Jésù kú fún?*  
Person Q-word FOC Jesus die for  
'Who did Jesus die for?'

RESPONSE: *Àwọn ẹlẹ̀sẹ̀ ni.* 'It is sinners'

(c) QUESTION: *Ìsẹ wo ni Jésù sẹ*  
Act Q-word FOC Jesus do  
'What deed did Jesus do?'

RESPONSE: *Kíkú ni Jésù kú...* 'It is death that Jesus died...'

The nouns *Jésù* and *ẹlẹ̀sẹ̀* are replaced with other nominal items in 39(a-b) above. This is to maintain the discourse focus of the constructions. It is not obligatory that the nouns must be replaced. If maintained however, the discourse focus or interpretation will not be the same as the one in (39). In 39(c), the verb *sẹ* is nominalised with the attachment of a vowel prefix because only nouns can be with question words and be focused. Consider the interpretations of (40) below. As indicated in the interpretation of both the questions and the answers in (40), the discourse realisation of the construction whereby the noun is repeated after being moved to the left periphery is absolutely different from when there is a slight modification as in (39). Instead of being of being 'who' or 'which person' in 40(a), it is now 'which Jesus' indicating that there are more than one Jesus from whom the respondent is expected to pick one.

5. a) QUESTION: *Jésù wo ni ó kú fún àwọn ẹlẹ̀sẹ̀*  
Jesus Q-word FOC 3SG die for 3PL sinner  
'Which Jesus died for sinners?'

RESPONSE: *Jésù yẹn ni* 'It was that Jesus'

b )

QUESTION: *Ẹlẹ̀sẹ̀ wo ni Jésù kú fún?*  
sinner Q-word FOC Jesus die for  
'Which sinner did Jesus die for?'

RESPONSE: *Àwọn ẹlẹ̀sẹ̀ tí ó ronú pìwádà ni.* 'It is for repentant sinners'

## 5 The relationships between Q-particles and Q-words

In the Yorùbá content question constructions, Q-particles and Q-words do not co-occur in one single structure. This is not to say that Q-particles are covert in structures containing the Q-words, they are not just there at all. The foregoing discussions shed light on the nature of each of these content question markers, and one can begin to guess the reasons for this. Among other things, two reasons stand out. The first relates to Cheng's (1991) third principle for recognising a wh-question typing particle in a language. We repeat this in (41) below for convenience.

6.

Overt wh-particles determine question force for certain kinds of wh-phrases, especially in languages whose wh-words function as indefinites as well as interrogatives, or better put where the meaning of the wh-words is ambiguous. This is because in languages which allow a non-overt wh-particle, the wh-words are never ambiguous: they are always interpreted as interrogative. Therefore, the presence of the overt wh-particle has a functional reason: to resolve ambiguity.

Following this principle (property or function), a language permits the overt merging of Q-particle and Q-word in a single structure when the meaning of the Q-words of the language is ambiguous. Cheng illustrates this with examples from Japanese (as in 42 below) where Q-words can be interpreted as interrogative, existential and universal.

7. (a) *Dare-ga ki-masu-ka*

Who-N come-Q

'Who's coming?'

(b) *Dare-ga ki-te mo, boku-wa aw-a-nai*

Who-N come Q I-T meet-not

'For all x, if x comes, I would not meet (x).'

(d) *Dare-kara-ka henna tegami-ga todoi-ta*

Who-from strange letter-N arrived

'A strange letter came from god knows who (someone).'

The presence of a Q-particle *ka* in such a structure as 42(a) significantly projects the interrogative force of the formation because the Q-word can have some other interpretations motivated by its context (as it is the case in 42b-c). Without the Q-particle, the structure may have been regarded a question or something else despite that a Q-word is present. On the other hand, if the Q-words of a language are not as ambiguous as what obtains in Japanese, then the merging of a Q-particle in a construction with Q-word becomes systematically unacceptable or redundant. In the Yorùbá language, both Q-particles and Q-words project equal interrogative force. Without being used in a structure, their forms or shapes give a wh-question force. Consequently, no matter the discourse similarity between them, they are never selected for merging in the same content question constructions. This is why all the forms in (43) are ill-formed while each of the reconstructions (44) and (45), where the choice of one excludes the other leads to convergent formations.

8. (a) \**Ibi wo ni Adé wà dà*

Place Q-word FOC Ade be Q-part

(b) \**Ba wo ni ara Ìyá e nkó*

Manner Q-word FOC body mother 2sg Q-particle

(c) \**Èlò ni oye owó aṣọ yèn nkó*

Q-word FOC amount money cloth that Q-part

9. (a) *Ibi wo ni Ade wà?*  
Place Q-word FOC Ade be  
'Where is Ade?'
- (b) (i-) *Bá wo ni ara Ìyá ẹ?*  
Manner Q-word FOC body mother 2SG  
'How is your mother's health?'
- (c) *Èlọ́ ni oye owó aṣọ yẹn?*  
Q-word FOC amount money cloth that  
'How much is that money?'
10. (a) *Ibi Adé wà dà?*  
'Place Ade be Q-part  
'Where is Ade?'
- (b) *Ara Ìyá ẹ nńkọ́?*  
Body mother 2SG Q-part.  
'How is your mother's health?'
- (c) *Oye owó aṣọ yẹn nńkọ́?*  
Amount money cloth that Q-part.  
'What about the price of that cloth?'

The construction type to which wh-question form with Q-particle in Yorùbá can be merged differs from the one to which question with Q-word enter into syntactic derivation. This is the second reason. In the languages Cheng studied, a Q-particle may be null in the presence of Q-word, its position in derivation is considered occupied because it blocks the Q-word from moving for clause typing. Yorùbá is not like that. When Q-particle is absent, it is not there. This is because when any of the particles is selected for merging, the syntactic unit to be projected is strictly predetermined: it must be an ESC in which the particle itself bears the entire predicative function. The Q-words of the language are nominal items. Therefore, they bear inherent nominal properties in the language and can be merged to any other nominal within argument structures serving as qualifiers of the latter.

Despite the divergences between Q-particles and Q-words, they share one thing in common in addition to inherently possessing equal interrogative force. They question the NP constructions that occur to their left in all wh-question formations within which they are merged following an argument structure. Besides, they do not need the presence of a verb to receive complete interpretations. Therefore, in all the phrases where any of them (particle or word) occurs, the formation is attested as a wh-question in the language.

## 6 Summary and conclusion

This article has discussed the formation of wh-question in Yorùbá from the perspective of Cheng's (1991) Clause Typing Hypothesis, presenting modifications where necessary to accommodate the language specific parametric variations. Two content question types were identified. The first has particles as initiators. The second employs nominal items that have wh-question force as one of their inherent features. Two of such particles were identified; *dà* and *nńkọ́*, whose occurrence and functions have been of perplexing concern to Yorùbá grammarians. Four Q-words were identified in the language. These are *ta*, *kí*, *èlọ́* and *èwo*.

All the premises developed in the paper lead to one conclusion: the Yorùbá language is typologically in-situ given the fact that the question force of wh-phrases is exerted not by internal movement but external merge, a common property of all in-situ languages.

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