

AN ANALYSIS OF INTERROGATIVE CONSTRUCTIONS IN DAGBANI

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The goal of this paper is to present an analysis of various means of marking interrogatives in Dagbani, including polar, alternative and content questions. Dagbani belongs to the Southwestern Oti-Volta in the Central Gur family spoken in Ghana's Northern Region by the Dagbamba. I show that different strategies including syntactic, phonological and morphosyntactic are employed in the formation of interrogatives. I demonstrate that polar questions are formed using two main strategies: the use of special intonation patterns (identified to be falling intonation) and the use of the interrogative particles **bee** and **ɔɔɔɔ**. In terms of the syntactic distribution of the interrogative particles, I demonstrate that the former occurs in both clause initial and clause final while the latter occurs only clause finally. I further demonstrate that the phonological strategy of falling intonation and the use of question particles are in complementary distribution. I show that alternative questions are formed using the same question particle **bee** though syntactically it occurs between the two alternatives within a structure. I propose an analysis of alternative questions according to which they are conjoined polar questions. I demonstrate that content questions are formed by either placing the interrogative word clause initially or leaving it in the base position. I argue that when the interrogative word is placed clause initially, then there is a mandatory requirement for the introduction of the focus particles **ka** or **n**, which appear immediately after the interrogative word. On the other hand, when interrogative word is left in the base (in-situ) position, there is no requirement for the focus markers suggesting that content questions can either be marked for focus or lack focus. The data used are drawn from two main sources: constructed data based on the native-speaker intuitions of the author, and data from text-based materials. The analysis in this paper is mainly descriptive and so, I make use of minimal theoretical assumptions.

Le but de cet article est de présenter une analyse de différents moyens de marquer les interrogatifs en dagbani, y compris les questions polaires, alternatives et de fond. Le dagbani appartient à la branche sud-ouest de l'Oti-Volta de la famille du Gur central parlé dans la région nord du Ghana par les Dagbamba. L'article montre que différentes stratégies, qu'elles soient syntaxiques, phonologiques ou morphosyntaxiques, sont utilisées dans la formation des interrogatives. L'article démontre que les questions polaires sont formées en utilisant deux types de stratégies : l'emploi des modèles d'une intonation spéciale (identifiée comme une intonation descendante) et l'emploi des particules d'interrogatifs **bee** et **ɔɔɔɔ**. En termes de distribution syntaxique des particules interrogatives, l'article démontre que le premier se produit tant au début d'un syntagme initial et d'un syntagme final tandis que le second se produit seulement dans un syntagme final. L'article démontre en outre que la stratégie phonologique de l'intonation descendante et l'emploi des particules de question sont en distribution complémentaire. L'article montre que les questions alternatives sont formées en utilisant la même particule de question **bee** bien que, au niveau syntaxique, elle se place entre les deux alternatives au sein d'une structure. Une analyse des questions alternatives est proposée selon laquelle celles-ci sont en fait des questions polaires conjointes. L'article démontre que les questions de fond sont formées soit en plaçant le syntagme du mot interrogatif au début de la phrase ou en le laissant dans sa position de base. Quand le mot interrogatif est placé au début du syntagme, l'introduction des particules du focus **ka** ou **n**, qui paraissent immédiatement après le mot interrogatif devient obligatoire. D'autre part, lorsque le mot interrogatif est laissé dans sa position de base (in-situ), le marqueur du focus n'est plus exigible, ce qui suggère que les questions de fond peuvent être marquées pour le focus ou manquer la marque du focus. Les données ont été tirées de deux principales sources : des données construites sur base des intuitions de l'auteur en tant que locuteur natif de la langue, et les données tirées des textes publiés. L'analyse dans cet article est essentiellement descriptive, et ainsi, elle fait usage de peu de présupposés théoriques.

0. INTRODUCTION

This paper discusses interrogativization in Dagbani, a relatively under-described Gur (Niger-Congo) language spoken in Ghana's Northern Region. The kinds of interrogatives discussed include polar interrogatives, alternative interrogatives and content questions. Questions are classified into three types according to the kind of reply they elicit, polar questions, alternative questions and content questions. In this paper, I retain the term 'polar questions' to focus on the semantic aspect of these questions, which inquire the truth condition on a polarity scale. These questions are

also sometimes referred to as yes/no questions. Compared to other types of questions, alternative questions have not received much attention in the literature. It is claimed in the literature that almost all languages have sentences of special structural types which are used for asking questions. This near-universality of the unique structural realisation of questions in languages indicates that questions form a central aspect of human communication. Dakubu (2003) proposes that, typically, a speaker utters a question to elicit information needed to complete an expression, to an interlocutor who is expected to provide that information. She therefore concludes that the choice of what is commonly called interrogative mood is a pragmatic one.

Interrogative sentences are essential components of the speech acts that exist in languages. The main difference between interrogatives and declaratives is that whilst declaratives are typically used for asserting, claiming, stating, accusing, criticizing, promising and guaranteeing, interrogatives are conventionally associated with the speech act of requesting information (König and Siemund, 2007; Siemund, 2001).

Notwithstanding the fact that interrogatives form a central aspect of human languages, languages differ in the strategies that they employ in the formation of interrogatives. These strategies, typologically, may be phonological, syntactic, or lexical.

It should be noted however, that the data used in this analysis is not representative of all the three major dialects of Dagbani which are the Eastern, Western and Nanuni Dialects. This is because the data is drawn primarily from the Western dialect; which is the dialect that the author speaks¹. The text corpus is also based on the Western dialect. Accordingly, possible dialectal differences in question formation are not reflected in this paper, and therefore the claims that are made here may not hold for the Nanuni and the Eastern dialects.

Question formation in Dagbani has not received any detailed linguistic investigation. The only known works that consider issues of question formation are Olawsky (1999) and Wilson (1972). Though Olawsky discusses *wh*-questions (content/informative questions), polar and alternative questions, his work is rather scanty and is devoted to only about two pages (1999:67-69). This paper is therefore crucial since it seeks to give an original contribution to linguistic knowledge of Dagbani in an area that has not received much attention yet. The main focus of this paper shall therefore be to:

- (i) give an analysis of interrogative constructions in Dagbani
- (ii) argue that the polar interrogativization in Dagbani can be marked via the use of question particles (syntactic criterion) and interrogative intonation (phonological criterion)
- (iii) demonstrate that there is a prohibition on the co-occurrence of the phonological and syntactic strategies in coding polar interrogatives
- (iv) argue that alternative questions are formed using the question particle **bee** occurring between the alternatives in context
- (v) pursue an analysis of alternative questions according to which there is a disjunction operator associated with **bee**

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- (vi) argue that the occurrence of focus particles in the formation of content questions is optional depending on whether the interrogatives are fronted or left in the base position
- (vii) demonstrate that semantically, content questions may or may not have contrastive information
- (viii) propose a semantic interpretation of alternative questions according to which there is semantic operator.

Beyond the introduction, the paper is organized as follows: section one discusses polar questions, concentrating on the strategies that are used in their formation, their structures and semantic interpretation. Section two considers alternative questions with emphasis on the strategies employed in forming them. The structure and nature of content questions are considered in section three. Section four summarizes the paper.

1. THE FORMATION OF POLAR QUESTIONS IN DAGBANI

A polar question is a question whose expected answer is either *Yes* or *No*. In a language such as English, polar questions are formed in both positive and negative forms as in *Will you be leaving for Accra next month?* and *Won't you be leaving for Accra next month?* According to König and Siemund (2007: 291), 'polar interrogatives are typically used to enquire about the true or falsity of a proposition they express'. They also however, point out that it is possible for answers to polar interrogatives to assume any answer which is within the scale of 'true' and false' as in such words as 'perhaps', 'possibly', and also 'quite likely'.

Different strategies have been attested to be used in the formation of polar questions in various languages. Typologically, it has been established that polar questions are formed using six main strategies, (König and Siemund, 2007: 291). The strategies are:

- (i) the use of interrogative particles,
- (ii) the use of special intonation patterns
- (iii) a change in relative word order
- (iv) the addition of special tags
- (v) the use of disjunctive-negative structures and
- (vi) the use of particular verbal inflection.

It has further been suggested that though some languages may make use of more than one strategy in the formation of these polar questions, the most prevalent is typically the use of special intonation. Cahill (2012) for instance, proposes that this special intonation could either be rising or falling pitch which would be added to a declarative sentence to make it an interrogative. This paper demonstrates that Dagbani employs two main strategies in the formation of polar questions: the use of interrogative particles and the use of falling intonation. I refer to the former strategy of forming polar questions as a syntactic strategy, while the latter strategy is a phonological strategy. I therefore identify falling intonation as the phonological notion relevant in the formation of polar interrogatives. I further give the intonation contours of some of the sentences (both declaratives and polar interrogatives). I contend that including this phonological information will be crucial in scientifically buttressing the argumentation that there is a difference in the intonation contours of declaratives on one hand and polar interrogatives on the other when polar interrogatives are marked phonologically.

On the syntactic strategy of forming polar questions, I demonstrate that there are two question particles **bee** and **yɔɔɔ** which are added to declaratives to form

In the Examples (1) through (3), I demonstrate the use of **bee** as a question particle in the formation of polar questions.

- | | | | | | | | |
|--------|--|--------------------------|----------------------------|----------------------------|-----------------------|-------------------|-------------------|
| (1) a. | O
3SG. NOM
'S/he has gone to school' | chaŋ-Ø
go.PERF | shikuru
school | | | | |
| b. | Bee
INT | o
3SG.NOM | chaŋ-Ø
go.PERF | shikuru
school | | | |
| c. | O
3SG. NOM
'Has s/he gone to school?' | chaŋ-Ø
go.PERF | shikuru
school | bee
INT | | | |
| d.* | Bee
INT | o
3SG.NOM | chaŋ-Ø
go.PERF | shikuru
school | bee
INT | | |
| (2) a. | Doo
Man | maa
DEF | di-ri
eat.IMPERF | nyuli
yam | | | |
| | 'The man eats yam.' | | | | | | |
| b. | Bee
INT | doo
man | maa
DEF | di-ri
eat.IMPERF | nyuli
yam | | |
| | 'Does the man eat yam?' | | | | | | |
| c. | Doo
Man | maa
DEF | di-ri
eat.IMPERF | nyuli
yam | bee
INT | | |
| | 'Does the man eat yam?' | | | | | | |
| d. | *Bee
INT | doo
man | maa
DEF | di-ri
eat.IMPERF | nyuli
yam | bee
INT | |
| (3) a. | Yi
2PL.NOM | sa
TRM | da-Ø
buy.PERF | loori
lorry | maa
DEF | | |
| | 'You bought the lorry (yesterday).' | | | | | | |
| b. | Bee
INT | yi
2PL.NOM | sa
TRM | da-Ø
buy | loori
lorry | maa
DEF | |
| | 'Did you buy the lorry (yesterday)?' | | | | | | |
| c. | Yi
2PL.NOM | sa
TRM | da-Ø
buy.PERF | loori
lorry | maa
DEF | bee
INT | |
| | 'Did you buy the lorry (yesterday)?' | | | | | | |
| d. | *Bee
INT | yi
2PL.NOM | sa
TRM | da-Ø
buy.PERF | loori
lorry | maa
DEF | bee
INT |

We see from (1-3) that Dagbani polar questions can be formed using the interrogative particle **bee** as proposed earlier. The (b) and (c) examples in each set are polar questions, in which the question is asked simply to establish the truth value of the statement. The **bee** question particle can occur either clause-initially (1b, 2b, 3b) or clause-finally (1c, 2c, 3c). The existence of two syntactic positions for **bee** does not appear to be pragmatically motivated: neither my own native speaker intuitions, nor those of other native speakers consulted, are able to tease out any pragmatic difference between the two.

Though **bee** occurs in either sentence-initial or sentence-final position, it never occurs in both positions within the same sentence, as seen in the ungrammatical sentences (1d), (2d), and (3d). In an attempt to account for this distributional restriction on the question particle **bee**, I propose that it is probably a syntactic constraint against multiple projection of functional category labeled as Question Phrase (QuP).

It is worthy of mention that not only positive polarity constructions occur in polar constructions: it is possible to have negative constructions as well, as in the examples in (4-5).

- (4) a. **O** **bi** **bɔ-ri** **bia** **maa**
 3SG.NOM NEG want.IMPERF child DEF
 ‘S/he does not want the child.’
- b. **Bee** **o** **bi** **bɔ-ri** **bia** **maa**
 INT 3SG.NOM NEG want.IMPERF child DEF
 ‘Doesn’t s/he want the child?’
- c. **O** **bi** **bɔ-ri** **bia** **maa** **bee**
 3SG.NOM NEG want.IMPERF child DEF INT
 ‘Doesn’t s/he want the child (or what)?’
- d. ***Bee** **o** **bi** **bɔ-ri** **bia** **maa** **bee**
 INT 3SG.NOM NEG want.IMPERF child DEF INT
- (5) a. **Payə** **ku** **da** **yili** **kpe**
 Woman NEG buy house here
 ‘A woman will not buy a house here.’
- b. **Bee** **payə** **ku** **da** **yili** **kpe**
 INT woman NEG buy house here
 ‘Won’t a woman buy a house here?’
- c. **Payə** **ku** **da** **yili** **kpe** **bee**
 Woman NEG buy house here INT
 ‘Won’t a woman buy a house here (or what)?’
- d. ***Bee** **payə** **ku** **da** **yili** **kpe** **bee**
 INT woman NEG buy house here INT

It should be noted that the manifestation of polar questions in negative constructions is not different from what we observed in positive polarity sentences earlier. For instance, in both negative and positive polarity sentences, it is possible for the question particle to occur in sentence initial position as in (4b) and (5b) or in clause final positions as in (4c) and (5c). The occurrence of the question particle **bee** in both clause initial and clause final positions within the sentence is prohibited in the

negative polarity sentence as can be observed in the ungrammaticality of (4d) and (5d), as was previously observed for the positive polarity sentences in (1d), (2d) and (3d).

The second question particle that is used to code polar interrogatives is **yɔɔɔ**. As mentioned briefly at the beginning of this section, **yɔɔɔ** and **bee** are polar interrogative markers which have the semantic function of changing a declarative into a polar question. The use of **yɔɔɔ** in forming polar interrogatives is exemplified in (6) and (7) below.

- (6) a. **O** **bi** **bɔ-ri** **bia** **maa**
 3SG.NOM NEG want.IMPERF child DEF
 ‘S/he does not want the child.’
- b. **O** **bi** **bɔ-ri** **bia** **maa** **yɔɔɔ**
 3SG.NOM NEG want.IMPERF child DEF INT
 ‘Does s/he not want the child?’
- c. ***Yɔɔɔ** **o** **bi** **bɔ-ri** **bia** **maa**
 INT 3SG.NOM NEG want.IMPERF child DEF
- d. **A** **ʒi** **ni** **doo** **zabri** **paya** **zuɣu**
 2SG.NOM know.NOT that man defend.IMPERF woman head
 ‘You don’t know that a man defends women.’
- e. **A** **ʒi** **ni** **doo** **zabri** **paya** **zuɣu** **yɔɔɔ**
 2SG.NOM know.NOT that a man defend.IMPERF woman head INT
 ‘Don’t you know that man defends women?’ Sibdoo (2005:7)
- f. ***Yɔɔɔ** **a** **ʒi** **ni** **doo** **zabri** **paya** **zuɣu**
 INT 1SG.NOM know.NOT that a man defend.IMPERF woman head
- (7) a. **Yi** **sa** **da-Ø** **loori** **maa**
 2PL.NOM TRM buy.PERF lorry DEF
 ‘You bought the lorry (yesterday).’
- b. **Yi** **sa** **da-Ø** **loori** **maa** **yɔɔɔ**
 2PL.NOM TRM buy.PERF lorry DEF INT
 ‘Did you buy the lorry (yesterday)?’
- c. ***Yɔɔɔyi** **sa** **da-Ø** **loori** **maa**
 INT 2PL.NOM TRM buy.PERF lorry DEF
- d. **A** **bu-hi** **m** **kpi-ra**
 2SG.GEN goat.PL FOC die.IMPERF
 ‘It is your goats that die.’
- e. **A** **bu-hi** **m** **kpi-ri**² **yɔɔɔ**
 2SG.GEN goat.PL FOC die.IMPERF INT
 ‘Is it your goats that die?’ Sibdoo (2005:8)
- f. ***Yɔɔɔ** **a** **bu-hi** **m** **kpi-ra**
 INT 2SG.GEN goat.PL FOC die.IMPERF

²The difference in the verb forms in (7d) and (7e) is due to a morphological alternation in Dagbani aspectual suffixes which have different syntactic requirements. The imperfective aspectual suffix **-ra** occurs clause finally while **-ri** must occur only when something follows the verb. For details of this verbal alternation, readers are referred to Issah (2014) and references cited therein.

It is evident from the data in (6) and (7) that the particle **yɔyɔ** just like **bee** is added to declaratives to form polar interrogatives. However, the two particles, though semantically similar, differ in terms of their syntactic distribution. While **bee** occurs in clause initial and clause final positions as demonstrated in sentences (1) through (5), **yɔyɔ** only occurs clause finally as seen in sentences (6b), (6e), (7b) and (7e), but never clause initially as shown by the ungrammatical sentences in (6c), (6f), (7c) and (7f).

The morphosyntactic manifestation of these interrogative particles in the formation of polar questions has some theoretical ramifications especially within the Chomskyan tradition of syntactic analysis: Chomsky, (1995) Chomsky (1981). For instance, as proposed for Irish, Japanese and Khoisan by Carnie (2007; 2011:280), and for Gbe by Aboh (2004), the presence of these interrogative particles is a manifestation of the presence of a question phrase which gives a Functional Projection of Question Phrase, (QuP). The question particles **bee** and **yɔyɔ** are therefore, proposed to be morphological manifestations of the Functional Projection, Question Phrase (QuP). Considering the fact that this paper lacks theoretical details, I do not pursue this theoretical orientation of Functional Projections further in my analysis.

According to Cahill (2012:90), ‘some languages indicate a polar question by a particular syntactic construction (“Is he going to the park?”) and some by a particular particle (somewhat like: “He’s going to the park, right?”). Others use only a change in pitch (intonation) to change a statement to a question (“He’s going to the park?”). Cahill (2012) further argues that in languages that do not have tone such as English, French, Italian as articulated in Chapallez (1964), Huastec of Mexico as argued in Larsen and Pike (1949), and Kunimaipa of Papua New Guinea, as argued in Pence (1964), polar interrogatives are marked using a pitch which rises utterance-finally. Dagbani does use both particles and special intonation in the formation of polar interrogatives; the particle strategy has been demonstrated above in the section 1 discussion of the particles **bee** and **yɔyɔ**.

In many languages, it is the case that a declarative sentence can be changed into a polar question via the process of raising the final pitch (Rialland 2009, Cahill 2012). Thus, it is possible to use intonation to differentiate between a declarative and an interrogative utterance. The use of intonation in signalling polar interrogativization has been demonstrated to be common to most natural languages. However, the nature of the intonation varies among languages, although many employ rising intonation at the end of a declarative sentence to turn it into a polar question. Dryer (2005a) notes that most languages apart from the use of interrogative particles or word order for the forming of polar questions also incorporate a distinct intonation for polar interrogativization. It is also argued in Dryer (2005b) that there are a number of languages that rely on intonation alone to signal polar interrogativization. The commonest of the intonation pattern are rising pitch and falling pitch. For instance, languages such as Chrau of Vietnam, Hausa and Thai use rising pitch in the formation of polar interrogatives as demonstrated in Thomas (1966), Miller and Tench (1982) and Luksaneeyanawin (1998) respectively. Thus, there definitely are languages that employ rising tone for the marking of polar questions. Bolinger (1978:471) for instance proposes that:

Terminals are almost universally low or falling for finality and assertion, and high or rising for the opposite, including yes-no questions...

However, there are also quite a number of the world’s languages that use final falling pitch to mark polar questions. Clements and Rialland (2008) and Rialland (2007, 2009) collected a database of over 70 African languages, and almost half of this number were discovered to be making use of falling intonation to indicate a polar

question. Employing rising pitch to indicate polar questions is therefore far from being a universal phenomenon in the world's languages, since about half of African languages use falling pitch for this purpose instead.

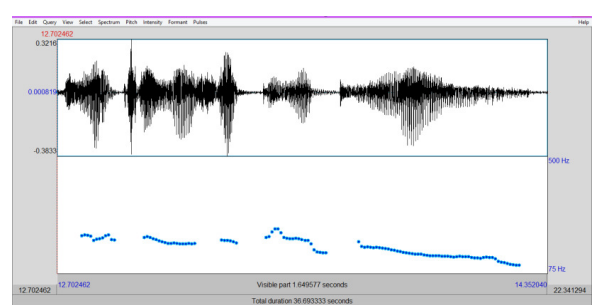
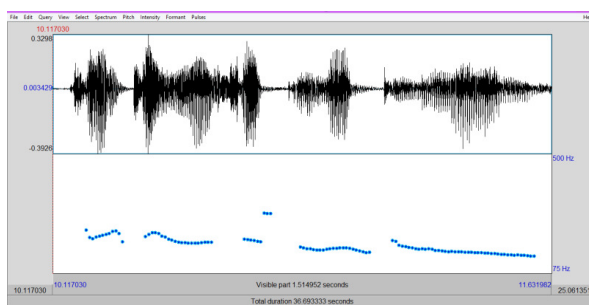
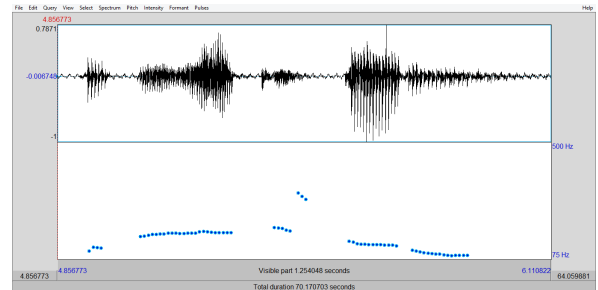
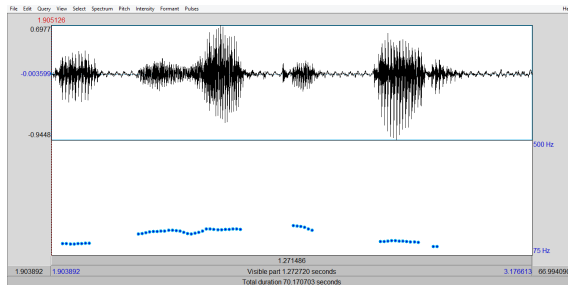
In most Gur languages, including Dagbani, polar questions are formed phonologically by lowering the pitch, that is, falling intonation. I will therefore, argue that the most consistent phonological strategy for marking polar question in Dagbani is by the use of falling intonation. A falling intonational contour, a pitch which falls utterance-finally, is the phonological strategy used to mark polar interrogatives. This is exemplified in (8) through (11).

- (8) a. **Mikashini** **wari-ti** **dari**
 Mikashini split.IMPERF firewood
 ‘Mikashini splits firewood.’
- b. **Mikashini** **wari-ti** **dari**
 Mikashini split.IMPERF firewood.INTO
 ‘Mikashini splits firewood?’
- (9) a. **O** **sa** **bi** **chaŋ-Ø** **Aŋkara**
 3SG TRM NEG go.PERF Accra
 ‘S/he did not go to Accra (yesterday).’
- b. **O** **sa** **bi** **chaŋ-Ø** **Aŋkara**
 3SG TRM NEG go.PERF Accra.INTO
 ‘Did s/he not go to Accra (yesterday)?’
- (10) a. **Chentiwuni** **sa** **kpe-Ø** **la** **duu** **maa** **ni**
 Chentiwuni TRM enter.PERF FOC room DEF LOC
 ‘Chentiwuni entered the room (yesterday).’
- b. **Chentiwuni** **sa** **kpe-Ø** **la** **duu** **maa** **ni**
 Chentiwuni TRM enter.PERF FOC room DEF LOC.INTO
 ‘Chentiwuni entered the room (yesterday)?’
- (11) a. **Mikashini** **sa** **di-ya**
 Mikashini TRM eat.PERF
 ‘Mikashini ate (yesterday).’
- b. **Mikashini** **sa** **di-ya**
 Mikashini TRM eat.PERF.INTO
 ‘Did Mikashini eat (yesterday)?’

The sentences in (8a), (9a), (10a) and (11a), are declarative sentences while (8b), (9b), (10b) and (11b) are polar interrogative versions. The falling intonation realized in the (b) versions of sentences (8)-(11) forms a contrast between the declarative sentences in the (a) examples against their corresponding interrogative counterparts in (b) versions. Though Wilson (1972) argues that phonologically, Dagbani polar questions are formed via final vowel lengthening together with a lowering of tone on the final Tone Bearing Unit (TUB), I contend that this analysis is not promising for Dagbani. I therefore, offer an alternative analysis according to which what is perceived as lengthening is, in reality, a relic of the marked pitch accent. The perceived lengthening is therefore seen as a phonetic by-product of the fall in intonation. Therefore, the idea of vowel lengthening is suggested to be

inappropriate especially within a traditional intonation analysis, when the fall in pitch affects the entire utterance and not just a single Tone Bearing Unit.

In the following illustrations in (12) and (13), I provide the pitch contours that instrumentally buttress the claim that there is falling intonation in interrogatives as opposed to declaratives.



(12) a. **Mikashini wari-ti dari**

(12) b. **Mikashini wari-ti dari**

(13) a. **Mikashini sa di-ya**

(13) b. **Mikashini sa di-ya**

It is observed from the speech contours in (12) and (13) that the entire pitch of the polar questions (12b) and (13b) are lower than their corresponding declaratives counterparts in (12a) and (13a). It is further observed in the sentence pairs that, unlike the sentences under (12a) and (13a) which are declaratives, the interrogative versions in (12b) and (13b) also (14b) and (14c) show that falling intonation has an entire utterance at its domain. This serves as evidence in favor of my proposal that when polar interrogativization is marked phonologically, it is done with falling intonation which affects an entire utterance and not just a single Tone Bearing Unit (TBU). It seems right, therefore, to suggest that the pitch contours in (12) and (13) support the traditional understanding of a falling intonation, not just a falling tone on the final TBU.

(14) a. **O yeli-ya ni o chaŋ-Ø puu ni**
 3SG.NOM say.PERF that 3SG.NOM go.PERF farm LOC
 ‘S/he has said that s/he has gone to farm.’

b. **O yeli-ya ni o chaŋ-Ø puu ni**
 3SG.NOM say.PERF that 3SG.NOM go-PERF farm LOC.INTO
 ‘Did s/he say that s/he has gone to farm?’

c. **Be ni yeli ni Abu bi dɔyi paya**
 3PL.NOM FUT say that Abu NEG deliver woman
 ‘They will say that Abu has not had (given birth to) a woman

- d. **Be** **ni** **yeli** **ni** **Abu** **bi** **dɔyi** **paya**
 3PL.NOM FUT say that Abu NEG deliver woman.INTO
 ‘Will they say that Abu has not had (given birth to) a woman?’

Descriptively, we observe from (14) above that the only difference between (14a-b) (14c-d), is that while (14a) and (14c) are declaratives, the sentences in (14b) and (14d) are polar interrogatives. Thus, the use of falling intonation as a strategy in forming polar questions is available not just in simple sentences, but also in sentences with embedded sentences as in (14b) and (14d). The intonation of the polar interrogatives is therefore pre-specified for (+FALLING INTONATION) as evidenced in the pitch contours in (12) and (13).

The findings on the marking of polar interrogatives seem to fall in line with the generalized description on the strategies that are employed by languages for the marking of polar interrogatives as noted by Muntzel (1986: 145) who argues that intonation is the normal means of coding polar interrogativization, but that occasionally, polar questions are marked by sentence initial question particles. Dagbani however, differs somewhat in the sense that the question particles do not only occur in the sentence initial position, but also clause finally.

It would be interesting to investigate the possible combinational permissibility of the syntactic and phonological strategies so far identified as being used in forming polar questions; the use of the interrogative particle **bee** and the use of special intonation. It is to be recalled that we have established that the commonest phonological strategy that is used in coding polar interrogativization is falling intonation and that the syntactic strategy is the use of the question particle **bee** which either occurs clause initially or clause finally and **yɔyɔ**, which occurs only clause finally. Consider (15a), (15b) and (16a) and (16b).

- (15) a. **Chentiwuni** **ni** **chim.**
 Chentiwuni FUT fry
 ‘Chentiwuni will fry.’
- b. **Chentiwuni** **ni** **chim?**
 Chentiwuni FUT fry.INTO
 Will Chentiwuni fry?
- c. ***Bee** **Chentiwuni** **ni** **chim**
 INT Chentiwuni FUT fry.INTO
- d. ***Chentiwuni** **ni** **chim** **bee**
 Chentiwuni FUT fry.INT INT
- e. ***Chentiwuni** **ni** **chim** **yɔyɔ**
 Chentiwuni FUT fry.INTO INT
- (16) a. **O** **sa** **bi** **da-Ø** **buku**
 3SG.NOM TRM NEG buy.PERF book
 ‘S/he did not buy a book (yesterday)?’
- b. **O** **sa** **bi** **da-Ø** **buku**
 3SG.NOM TRM NEG buy.PERF book.INTO
 ‘Did s/he not buy a book (yesterday)?’
- c. **Bee** **o** **sa** **bi** **da-Ø** **buku**
 INT 3SG.NOM TRM NEG buy.PERF book
 ‘Did he not buy a book (yesterday)?’

d. * Bee	o	sa	bi	da-Ø	buku	
INT	3SG.NOM	TRM	NEG	buy.PERF	book.INTO	
e. * O	sa	bi	da-Ø	buku	bee	
3SG.NOM	TRM	NEG	buy.PERF	book.INTO	INT	
f. * O	sa	bi	da-Ø	buku	yɔyɔ	
3SG.NOM	TRM	NEG	buy.PERF	book.INTO	INT	

It is to be recalled from the analysis put forth in this work that sentences (15a) and (16a) are declarative sentences. They, however, have their interrogative counterparts in (15b, 16b) signalled by falling intonation. In (16a) a simple declarative sentence is changed to a polar interrogative as in (16b), also via falling intonation. The ungrammaticality of sentences (15c), (15d) and (16d) and (16e) indicates that the phonological and syntactic strategies cannot co-occur within the same sentence. Thus, it is clear that the question particle **bee** is excluded from (15c), (15d), (16d) and (16e) because the question head is already realized as falling intonation. The ungrammaticality of (15e) and (16f) is also attributed to the co-occurrence between the question particle **yɔyɔ** and the phonological strategy of falling intonation. If it is argued that the claimed final segment lengthening is phonetic, then one might not be far from right to argue that nasal lengthening in closed syllables is equally phonetic. This is borne out of the observation that while the existence of phonological vowel length is well known in Dagbani, phonological nasal length is not obvious. The claim that the nasal length is phonetic also buttresses the point that what is really happening phonologically in the formation of polar questions is a fall in intonation and that any other thing, such as vowel lengthening and nasal lengthening, is just a phonetic by-product of the fall in intonation.

Three major descriptive observations have been made on the analysis of the polar questions; (i) polar questions can be coded using the phonological strategy of falling intonation (ii) polar questions can also be formed using the syntactic strategy which employs the use of interrogative particles **bee** and **yɔyɔ** and (iii) the phonological strategy of falling intonation and the syntactic criterion of using question particles **bee** and **yɔyɔ** do not co-occur in the language.

2. ALTERNATIVE QUESTIONS IN DAGBANI

This section of the paper considers the nature and semantics of alternative questions. An alternative question presents two or more possible answers and presupposes that only one of the presented alternatives is true. In the study of information structure, it has been argued that these types of questions generally present an exclusive disjunction, that is, a pair of alternatives of which only one is acceptable. When asking an alternative question, therefore, the speaker is simply in search of the answer as to whether say q or p (or even r) holds. The particle **bee** is used to mark alternative questions. I pursue an analysis of polar questions in which they are truncated alternative questions. I therefore, propose that there is only one **bee** which occurs in both alternative and polar. The position then is that in polar questions, there is a truncation of one alternative, and polar questions formed with **bee** are really truncated alternative questions, while in alternative questions **bee** occurs between the two coordinated structures since there is no truncation. This is probably what Olawsky (1999:67) observes when he argues that polar questions are short versions of alternative questions. I must point out however, that though intonation can turn a simple declarative statement into a polar question, it does not seem the case that intonation plays a part in Alternative Questions. Therefore, the existence of **bee** is enough in making a sentence a question and not a statement. This then means that

Dagbani is unlike English where there is a need for a rising intonation on the end of the first choice together with the use of **or** in the formation of alternative questions.

Also at the level of semantics, while the **bee** in polar questions simply demands a *yes* or *no* answer, in alternative questions; it demands a selection between the alternatives in context. Accordingly, alternative questions also differ in terms of the response required as they do not simply demand a *yes* or *no* answer, but rather, they require an alternative, out of the alternatives that may be stated for the listener. Going by Hamblin's theory, there is thus no difference between positive polar questions (PPQs) and negative polar questions (NPQs), and alternative questions really are composed of two polar alternatives in terms of their meaning as proposed by Groenendijk and Stokhof (1984).

Accordingly, while the syntactic forms of alternative questions contain nothing more than a coordinate structure, their semantic component will be analyzed as including an alternative operator **bee**. Considering the structure of alternative and polar questions, I contend that the particle **bee** is analysable as the equivalent of the English conjunction 'or'. This is shown in the data in (17).

- (17) a. **Chentiwuni sa da-Ø la³ bua maa bee**
 Chentiwuni TRM buy.PERF FOC goat DEF INT
o sa bi da-Ø o
 3SG.NOM TRM NEG buy.PERF 3SG.OBJ
 'Did Chentiwuni buy the goat (yesterday) or he didn't buy it?'
- b. **Be nyu-ri kom bee be bi nyu-ra⁴**
 3PL.NOM drink.IMPERF water INT 3PL.NOM NEG drink.IMPERF
 'Do they drink water or they do not drink?'
- c. **Abu ni yeli ni o bo-ri duu**
 Abu FUT say that 3SG.NOM want.IMPERF room
bee o ku yeli
 INT 3SG.NOM NEG say
 'Will Abu say (that) he wants a room or he will not say?'
- d. **Bi-hi maa bi sayim-Ø loori maa**
 Child.PL DEF NEG spoil.PERF lorry DEF
bee be sayim-Ø li?
 INT 3PL.NOM spoil.PERF 3SG.OBJ
 'Have the children not spoiled the lorry or they have spoiled it?'

As noted earlier, my proposal is that the alternative questions are conjoined polar questions. Alternative questions are proposed to involve a strong exhaustive presupposition for the alternatives under consideration. In contrast, polar questions have just one alternative that might be non-exhaustive. A similar generalization is made by Saah (1983, 1987) of a syntactically similar question particle in Akan, **anaa** in his analysis of Akan questions.

³ Hudu (2012:110) has maintained that **la** is an in-situ marker that focuses on the object in the clause, showing that it is no other than the one mentioned while Hudu (ibid:120) holds that **mi** is a predicate focus marker, focussing on the action of the verb.

⁴ The difference in the aspectual suffixes as in (16b) is borne out of the fact the coding of aspect in Dagbani interacts with the sentence structure of Dagbani; while the imperfective suffix **-ri** needs an obligatory complement, **-ra** occurs clause finally. For details of this, see Issah (2014).

Following Ginzburg (1992), I treat all cases of alternative questions as conjoined polar questions. In other words, each disjoint in an alternative question is a polar question and is connected by **bee** to form a coordinated sentence. In this case, the disjunction is construed as a choice between two or more alternatives. While this analysis does not directly draw on Karttunen's (1977) semantic analysis of polar and alternative questions, it shares the intuition behind his analysis: that both of them involve a choice between propositions (or entities).

It has been observed so far that the data we have presented are instances of coordinated sentences using **bee**. It is possible however, for the alternative question to be based on just two NPs which are conjoined using the question particle **bee**.

- (18) a. **Adam bee Abu ni ʒi nyu-ya maa**
 Adam INT Abu FUT carry yam-PL DEF
 'Is it Adam or Abu who will carry the yams?' Yahaya (1995:6)
- b. **M bɔhi-∅ la bia maa ni shinkaafa ka⁵ o bɔri**
 1SG ask-PERF FOC child DEF that rice FOC 3SG.NOM want
bee sakoro?
 INT fufu
 'I asked the child whether s/he wants rice or fufu.'

In (17b) the alternatives are in the embedded sentence, but the main sentence cannot be analyzed as interrogative.

I then conclude in line with my proposal on the semantic interpretation of alternative questions that sentences with **bee** 'or' in alternative questions denote the union of the sets corresponding to the disjuncts as argued by Alonso-Ovalle (2006). The basic analysis however is that whether in alternative questions or polar questions, **bee** cannot be used for eliciting new information from the hearer. Some descriptive generalisations that have been made of alternative questions are: (i) alternative questions are formed using the interrogative particle **bee**, (ii) alternative questions are analysed as conjoined polar questions and finally (iii) the **bee** that occurs in polar questions is same as the **bee** in polar questions suggesting that there is only one **bee**, with different functions.

3. CONTENT QUESTIONS

Unlike polar and alternative questions discussed above, content questions, also termed as information questions, according to König and Siemund (2007: 291) 'receive answers that provide the kind of information specified by the interrogative word'. Content questions in English are often called *wh*- questions since most of the interrogative words in English begin with *wh* such as *who*, *which*, *what*, among others. In this paper however, I adopt the terminology *interrogative words* to refer to this group of words with interrogative function. Boadi (1990) also uses the expression *question word/question phrase* to refer to this group of words in Akan. Interrogative words and question words are therefore used interchangeably in this paper. I also use the term *content questions* to refer to what have traditionally been referred to as *wh*-questions. According to Dryer (2005a), all languages, whether spoken or signed, have a set of interrogative words, although the inventory varies across languages.

Within content questions, a major parameter to be studied is interrogative words, including their inventory, positions, (structure) and possible combinations of the interrogative words.

⁵See Section 3 for a fuller explanation of the function of **ka**. It focuses on the Object **shinkaafa**

In this section, I demonstrate that Dagbani interrogative words may occur either in the clause initial positions or in the clause final (base) positions. This indicates that Dagbani is an optional fronting language. As in the English examples in (19), content questions contain an interrogative word or phrase and elicit a more specific answer than ‘Yes’ or ‘No’.

- (19) a. What did John buy?
b. When will the children come?

The most common positions for interrogative words in natural languages, cross-linguistically, are clause-initial, clause-final, or both (that is, doubled). Siemund (2001) refers to these languages as fronting, in-situ and optional fronting languages respectively.

As briefly pointed out, Dagbani interrogative words can either be put clause initially or be left in the clause final (base) positions. Fronted interrogative words obligatorily require focus markers, while interrogative words in the situ position do not require focus markers. Accordingly, the position of an interrogative word may be attributed to the presence or absence of focus, but does not affect the interpretation of a structure as a content question. The differences between content questions with utterance-final interrogatives and those with clause initial interrogatives is attributed to focus, while the former lack contrastive focus, the latter have contrastive focus. Morphologically, content questions are primarily identified by any of the interrogative words or pronouns in Table 1.

The classification of question words as stipulated in Cysouw (2004) is based mainly on the parameter of ‘category’. By the concept of category, Cysouw groups questions using parameters such as person, thing, time, place, manner, reason, quantity and selection. Dagbani does have interrogatives which fit on this principle of category proposed by Cysouw. This is therefore, the reason behind my categorising the question words based on Cysouw’s (2004) categorization.

Table 1: List of Dagbani question words based on the categorization of Cysouw (2004)

Category	Interrogative word	Gloss
Person	ɲuni	Who
Reason	bɔzuɣu	Why
Thing	bɔ	What
Time	saha dini/bondali	which time, which day
Quantity	ala	how much/many
Selection	dini	Which
Manner	wula	How
Place	ya	Where

In Issah (2012:75-85), I argue that **ka** and **n** must be recognised as focus markers, and that **ka** occurs where the focus is on the object and **n** occurs where the focus is on the subject. The observation that these particles, **ka** and **n** occur in content questions suggests that the pragmatic notion of focus is relevant in the discussion of content questions. The formation of content questions is illustrated in (20) through (24).

- (20) a. **Bɔ** **ka** **paya** **maa** **ɲmaagi-Ø**
 What FOC woman DEF cut.PERF
 'What has the woman cut?'
 b. ***Bɔ** **paya** **maa** **ɲmaagi-Ø**
 What woman DEF cut.PERF
 c. **Paya** **maa** **ɲmaagi-Ø** **bɔ**
 Woman DEF cut.PERF what
 'What has the woman cut?'
- (21) a. **Ya** **ka** **bi-hi** **maa** **chan-Ø**
 Where FOC child.PL DEF go.PERF
 'Where have the children gone?'
 b. ***Ya** **bi-hi** **maa** **chan-Ø**
 Where child.PL DEF go.PERF
 c. **Bi-hi** **maa** **chan-Ø** **ya**
 Child.PL DEF go.PERF where
 'Where have the children gone?'
- (22) a. **Bondali** **ka** **tɔha** **da-Ø** **marafa**
 When FOC hunter buy.PERF gun
 'When has a hunter bought a gun?' (Yahaya 1995:30)
 b. ***Bondali** **tɔha** **da-Ø** **marafa**
 When hunter buy.PERF gun
 c. **Tɔha** **da-Ø** **marafa** **bondali**
 Hunter buy-PERF gun when
 'When has a hunter bought a gun?'
- (23) a. **Bɔzuɣu** **ka** **bɛ** **daa**⁶ **zali** **toto** **maa**
 Why FOC 3PL.NOM TRM fix contribution DEF
 'Why did they fix the contribution (more than two days ago)?' (Yahaya 1995:30)
 b. ***Bɔzuɣu** **bɛ** **daa** **zali** **toto** **maa**
 Why 3PL.NOM TRM fix contribution DEF
 c. **Bɛ** **daa** **zali** **toto** **maa** **bɔzuɣu**
 3PL.NOM TRM fix contribution DEF why
 'Why did they fix the contribution (more than two days ago)?'
- (24) a. **ɲuni** **n** **daa** **ku-Ø** **niriba** **maa** **yili** **maa** **ni**
 Who FOC TRM kill.PERF people DEF house DEF LOC
 'Who killed the people in the house (more than two days ago)?'
 b. ***ɲuni** **daa** **ku-Ø** **niriba** **maa** **yili** **maa** **ni**
 Who TRM kill.PERF people DEF house DEF LOC

Considering the data in (20) through (24), it becomes clear that the focus particles **ka** and **n** are not required in the formation of content questions in Dagbani if

⁶Dagbani makes use of certain preverbal particles that have temporal functions in that they tell how far the action denoted by the verb may be. **Daa** is one of these temporal markers that tell us that the action was completed more than two days ago. Olawsky (1999) refers to these markers as time depth particles.

However, it has been observed that it is possible to use another particle **lee** in the formation of content questions either without **ka/n** as in (25a-c) or together with **ka/n** as in (26a-b).

- (25) a. **Bɔ lee bala**
 What PRT that
 ‘What is that?’
- b. **ɲuni daa lee nyu-ri bimpuma maa?**
 Who TRM PRT drink.IMPERF flowers DEF
 ‘Who was drinking the juice from the flowery plants (some time ago)?’
 Yahaya (1995:73)
- c. **ɲuni lee ku-ri soon-si maa kpe?**
 Who PRT kill.IMPERF rabbit.PL DEF here
 ‘Who kills the rabbits here?’

Though forms as in (25) exist in the language, I hesitate to conclude that **lee** is a variant of **n/ka**. The scepticism in analysing **lee** as variant of **ka/n** is seen in the existence of forms such as (26) where **lee** co-occurs with both **n** and **ka**. If it were the case that these particles were variants, then they should have been mutually exclusive in their distribution. But the grammaticality of (26a) and (26b) indicates that **lee** and **ka/n** are not mutually exclusive. I must however, point out that there are dialectal differences here in the data set in (25). For instance, the data is only grammatical to speakers of the Western Dialect, not those of the Eastern Dialect. Accordingly, for some speakers who say the data in (25), no particle is even needed, neither **n** nor **ka** for them to be grammatical. So for some speakers, (25a) can surface as **bo bala**. This is however, available only in fast speech. In (25a) and (25b) **lee** appears to function as a copula, whilst in (26a) and (26c) it appears to function like an emphatic auxiliary verb. The status of this particle is currently unclear for now and further investigation into its pragmatics and function is needed for more light to be shed on its function in the formation of content questions. The assertion that **ka** and **n** do co-occur with **lee** in the formation of content questions is illustrated in (26).

- I demonstrated that there are two main strategies that are employed in the coding of polar interrogativization: the phonological and syntactic strategies. The phonological strategy is demonstrated to be the use of a special interrogative intonation which is always falling intonation, while the syntactic strategy is demonstrated to be the use of a question particles **bee** and **yɔyɔ** which are added to a corresponding declarative sentence. While **yɔyɔ** occurs only clause finally, **bee** may occur in either clause initial or clause final positions, but never in both positions at the same time. I argued that the phonological strategy (the use of the falling intonation) and the syntactic strategy (the use of question particles) are mutually exclusive. I also concluded that the claimed lengthening of vowels and consonants at the end of polar interrogatives, by earlier researchers like Wilson (1972) is an issue of phonology/syntax interface and so it would be promising to analyse it as a gradient phonetic by-products of other phonological processes and not a categorical phonological process.

I also showed that alternative questions are formed by conjoining two or more sentences or phrases by the alternative conjunction **bee**. In polar questions, **bee** occurs clause finally, but in alternative questions, it occurs conjoining two or more clauses which are alternative propositions. This led to the conclusion that a polar question formed using the question particle **bee** be analysed as a truncated alternative question sentence. To rephrase this, alternative questions can be analyzed as conjoined polar questions. I concluded however, that there is only one **bee**, which occurs in both alternative and polar questions. Therefore, the existence of **bee** is enough in making a sentence a question and not a statement. This then means that Dagbani is unlike English where there is a need for a rising intonation on the end of the first choice together with the use of **or** in the formation of alternative questions.

Finally, it was observed that in the formation of content questions, the interrogative words can either be placed clause initially or left in the base position. When interrogatives are moved clause initially, then, they are obligatorily followed by the focus marker **ka/ n**, the particle **lee** or a combination of **ka/n** and **lee**, while when they are left in the base positions, focus markers are not required. This correlation that is claimed to exist between content questions and the pragmatic notion of focus has been proposed in the literature of information structure to be typologically valid for many of the world's languages.

ABBREVIATIONS

DEF	Definite	NOM	Nominative
FOC	Focus marker	PERF	Perfect
FUT	Future	PL	Plural marker
GEN	Genitive	PRT	Particle
IMPERF	Imperfect	SG	Singular
INT	Interrogative	TRM	Time reference
INTO	Intonation	1	1st Person
LOC	Locative	2	2nd Person
NEG	Negative	3	3rd Person

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