

**INFORMATION PROCESSING IN AKAN QUESTION-WORD FRONTING AND FOCUS
CONSTRUCTIONS**

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1. Introduction*

In this paper, we discuss *wh*-question fronting and focus constructions (formally noted as marked sentence-types) and other facts that are related to them in Akan, a Kwa language spoken in Ghana and other parts of West Africa. Three features characterize *wh*-question fronting and focus constructions in Akan: i) left-peripheral dislocation of a constituent, ii) introduction of a clitic morpheme after the dislocated constituent, and iii) pronoun resumption in a canonical clause position. In comparing these constructions to each other and to related canonical constructions, the question that one is confronted with is whether the same discourse-contextual information is consistently expressed in both constructions.

Using the framework of Lexical-Functional Grammar (LFG: Kaplan & Bresnan 1982; Bresnan 2001; etc.), we explore the similarities and differences between *wh*-question fronting and focus constructions. We show in this paper that, in the constituent (c-) structure and the functional (f-) structure, both *wh*-question fronting and focus constructions essentially share common representations. Considering the individual discourse-contextual information that is expressed in *wh*-question fronting and focus constructions, as compared to the discourse-contextual information expressed in the respective *in-situ* and canonical clause counterparts, however, we show that a variance is drawn between them in the information (i-) structure, which is accessible to the semantic (s-) structure (see King (1997) for example).¹ In a further constraint-based analysis, Optimality-Theoretic LFG (OT-LFG: Bresnan 2000; Kuhn 2001; etc.) is used to clarify and strengthen the suggestions made.

The paper is organized as follows: in section 2, we give a descriptive account of *wh*-question constructions in Akan, including its constituent *in-situ* and constituent left dislocation occurrences. The focus construction in Akan is then described in section 3. In sections 4 and 5, we explain how the two constructions are similar to, or different from, each other and throw light on the intricacies involved in their constructions within LFG. With insights from OT-LFG, section 6 illuminates the discussions in sections 4 and 5. Section 7 provides the conclusion to our observations and analyses.

2. Wh-question constructions

A *wh*-question construction in Akan is primarily identified by any of the following interrogative phrases or pronouns in (1). Following Boadi (1990), we refer to the pronouns in (1) as “question words or question phrases” (hereafter, Q-words/Q-phrases). As discussed in the following sections (2.1 and 2.2), each of the Q-words can remain *in-situ* in a canonical clause or fronted in an extra-sentential clause.

- | | | | |
|-----|------|-------------------------------|------------------------------|
| (1) | i. | hwáí / hwáánómí | ‘Who / which people’ |
| | ii. | séń | ‘How much, how many or what’ |
| | iii. | á!dén / (sé) dééń /á!dén (ńí) | ‘Why / for what reason’ |
| | iv. | èhéé(!fá) | ‘Where’ |
| | v. | èdééń / èdéébéí | ‘What’ |
| | vi. | bré- / dà-béí | ‘When’ |
| | vii. | NP + béí | ‘Which (of that item)’ |

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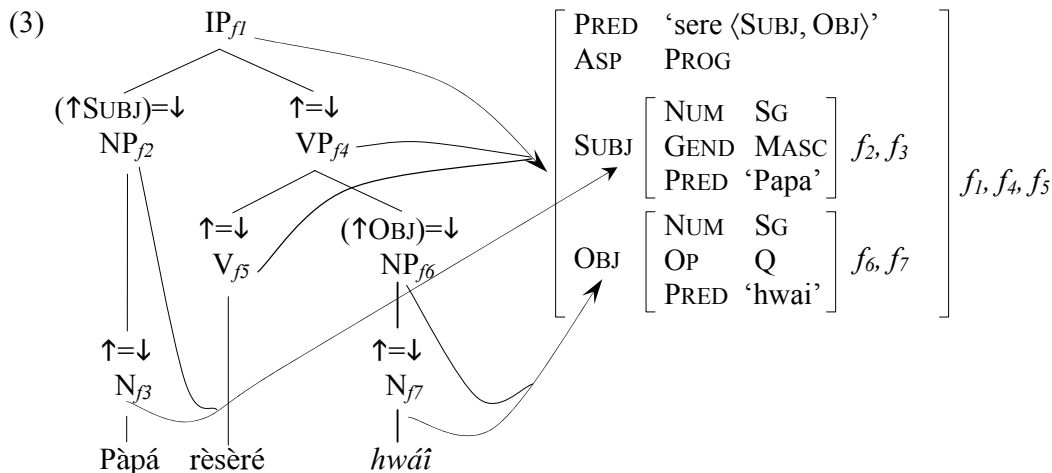
¹ In LFG, c-structure, f-structure, and i-structure respectively model the categorial representation, the grammatical functions, and the discourse-contextual information aspects of the grammar.

2.1 Q-word *in-situ*

These Q-words are substitutes for the various syntactic categories serving as the traditional argument functions, such as subject, object, etc. As illustrated in (2a) and (2b) for the subject and the object respectively, therefore, these Q-words can remain *in-situ* in a canonical clause as substitutes of the constituents they question. When the verb is questioned in the *in-situ* representation, as shown in (2c), it is replaced by another verb, ‘*ye*’, literally meaning ‘do’. In addition, the Q-word occurs in the post-sentential position.

- (2) Pàpá r̀è-s̀èr̀é à̀b̀ò̀f̀r̀á ǹó ⇒ a. Hwáí r̀è-s̀èr̀é à̀b̀ò̀f̀r̀á ǹó?
 father PROG-laugh child the who PROG-laugh child the
 ‘Father is laughing at the child.’ ‘Who is laughing at the child?’
- ⇒ b. Pàpá r̀è-s̀èr̀é hwáí?
 father PROG-laugh who
 ‘Father is laughing at whom?’
- ⇒ c. Pàpá r̀è-yé à̀b̀ò̀f̀r̀á ǹó déén?
 father PROG-do child the what
 ‘What is father doing to/with the child?’

The c- and f-structure instantiations of the Q-word *in-situ* construction in (2b) are shown in (3) below. The illustration in (3) also shows how c-structure maps to f-structure through the Structure-Function Mapping theory (Bresnan 2001; Dalrymple 2001; Falk 2001; etc.).



2.2 Q-word fronting

Besides the *in-situ* representation of the *wh*-construction in Akan, with which the canonical phrase structure is maintained, there is another option of representation. This option involves the fronting of the Q-word (hence, Q-word fronting). A Q-word fronting in Akan refers to the dislocation of the Q-word to the left-periphery of an extra-sentential clause. A clitic morpheme, “*na*”, referred to as a focus marker (FOC) (Boadi 1974, 1990; Saah 1988), is also introduced at the right-edge of the fronted Q-word. In other words, as illustrated in (4), an obvious phrase structure variation is realized where the Q-word is extraposed into some position that is above the canonical clause.

- (4) a. [IP Pàpá r̀̀-̀̀s̀̀r̀̀é hwáí] ⇒ Hwáí nà [IP pàpá ré-̀̀s̀̀r̀̀é nóí]
 father PROG-laugh who Who FOC father PROG-laugh 3SG
 ‘Father is laughing at who?’ ‘Whom is father laughing at?’
- b. [IP Kòfi bé-!dúá déén] ⇒ Déén nà [IP Kòfi bé-!dúá]
 Kofi FUT-sow what What FOC Kofi FUT-sow
 ‘Kofi will sow what?’ ‘What will Kofi sow?’

Saah (1988) observes that some Q-word *in-situ* constructions related to greetings in Akan (e.g., see (5)) are canonically fixed in phrase structure. Thus, a corresponding Q-word fronting option is ungrammatical. Perhaps, Saah’s observation is true in other dialect(s) of Akan.² In Asante-Twi, however, as shown in (5), preposing of greetings related Q-words is attested even though it is a fact that it is not often done.

- (5) Q-word *in-situ* Q-word fronting
- a. [IP Wò hó tè **séń**] ⇒ Séń nà [IP wò hó téé]
 2SG self be.PRES how how FOC 2SG self be.PRES
 ‘how are you?’ ‘how are you?’
- b. [IP Ẁ̀-̀̀fré wò **séń**] ⇒ Séń nà [IP ẁ̀-̀̀fré wó]
 3PL-call.HAB 2SG how how FOC 3SG-call.HAB 2SG
 ‘what is your name?’ ‘what is your name?’

Saah (1988) also notes that where a Q-phrase is functioning as an adverbial of reason, it must be extraposed obligatorily, as shown in (6a).³ Otherwise, as also shown in (6b), the construction is ungrammatical where the Q-word remains *in-situ*. While being cautious, he further suggests that the Q-phrase needs to be at a stressed or emphatic position, hence the left-periphery dislocation – i.e., the specifier position of some projected pragmatic/discourse function.

- (6) *From Saah (1988: 20)*
- a. (Sé) déèn àdé níí nà Kwàdwó b̀̀-̀̀ Á!má
 What thing because FOC Kwadwo hit-PST Ama
 ‘For what reason/why did Kwadwo hit Ama?’
- b. * Kwàdwó b̀̀-̀̀ Á!má déèn àdé níí
 Kwadwo hit-PST Ama what thing because
 ‘For what reason/why did Kwadwo hit Ama?’

As will be reiterated in section 4, we claim that an extraposed Q-word does not invoke any further emphasis than what it does at an *in-situ* construction. The fact that left dislocation in

² Akan is composed of several dialects. The prominent ones are Asante-Twi, Fante, and Akuapim-Twi. It seems to us that Saah (1988) was referring to Fante, considering his selection of Akan texts (e.g., the use of *déń* in Fante instead of *séń* in Asante-Twi). However, according to our observations, even in Fante, preposing of Q-words is generally acceptable.

³ “*se*” in bracket is not part of Saah’s example. It is optional when the Q-word is extraposed. In fact, either “*se*” or “*nií*” can be done away with, but not both of them.

greetings-related constructions is not often done, although grammatical, will also back up our claim that Q-word fronting does not induce any further emphasis than what a Q-word *in-situ* inherently expresses. Indeed, it is a fact that (6b) is not grammatical, as Saah rightly notes. However, the ungrammaticality is only due to the fact that the whole interrogative phrase (Q-phrase), *déèh àdé níí*, asking for the reason behind the agent's (Kwadwo) action, is incomplete. The complete Q-phrase should read *sé déèh àdé níí*. We explain the incompleteness of *déèh àdé níí* as follows.

Recall our earlier suggestion that Q-words/Q-phrases are only substitutes for canonical clause (IP) internal categories. Since the Q-phrase in (6b) is actually replacing a phrase referring to the patient's (Ama) action, asking for the reason behind Kwadwo's action also means finding out what Ama did to Kwadwo. That is, what did Ama do that caused Kwadwo to hit her? Supposing that *laughing at Kwadwo* is what Ama did, the corresponding declarative construction to (6b) would be expressed as the construction in (7a) below, and not the ungrammatical one in (7b), which is without “*sé*” as part of the whole Q-phrase.

- (7) a. Kwàdwój b̀̀-̀̀ Á!maj sé òj-à-séré (nój) níí
 Kwadwo hit-PST Ama __ 2SG-PRF-laugh him because
 ‘Kwadwo hit Ama because she has laughed (at him)’
- b. * Kwàdwój b̀̀-̀̀ Á!maj òj-à-séré (nój) níí
 Kwadwo hit-PST Ama 2SG -PRF-laugh him because
 ‘Kwadwo hit Ama because she has laughed (at him)’

Likewise, when substituting the phrase expressing Ama's action (*sé òàséré níí*) with a related Q-phrase, “*sé*” (which is actually related to *níí* in the phrasal form, *sé ... níí* ‘because’) must be part of the whole Q-phrase. Therefore, we highlight the fact that it is because of the absence of “*sé*” in the Q-phrase that (6b) is ungrammatical, and not because the Q-phrase cannot remain *in-situ*. Observe in (7c) below, the alternative to (6b), that the same Q-word *in-situ* construction is grammatical with “*sé*” as part of the whole Q-phrase.

- (7) c. Kwàdwój b̀̀-̀̀ Á!má sé déèh àdé níí
 Kwadwo hit-PST Ama __ what thing because
 ‘For what reason/why did Kwadwo hit Ama?’

In addition, we have observed that the *in-situ* construction in (7c) conveys the same discourse-contextual information that is expressed in the case of Q-phrase fronting construction in (6a). In other words, as will be revisited and discussed in detail in section 5, no semantic contrast attains between (6a) and (7c).

3. Focus construction

A focus construction in Akan has a ‘point of prominence’ within it (Boadi 1974) where contrastive information (of certainty) is intentionally placed for the purpose of emphasis. A constituent is focused in Akan when it is placed at the left-periphery of its extra-sentential projection of focus phrase (FOCP). The constituent in focus is also immediately followed by the FOC, “*na*”. Boadi (1974: 7) explains that, in focus constructions, the FOC has the function of narrowing down the referential range of its host, the constituent in focus. The function of

the FOC in focus constructions, therefore, is a semantic one. That is, it has discourse information alteration significance.

A constituent cannot be focused *in-situ* in Akan. This is because the FOC cannot be invoked in the canonical clause.⁴ As shown in (8a & b), the FOC appears in the head position of the functional projection, FOC_P. Again, the FOC is only introduced after a constituent that is sitting at specifier position of FOC_P (Spec-FOC_P). Considering the syntactic properties of the FOC, therefore, the ungrammaticality of (8c & d) needs no further explanation.

- (8) Kòfì rè-bòá Á!má ⇒ a. [_{FOC_P} Bòá_i nà [_{IP} Kòfì ré-bóá_i Á!má]]
 Kofì PROG-help Ama help FOC Kofì PROG-help Ama
 ‘Kofì is helping Ama’ ‘It is help (that) Kofì is helping Ama’
- ⇒ b. [_{FOC_P} Á!má_i nà [_{IP} Kòfì ré-bóá nò_i]]
 Ama FOC Kofì PROG-help 3SG
 ‘It is Ama (that) Kofì is helping’
- ⇒ c. *_{[IP} Kòfì ré-bóá Á!má nà]
 Kofì PROG-help Ama FOC
 ‘It is Ama (that) Kofì is helping’
- ⇒ d. *_{[IP} nà Kòfì ré-bóá Á!má]
 FOC Kofì PROG-help Ama
 ‘It is Ama (that) Kofì is helping’

Observe also in (8a) that when the sentential head is rather the focus, the same form of the verb-stem remains *in-situ*, unlike the case of a questioned predicate where ‘yɛ’ is rather introduced in the canonical base position (see (2c)).

It is important to note that a focus construction is related to a Q-word fronting construction in Akan with regards to constituent left-periphery dislocation and the employment of the FOC at the head position of a projected functional phrase. Besides these two phrase structure facts, another connection between the two constructions is that a focus construction is more or less an answer to a Q-word fronting construction in a question-answer pair (Boadi 1974). Therefore, as exemplified with the subject NP in (9) below, the answer constituent to the Q-word in the Q-word fronting construction corresponds to the constituent in focus in the focus construction.⁵ We will revisit the significance of this connection in section 5.

- (9) Question: [_{FOC_P} Hwáí_i nà [_{IP} ð_i-ré-sómá àbòfrá nò]]
 who FOC 3SG-PROG-send child the
 ‘Who is sending the child?’

⁴ Boadi (1974) notes that “*dee*”, which occurs in the same syntactic position as “*na*”, also plays the role of a focus marker, as in *Á!má_i dèè Kòfì rébóá nò_i* ‘as for Ama, Kofì is helping her’ (cf. (8b)). As he finally asserts, however, let us note that “*dee*” does not define the concept of contrastive information in definite terms. Unlike “*na*”, it does not induce an exclusive focus on an extraposed constituent. Again, unlike “*na*”, “*dèè*” cannot come after a Q-word, such that “*dee*” in **Hwáí_i dèè Kòfì rébóá nò_i* is ungrammatical. Thus, aside from the fact that we do not consider “*dèè*” as a true FOC, it also falls outside the scope of this paper.

⁵ Perhaps this correspondence contributed to Saah’s (1988) suggestion that a fronted Q-word is more emphatic, as compared to an *in-situ* counterpart.

- (11) a. [_{FOCP} Á!má_i nà [_{IP} Kòfi [_{VP} ré-bóá [_{NP} nó_i]]]]
 Ama FOC Kofi PROG-help 3SG
 ‘It is Ama that Kofi is helping.’
- b. [_{FOCP} èmóó_i nà [_{NP} ðbáá nó [_{VP} nóá [_{NP} Ø_i]]]]
 rice FOC lady DEF cook.HAB *e*
 ‘It is rice (that) the lady cooks.’
- c. * [_{FOCP} èmóó_i nà [_{IP} ðbáá nó [_{VP} nóá [_{NP} nó_i]]]]
 rice FOC lady DEF cook.HAB 3SG
 ‘It is rice (that) the lady cooks.’

Where there is a necessity to show in the c-/f-structures that the inanimate object is covertly represented, some versions of LFG account for the phenomenon through the Principle for Identifying Gaps (Bresnan 2001: 181) provided in (12). The principle is necessary in the linking up of such an *EC* to the Spec-DF (FOCP) constituent, thus enabling the integration of Spec-DF constituent (a non-argument) in the argument structure in f-structure.

- (12) *Principle for Identifying Gaps:*
 Associate $XP \rightarrow e$ with $((x\uparrow) DF)=\uparrow$

Through the Principle for Identifying Gaps, the violation of the Economy of Expression principle by having an *EC* in the c-structure is bypassed.⁷ Perhaps, the animacy restriction on objects, and not on subjects, also emphasizes the Subject Condition (SC) LFG stipulates. SC requires every predicate to have a subject (but not necessarily an object). Based on the inspiration of SC, we posit the condition, Strict Phonetic Subject (SPS), stated in (13) for extra-sentential clauses in Akan (in this paper, Q-word fronting and focus constructions). SPS explains the grammaticality and ungrammaticality of the focus constructions in (14a & b) respectively.

- (13) *Strict Phonetic Subject.*⁸
 Every predicator in the embedded clause of an extra-sentential clause must have a phonetic subject.
- (14) [_{IP} Pàpá rè-sòmá mé] ⇒ a. [_{FOCP} Pàpá_i nà [_{IP} ð_i-ré-sómá mé]]
 father PROG-send 1SG father FOC 3SG-PROG-send 1SG
 ‘Father is sending me.’ ‘It is father who is sending me.’
- ⇒ b. * [_{FOCP} Pàpá_i nà [_{IP} Ø_i-ré-sómá mé]]
 father FOC PROG-send 1SG
 ‘It is father who is sending me.’

⁷ The “Economy of Expression” (Bresnan 2001, etc.) principle states that all syntactic phrase structure nodes are optional and use of any of them is prohibited unless independent principles demand it.

⁸ SPS is motivated against a possible proposal that an extraposed subject does not need RPro in the canonical clause, since it is still the most prominent in the relational hierarchy and the default DF. In this sense, SPS is not merely a stipulation. In fact, it has to be satisfied in other extra-sentential constructions in Akan as well; e.g. topic constructions and relative clauses.

5. Distinction: Discourse-contextual information

So far, it has been made clear that both Q-word fronting and focus constructions essentially share a common marked categorial configuration; i.e., $[_{FOCP} XP \text{ na } [_{IP} \dots]]$. However, considering the individual discourse-contextual information that is expressed in the i-structure (Vallduví 1992; Lambrecht 1994; etc.) of each of them, as compared to the discourse-contextual information expressed in the respective *in-situ* and canonical clause counterparts, we explain in this section that semantic contrast is only evident in focus constructions.

In exploring the semantic information divergence in the i-structure of Q-word fronting and focus constructions, let us assume that discourse-contextual information in the constructions particularly has to do with (or is tied to) the obligatory occurrence of the FOC (besides the constituent left-dislocation). With this assumption, we suggest that, unlike in focus constructions, the occurrence of the FOC in Q-word fronting constructions does not invoke any contrastive information in the discourse other than what obtains in related Q-word *in-situ* counterparts. In other words, as already noted in section 3, Q-word fronting does not alter the semantic content of the interrogative in any way.

Boadi (1990: 78) suggests that the lack of semantic contrast in a Q-word fronting construction in Akan, as compared to a related Q-word *in-situ* construction, is due to the fact that Q-words are actually inherently focus-marked. Accordingly, they do not need any further special reference. We further claim in this paper that a Q-word holds the core of the information profile of a construction within which it appears (i.e., the expression of interrogative). As such, a Q-word does not need any further semantic buffer, in this case the FOC, to complete what it already and inherently establishes. In fact, following a previous discourse, sometimes, only the Q-word could be employed to represent the whole of a construction within which it occurs. Accordingly, in (15) below, the whole of (15b) can be replaced by (15c), drawing directly from (15a).⁹ On the contrary, where we want to focus the subject in (15a), for instance, the only option is to put the subject in the ‘focus-presupposition’ structure, as shown in (15d). Since a non-Q-word is not inherently focus-marked, (15e) cannot represent the whole of (15d).

- (15) a. *Kòfi bé-!dúá àbá nó*
 Kofi FUT-sow seed DET
 ‘Kofi will sow the seed.’
- ⇒ b. *Hwáíj nà òj-bé-!dúá àbá nó?* = c. *Hwáí?* ‘Who?’
 Who FOC 3SG-FUT-sow seed DET
 ‘Who will sow the seed?’
- ⇒ d. *Kòfij nà òj-bé-!dúá àbá nó* ≠ e. *Kòfi* ‘Kofi’
 Kofi FOC 3SG-FUT-sow seed DET
 ‘It is Kofi who will sow the seed.’

As noted earlier, contrary to the stance taken in this paper, Saah (1988: 19) claims that (as a motivation for the constituent left-periphery dislocation) extra-sentential clause-initial Q-

⁹ Whether or not a Q-word can represent a whole Wh-construction is constrained by animacy and the number of the argument functions in the related canonical clause. Thus, unlike (15), in *Kòfi àbó A'má* ‘Kofi has beaten Ama’ where we have two animate argument functions the same Q-word, *hwai* ‘who’, can substitute for any one of the arguments. It is, therefore, not enough to use only the Q-word in this case.

word occurrence is more emphatic, as compared to the *in-situ* counterpart. The question however is, to what extent is a fronted Q-word more emphatic? With regards to discourse-contextual information, what can we draw from its information profile that is different from what is obtained in the information profile of a related Q-word *in-situ* construction? Seemingly emphasized as a fronted Q-word in Akan is, it is actually vacuous in terms of semantic contrast to a related Q-word *in-situ* construction. Indeed, as explained in section 2.1 (see and cf. (6a) and (7c)), Q-word fronting (with the employment of FOC) induces nothing more into its i-structure other than what is in the i-structure of the *in-situ* construction (i.e., the general interrogative expression of the Q-words).

On the other hand, the identification of a semantic contrast in the i-structure of a focus construction, as compared to that of a related canonical clause is indisputable and readily perceptible. That is, contrastive information is attained in focus construction, particularly relating to the constituent in focus. In this case, among all the constituents in the construction, the one in focus is highlighted as the point of contrastive discourse information (of certainty) in the construction; hence, its constitution as the ‘point of prominence’ (Boadi 1974). For instance, the focus construction in (15), *Kòfi nà òbé!dúá àbá nó* ‘it is Kofi who will sow the seed’, is interpreted as ‘it is Kofi and only Kofi (i.e., nobody else) who will sow the seed’, and not just as ‘Kofi will sow the seed’. With the latter interpretation, none of the constituents is identified as prominent (or new) information. Accordingly, other people besides ‘Kofi’ might sow the seed as well; hence, the contrast between it and the former interpretation of focus.

Kiss (1995) also puts the interpretation of focus as follows: ‘the focus operator serves to express identification’ (Kiss 1995: 212). In the focus construction in (15), for instance, left-periphery dislocation and the employment of FOC identify *Kòfi*, and only *Kòfi*, as the one who is sowing the seed. We can, therefore, say that the occurrence of the FOC in a focus construction does not only contribute to the contrast in the phrase structure configuration of the construction that results (as compared to a related canonical clause). It also contributes to semantic contrast in the i-structure as well.

Despite the semantic distinction made between Q-word fronting and focus constructions in relation to their canonical clause counterparts, it is important to note that ‘focus-presupposition’ information pattern reflects in both constructions and that goes to prove that both Q-word and focus express prominent new information. The association of prominent new information to Q-words in particular here may be controversial in Akan. But one cannot deny the fact that Q-word fronting constructions involve some sort of focusing besides the fact that a Q-word is actually inherently focus-marked, as has already been noted. Kroeger (2004: 139) notes that ‘the question word bears a pragmatic focus, since it specifies the crucial piece of new information which is required; the rest of the question is part of presupposition’. That is to say, since a Q-word constitutes a linguistic device for the identification of a specific piece of prominent new information, it should be recognized as prominent new information as well. As shown in (16) below, we observe that it is from the questioning in (16a) that *papa* realizes as prominent new information in (16b) and, for that matter, the focus.

- (16) a. Question: [*Hwáíi*] nà ǎj-ǎ-sómá àbòfrá nó?
 who FOC 3SG-PROG-send child the
 ‘Who is sending the child?’
- ⇒ b. Focus: [*Pàpáí*] nà ǎj-ǎ-sómá àbòfrá nó
 father FOC 3SG-PROG-send child the
 ‘It is father who is sending the child.’ (in answer to (17a))

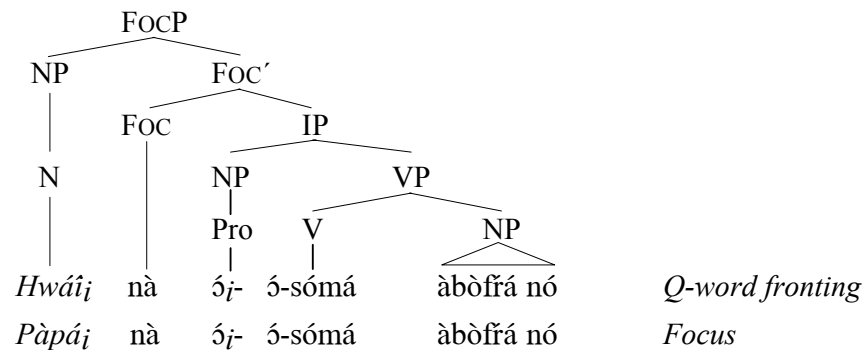
Following the feature-based i-structure (Choi 1999, 2001; Lee 2001; etc.), which we extend here to include Q-words, Q-words and focused constituents in Akan would therefore depict identical information profile on discourse NEW(ness) and PROM(nence), as shown in (17).¹⁰

$$(17) \quad \text{Focus} \quad \begin{bmatrix} \text{NEW} & + \\ \text{PROM} & + \end{bmatrix} \quad \text{Q-word} \quad \begin{bmatrix} \text{NEW} & + \\ \text{PROM} & + \end{bmatrix}$$

Going back to Q-word fronting and focus constructions in relation to their canonical clause counterparts, it has been noted that, unlike in Q-word fronting constructions, FOC has an alteration function in focus constructions that alters the default discourse-contextual information of a related canonical clause. We refer to this information alteration function of the FOC in focus constructions as ‘discourse-contrast’, since it results in contrastive information (of certainty; i.e., ‘*X* and only *X*’) that characterizes focus constructions in Akan. Conversely, ‘discourse-neutral’ (Lee 2001) is obtained with occurrence of FOC in Q-word fronting constructions, since the same information expressed in related Q-word *in-situ* constructions are expressed in them. It logically follows then that ‘Q-word fronting in Akan is only an optional representation’ (Boadi 1990: 78) and the obligatory occurrence of FOC with it is only a general syntactic restriction. In line with structural markedness, we refer to FOC in Q-word fronting constructions as ‘configurational focus’, since its occurrence contributes to the marking of the whole c-structure of the construction. Recall that Q-word fronting and focus constructions are noted as marked sentence-types.

Having identified and explained the realization of the common information profile (defining pragmatic focus) in Q-words and focused constituents, we now present a common c-structure and individual f- and i-structures of the Q-word fronting and focus constructions in (18) below.¹¹ In the i-structure in (18c) in particular, we show how the common information profile come to bear in the interpretation of Q-word fronting and focus constructions relative to the interpretation that obtains in related canonical clauses – i.e., the semantic expressions of ‘discourse-neutral’ of Q-words and ‘discourse-contrast’ of focus.

(18) a. *c-structure* (for both Q-word fronting and focus constructions)

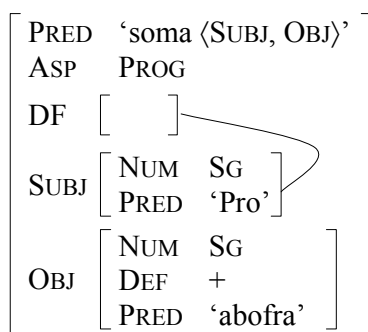


¹⁰[+PROM, +NEW] specifications explain that a constituent is highlighted as prominent new information in the discourse of occurrence.

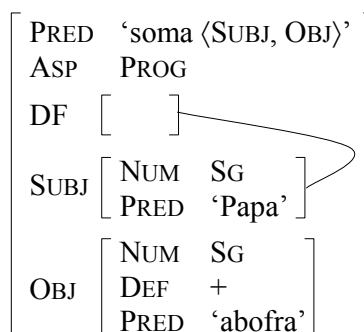
¹¹We observe i-structure here as distinct structure from the f-structure projected off the c-structure and accessible to the semantic structure (s-structure) (King 1997; Butt and King 1998; etc.).

b. *f-structures*

Q-word fronting

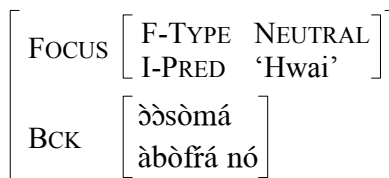


Focus

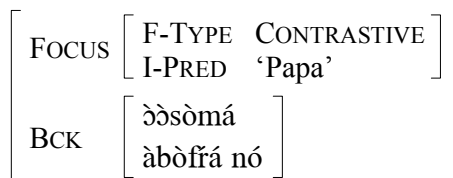


c. *i-structures*

Q-word fronting



Focus



We have already discussed how the common c-structure is realized in section 4. The argument functions subcategorized for by the verb, *sòmà*, in both constructions are also encoded in the individual f-structures. Also encoded in the f-structures is the identification of the projected discourse function (DF) with an argument function, the subject. The semantic significance in the discourse of Q-word fronting and (non-Q-word) focusing is also given in the separate i-structures.¹² Here, the focus type (F-TYPE) of the Q-word, *hwáí* (noted as I-PRED) is given as ‘neutral’ following FOC function as ‘discourse-neutral’ in Q-word fronting construction, while that of the focused constituent, *pàpá*, is given as ‘contrastive’ following FOC function as ‘discourse-contrast’ in focus constructions. The rest of both constructions are given as presupposition/background information (BCK).

Since Q-words have been noted as inherently focus-marked in Akan, finally, it is important to note that a Q-word fronting construction is distinguished from its *in-situ* counterpart only on the basis of c-structure configurational markedness. As noted on several occasions, with respect to discourse-contextual information realization, both representations are essentially the same.

6. Constraining the constructions: OT-LFG

With a recast of LFG within Optimality Theory (OT-LFG) (Bresnan 2000; Choi 1999; Kuhn 2001; etc.), the common c-structure configuration of Q-word fronting and focus constructions is further established in this section. We also show and constrain ‘harmonic alignment’¹³ (Aissen 1999; Bresnan 2000; Choi 2001; Lee 2001; etc.) between the common c-structure and the i-structure of a particular constructions.

¹² Recall that we are particularly referring to the alteration impact (in semantics) that the information profile Q-word and focus share; i.e., [+PROM]; [+NEW], has in the i-structure of their individual constructions, as compared to the i-structure of respective *in-situ* construction and canonical clause counterparts.

¹³ Each of the parallel structures of LFG defines prominence in a hierarchical fashion. The matching of prominence definition in one structure to that in another structure constitutes a harmonic alignment.

6.1 Categorical representation

Two conflicting constraints readily come to mind concerning constituent left dislocation in Q-word fronting and focus constructions. These are OP-SPEC, motivated by the presence of syntactic operator (Grimshaw 1997; Bresnan 2000; Kuhn 2001; etc.) and recast in expression as *operator in specifier of functional projection*, and *DISLOC, proposed in this paper on the inspiration of the economy principle and expressed as *don't dislocate*. As stated in (19), while OP-SPEC favors functional projection and the appearance of a constituent in question/focus in Spec-DF, *DISLOC stands to block such a categorical representation. For a Q-word fronting or focus construction word order to prevail, therefore, OP-SPEC must crucially outrank *DISLOC.

- (19) i. OP-SPEC:¹⁴
An operator (i.e., a constituent in focus/question) must be in the specifier position of its functional projection.
- ii. *DISLOC:
Don't dislocate; the canonical phrase structure must not be altered.

The other typological traits of Q-word fronting and focus constructions noted earlier also need to be recast and explained in constraint terms if alternative categorical representations are to be properly rejected. It has been noted that the projected phrase of the operator function has to be headed by the FOC, “*na*”. Also noted is the fact that an argument function that appears at the specifier position of the projected functional phrase has to be replaced in the embedded canonical clause position by an RPro. The appropriate constraints we employ to demand these representations are OB-HD/fp (Bresnan 2000; Choi 2001; Kuhn 2001; etc.) and PARSE/gf, proposed here on the motivation of SPS; (see 13)).¹⁵ Respectively expressed as *obligatory head* and *parse argument functions*, OB-HD/fp and PARSE/gf are also stated in (20) below. In the constraint ranking, we assume a dominance of PARSE/gf among the two. However, both constraints should dominate *DISLOC and should be dominated by OP-SPEC (see Tableau I).

- (20) i. OB-HB/fp:
The head position of a functional projection must be filled.
- ii. PARSE/gf:
Left dislocated argument function should be phonetically represented in the canonical clause position.

The f-structure in (21), a merged f-structure of both constructions in (18), is employed as the working input. Tableau (I) also explains that, among the candidate set of (a), (b), (c), and (d), the optimal candidate is the one whose c-/f-structures best relate to this input.

¹⁴ In terms of generalized alignment constraint formulation (McCarthy and Prince 1993), OP-SPEC could be fashioned as ‘Align_L Focus/Q-word’, expressed as “align the left edge of the focused/Q-word to the left edge of the projected FOCp”.

¹⁵ An alternative view is that SPS should be kept in the constraint formulation, but that would restrict pronoun resumption to only the subject position. That is, considering the fact that fronted/focused animate objects also have to be resumed, PARSE/gf better captures the phenomenon.

(21) Input f-structure: *Hwáí; / Pàpá nà í-ísómá àbòfà nó*¹⁶

| | |
|------|--------------------|
| PRED | ‘soma <SUBJ, OBJ>’ |
| ASP | PROG |
| DF | [] |
| SUBJ | [PRED ‘Pro’] |
| OBJ | [PRED ‘abofra’] |

(I) OP-SPEC >> PARSE/gf >> OB-HB/fp >> *DISLOC

| | Matrix Q-word fronting/focus | OP-SPEC | PARSE | OB-HB | *DISLOC |
|----|---|---------|-------|-------|---------|
| a. | [_{FOCP} NP _i na [_{IP} Pro _i [_{VP} V NP]]] | | | | * |
| b. | [_{IP} NP [_{VP} V NP]]] | *!* | | | |
| c. | [_{FOCP} NP _i na [_{IP} e _i [_{VP} V NP]]] | | *! | | * |
| d. | [_{FOCP} NP _i e [_{IP} Pro _i [_{IP} V NP]]] | | | *! | * |

In Tableau (I), candidate (a) outperforms the rest of the candidates as follows: Candidate (b) is taken out (on two counts) for not having a functional projection, let alone a constituent in question/focus appearance in its specifier position. Candidate (c) is also ruled out on PARSE/gf for violating the requirement of having an RPro in place of the extraposed argument function (in the present case, subject function) in the embedded canonical clause. Candidate (d) is also taken out of contest for the violation of OB-HB/fp, which ensures functional projection headedness. Consequently, the grammatical c-/f-structure of candidate (a) prevails as the optimal candidate.¹⁷

6.2 Information correspondence: alignment

We have noted that Q-word fronting and focus constructions share a common information profile in the i-structure with regards to NEW and PROM. Choi (2001: 34) proposes i-/c-structure correspondence/alignment constraints based on NEW and PROM that are supposed to yield informationally-motivated marked c-structure. Relevant among these constraints in the present cases of Q-word fronting and focus constructions are NEW-L and PROM-L recast in (22) below.

- (22) i. NEW-L: [+NEW] aligns left in the construction of occurrence.
 ii. PROM-L: [+PROM] aligns left in the construction of occurrence.

Since both Q-word and constituent in focus are noted as ‘[+PROM]; [+NEW]’ in the (feature-based) i-structure and each of them sits at Spec-FOCP, presently the most prominent position in the *structural hierarchy* at c-structure, it is obvious that the i-/c-structure correspondence

¹⁶ Both Q-word and focused constituents are represented in Spec-FOCP as NP on the tableaux. Again, the attribute-value matrix of the operation and other features underscored in the individual constructions are not indicated in the input f-structure of the two constructions, since they do not undermine the c-structure configuration in any way.

¹⁷ Note that the input f-structure in (21) essentially doubles as f-structure of candidate (a). All the other candidates correspond to distinct f-structures, which are not given in this paper for lack of space.

constraints in (22) will be satisfied in both constructions (see Tableau II). Comparing their discourse-contextual information to the information that obtains in respective Q-word *in-situ* construction and canonical clause counterparts, however, Q-word fronting and focus constructions have been set apart in the semantics as ‘discourse-neutral’ and ‘discourse-contrast’ respectively through the projected i-structure (see (18c)). These separate semantic orientations of Q-word fronting and focus are expressed in constraint terms using Choi’s (2001) NEW-L and PROM-L proposals in (23) below.

- (23) i. NEUT-L: [+NEUT] aligns left in the construction of occurrence.
 ii. CONST-L: [+CONST] aligns left in the construction of occurrence.

With the present constraints in the constraint set, as Tableau II below shows, we explain that CONST-L must crucially outrank NEUT-L where there is a need to establish i-/c-structure harmonic alignment in a focus construction (i.e., a correspondence between a constituent in focus and the Spec-FOCP position, as against harmonic alignment between a fronted Q-word and the Spec-FOCP position). Observe in the tableau that, unlike the ranking of CONST-L against NEUT-L, the ranking between CONST-L and NEW-L/PROM-L in the Tableau is hardly crucial and, for that matter, has little or no impact at all in the i-/c-structure correspondence. As noted earlier, this is because both fronted Q-word and focus constituent sit at Spec-FOCP and specify for [+NEW]/[+PROM].

(II) NEW-L >> PROM-L >> CONST-L >> NEUT-L

| | | NEW-L | PROM-L | CONST-L | NEUT-L |
|---|--|-------|--------|---------|--------|
| | [_{FOCP} NP _i na [_{IP} Pro _i [_{VP} V NP]]] | | | | |
| ☞ | a. [_{FOCP} Papa _[+CONST, +NEW, +PROM] i na [_{IP} Pro _i [_{VP} V NP]]] | | | | * |
| | b. [_{FOCP} Hwai _[+NEUT, +NEW, +PROM] i na [_{IP} Pro _i [_{VP} V NP]]] | | | *! | |

It is important to note that CONST-L and NEUT-L are only necessary constraints motivated on individual semantic content to draw attention to the semantic distinction between Q-word fronting and focus constructions. Thus, the fact that the focus construction outperforms the fronted Q-word construction in Tableau II does not mean that the Q-word fronting construction is ungrammatical. As has already been mentioned in previous sections, it only explains that, unlike in a focus construction, no semantic contrast is realized in a Q-word fronting construction, as compared to related *in-situ* construction. Ranking NEUT-L over CONST-L will also select i-/c-structure correspondence in Q-word fronting construction.

7. Conclusion

It has been shown in this paper that Q-word fronting (in *wh*-questions) and focus constructions in Akan essentially share the same configuration, which involves constituent left dislocation, introduction of the focus marker (FOC), “*na*”, and insertion of resumptive pronoun (RPro) for a dislocated argument function. Further, it has also been illustrated, using the OT-LFG framework, that the same c-/f-structure constraints and their rankings essentially ensure the configuration of both constructions.

Through the i-structure, however, we have drawn attention to the individual semantic content of Q-word fronting and focus constructions based on the individual discourse-contextual information that obtains in them in comparison to discourse-contextual

information that obtain in respective *in-situ* construction and canonical clause counterparts. It has been explained that the occurrence of the FOC, along with constituent left-periphery dislocation in a Q-word fronting construction does not result in semantic contrast because the discourse-contextual information expressed in it is the same one that obtains in an *in-situ* counterpart. On the other hand, constituent left-dislocation and the occurrence of the FOC in a focus construction do bring into play semantic contrast. That is, a constituent is highlighted among others as an obvious ‘point of contrastive information’ in the information profile of a focus construction. Using OT-LFG, we have stressed this semantic information distinction between the two constructions, which further shows the optimization of a particular i-/c-structure alignment in the grammar.

References

- Aissen, Judith. 1999. Markedness and Subject Choice in Optimality Theory. *Natural Language and Linguistics Theory* 17: 673–711.
- Berman, Judith. 1997. Empty categories in LFG. In *On-line Proceedings of the LFG97 conference*, University of California, San Diego, M. Butt and T.H. King (eds.). Stanford: CSLI Publications. URL <http://csli-publications.stanford.edu/LFG/2/lfg97-toc.html>
- Boadi, Lawrence A. 1974. Focus-marking in Akan. *Linguistics*. 140: 5-57.
- Boadi, Lawrence A. 1990. Questions in Akan. In *Frankfurter afrikanistische Blätter*, Vol. 2: 70-92.
- Bresnan, Joan. 2000. Optimal Syntax. In *Optimality Theory: Phonology, Syntax and Acquisition*. Joost Dekkers, Frank van der Leeuw and Jeroen van de Weijer (eds.). 334-385. Oxford: Oxford University Press.
- Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.
- Butt, M. and T.H. King. 1998. Interfacing Phonology with LFG. In *On-line Proceedings of the LFG98 Conference*, University of Queensland, Brisbane, M. Butt and T.H. King (eds.). Stanford: CSLI Publications. URL: <http://csli-publications.stanford.edu/LFG/3/lfg98.html>
- Choi, Hye-Won. 1999. *Optimizing Structure in Context: Scrambling and Information Structure*. Stanford, CA: CSLI Publication.
- Choi, Hye-Won. 2001. Resolution of Mismatches. In *Formal and Empirical Issues in Optimality-Theoretic Syntax*, Peter Sells (ed.). Studies in constraint-based lexicalism; 5: 17-62. CSLI.
- Dalrymple, Mary. 2001. *Lexical-Functional Grammar*. Syntax and Semantics, Vol. 34. New York: Academic Press.
- Falk, Yahuda. 2001. *Lexical-Functional Grammar. An Introduction to Constraint-based Syntax*. Stanford, CA: CSLI.

- Grimshaw, Jane. 1997. Projection, Heads, and Optimality. *Linguistic Inquiry* 28: 73-422.
- Kaplan, Ronald M. and Joan Bresnan. 1982. Lexical-functional grammar: a formal system for grammatical representation. In Dalrymple *et al.* (eds.). 1995. *Formal Issues in Lexical-Functional Grammar*, 29-130. CSLI Publications, Stanford, CA.
- King, Tracy H. 1997. Focus Domain and Information-Structure. In *On-line Proceedings of the LFG97 Conference*, M. Butt and T.H. King (eds.). Stanford: CSLI Publications. URL: <http://csli-publications.stanford.edu/LFG/2/lfg97-toc.html>
- Kiss, Katalin É. 1995. NP Movement, Operator Movement, and Scrambling in Hungarian. In *Discourse Configurational Languages*. Katalin É. Kiss (ed.) Oxford Studies in Comparative Syntax; 207-243. Oxford University Press.
- Kuhn, Jonas. 2001. Generation and Parsing in Optimality Theoretic Syntax. In *Formal and Empirical Issues in Optimality-Theoretic Syntax*. Peter Sells (ed.). Studies in constraint-based lexicalism; 5: 313-366. CSLI.
- Lambrecht, Knud. 1994. *Information Structure and Sentence Form*. Cambridge: Cambridge University Press.
- Lee, Hanjung. 2001. Markedness and word order freezing. In *Formal and Empirical Issues in Optimality-Theoretic Syntax*. Peter Sells (ed.). Studies in constraint-based lexicalism; 5: 17-62. CSLI.
- McCarthy, John and Alan Prince. 1993. Generalized Alignment. In *Yearbook of Morphology*. Geert Booij and Jaap Van Marle. Dordrecht (eds.): Foris, 79 – 153.
- Saah, Kofi K. 1988. Wh-questions in Akan. *Journal of West African Languages*. XVIII, 1: 17-28.
- Saah, Kofi K. 1992. Null Object Constructions in Akan. Proceedings of the Kwa comparative syntax workshop. MIT Working Papers in Linguistics. Vol. 17: 219-44.
- Stewart, John M. 1963. Some restrictions on the object in Twi. *Journal of African Languages* 2: 145-149.
- Vallduví, Enric. 1992. *The informational Component*. New York: Garland.

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