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TABLE OF CONTENTS

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DISTINGUISHING COMPOUNDS FROM PHRASES IN KUSAAL

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Clement Kwamina Insaidoo Appah

Abstract
This study examines how compounds can be distinguished from phrases in Kusaal, a Mabia language spoken in the Upper East region of Ghana as well as two neighbouring countries: Burkina Faso and Togo. Both compounds and phrases involve the combination of lexemes. It is, therefore, important to establish clear-cut criteria for distinguishing between them. However, due to individual language uniqueness, there are no universally acceptable criteria that work for all languages, necessitating the identification of language-specific features. An outstanding matter which complicates the issue of the demarcation between compounds and phrases in Kusaal emanates from the orthography where a modifying adjective in a phrase is written together with its head noun as a single word, much like noun+adjective compounds which are also written together as single units. Using primary data collected through semi-structured interviews and secondary data gathered from Kusaal dictionaries, the study finds displacement, coordination, and inflection as criteria for distinguishing phrases from compounds. In contrast, orthography, stress and compositionality are less reliable for distinguishing compounds from phrases in the language. This descriptive study contributes to our understanding of word formation, one of the grey areas in the study of the grammar of Kusaal.

Keywords: Morphology, compounds, phrases, Kusaal, Mabia languages

1. Introduction

The purpose of this paper is to discuss how Kusaal compounds words like those in Table 1 may be distinguished from phrases in the language.

Table 1. Sample of Kusaal compounds

Constituents	Meaning	Compound	Meaning
pʊ'a-na'aba	woman-chief	pʊ'ana'ba	queen
nu-bil	hand-small	nubil	finger
nɔɔr-gban	mouth-leather	nɔgban	lips
saa-ku'om	rain-water	saku'om	rainwater

Compounding is a prominent word formation process by which languages of the world increase their word stock. It has, therefore, attracted a great deal of research attention, such that, as Appah (2017a:13) observes, "virtually every important question about the nature of compounding in specific languages and across language families has been asked". The main questions relate to definition (Bauer 2006, Fabb 1998, Fábregas & Scalise 2012, Montermini

2010), classification (Bisetto & Scalise 2005, Scalise & Bisetto 2009) and how to delineate compounds from derived words on the one hand (Bauer 2005, Ralli 2010) and phrases on the other (Ackema & Neeleman 2010, Appah 2009a, b, 2019a, Bauer 1998, Bisetto & Scalise 1999, Booij 2012, Giegerich 2004, 2008, 2009, Jackendoff 2009, 2010, Katamba & Stonham 2006, Lieber 1992, Payne & huddleston 2002, Scalise & Vogel 2010, Spencer 1991). However, notwithstanding the extensive literature on compounding, and the almost universal presence of compounds, it remains appropriate to acknowledge that there are hardly any universally accepted answers to all the relevant questions, especially the question of the distinction between compounds and phrases (see Lieber & Štekauer 2009, Omachonu & Abraham 2012). Indeed, several attempts to establish distinguishing criteria exist in the literature (see, inter alia, Bauer 2001, Booij 2012, Katamba & Stonham 2006). However, due to individual language uniqueness, there is no clear-cut approach to distinguishing compounds from phrases that works for all languages. It is, therefore, imperative to identify language specific features that serve as tools for this purpose.

There are several reasons why the question of how compounds may be distinguished from phrases has been a matter of interest in the relevant literature. One is the formal similarities between the two construction types. That is, both compounds and phrases primarily combine words, differing only because compounding combines words to form other words whose constituents may be written together, hyphenated or simply juxtaposed, resulting in word-level constructions which may not be formally distinguishable from phrases. Spencer (1991:310) captures the problem well when he observes that:

> *Compounding [...] is prototypically the concatenation of words to form other words. However, we have often no satisfactory, unequivocal way of distinguishing between a compound word and a phrase. This means that when compounding is a freely generative process (as it usually is) we are hard put to know whether we are looking at morphology or syntax or both (or, perhaps, something else).*

Another reason why there must be means of distinguishing compounds from phrases is that the grammatical relations that exist between the immediate constituents of compounds and the elements of phrases has been observed to be the same – subordination, modification/attribution or coordination (Appah 2013a, 2019a, Scalise & Vogel 2010). Based on this, a third reason is suggested. That is, although compounds are words, they exhibit a type of invisible internal syntax (Jackendoff 2009, Scalise & Vogel 2010). For example, to interpret the English compounds *taxi driver*, *hard ball* and *poet painter*, one must 'add' some kind of syntactic relation between the two constituents (i.e. driver *of a* taxi, a ball *which is* hard, poet *and* painter) and this "internal syntax" is not overtly marked (cf. Scalise & Vogel 2010:1).

Booij (2012:84) suggests two further reasons why it is not easy to distinguish between compounds and phrases. He notes that "phrases can have the same function as words, that of labels for name-worthy categories" and that "compound patterns often derive historically from phrasal word combinations", hence the formal similarity between compounds and phrases.

Compounding has generally garnered very little scholarly attention in Kusaal. Aside from snippets from Abubakari (2018) and Musah (2018), which are PhD dissertations on the grammar of Kusaal which dedicate some attention to morphology, this is the first paper dedicated to the study of an aspect of compounding in Kusaal. Thus, it is hoped that, aside from serving its pioneering role on compounding in Kusaal, this study will engender further discussions on compounding in other Mabia languages.

The rest of the paper is divided into five sections. Section 2 gives a brief background information on Kusaal and its speakers as well as data collection and methodology. In section

3 we attempt to characterize a compound and a phrase to provide a general scope for the study. Section 4 reviews how compounds and phrases have been differentiated in the literature. Section 5 shows how the criteria for distinguishing compounds from phrases apply to the Kusaal data. Section 6 summarises and concludes the paper.

2. The Kusaal language and its people

Kusaal is a Mabia language spoken in Ghana, Burkina Faso and Togo by a group of people who refer to themselves as Kusaas(PL), Kusaa(SG). It is one of the Central Mabia subgroup of Mabia languages (Bodomo 2020), previously known as the Western Oti-Volta subgroup of Gur languages (Greenberg 1963, Westermann & Bryan 1952) of the Niger-Congo language family. The Mabia nomenclature is a compound word composed of two morphemes: *ma* 'mother' and *bia* 'child'. Bodomo (2020) argues that the term better describes the languages under this group since the two morphemes are lexemes in almost all the languages.

In Ghana, Kusaal is spoken in six districts in the Upper East Region: Bawku, Garu, Tempani, Pusiga, Zebilla, and Binduri (see Abubakari 2018, 2022). There are two dialects of the language: Agole and Atoende. The Atoende dialect is spoken in Zebilla and its neighbouring communities whilst the Agolle dialect is spoken in Bawku, Garu, Tempane and surrounding communities.

Abubakar (2018, 2022) explains that, although there is no official census on the number of speakers of Kusaal across the West African sub-region, it is estimated that there are over two million native speakers of the language. According to the Ghana Statistical Service, based on its 2010 population and housing census, there are 534,681 speakers of Kusaal in the various regions and districts of Ghana. With a total population of 24,658,823 (GSS 2012), Kusaas make approximately 2.2% of the population of Ghana as at 2010 (Abubakari 2018, 2022).

2.1 Data Collection and Methodology

The data for this study is sourced from Naden (2015), a Kusaal Agole dictionary. We also solicited additional information via semi-structured interviews with native speakers of the language in Garu, Binduri and Bawku. The first author is also a native speaker of the language whose intuition helped with the grammaticality judgement of some of the constructions and words used. The research is entirely qualitative.

3. Characterising compounds and phrases

This section deals briefly with how the two constructions; compounds (3.1) and phrases (3.2), are characterised in relevant literature. For purposes of illustration, the discussions are further supported with some data from Kusaal.

3.1. Characterising a compound

Compounding is a major word formation process which is characterised simply as the process of putting together two or more words to form a new word. The literature is replete with definitions of the concept which tend to be language specific, although some appear to claim cross-linguistic applicability. Marchand (1969:11) explains that compounds are a combination of two or more words that form a morphological unit. Katamba & Stonham (2006:55) indicate that compounds consist of, at least, two bases which could be words or, at any rate, root morphemes. Fabb (1998:66), on his part, argues that a compound is a word which consists of two or more words. Olsen (2001:280) similarly defines compounds as combination of two free

forms or stems, to form a new complex word. Carstairs-McCarthy (2018:65) adds that compounds are formed by the combination of roots while Ralli (2013:10) asserts that compounds are made up of more than one lexeme which can be realised as words or stems based on the language under investigation.

Booij (2012:77) describes compounds as "consisting of the combination of lexemes into larger words". The strength of this definition lies in the fact that it identifies the constituents of compounds as potentially independent lexical items, much like the definition of compound as the result of a process of forming a word "by concatenating two or more bases each of which potentially occurs alone elsewhere in the grammar as a syntactic atom" (Appah 2013b:73). This characterisation makes it possible to distinguish a compound from a derived word which must contain at least one affix as an immediate constituent (see Lieber & Štekauer 2009, Omachonu & Abraham 2012). However, it has been observed that the difference is not so clear-cut because "a lexeme may develop into a derivational morpheme" (Booij 2012:87). Again, the elements that make up compounds in some languages may not be free-standing words, but rather stems or roots (Omachonu & Abraham 2012). However, Lieber & Štekauer (2009:2) argue that the use of the term lexeme is "specific enough to exclude affixes but broad enough to encompass the roots, stems and free words that make up compounds in typologically diverse languages". The examples in Table 2 are Kusaal nominal compounds whilst those in Table 3 are suffix-derived nouns.

Table 2. Kusaal nominal compounds

	Constituents	**Gloss**	**Compound**	**Meaning**
a	nu'ug+bil	hand+small	nubil	finger
b	teŋ+pʊʊg	land+stomach	teŋpʊʊg	city
c	tʊbir+pʊ-wʊnim	ear+NEG-hear	tʊbpʊwʊnim	disobedient person

Table 3 Derived nominals in Kusaal

	Base	**Meaning**	**Derived word**	**Gloss**	**Meaning**
a	pa'al	teach	pa'al-ʊg	teach-NMLZ$_{[ACTION]}$	lesson/teaching
b	pa'al	teach	pa'a-n/pa'a-nip	teach-NMLZ$_{[AGENT]}$	teacher
c	wa'	dance	wa'a-b	dance-NMLZ$_{[ACTION]}$	dancing
d	wa'	dance	wa'a-wa'ad/wa'a-d	dance-NMLZ$_{[AGENT]}$	dancer

Table 2 shows two lexical items (free morphemes) combined to form new words. In Table 2a, for instance, we have the noun *nu* 'hand' combining with the adjective *-bil* 'small' to form nubil 'finger' (any of the ten). Even though Table 2c is more complex as it contains a verb *wʊm* 'to hear', a negative morpheme *pʊ* and a noun *tʊbir* 'ear' compared to the other two that are each composed of two nouns, it divides into two lexemes as the negative morpheme is not a separate lexeme.

In his critique of extant definitions, Altakhaineh (2016c) argues that most definitions are narrow since they fail to acknowledge the fact that phrases can be elements of compounds in some languages, like English, *over the fence gossip* in which the first constituent is a prepositional phrase [[*over the fence*]$_{PP}$ gossip]$_{N}$. He also argues that the definitions do not shed light on how compounds may be distinguished from phrases, except, in his opinion, studies like Bauer (2001) and Plag (2003). Bauer (2001:695), for example, explains that a "[c]ompound is a lexical unit made up of two or more elements, each of which can function as

a lexeme, independent of the other(s) in other contexts, and which shows some phonological and/or grammatical isolation from normal syntactic usage." Writing on English compounds, Plag (2003:135) suggests that "a compound is a word that consists of two elements, the first of which is either a root, a word or a phrase, the second of which is either a root or a word."

Altakhaineh (2016c), by following Plag (2003)'s argument, attempts to give what he reckons would be a cross-linguistically applicable definition of compounds. He defines a compound as "a complex word that consists of at least two adjacent elements, where the non-head is normally non-referential. Each of these elements is either a word, combining form or a phrase, so that the whole compound is a combination of these elements" (Altakhaineh 2016c:81).

A detailed discussion of Altakhaineh's definition and the supporting data lies outside the scope of the present paper. It is worth noting, however, that portions of it are not clear enough. For example, it is unclear what is mean by "the whole compound is a combination of these elements". Of course, formally, every linguistic expression, unless it is a simplex form, is expected to be "a combination of [its constituent] elements". Again, the idea of the non-referentiality of the non-head constituent may not necessarily be uniquely defining of compounds *per se* because even phrases may have non-referential non-head constituents (cf. Haspelmath & Sims 2010:191-92). This confirms our view that what a compound may be defined based on language-specific criteria as well as established cross-linguistically acceptable criteria like the fact that there must be at least two constituents where ideally one is the head, and the non-head may be a combining form, another lexeme, or a phrase.

To set the stage for the discussion of the demarcation of the boundaries of compounds and phrases in Kusaal, we spell out what a phrase is in the next section.

3.2 Characterising phrases

Katamba & Stonham (2006:353) describe a phrase as "a syntactic constituent whose head is a lexical category, i.e. a noun, adjective, verb, adverb or preposition". They add that it may consist of one, two or more words. Radford (2009:39) similarly expects phrases to be made up of two or more words. Thus, he observes that "the simplest way of forming a phrase is by merging […] two words together" as found in *help you* which is a phrase formed by merging the word *help* with the word *you*. It must be noted, however, that a phrase can minimally contain only one word, like *help* in (1a) which has the same distributions as *help you* in (1b).

(1). a. We are trying to *help*.
b. We are trying to *help you*.

An important feature of phrases is that they are headed constructions with the head playing the critical role of determining the grammatical and semantic properties of the whole phrase (Radford, 2009). For example, in the phrase *help you* (1b), because the head *help* is a verb, the whole construction will have the distribution of a verb. Again, the whole compound is about the action of *helping* rather than the pronoun *you* which refers to a person because *help* is the head.

The foregoing and the content of the previous section provide a general scope for the debate, having brought us face to face with one of the principal reasons why the whole enterprise of distinguishing compounds from phrases is important. That is, just like compounds, phrases may consist of two or more words, as illustrated in (2). As Bauer (2003:135-36) puts it, compounding shares identical properties with phrase formation in that they sequence lexemes. Thus, the number of lexemic constituents in a construct may not accurately indicate whether that construct is a compound or phrase (see Altakhaineh 2016c:60).

(2)

Constituents	***Compounds***	***Phrases***
nwad+bibi-s	*nwadbibis*	*ya tita-da*
moon+small-PL	'stars'	house.PL big-PL
		'big houses'
nu'u+bil	*nu'ubil*	*zɔ kul*
hand+small	'finger'	run go.home
		'run home'
naa_yir	*naayir*	*bi sabulug wɔk la*
chief-house	'palace'	child black tall DEF
		'the tall black child'

In the next section, we review literature on the distinction between compounds and phrases.

4. Distinguishing between Compounds and Phrases: the criteria

As our discussions so far have shown, the question of how to distinguish between compounds and phrases is not a trivial one. Therefore, a lot of research attention has been focused on it with the application of varying phonological, syntactic, and semantic criteria to distinguish, for example, nominal compounds from syntactic constructions like noun phrases and genitive constructions whose constituents tend to be similar to nominal compounds. We briefly discuss how some studies have applied certain criteria in attempts to distinguish compounds from phrases in some languages.

As noted above, Booij (2012) gave two main reasons why it is not easy to distinguish between compounds and phrases: their functional similarity as labels for name-worthy categories, and their formal similarity which results from the observation that compound patterns often derive historically from phrasal word combinations. In illustrating the formal similarity mentioned above, Booij uses the German expression for "red cabbage" which is an Adjective+Noun compound *Rotkohl* as opposed to the Dutch expression for the same item *rode kool* which is a noun phrase. Booij explains that whilst the German expression is a compound, the Dutch expression is a phrase because the adjective in the Dutch expression bears an inflectional ending *-e* which marks agreement since adjectives in Dutch phrases must agree with the nouns they modify in terms of gender, number, and definiteness. The German expression, on the other hand, is a compound because the adjective does not take inflection in this circumstance. The German expression *ein rot-er Kohl* "a red cabbage", however, is clearly a noun phrase because of the adjectival ending *-er* (see Booij 2012:84).

Bauer (2003:136) and Rosenbach (2007:143) also explain that a sequence of N+N in English can be equivalent to possessive plus noun. Thus, whereas the data listed under 'compounds' in (3) are usually seen as exemplifying morphology, the data listed under 'phrases' in (3) are viewed as part of syntax.

(3)	**Compounds**	**Phrases**
a.	dog house	dog's house
b.	lawyer fees	lawyer's fees
c.	Sunday lunch	Sunday's lunch

Haspelmath & Sims (2010:191) presents similar observation about what obtains in Lango. However, we will show that this criterion cannot be used to distinguish between compounds and phrases in Kusaal because there are no overt markings of possession in the language. The

distinction between similar constructs in Kusaal is largely deduced from context. For instance, the construction in (4a) is ambiguous because it could be interpreted as 'he has a dog at home' or 'he has a dog-house'.

(4) a. *O* *mɔr* *baa* *yir*
3SG has dog house
'He has a dog house'

b. *baa* *la* *yir* *la* *sa'am-ya*
dog DEF house DEF damage-PERF
'The dog's house is damaged.'

Based on the view that compounds may be subject to morphological and phonological processes which may either be language or compound specific (cf. Fabb 1998), phonological processes like assimilation, vowel elision as well as suprasegmental features like stress, tone and intonation have been identified as useful criteria for distinguishing compounds from phrases in some languages (Abakah 2006, Appah 2016a, c, 2017b, 2019a, Broohm & Melloni 2020, Marfo 2004). For instance, Finney (2002) argues for a productive process of compounding in Krio that sometimes involves the application of tonal processes of High deletion and Low spreading. Similarly, right-hand primary stress assignment for nominal compounds in English has proven somewhat useful in determining compounding in the language, although questions still remain about the robustness of the criterion (cf. Bauer 1998, Giegerich 2004, 2008, 2009, Jones 1995, Lieber & Štekauer 2009, Olsen 2000). Finally, it has been noted that some compounds in Akan can be distinguished from corresponding phrases containing the same constituents by the differences in their tonal melodies. For example, a class of verb+noun compounds in Akan (e.g., *kúm̀-kɔ́ḿ* 'hunger killer (a high-yielding variety of maize)', *kɔ́-m̀súó* 'one who fetches water', *kɔ́-àyí*é 'one who attends funerals habitually'etc.) can be differentiated from the corresponding verb phrases (*kùm̀-kɔ́ḿ* 'kill hunger', *kɔ̀-m̀súó* 'fetch-water' *kɔ̀ àyí*é 'attend a funeral' etc.) by the tone on the verb constituents which is high (*ɔ́*) in the compounds and low (*ɔ̀*) in the verb phrases (see Appah 2016a, c, 2017b, 2019a, b).

As far as meaning is concerned, it is generally accepted that idiomaticity is a typical property of compounds but not phrases. That is, whereas the meanings of phrases are usually compositional, the meanings of compounds tend not to be compositional just like idioms which, although they are formed through regular rules of syntax, are usually non-compositional. However, as Haspelmath & Sims (2010:191) observe, non-compositionality is neither a necessary nor sufficient criterion for compoundhood. Finally, as Booij (2012) notes, both compounds and phrases may be labels for name-worthy categories. Thus, Altakhaineh (2016d:60) uses the data in (5) to show that the meaning of a noun+noun compound may be indistinguishable from the meaning of an adjective+noun constructions.

(5)	**N+N**	**Adj+N**
a.	*atom bomb*	*atomic bomb*
b.	*verb paradigm*	*verbal paradigm*
c.	*language development*	*linguistic development*

Clearly, the demarcation between a compound and a phrase in not a clear one in languages, and Kusaal is no exception. However, as the foregoing has shown, the literature is filled with several proposals for distinguishing compounds from phrases (Altakhaineh 2016c, Appah 2013a, Bauer 2003, Bauer, Lieber & Plag 2013, Fábregas & Scalise 2012, Lieber & Štekauer

2009). In the next section, we consider the various criteria, weaving the discussion around a relatively recent attempt to pull together the criteria that have been proposed for distinguishing compounds from phrases (Altakhaineh 2016c), and show how Kusaal fits in, as we test the criteria with data from Kusaal to find out whether they could be useful in differentiating compounds from phrases in this language.

5. Distinguishing compounds from phrases in Kusaal

As shown above, the need to distinguish compounds from phrases has been observed cross-linguistically for various reason, including the formal and semantic similarities between the two constructs. The parameters that have been used in this endeavour include orthography, stress, modification, compositionality, displacement, insertion, referentiality, coordination, replacement of the second element by a pro-form, ellipsis, and inflection & linking elements (cf. Altakhaineh 2016c, Appah 2017a, 2019a, Bauer 1998, Giegerich 2004, 2008, 2009, Haspelmath & Sims 2010, Spencer 1991). Very little, if any at all, can be said of studies in Mabia languages that have attempted using any of the criteria above to distinguish compounds from phrases. This work, thus, discusses these parameters to determine which of them can be used to differentiate compounds from phrases in Kusaal. Our exploration will support the view that the various criteria for distinguishing phrases from compounds tend not to be cross-linguistically applicable (see Haspelmath & Sims 2010:187-95).

5.1. Orthography

The writing systems of languages may provide criteria for identifying compounds from other construction types. In several European languages, orthography provides enough basis for distinguishing compounds from phrases (cf. Altakhaineh 2016c). For example, in Czech and Slovak, a compound is spelled as one word and a syntactic phrase as separate words (Lieber & Štekauer 2009:7). Also German compounds are often spelled as single words but coordinates (e.g., *rot-grün* 'red and green', *schwarz-rot-gold* 'black and red and golden' and *Dichter-Maler-Komponist* 'poet and painter and composer') are typically written with hyphens (Neef 2009:396). However, English orthographic convention is not very helpful in distinguishing compounds from phrases as some compounds are written as one word with or without hyphens (e.g., *horse-trade*, *overflow* and *egghead*) while others (e.g., *body language*) are often written as separate words. Even English dictionaries are not consistent as seen for the various renditions of the same expression *girlfriend* (*Hamlyn's Encyclopaedic World Dictionary* and W*ebster's Third New International Dictionary*), or *girl-friend* (*Concise Oxford Dictionary*, 7th Edition). Thus, orthography is not a very reliable criterion for distinguishing between compounds and phrases especially in a language like English (cf. Altakhaineh 2016c:61-62).

The spelling systems of Mabia languages are gradually gaining attention as researchers look for ways to harmonise the orthographies of these languages. Suggestions on how compounds should be written has been one critical issue. Bodomo & Abubakari (2017:179), observe that the spacing of constituents that form compounds in the orthography of these languages is one basic problem. They propose that if the first constituent of a compound loses its ending, then the second constituent should be joined to the first and the two written as one word as demonstrated in Table (4).

Table 4. Proposed orthography for Mabia compounds (Bodomo and Abubakari 2017:179)

	Language	**Constituents**	**Gloss**	**Compound**	**Meaning**
a	*Dagaare*	*bie+doo*	child+man	*bidoo*	young man/son
b	*Kusaal*	*biig+bil*	child+litt*l*e	*bibil*	little child

Similarly, Musah, Naden & Awimbilla (2013:32-33), maintaining the view that compounds are written as single words in Kusaal, suggest that any first noun that loses part of its form should be combined with the adjoining noun to form a compound. The resulting words are fused as shown in Table 5a-f.

Table 5. Proposed orthography for Kusaal compounds (Musah, Naden & Awimbilla 2013)

	Constituents	**Gloss**	**Compound**	**Meaning**
a.	*daam+bin*	liquor+faeces	*dabin*	alcohol yeast
b.	*wɛvg+naaf*	deep bush+cow	*wɛnaaf*	buffalo
c.	*bin+tam+pig+ir*	faeces+mud+ball]	*bintipigidvg*	dung-beetle
d.	*teŋ+pvvg*	land+stomach	*tempvvg*	city-centre
e.	*wɛvg+baa*	deep bush+dog	*wɛ-baa*	leopard
f.	*sinlinsin'ugpaanlvŋ*	spider+web	*sinlinsin'ipaanlvŋ*	spider-web
g.	*Atine+daar*	Monday+day	*Atine daar*	Monday
h.	*Atilata+daar*	Tuesday+day	*Atilata daar*	Tuesday
i.	*Alaarib+daar*	Wednesday+day	*Alarib daar*	Wednesday

Although one may not entirely rule out their existence, we are yet to come across compound words that are written as separate words except the names of the days of the week which are consistently written as separate words (Table 5g-i) probably because they are borrowed from Hausa which also borrowed them from Arabic (Abubakari et al. 2023). Indeed, when used without *daar* 'day', the morphemes *Atine*, *Atilata* and *Alaarib* (Table 5g-i) can only be interpreted as personal names for people born on the respective day of the week – Monday, Tuesday and Wednesday.

On hyphenation, Musah, Naden & Awimbilla (2013) argue that a compound is hyphenated if the first base ends with a [+syllabic] and the second base also begins with a [+syllabic]. The hyphen, they explain, is intended to avoid a long concatenation of vowels or syllabic sounds. The examples in Table (6) are used as illustrations.

Table 6.Hyphenated Compounds (Musah, Naden & Awimbilla 2013:33)

	Constituents	**Gloss**	**Compound**	**Meaning**
a	*saa+ian'asvg*	rain+flas	*Sa-ian'asvg*	lightning
b	*pv'a+ɛliŋ*	woman+marriage	*pv'a-ɛliŋ*	betrothed

The orthographic rule that requires that if a compound constituent loses part of its phonological material, it should be fused with the second constituent to form one word is similarly proposed for phrases especially N+Adj phrases. A modifying adjective is attached to its head noun to form a single word if the latter loses part of its base. This is demonstrated in Table (7) where (7a, b) are phrases whose constituents are written together as single words and (7c, d) where the constituents are written as separate words because the constituents are in their full forms.

Table 7. N+Adj Phrases

	Constituents	Gloss	Compound	Meaning
a	*bvvg+bil*	goat+small	*bvbil*	kid
b	*pɛ'og+piel*	sheep+white	*pɛpiel*	white sheep
c	*pu'a+vɛnla*	woman+beautiful	*pu'a vɛnla*	beautiful women
d	*paŋ+tita'ar*	strength+big	*paŋ tita'ar*	great strength

Clearly, the orthographical convention of Kusaal poses a challenge for the attempt to

distinguish between compounds and phrases, especially N+Adj compounds and N+Adj phrases. Kusaal can, therefore, be grouped with languages like English which cannot be said to have a reliable orthographic demarcation between these two grammatical constructs.

5.2. Stress

Stress marking is another proposed criterion for distinguishing compounds from phrases in some languages, including English (Haspelmath & Sims 2010:192), Danish (Bauer 2009:402), Dutch (Don 2009:379-80), Hungarian (Kiefer 2009:531), Polish (Szymanek 2009:472-73), and Maipure-Yavitero (Zamponi 2009:587, 92). Stress marking is generally not a characteristic of Kusaal and Mabia languages. For instance, Hudu (2010:19) asserts that "Dagbani and other Gur languages are not stress marking". Thus, this criterion cannot be applied to distinguish compounds from phrases in Kusaal.

5.3. Modification of constituents of compounds

Another criterion that has been used to distinguish compounds from phrases is modification. It is argued, for instance, that in an Adj+N compound in English, the first constituent cannot be modified while the first constituent of a phrase containing similar constituents can be modified. For example, the word *very* can modify an adjective that is part of a phrase, such as a *very black bird* while pointing at a crow, but it is not permissible to say *a very blackbird* if the referent is the genus *Agelaius* (see Altakhaineh 2016c:64, Lieber & Štekauer 2009:12). The reason is that the first constituent is not the head and that non-head constituents cannot be modified independently (cf. Appah 2016b:266, Giegerich 2005:574, Ralli & Stavrou 1998:244). Indeed, it is expected that, being words, any modifier will have scope over the entire word and not individual constituents, especially non-head constituents.

As demonstrated by Abubakari (2018, 2022), Kusaal adjectival modifiers of nouns in both morphology and syntax occur to the right of the nominal, yielding the structure $N_{root/stem}$ Adj_{num}. This is illustrated in (6a) and (6b) for singular and plural nouns respectively, where the stem of the head noun is followed by the adjective which also marks number. As can be seen, the head noun *buug* 'goat' becomes *bu-* when the adjective *wɔk* 'tall' is added.

(6) a. bú+wɔk piélúg lá
goat+tall.SG white.SG DEF
'the tall white goat'

b. bú+wáˈá piélís lá
goat+tall.PL white.PL DEF
'the tall white goats'

The non-head adjective constituent cannot be modified independently if the construct is a compound while the adjective constituent of a similar looking construct can be modified if it is a phrase. The modified phrase has a different interpretation from the compound and these interpretations are context driven since both the phrase and the compound have the same constituents, written and pronounced the same way, as in (7).

(7) a. *nu'u+bil* *hali* [[nu'ubil] hali] *[nu'u [bil hali]]
hand+small very
'tiny finger'

b. *nu'u+bil* *hali* [nu'u [bil hali]]
hand+small very
'a very small hand'

c. *O* *mɔr* *nu'ubil hali*
3SG has hand.small very
'S/he is a professional thief'

Thus, N+Adj compounds do not allow the modification of the adjective constituent in isolation, as illustrated by bracketing in (7a), however, the entire construct can be modified. *Nu'ubil* also means 'thief' and when modified with *hali*, it is interpreted as a 'professional thief', as shown in (7c). In (8a-b) are other examples showing the grammaticality of modifying compounds with other adjectives.

(8) a. *na'a+pua* *sabulug* *la*
chief+woman black DEF
'the dark-skinned queen'

b. *naasaa+bugum* *pii-pil*
whiteman+fire bright
'bright light'

Unlike compounds, both the phrase and its non-head constituent can be modified by the intensifier *hali* 'very'. Consider examples (9) and (10) and the bracketing to the right of the (b) examples.

(9) a. *ya* *titada*
hous.PL big.PL
'big houses'

b. *ya* *titada* *hali* [[*ya titada*] *hali*], [*ya* [*titada hali*]]
house.PL big.PL very
'very big houses'

(10) a. *bʋ+bil*
small+goat
'a small goat'

b. *bʋ+bil* *hali* [[*bʋ bil*] *hali*], [*bʋ* [*bil hali*]]
small+goat very
'a very small goat'

While the modification of a non-head constituent of compounds renders it ungrammatical, the modification of the entire construct is permissible. Non-head constituents of phrases, on the other hand, can be modified as well as the entire construct. This is consistent with previous observations on the modification of non-head constituents of compounds (Altakhaineh 2016c, Appah 2016b, Giegerich 2005, Lieber & Štekauer 2009, Ralli & Stavrou 1998).

5.4. Compositionality

Booij (2012:209) observes that "[t]he general principle for the semantic interpretation of both morphological and syntactic structures is the compositionality principles" which suggests that the meaning of a complex linguistics expression must emanate from the meanings of its constituent parts and their arrangement in the linguistic expression. As Neef (2009:394) puts it, "[a] complex linguistic expression is considered to be compositional if its meaning is determined by both the meanings of its parts and the way it is structured." Thus, given a complex linguistic expression that is made up of *sea* and *blue*, the meaning should differ depending on the order in which they are combined, so that *sea blue* (a type of *blue*) should mean something different from *blue sea* (a type of *sea*). It is widely accepted that compounds can generally be divided into two – those whose meanings emanate from their constituents (endocentric compounds) and those whose meanings, either in part or whole, do not emanate from their constituents, called exocentric compounds (Appah 2016a, 2017a, b, 2019b, Bauer 2008, 2010, 2016). At the heart of the distinction is the idea of the head constituent which determines the categorial and semantic properties of the compound and is usually modified by the non-head constituent. An endocentric compound has a head constituent. That is, a compound with the structure YX will have X as the head and Y serving as a modifier, expressing something related to X. This is commonly observed in N+N compounds (Bauer 1979, 1998, Downing 1977, Spencer 2011). Consider the endocentric compounds in Table 8 where the second constituents function as heads and the first constituents serve as modifiers. For instance, *baa yir* 'doghouse' is a type of house and not a type of dog; *na'apu'a* 'chief's wife' is a type of wife not a type of chief; *na'asaateŋ* 'Europe' is a type of geographical location not a whiteman and *zabasʋ'ʋg* 'sword' is a type of knife not a type of war.

Table 8. Compositional (endocentric) N-N compounds in Kusaal

Constituents	**Gloss**	**Compound**	**Translation**
baa+yir	dog+house	*baa yir*	doghouse
na'a+pu'a	chief+woman	na'apu'a	queen mother
na'asaa+teŋ	whiteman+land	*na'asaateŋ*	Europe
zaba+sʋ'ʋg	war/fight+knife	*zabasʋ'ʋg*	Sword
pɔɔg+gur'	farm+guard	*pɔgur'*	farmguard
yir+in+kɔnbʋg	home+animal	*yinkɔnbʋg*	domestic animal

Exocentric compounds tend not to have head constituents and so cannot be compositional by either syntactic or semantic measure. In Table 9 are examples of Kusaal exocentric compounds that are semantically non-compositional.

Table 9. Non-compositional (exocentric) N-N compounds in Kusaal

Constituents	**Gloss**	**Compound**	**Translation**
na'asa+bugum	whiteman+fire	*na'asaabugum*	electricity
zug+sɔb	head+owner	*Zugsɔb*	God almighty
kparib+piim	robe+arrow	*kparipiim*	needle

Contrary to the generally accepted view that compounds tend not to be compositional, some linguists argue that compounds, in many languages, are very productive and often compositional especially when contexts are considered (Benczes 2005, 2006, Kavka 2009, Lieber 2005). As Kavka (2009:33) observes, "their status will be understood more readily if they are viewed as parts of concrete, contextually defined utterances".

Compositionality is argued to be one of the most important criteria for distinguishing

compounds from other free combinations. That is, while phrases tend to be compositional, compounds tend to be non-compositional, much like idiomatic expressions (Altakhaineh 2016c, Kavka 2009). Some examples of compositional compounds in English are *houseboat, committee meeting* and *bookshop,* while *egghead, redskin* and *blue-stocking* are non-compositional (Altakhaineh 2016c:67). Comparing these to phrases, Altakhaineh (2016c:67) argues that there are phrases that are compositional and others that are not: *white lie,* and *old hand* are non-compositional, whereas *beautiful house, long journey* and *tall man* are compositional. Thus, it is suggested that this criterion for compoundhood should be dismissed at least for languages like English.

Compounds in Kusaal cannot be distinguished from phrases on the grounds of compositionality. Kusaal has compounds that are clearly compositional and others that are non-compositional as exemplified in (11).

(11)

Compositional compounds	Non-compositional compounds
i. *ku'o+svŋ*	i. *teŋ+pvvg*
water+good	land+stomach
'clean water'	'city'
ii. *bi+pv'a*	ii. *karim+saam*
child+wife	read+father
'child's wife/ daughter-in-law'	'teacher'

Additionally, the language has phrases that are compositional and others that are non-compositional as shown in (12) where the non-compositional phrases look more idiomatic because their meanings do not depend on the meanings of their constituents.

(12)

Compositional phrases	Non-compositional phrases
i. *teŋ tita'ar*	i. *mər pvvr*
land big	have stomach
'big towns/country'	'be pregnant'
ii. *dap vɛnla*	ii. *lɔ nɔɔr*
man.PL beautiful.PL	tie mouth
'handsome men'	'to fast'
iii. *nyan diisvg*	iii. tis sida
shame feed.NML	give truth
'shame, disgrace'	'agree'
iv. *mər sam*	iv. pu'a diir
have debt	woman eat.NML
'be indebted'	'marriage'

It is worth pointing out that the forms of the constituents of compounds tend to be different from the forms of the constituents of phrases, even if it is the same lexeme. For instance, '*bipu'a*' is supposed to be *'biig+pu'a* ' but in both spoken and written forms of the language '*bipu'a*' is used as the standard form. However, if *biig pua* 'child wife' is construed as a phrase, the meaning somehow changes to 'a boy's wife', thus the referent is not an in-law of the speaker. Thus, although the constituents of both the compound and the phrase are the same their

meanings differ. Example (13a-c) further illustrate this, showing the ungrammaticality of using a compound form where a phrasal form is expected (13c).

(13) Compositional Compound
a. *ku'o+svŋ*
water+good
'the clean water'

Phrase
b. *kuom kane an svm la*
water which is good DEF

c. **ku'om svŋ*
'clean water'

Additionally, when the constituents of a non-compositional compound are split and used in a phrase, the latter acquires a different meaning. For instance, the compound in (14a) will be rendered as in (14b) for a noun phrase.

(14) Compound
teŋ+*pvvg*
land+stomach
'city'

Noun Phrase
teŋ la pvvg
land DEF stomach
'inside the town/ main town'

5.5. Displacement

One criterion which promises to be efficient is 'displacement'. Fábregas & Scalise (2012:121) show that displacement is one successful way of identifying compounds from phrases in English, since in English it is possible to displace a constituent from a phrase but not from a compound. This is because, being words, compounds have lexical integrity which is violated when a constituent is extracted or displaced (Booij 2009, Chomsky 1968). Thus, it is ungrammatical to extract 'truck' from the compound 'truck driver' in (15a) but is felicitous to extract the same item from the corresponding VP in (15b) *'... drives trucks*'.

(15) *a. *Truck is what he likes a* [_____ *driver*].

b. *Trucks are what he* [drives _____]. (cf. Altakhaineh 2016c:67)

A rendition of the above situation in Kusaal results in a similar observation where *dɔriba* 'driver' cannot be extracted from (16a) as it results in the ungrammatical construction in (16b), whist extraction is possible in (17a) as evidenced by (17b) and (17c).

(16) a. *O anɛ [tazi dɔriba]*
3SG COP taxi driver
'He is a taxi driver.'

b. **Tazi ka o nɔŋ [___-dɔriba]*
taxi FOC 2SG like driver

(17) a. *O [dɔribid nɛ tazinam]*
3SG drive.IMPV FOC taxis
'He drives taxis.'

b. *Tazinam* *ka* *o* *[dɔribid-___]*
taxis FOC 3SG drive.IMPV
'He drives TAXIS.'

c. *Tazinam* *anɛ* *dinɛ* *ka* *o* *dɔribid*
taxis COP what FOC 3SG drive.IMPV
'Taxis are what he drives.'

The slot represents the gap left by the constituent *tazinam* 'taxis' extracted to the sentence initial position where it receives a focus interpretation and followed by the focus particle *ka*. As explained by Jackendoff (2009), this criterion shows that compounds are not built by syntactic rules as phrases are, making compounds lack internal syntactic structure.

5.6. Insertion

Insertion, just like displacement, provides a clear way of delineating compounds from phrases in some languages. Lieber & Štekauer (2009:11-12) show that insertion provides one way of identifying compounds from phrases in English. They argue that while it is possible to insert a word like *ugly* into a phrase like *a black bird*, it is impossible to insert the same word in the compound *blackbird*. *Ugly* can only be used in modifying the whole compound as in *ugly blackbird* (see Altakhaineh 2016c:68).[1] This is clearly related to what we discussed in section 5.3 under modification.

In Kusaal, some phrases are written as separate words. Compounds, on the other hand, often have two or more bases written together as single words with final morphemes deletion in the first constituent. A modifier cannot occur between the constituents of a compound. However, this is possible in a phrase. See illustration below with the modifier *suŋ* 'good'.

(18)

	Compound	**Phrase**
a.	*nid+kvvd* man+kill.NOM[AGENT] 'murderer'	*nid.svŋ kvvr* man.good funeral.NOM' 'good man's funeral'
b.	*ku'o+nuudim* water+drink.NOM 'drinking-water'	*ku'o.svŋ+nuub* water.good+drink.NOM drinking of good water
c.	*ku'onuudim svŋ* 'good drinking water'	
d.	**ku'osvŋ+nuudim* Intended: 'good drinking water'	

Previous research has also established possible situations where demonstratives and quantifiers have been identified as possible criteria for separating compounds from phrases in Arabic (cf. Altakhaineh 2016c). It is important to indicate that the demonstratives *nwa* 'this', *kanna* 'that', the quantifiers *sieba* 'some' *wusa* 'all' and *za'a* 'all' can be inserted in N+N phrases but not in N+N compounds in Kusaal.

[1] It has been noted that there is one potential exception to this general principle: the category of phrasal verbs (Lieber & Štekauer 2009).

(19)

NN Phrases	*niŋgbiŋ kpaam* skin oil 'skin pomade'	*niŋgbiŋ sieba kpaam* skin some oil 'pomade for certain skin types'	*niŋgbiŋ nwa kpaam* skin this oil 'pomade for this skin type'
NN Compounds	**bin'isnwakpaam* 'butter'	*bin'iskpasvŋ nwa* butter this 'this butter'	

The general observation is that insertion is a fairly reliable criterion for differentiating compounds from phrases in Kusaal. Possible permutations of compounds or phrases involving other word categories where the modifiers, quantifiers and demonstratives could be used as a criterion for differentiating these constituents have not been covered and is open for further investigation.

5.7. Referentiality

Referentiality is another semantic criterion suggested in the literature for separating compounds from phrases (inter alia, Altakhaineh 2016c, Haspelmath & Sims 2010, Saeed 2016). Referentiality is defined by Saeed (2016:11) as "the relationship by which language hooks onto the world". For instance, the anaphoric or referencing expression *he* in *he is a coward* identifies an entity, person/individual in the world as its referent. Relating this to compounds, it is observed that non-head constituents are commonly generic and non-referential. Haspelmath & Sims (2010:191) explain that a dependent noun in almost all compounds, does not denote a particular referent, but an entire class. In the Kusaal example *naasaa+bugum* 'electricity' [lit. whiteman+fire], the constituent *nasaa* 'whiteman' does not have a specific referent or entity in the context of the meaning of the compound. The head of the compound *bugum* 'fire', on the other hand, refers to a specific thing which can be modified by different modifiers on occasion, as in *bugum+saana* [fire+charcoal] 'charcoal-fire' and *bugum pipilim* 'bright light' [lit. fire bright] where a type of fire and a type of light are respectively described. Additionally, compounds in Kusaal can be either left or right headed as in *bugum pipilim* 'bright light' and *naasaa+bugum* 'electricity' [lit. whiteman+fire] respectively. This means that modifiers in compounds can either qualify the left or the right element which functions as the head. To further exemplify the non-referentiality of non-head constituents of compounds in Kusaal, we see that the non-head constituents of the two compounds below, do not refer specifically to any entities that are contextually and referentially identifiable in the world.

(20) a. *nwad+pielig*
moon+white
'moonlight'

b. *nwad+bibis*
moon+small.PL
'stars'

c. *nwad pipilim*
moon bright
'bright moon'

d. **pielig pipilim*

It is important to note that, contrary to the widely held view about the non-referentiality of non-head constituents of compound, Bauer (1998) argues that they occasionally serve as discourse antecedents for pronouns, such as *so I hear you are a real cat-lover. How many do you have now?* This is also discussed by Bauer, Lieber & Plag (2013:464). The Kusaal data, however,

suggests that referentiality is quite a reliable criterion for the purpose of identifying compounds (21b) from phrases (21a).

(21) a. *dau* *bil* b. *nu'ubil*
man small hand+small
'small man' 'finger'

In the examples in (21) whilst *bil* 'small' refers to the head noun *dau* 'man' in (21a), the same word has no specific reference in the compound *nu'ubil* 'finger' in (21b). It must be pointed out that it is not just any small hand that can be referred to as a finger. For example, relative to a full-grown man, a baby's hand is a "small hand", but that does not make the baby's hand a "finger". Thus, this example, shows the non-compositionality of the compound as well as the non-referentiality of the head constituent *nu'u* 'hand' as it is not a specific hand that is referred to in the compound.

5.8. Coordination

The three kinds of grammatical relations that occur between constituents of phrases (modification, subordination and coordination) also occur in compounds. The only difference is that compounds usually do not have overt markers for them (Appah 2013a, Jackendoff 2010, Jackendoff & Audring 2020, Scalise & Vogel 2010). Thus, unlike phrases, compound constituents are not easily coordinated using conjunctions (see Altakhaineh 2016c:70, Fábregas & Scalise 2012:120). It is on this basis that the bracketed portions of the example in (22a) is regarded as a phrase while the one in (22b) is treated as a compound, although the two elements (tea & bread) are in both (22a) & (22b). Indeed, the meaning of the composite *tea bread*, is a bit more than the sum of the meanings of *tea* and *bread*.

(22) a. *He likes [tea and bread]*. (phrase)

b. *He likes [tea bread]* (compound)

Coordination is quite a reliable criterion for distinguishing phrases from compounds in Kusaal. Whilst the constituents of phrases can be coordinated, the various constituents in compounds cannot be coordinated using either the noun phrase or verb phrase coordinators: *nɛ* and *ka* respectively in Kusaal. The following examples which can pass as phrasal compounds in English cannot be rendered in similar form in Kusaal.

(23) a. He is a bicycle and motor repairer.
b. She is a rice and beans seller.
c. He is a farm and game lover

(24) a. *O* *anɛ* *onɛ* *maan* *moto* *nɛ* *kɛɛkɛnam*.
3SG COP someone makes motor CONJ bicycle
'He is someone who repairs motors and bicycles'

b. *O* *anɛ* *onɛ* *nɔŋ* *kuob* *nɛ* *tɔn'ɔsʊg*.
3SG COP someone like farm.NML CONJ hunt.NML
'He is someone who loves farming and gaming.'

c. *O* *anɛ* *onɛ* *kuosid* *mui* *nɛ* *bɛŋa*.
3SG COP someone sell.IMPV rice CONJ beans
'S/he is someone who sells rice and beans.'

It can be observed that the coordinate compounds in English are rendered as coordinate phrases in Kusaal. It is therefore observed that, whilst phrases can be coordinated, compounds do not lend themselves easily to coordination in Kusaal. Additionally, any attempts to break a compound into its composite parts and use the coordinator *nɛ* or *ka* where applicable, changes the meaning of the compound to something entirely different.

(25)

Compounds	**Coordinate phrases**
i. *ba'a+biig*	i. *ba'a nɛ biig*
father+son	father CONJ son
'my father's son/sibling'	'father and son'
ii. bin'iskpaam	ii. *bin'isim nɛ kpaam*
milk.oil	milk CONJ oil
'butter'	milk and oil'

In effect, coordination, as demonstrated, provides a good basis for differentiating compounds from phrases in Kusaal.

5.9. Inflection

Inflection is one of the criteria suggested for differentiating compounds from phrases in the literature although it appears not to be entirely effective as a cross-linguistic criterion. Inflectional languages commonly inflect the individual words of phrases when same cannot be said of compounds which are composed of not full forms of words but stems (Lieber & Štekauer 2009). Using Hebrew and Arabic for instance, it has been shown that free pluralization of non-head proves reliable in differentiating between phrases and compounds (Altakhaineh 2016a:8-9, 2016b, d:135). However, some examples from English show that although most compounds are inflectionless (*houseboat* and *spaceship*) others described as 'descriptive genitives (*children's hour* or *girls' club*) take inflections (Altakhaineh 2016c:70, Bauer, Lieber & Plag 2013:436, Lieber 2005:376).

Inflectional marking on N+Adj phrases in Kusaal presents two situations: (i) the possibility of realising number on the individual lexemes in the phrase, and (ii) the possibility of number marking only on the modifier (Abubakari 2018:52, 2022).

(26)

	Noun Phrase (SG)	**Noun Phrase (PL)**	**Unacceptable permutations**
a.	*dav vɛnliŋ*	*dap vɛnla*	**dap vɛnliŋ*
	man beautiful	man.PL beautiful.PL	man.PL beautiful.SG
	'handsome man'	'handsome man'	**dau vɛnla*
			man.SG beautiful.PL
b.	*pv'a giŋ*	*pv'a gima*	**pv'ab gima*
	woman.SG short.SG	woman.SG short.PL	woman.PL short.PL
	'short woman'	'short women'	
c.	*yir tita'ar*	*ya tita'ada*	**yir tita'ada*
	house.SG big.SG	house.PL big.PL	house.SG.big.PL
	'big house'	'big houses'	**ya tita'ar*
			house.PL big.SG

It is important to add that, anytime number is marked on the head in the phrases above, same must reflect on the modifier, however, the reverse is not always the case. Thus, number is marked on (i) modifier only, (ii) both head and modifier and (iii) never head alone. This can be said to follow cross-linguistic observation of inflectional languages.

Compounds present a regular pattern in number marking. Comparing inflectional marking on phrases to that of compounds, we observe that number is only marked on the head of the compound. This will answer any question of why so-called phrases that are written as single units are not considered as compounds. The main reason is that, as a single word, inflection appears only ones in the compound and is usually marked on the head constituent which is the locus of inflections (Lieber & Štekauer 2009). Generally, then, phrases and compounds can be said to inflect differently in Kusaal.

(27)

Compounds (SG)	**Compounds (PL)**	**Unacceptable permutations**
ba'a+biig father.child.SG 'sibling'	*ba'a+biis* father.child.PL 'siblings'	* *ba'anambiis* father.PL.child.PL * *ba'anambiig* father.PL.child.SG
karim+saam read.father 'teacher'	*karim+saamnama* read.father.PL 'teachers'	**karimnamasaamnama* read.PL.father.PL **karimnamasaam* read.PL.father.SG
nwad+bil moon.small 'star'	*nwad+bibis* moon.small.PL 'stars'	**nwadnama bibis* moon.PL. star.PL **nwadnama bil* moon.PL small.SG

In general, whilst compounds follow a regular pattern of inflecting for number on only the head, phrases do not. Phrases can have number marked on every constituent. Furthermore, expressions that could be described as 'descriptive genetives' in Kusaal, also considered as compounds, show a systematic pattern such that they do not take inflection. As indicated in Abubakari (2018), Kusaal does not have an overt inflectional marker for the genitive (28a, b). However, number marking on descriptive genitives only occurs on the non-head of the compound (29a-d). Any additional number marking on the head word implies multiples of the referent of the compound.

(28) a. *Wina'am siig*
God spirit
'God's spirit'

b. *zimi la'ad*
fish item.PL
'fishnets, fishing equipment'

(29) a. *biis dɔɔg*
child.PL.POSS room
'children's room'

b. *biis saŋa*
chile.PL hour
'children's hour'

c. *Adolub yir*
Adolub.POSS house
'Adolub's house'

d. *pu'ab tuongat*
woman.PL.POSS leader
'women's leader'

Generally, the observation in this subsection is that inflection is one possible criterion for distinguishing compounds from phrases in Kusaal. The following table presents a summary of basic observations.

(30) Inflectional markings on phrases and compounds

Phrases	**Compounds**
Can inflect only modifier	Inflects only head
Can inflect both head and modifier	Cannot inflect head and modifier
Cannot inflect only head	Cannot inflect modifier
	Absence of genitive inflection
	Number marked on only modifier for descriptive genitives

There remains a question about the eligibility of the proposals to classify N+Adj of the form stem+adjective as compounds (Bodomo & Abubakari, 2017; and Musah et al., 2013). Although the root is what gets attached to the modifier, making it the semantic head, yet it is not the constituent that carries inflection, as demonstrated in (31).

(31)

Constituents	**Gloss**	**Compound**	**Translation**
bi+wɔk	child+tall+SG	*biwɔk*	'tall child'
bi+wa'a	child+tall+PL	*biwa'a*	'tall children'
bi+svŋ	child+good+SG	*bisvŋ*	'good child
bi+suma	child+good+PL	*bisuma*	'good children'

These examples behave more as phrases than compounds in inflectional marking. Thus, the modifier is what takes the number inflection unlike the head which is marked for number in compounds. Classifying N+Adj of the form stem+adjective as compounds, as suggested by Bodomo & Abubakari (2017) and Musah, Naden & Awimbilla (2013) based on orthography alone, is therefore problematic. Following this, it is suggested that the compoundhood of stem+adjective constructs should be assessed using other criteria such as modification, insertion among others. This ensures that 'true' N+Adj compounds like (32a, b) are distinguished from N+Adj phrases like (33a, b).

(32) a. *nwad+biig*
moon.SG+child.SG
'star'

b. *nwad+bibis*
moon.SG+child.PL
'stars'

(33) b. *bʋ+bil*
Goat.SG+small+SG
'kid'

b. *bʋ+bibis*
goat.SG+small.PL'
'kids'

Additionally, the orthographic guide for demarcating compounds from phrases need to be relooked since the situation does not appear as simple as proposed.

6. Conclusion

This research has investigated various criteria proposed in the literature for distinguishing compounds from phrases and examined their viability for the task against data from Kusaal. The study finds that while criteria such as orthography, stress, and compositionality, are unreliable for distinguishing compounds from phrases in the language, others, such as displacement, coordination, inflection, referentiality, insertion, and modification, are very useful diagnostic tools for this purpose in Kusaal. The systematic application of these criteria to Kusaal data contributes to our understanding of word formation in the language with a possible extension of the phenomenon in Mabia languages in general. The contribution of this study lies in two areas: (i) it serves as a useful empirical resource as it presents and analyses a wealth of Kusaal examples, which can potentially enhance further research on the morphology and compounding patterns of the language. (ii) Additionally, it is a contribution to the theoretical debate on compounding as it evaluates proposed criteria and their cross-linguistic applicability. This enhances our understanding of the factors that distinguish compounds from phrases. The study has its limitations which provide avenue for further research. It will be worth investigating the historical development of compounds and their relationship to phrasal constructions. This can provide insights into the diachronic processes that shape the morphological structure of the language. Again, a comparative study of compounding in the Mabia languages will uncover patterns that can contribute significantly to discourses on this subject matter. Furthermore, the findings raise issues on constructions such as stem+adjective formations. These often exhibit identical features. Future study could delve deeper into these borderline cases, potentially refining the criteria for compoundhood and shedding light on the intricate interplay between morphology and syntax.

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A QUANTITATIVE STUDY OF PHONOLOGICAL AND MORPHOLOGICAL VARIANTS IN THE EVOLVING SPOKEN STANDARD IGBO VARIETY

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Abstract

The evolution of Spoken Standard Igbo used by the Igbo people in public space in Nigeria, has undergone significant developments. However, this occurrence has received limited empirical attention. This paper examines five phonological and two morphological variables in the evolving spoken Standard Igbo variety. This study aims to establish the variants with the highest rate of occurrence. Data was extracted from the available corpus of Igbo language news from seven purposively sampled radio stations in South-Western and South-Eastern Nigeria, covering the period of 2021-2022. The data was analyzed using frequency count and simple percentage values of variants. The findings from the analysis of data established a higher frequency of occurrence of the variants: 'r' over 'l', 'r' over 'y', 'h' over 'f', 'h' over 'r', 'l' over 'n', the negative morphemes 'ghi' over 'ro', 'hu' and 'gi', and the aspectual morphemes 'la' over 'na', 'le', and 'go'. This study recommends that the variants with a wider spread and higher frequency of occurrence should be prioritized for Spoken Standard Igbo. The adoption of this recommendation would minimize pronunciation variation in Spoken Standard Igbo.

Keywords: Standard Igbo, Phonological Variants, Morphological Variants, Pronunciation Choices, Sound Specialisation

Introduction

The name, Igbo is a name that represents both the language and the people who speak it as their first language in Nigeria. Standard Igbo is the perceived idea variety of the language required to communicate across the Igbo speech community (Emenanjo 2015). It is used in the media (Ikwubuzo 2019) because it is spoken and understood by a majority of Igbo person in all parts of Igbo land (Nwadike 2008). The Standard Igbo variety has been subjected to conflicts, engineered by the quest for supremacy between the Union Igbo and Central Igbo (Igboanusi 2017). The resolution of the conflicts has led to the emergence of a written standard and evolving spoken Igbo variety which had undergone several developments (Nwachukwu 1983, Emenanjo 2005, 2015). This can

be attested by the availability of numerous publications of Igbo meta-language for different subjects and courses in schools, and the development of legislative terminology for lawmakers. Also developed with Standard Igbo is the curriculum for the Primary, Secondary, Advanced Teachers College and College of Education. This has also made it possible for Igbo to be taught at all levels of education in Nigeria. It has also increased the visibility of the language in the media, especially the internet, through the point-partnership with Microsoft. However, the evolving spoken Standard Igbo still contains many phonological and morphological variants. Variants are non-distinctive forms in a language. The aim of this study is to identify the pattern of alternating variants of sound in the evolving standard Igbo used in some radio stations, and the rate at which a variant is used over the other. The goal of this exercise is to recommend the adoption of variants with most spread and high rate of usage as the standard variable among other competing variables.

Literature Review

Some previous studies show that Igbo speakers substitute one variant of Igbo sounds with another. For example, in Umunze dialect, vowel 'u' is used in the place of vowel 'o', 'a', in the place of 'i'. The velar sound 'gh' also replaces the labio-dental fricative 'f' (Eze, 2019). According to Onyeocha (2012, 2020), who did a preliminary study on the influence of Onitsha and Awka accents on the Standard Igbo used by newscasters in ABS radio and Radio Sapientia Onitsha, the dialectal aspectual marker '*go*' is used against the other variant '*la*'. Onyeocha (2012, 2020) also reported that the dialectal sound 'l' is used in the place of 'r' in standard Igbo. In another data presented by Onyeocha (2012, 2020) the variety 'r' in words such as '*rụọ'* (work) was realised as 'l' '*lụo'*. Onyeocha (2012) serves as the first preliminary study that indicates variation in the spoken Igbo used by Igbo radio newscasters who are supposed to be using a standard spoken Igbo devoid of variation. In English, which is the official language in Nigeria, newscasters alternate their pronunciations of Standard English words in a classic case of interference. According to Melefa (2019a) who investigated the pronunciations of the Nigeria Television newscasters in Channels Television, Nigeria Television Authority (NTA), Silver bird Television (STV), Television Continental News (TVC) and African Independent Television (AIT), the newscasters in these stations did not maintain a qualitative difference between some vowel segments that maintain opposition in

Received Pronunciation (RP). According to the study, the vowel /e/ in English (of the Nigerian Television Newscasters) tallies with RP, same with the low vowel /a/. However, the realisation of open and low back rounded vowels can only be equated with that of RP in the speech of 80% of the newscasters, as the remaining 20% deviated in their pronunciation style. One obvious fact is that the newscasters exploited the internal segment variations in English vis-à-vis ethnic English, Nigeria English and RP, with both internal and external factors affecting their pronunciation. A similar result of pronunciation variation was also reported in Melafa (2019b) on the use of English stress in the speech of Nigerian Television newscasters in Channels Television, Nigeria Television Authority (NTA), Silverbird Television (STV), Television Continental (TVC) and African Independent Television (AIT).

The case of Igbo becomes a cause for worry because the variations in Igbo accent where spoken standard Igbo is derived from are so many, which can confuse a hearer. Standard Igbo has just thirty-six sounds while the other Igbo local dialects have about seventy-three sounds (Aniche 2011). The number of sound variations in Igbo dialect shows the accents that interfere in the quest by the broadcasters to use the evolving spoken standard Igbo during news programme.

In various Igbo dictionaries, which serve as reference pronunciation material for newscasters, pronunciation variations abound. In Echeruo (1995), one of the Igbo dictionaries, there are alternations in the choice of 'r and 'l' in the variants *ọrụ*/*ọlụ* (work), 'r' and 'h' in *iru*/*ihu* (work) and 'l' and 'n' in the *ụnọ*/*ụlọ* (house), 'l' and 'r' also alternate in both *sọpụru* and *sọpụlu* (respect), *ụla* and *ụra* (sleep), *ọgaranya* and *ọgalanya* (wealthy person), and *usoro* and *usolo* (method). The case of 'h' and 'r' alternation is seen in the variants *nhọpụta* and *nrọpụta* (selection), 'h' and 'f' in the *ahuhu* and *afufu* (sufferings). 'l' and 'n' alternation occur in *abalị* and *abanị* (night), and *alaka* and *anaka* (branches), *elu* and *enu* (up), *kene* and *kele* (greeting). 'y' and 'r' alternate in the variants *oyia* and *oria* (Igwe 2001). Also in Eke (2001), there are also 'h' and 'f' alternation in the variants *hụ* and *fụ* (see), *afa* and *aha* (name), to mention but a few.

The challenge of having various Igbo accents in the standardisation of evolving spoken Igbo has been acknowledged by Onyeocha (2020), and Nwoga **(**1982). Specialisation of phonological variants has been proposed in tackling this challenge. Specialisation of

phonological variants entails attaching a special meaning to each of the two variant that alternate (Emenanjo 2005). According to Nwoga (1982:172):

> the existence of medial consonants in different dialects in the situation where the same spelling in the same dialects gives different meanings, offers us an opportunity to use different spelling for different medial consonants from the various dialects to create different spellings for different words in Standard Igbo.

Emenanjo (2005) also suggested that both phonological variants and affixes, should be specialised and adopted by all for pronunciation uniformity. For instance, variants with alternating variables such as 'l' and 'r' can mean different things when pronounced with a particular variable. For example '*iru'* and '*ihu'* that have the same meaning in two different Igbo dialects will have two different meanings when specialised in standard Igbo. With this type of specialisation, the alternation or substitution between the 'l' and 'r', 'r' and 'h' etc, will no longer be arbitrary, and the 'competition' between variants will cease. A good number of lexemes have been adopted from different local dialects and specialised for general usage in standard Igbo (Emenanjo 2005). Establishing the phonological and morphological variants with high frequency of occurrence in a formal speech will aid the specialisation of variants in the evolving spoken standard Igbo just like the lexemes. This is the gap which this study intends to fill by providing data for the harmonisation and standardisation spoken standard Igbo.

Methodology

The data used in this study were recorded from seven radio stations, which were purposively sampled, based on the time allotted to newscasting. These stations are Broadcasting Corporation of Abia (BCA radio), Anambra Broadcasting Service (ABS radio), Ebonyi Broadcasting Corporation (EBBC radio), Enugu State Broadcasting Service (ESBS radio), Radio Nigeria, Orient FM and Bond FM. The stations are spread over six states of Abia, Anambra, Ebonyi, Enugu, Enugu, Imo, and Lagos State respectively.42 recorded news bulletins (six from each radio station) were selected owing to time allotted to the Igbo news programme. The selected stations reflect different states where Igbo is dominantly used as L1, as well as Lagos which has a special status as Nigeria's commercial centre. By the profile of these stations, Radio Nigeria Enugu and Bond FM Lagos are federal-owned radio

stations, while ABS, EBBC, ESBS, BCA radio and Orient FM are state-owned radio stations. These stations were purposively selected because they dedicate a reasonable time to Igbo language news. The same cannot be said for most private Radio Stations. All newscasters are L1 Igbo speakers who are also fluent in English. The distribution shows that in the data recorded ABS has (8) newscasters, ESBS (8), Orient (8), BCA (8), EBBC (8) Radio Nigeria (8) and Bond FM (4).

Table 1: the selected radio stations and time alloted to news session

Station	Location	**No of Bullet in**	Newscast er state of Origin	**Time Allote d to Each Bullet in**	**Tot al**
ABS	Anamb ra	6	Anambra	30	180
Radi o Nig	Enugu	6	Enugu, Abia, Anambra , Imo	15	90
ESB S	Enugu	6	Enugu,	30	180
EBB S	Ebonyi	6	Ebonyi	15	90
Bon d FM	Lagos	6	Lagos	10	60
BCA	Abia	6	Abia	30	180
Orie nt FM	Imo	6	Imo	30	180

6 news bulletins of 30 minutes recorded from ABS Awka, EBBC, Orient FM, and BCA while 6 news bulletins of 15 minutes each were recorded in ESBS and Radio Nigeria which. A 60 minutes recording was Bond FM for 6 news bulletins. All audio recordings amounts to 960 minutes, approximately 16 hours by a total of 52 newscasters. All data were recorded between the 1st of December, 2021 to 22nd of June 2022, at about the same period of the day. The audio recording were conducted with a mini recorder and subsequently fed into a HP laptop for listening, transcription and analysis. The news broadcasts were recorded from different locations with mini recorder, while some were collected from the newscasters.

The variables identified for this study were selected through feedback from data. By the selection criteria adopted for this study, the identified variables were identified as variants in the in the Standard Igbo variety. The following variants were selected: 'l' and 'r', 'l' and 'n', 'r' and 'h', 'h' and 'f', 'r' and 'y', variants of negative morphemes '-ghi', 'ro', 'hu' and 'gi', and variants of aspectual morphemes 'go', 'ne', 'na' and 'la'. Available data were transcribed following the Onwu orthography of 1961, and other Igbo scholars such as Uwalaka (1996, 1997) and Mgbeomena (2011). In the transcribed data, tokens of occurrence are extracted from the corpus. The variants were identified, and their frequencies of occurrences were counted for analysis. This approach is considered appropriate for this study because it naturally provides trends in choices of variants which are the most heard of all variants in Igbo speech communities. In addition to this advantage, news language gains prestige from the importance attributed to its subject matter. Radio news broadcasters are generally considered to be the ultimate spoken language professionals, who may rely mainly on voice only for their occupation. This is one of the reasons the public accepts their codification as the definition of correct speech (Bell 1983). To determine the most frequent variants, their rates of occurrence were compared across the identified stations.

Findings and Discussion

1 Orient FM

The recordings from Orient FM showed that, the variants: 'r', 'h', 'r', 'l', recorded 100% in their frequency of occurrence over 'l', 'r', 'f', 'y', 'n', respectively. The negative and the aspectual markers have many realisations. '*-ghi'* recorded a higher score of 15 (53.6%) while '*-gi'* recorded a lower score of 13 (46.4%), just a difference of 7% between them. In the choice of the aspectual morpheme '*-la', '-le', '-ne'* and '*-go'*, the set of '*-le', '-ne*' and '*-go'* were less frequent in the station when compared with '*-la'*. '*-la'* variant recorded the score of 17 (58.6%), '*-le'* 3 (10.3%), '*-na'*, and 4 (13.8%), while '*–go'* recorded 5 (17.3%). '*-la'* only, recorded above half of the aspectual morpheme recorded in this radio station, while each of the rest scored less than 18% with the aspectual morpheme '*-le'* recording the lowest with a minimal margin above 10%.

2 ESBS

The recordings from Orient ESBS showed that, except the negative morpheme experienced a bidirectional pattern in the choice of pronunciations in ESBS. 'r' has a frequency of 4 (4.3%) in the pronunciation of *ọrụ* (work). It does not reflect in *ụra* (sleep) and *arụ* (to work) pronunciation choices. It has a frequency of 30 (28.3%) in the /rv/ past tense morpheme. 'r' also recorded a frequency of 10 (9.4%), 8 (7.5%), 10 (9.4%), 9 (8.4%), 9 (8.4%), 9 (8.4%), 10 (9.4%) and 6 (5.6%) in the pronunciation of *ndọrọndọrọ* (election/section), *ntọri* (kidnapping), *ekpere* (prayer), *okporoụzọ* (main road), *akụrụngwu* (tools), *mgborogwu* (roots), *mkpuru* (seed) and *mpaghara* (part of) respectively. The variant /l/ has a frequency of 40 (52.6%) in *ọlụ* (work), 8 (10.5%) in *ụla* (sleep), 18 (23.6%) in *alụ* (to work) and 10 (13.1%) in '-rV' past tense marker, while the pronunciation *ndọlọndọlọ* (election/section), *ntọli* (kidnapping), *ekpele* (prayer), *okpoloụzọ* (main road), *akulungwu* (tools), *mgbọlọgwu* (roots), *mkpulu* (seed) and *mpaghala* (part of) are all absent in the pronunciation choices of ESBS radio newscaster. Out of these twelve words, only two words recorded only the 'l' variant while eight others recorded only the 'r' variant. The word *ọrụ* (work) and the past tense morpheme have a bidirectional pattern of pronunciation where both 'r' and 'l' variants are utilised. Interestingly, they occur in unequal proportions. The 'l' variant was higher in *ọlụ* unlike in past tense morpheme where 'r' recorded a higher occurrence than 'l'. In all, the choice of 'r' is more than that of 'l' which indicates that 'l' is marginally used in ESBS.

In the frequency and percentage of score of 'r' and 'y' choices of pronunciation in Igbo radio news, 'r' has a frequency of 3 (50) in *ọrịa*. (sickness). It does not reflect in *arịrịọ* (begging), while in *ịrịọ* (to beg), it has a frequency of 3 (50%). 'y' on the other hand has a frequency of 18 (45%) in *ọya* (sickness), 12 (30%) in pronunciation of *ayịyịọ* (sickness), and 10 (25%) in *ịyọ* (to beg). 'y' variants occurred in the three words while 'r' occurred in only two words. The frequency at which the 'y' occurred in Igbo news in ESBS is greater than 'r'.

Between 'h' and 'f', 'h' has a frequency of 3 (15.7%) in *ahụ* (to see), 3 (15.7%) in the pronunciation choice of *hụta* (saw), 4 (21.0%), 4 (21.0%) and 5(26.3%) are recorded only in the words *ihe* (something), *ahụhụ* (suffering) and *aha* (name) pronunciation choices respectively. On the other hand, 'f' has a score of 10 (31%) in *afụ* (to see), 15 (46%) in *fụta*

(saw), 4 (12%) in *ife* (something), and 3 (9.3%) in *ahụhụ* (suffering). The aggregate score shows that the choice of 'f' pronunciation is more in this station than 'h'.

The pronunciation of 'r' has a frequency of 20 (36.3%) in the pronunciation of *iru* (front), 13 (23.6%) in the pronunciation of *nrọpụta* (selection/election), and 12 (21.8%), 4 (7.2%), 2 (3.6%), and 4 (7.2%) in the pronunciation of *ọra* (all), *arapụ* (to leave), *arụ* (body) and *ori* (stealing) respectively. 'h' sound has frequency of 2 (15.3%) in *ihu* (front), 2 (15%) in *nhọpụta* (selection/election), 3 (23%) in *ahapụ* (do not leave), 4 (30.7%) in *ahụ* (body) and 2 (15.3%) in *ohi* (stealing) while *ọha* (all) is absent. Out of these six words, 'r' pronunciation occurred in five words, while 'h' also occurred in five words. The aggregate scores recorded for both shows that 'r' pronunciation occurred higher than the 'h' pronunciation.

In the pronunciation of 'l' and 'n', 'l' has a frequency of 40 (41.2%) in *ụlọ* (house) and 8 (8.2%), 12 (12.3%), 8 (8.2%), 8 (8.2%), 4 (4.1%), 7 (7.2%), 5 (5.1%), and 5 (5.1%) in *niile* (all), *ala* (land) *imemila* (eliminate), *ọnụọọlaa* (fight-and-run), *kwalite* (promote), *ọbụla* (every), *alaka* (branch) and *kaosiladi* (not withstanding) respectively. /n/ on the other hand had the frequency score of 1 (16.9%) in *anapụ* (snatch), 3 (48.9%) in *niine* (all of them), and 2 (33.9%) in *kwanite* (promote), while these variants *ụnọ*, *imemina*, *ọnụọọnaa*, *ọbụna*, *anaka*, and *kaosinadi* were all absent. Among the nine words where these 'n' and 'l' variants were investigated, 'l' and 'n' shared their occurrence in three words. Only 'l' pronunciation was recorded in six words.

By their frequency of occurrence, 'l' occurs more than 'n' in this station. The score of variants of aspectual morphemes '-go' and '-la' attached to many Igbo verbs used by the ESBS newscasters indicates that '*-go'* has a frequency score of 12 (25%) while '*-la'* appeared 36 times (75%) in the ESBS radio. The frequency of use of '-la' over '*-go'* aspectual morpheme shows that '-la' is more highly used than '*-go'*.

3 EBBC

The recordings from Orient EBBC showed that, between the 'r' and 'l' variants, 'r' recorded 100% frequency of occurrence over 'l'. In the pronunciations of involving the variants 'r' and 'h', 'r' scored 2 (28.5 %) in iru, and 5 (71.4%) in *nrọpụta*, while 'h' has a frequency score of 16 (59.2) in *ihu* (front) and 11 (41.4%) in *nhọpụta* (selection/election).

Their scores show that 'h' occurs more frequently than 'r' in these two words in this station. Between 'r' and 'y' variants, in pronunciation choices among EBBC Igbo newscasters, 'r' has a frequency of 13 (52%) in *ọrịa* (sickness) and 12 (48%) in the pronunciation choice of *arịrịọ* (begging). 'y' does not reflect in *aya* (sickness), it has the score of 3 (100%) in the pronunciation of *ayịyịọ* (begging).

In all, 'r' occurs more frequently and in more words than 'y'. As regard the variants of aspectual morphemes in this station, '*-la'* and '*-go'* recorded 36 (75%) and 12 (25%) respectively. '-go' aspectual morpheme contributed to one quarter of the aspectual morpheme used in the stations. For the variants of negative morphemes, '*-ghi'* has a frequency score of 21 (52.2%), '-gi' has a frequency score of 15 (37.5%) while '*-hu'* recorded the frequency score of 4 (10%). Only the negative aspect '*-ghi'* alone, contributed over 50%, out of the three variants of negative morpheme used in this station. The use of the aspectual morpheme '-go', and the negative morpheme '*-gi'* and '*-hu'* are very minimal in this station. The aspectual morpheme '*-go'* occur in limited form especially when interfixed between a verb and the past tense marker as seen in the word *jigoro* (has held), *nwegoro* (has had), *sọgoro* (has followed), *lagoro* (has gone).

4 ABS

The recordings from ABS showed that 'l' has a frequency of 40 (23%) in pronunciation of ọlụ, 10 (5.2%) in the '–lV' past tense morpheme. It has frequency score of 9 (5.3%), 9 (5.3%), 9 (5.3%), 10 (5.9%), 5 (2.9%), 10 (5.9%), 9 (5.3%), 11 (6.3%), 11 (6.5%), 8 (4.7%), 10 (5.9%), 8 (4.7%) and 8 (4.3%) in the pronunciation of *ụla* (sleep), *ọkala* (half), *mbelede* (emergency), *ịlụwanye* (to work more), *ịlụ* (to work), *nkali* (being stronger), *okwulọkaa* (outstanding fellow), *ọgalaanya* (wealthy man), *mmeli* (triumph), *akụlụngwa* (tools), *akpalumagwa* (character) and *usolo* (method) respectively. The 'r' on the other hand recorded the frequency score of 5 (12.1%) in *ọrụ* (word), 28 (67.9%) in the '–rV' past tense morpheme, 3 (7.3%) in *mmeri* (triumph), 2 (4.7%) and in *akụrụngwa* (tools), and 3 (7.3) in *usolo* and absent in the variants *ọkachara* (experts), *ọgaranya* (wealthy man), *ọkwụrụọkaa* (outstanding fellow), *nkari* (beingstronger), *iru* (front), *iruwanye* (work more), *mberede* (emergency), *ọkara* (half) and *ụra* (sleep). Out of the fifteen words where pronunciation was examined, only six words contained both 'l' and 'r' pronunciations. In those six words,

/r/ only recorded a higher frequency of occurrence in the past tense morpheme while 'l' dominated in the remaining five words.

Between 'r' and 'h' variants, the frequency and percentage of 'r' and 'h' in the pronunciation choices of ABS broadcasters, revealed that 'r' has a frequency of 25 (44%), 17 (30.3%), 6 (10.7%) and 8 (14.2%) in *iru* (front), *nrọpụta* (selection/election), *ọra* (all) and *arụ* (body). /h/ recorded 6 (66%) and 3 (33.3%) in the pronunciation of *ihu* (front) and *ahụ* (body). The choice of 'r' is more frequent than 'h' as it occurred in all four words whereas 'h' occurred in three words with a low frequency.

As for the variants 'f' and 'h', the frequency and percentage scores show that, 'f' has a frequency score of 17 (53.1%) in *afụ* (to see), 7 (21.8%) in *ọhụrụ* (new) and 8 (25%) in *ụnyafụ* (yesterday). On the other hand, 'h' recorded a frequency of 3 (21.8%) in pronunciation of *ọhụrụ* (new) but was absent in the variants *ahụ* (body), and *ụnyahụ* (yesterday). The score recorded in 'f' shows that it occurs more frequently and in more words, than 'h'.

Between 'l' and 'n' variants, 'n' has frequency of 13 (10.3%) in *abanị* (night), 7 (5.5%) in *kwanite* (promote) and 6 (4.7%), 5 (3.9%), 7 (5.5%), 7 (4.7%), 10 (7.9%), 30 (23.8%), 8 (6.3%), 6 (4.7%), 15 (11.9%), and 12 (9.5%) in the pronunciation of *anaka* (branch), *etolite* (growing), *imemina* (eliminate), *kene* (greet), *niine* (all), *nnekota* (supervise/look after), *ụnọ* (house), *ọnụọọnaa* (fight-and-run), *ọbụna* (all) and *mmanite* (begin) respectively, while 'l' recorded a frequency scores of 2 (13.3%), 1 (6.6%), 2 (13.3%), 1 (6.6%), 3 (20%), 2 (13.3%), 1 (6.6%), and 3 (20%) in *abalị* (night), *akwalite* (promote), *etolite* (growth), *imenila* (eliminate), *kele* (greet), *niile* (all), *nlekota* (supervise/look after), *ọnụọlaa* (fight-and-run) but absent in *alaka* (branch), *ọbụla* (every) and *mmalite* (begin). Although 'n' and 'l' shared occurrence in eight words, 'l' recorded a very low frequency, and had no absolute occurrence as against 'n' that recorded absolute occurrence in four words. For the variants of the aspectual morpheme, '*-go'* recorded a score of 41 (69.5%) whereas the '*-la'* variant recorded a frequency score of 18 (30.5%). The score shows that '-go' aspectual morpheme is highly preferred to '*-la'* which recorded one-quarter of all the frequency values.

5. BCA

In the eleven pronunciation choices recorded in BCA, nine of them show a unidirectional pattern of pronunciation, while only the negative and aspectual markers have variants in BCA radio. The scores for the aspectual markers and negative morphemes show that /-'*ghi'* has a frequency score of 15 (53.6%), while '*-gi'* has a frequency score of 13 (46.4%), giving an 8% difference between the two negative morphemes. The other variants of the negative morpheme '*-ro'* and '*-hu'* were not recorded in this station. The score of the two variants of the aspectual morphemes in this radio station shows that '*-na'* and '*-go'* are less frequent when compared with '*-la'* where they recorded a frequency scores of 15 (41.7%), 13 (36.1%), and 8 (22.2%) respectively.

6. BOND FM

Out of the seven markers recorded in Bond FM, five showed a unidirectional pattern in the choice of pronunciation while two variables manifest internal variation. Their scores show that the aspectual morpheme 'na' and 'la' recorded 2 (6.1%) and 31 (93.9%) respectively. On the other hand, the negative morpheme '*-ghi'* has a frequency of 27 (84.4%) while '-gi' has a frequency of 5 (15.4%).

7. RADIO NIGERIA

The recordings from Radio Nigeria Enugu showed that, the frequencies and percentage scores for variables in different words show that the pronunciation choice of /l/ has a frequency of 5 (27.7%) in the pronunciation of *ọlụ* (work). It does not reflect in *egwulegwu* (play), *okpoloụzọ* (main road), *usolo* (method), *akụlụngwa* (tools), *akpelima* (criminal), *ndọlọndọlọ* (contest), and *mkpọlọ* (prison) while a frequency of 13 (72.2%) was recorded in the articulation of 'rV' past tense morpheme. The 'r' variant on the other hand has frequency of 22 (14.3%), 30 (19.1%), 10 (6.4%), 9 (5.7%), 13 (8.3%), 12 (7.6%), 18 (11.5%) and 20 (12.12 %) 4 (2.4%), 8 (5.1%), and 10 (6.4%), in *ọrụ*, past tense morpheme 'rV', *egwuregwu* (play), *okpuru* (under) *okporoụzọ* (main road), *usoro* (method), *akụrụngwa* (tools), *okpurukpu* (hard), *akperima* (criminal), *ndọrọndọrọ* (contest), and *mkpọrọ* (prison) respectively. From the data above, 'r' and 'l' share occurrence in *ọlụ/ọrụ* (work) and the past tense morpheme, with 'l' recording a very low score among the two variants.

Between the variants ‘r’ and ‘h’, in the pronunciation choices in Radio Nigeria Enugu, ‘r’ has a frequency score of 5 (41.6%) in *iru* (front). It does not reflect in *ọha* (all), but reflected with a frequency score of 7 (58.3%) in *nrọ̣puta* (selection). On the other hand, ‘r’ sound has a frequency of 10 (37.0%) in *ihu* (front), 11 (58.3%), and a score of 0% in *nhọpụta* (election/selection) and *ọha* (all) respectively. In summary, ‘h’ recorded a higher score than ‘r’ although at a very marginal level.

In the pronunciation between ‘f’ and ‘h’, ‘f’ has frequency of 7 (77.7%) in *afụ* (suffer) and 2 (22.2) in *aha* (name). It does not reflect in *ọfụụ* (new), while ‘h’ has a frequency score of 19 (59.3%) in *ahụ* (body), 3 (9.3) and 10 (31.25%) in *aha* (name) and *ọhụrụ* (new) respectively. Like the case of ‘h’ and ‘r’ above, ‘h’ also recorded more occurrences of each word and in the number of words over ‘f’.

In pronunciation choices made by newscasters in Radio Nigeria Enugu, ‘r’ has a frequency of 3 (42.8%) in *ọria* (sickness), and a frequency of 4 (57.1%) in the pronunciation choice of *arịọ* (to beg), while *ọrịrịọ* (begging) is absent. ‘y’ on the other hand has a frequency of 17 (58%) in *ọya* (sickness) and a frequency score of 12 (41.3%) in pronunciation choice of *ayịyịọ* (begging), while *ayịọ* (begging) is absent. The two sounds shared their occurrence in one word and excluded each other in the other words.

In pronunciation choices of Igbo radio newscasters in Radio Nigeria, ‘l’ has a frequency of 2 (9.0%) in *kwanite*, 6 (27.2%) in the pronunciation choice of *ọbụna* and 2 (9.0%) and 12 (54.5%), in *niine* (all) and *ụnọ* (house) respectively. *Kwanite* (promote), *nnọkọta* (coming together), *abanị* (night), *mmanite* (beginning), *kponite* (call on), *etonite* (growth) and *kaosinadi* (notwithstanding) are all absent in ‘n’ pronunciation. ‘l’ sound has a frequency of 8 (6.5%) in *kwalite* (promote), 6 (4.0%) in *kelee* (greet), and 8 (6.5%), 10 (8.19%), 10 (8.19%), 13 (10.6%) 5 (4.0%), 26 (21.3%) 11 (9.0%), 17 (13.9%), 8 (6.5%) in the pronunciation choice of *nlekota* (supervise), *ọbụla* (every), *niile* (all), *abalị* (night), *mmanite* (begin), *ụnọ* (house), *etolite* (grow), *kpolite* (call on) and *kaosinadi* (notwithstanding). ‘n’ and ‘l’ sound shared occurrence in only four words, with ‘n’ recording more frequencies of occurrence in just two words. In all, ‘l’ recorded more frequency of occurrence than ‘n’ in Radio Nigeria Enugu.

As for the variants of the aspectual morpheme, ‘*-go’* recorded a score of 25 (45.5%) while ‘*la’* recorded a score of 30 (54.5%). The difference in the occurrence of these two aspectual

morphemes is 9%. Like some other radio stations, 'la' is used more than '*go'* aspectual morpheme in this station. The score of the variants of negative morphemes indicates that variants of the negative morpheme '*gi'* and 'ghi' recorded a score of 18 (51.4%) and 12 (43.3%) respectively in Radio Nigeria.

Comparative Value of Variants

This section examines the rate which these variants: 'l' and 'r', 'y' and 'r', 'f' and 'h', 'r' and 'h', 'n' and 'l', '-ghi' '-ro', '-hu' and '-gi', and '-la', '-na', '-le' and '-go' are used in all radio stations.

	l%	**r%**
ABS	80	20
ESBS	53	47
EBBC	0	100
ORIENT	0	100
BCA	0	100
RADIO NG	18	82
BOND FM	0	100

Table 2. The total percentage score of h and r

The percentage score of the variants 'l' and 'r' show that ABS recorded the highest number of 'l' pronunciation at 80%, followed by ESBS, 53% and Radio Nigeria, 18% while 'r' recorded 100% occurrence ESBS, ORIENT, BOND FM and BCA, and 82%, 47% and 20% in Radio Nigeria, ESBS and ABS respectively.

	h%	**r%**
ABS	3	97
EBBC	80	20
ESBS	18	82
ORIENT	100	0
BCA	100	0
RADIO NG	30.8	69.2

BOND FM	100	0

Table 3 the total percentage score of h and r

Between 'h' and 'r' in all stations, 'h' recorded the percentage score of 3%, 80%, 18%, 100%, 100%, 30.8% and 100% in ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria and Bond FM respectively, while 'r' recorded the percentage score of 97%, 20%, 82% and 69.2 % in ABS, EBBC, ESBS and Radio Nigeria respectively but was absent in Orient FM, BCA and Bond FM.

	r%	y%
ABS	0	100
EBBC	81.2	18.8
ESBS	10	90
ORIENT	100	0
BCA	100	0
RADIO NG	80	20
BOND FM	100	0

Table 4. the total percentage score of r and y

In the choice of 'r' and 'y' in all stations, 'r' recorded 82%, 10%, 100%, 100%, 80% and 100% in EBBC, ESBS, Orient FM, BCA, Radio Nigeria and Bond FM respectively but was absent in ABS, while 'y' recorded the percentage score of 100%, 90%, and 20% in ABS, ESBS and Radio Nigeria respectively but was absent in BCA, Orient FM, EBBC and Bond FM.

	h%	**f%**
ABS	5	95
EBBC	100	0
ESBS	20	80

ORIENT	100	0
BCA	100	0
RADIO NG	78	22
BOND FM	100	0

Table 5 the total percentage score of h and f

In the choice of 'h' and 'f', 'h' recorded the scores of 5%, 100%, 20%, 100%,100%, 78% and 100% in ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria, and Bond FM respectively, while 'f' recorded a percentage score of 95%, 80%, and 22% in ABS, ESBS and Radio Nigeria respectively, but was absent in BCA, EBBC, Orient and Bond FM.

	l%	**n%**
ABS	8	92
ESBS	95	5
EBBC	100	0
ORIENT	100	0
BCA	100	0
RADIO NG	85	15
BOND FM	100	0

Table 6 the total percentage score of 'l' and 'n'

For 'l' and 'n', the percentage of occurrence above shows that 'l' recorded the score of 8%, 95%, 100%, 100%, 100%, 85% and 100% in ABS, ESBS, EBBC, Orient FM, BCA, Radio Nigeria and Bond FM respectively, while 'n' recorded a percentage score of 92%, 5% and 15% in ABS, ESBS and Radio Nigeria respectively but was absent in BCA, EBBC, Orient FM and Bond FM.

	la%	**go%**	**na%**	**le%**
ABS	31	69	0	0
EBBC	75	25	0	0
ESBS	75	25	0	0
ORIENT	58	18	14	10
BCA	42	20	38	0
RADIO NG	55	45	0	0
BOND FM	94	0	6	0

Table 7 the total percentage scores of variants of aspectual morpheme

Between the variants of aspectual morphemes, the table above shows ‘go’ aspectual morpheme recorded 68%, 25%, 25%, 18%, 20%, 45% and 0% in ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria, and Bond FM respectively, while ‘-la’ on the other hand recorded a percentage score of 31%, 75%, 75%, 58%, 42%, 55% and 94% in ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria and Bond FM respectively. The aspectual morpheme ‘-na’ recorded a percentage score of 14%, 38% and 6% in Orient FM, BCA, and Bond FM respectively but was absent in ABS, EBBC, ESBS and Radio Nigeria, while ‘-le’ aspectual morpheme recorded 10% only in Orient FM.

	-ghi	-gi	-hu	-rɔ
ABS	98	0	0	2
ESBS	100	0	0	0
EBBC	54	38	8	0
ORIENT	54	46	0	0
BCA	54	46	0	0
RADIO NG	54	32	0	14
BOND FM	90	10	0	0

Table 8 the total percentage score of variants of negative morpheme

In the choice of variants of negative morpheme in all stations, '-ghị' is shared by all radio stations, namely: ABS, EBBS, ESBS, Orient FM, BCA, Radio Nigeria, and Bond FM. These stations recorded a percentage score of 98%, 100%, 54%, 54%, 36% and 90% respectively. ESBS, Orient FM, BCA, Radio Nigeria, and Bond FM shared the use of the negative morpheme '-gi' with a recorded score of 38%, 46%, 46%, 47% 32% and 10% respectively. '-hu' negative morpheme used only in EBBC, and Radio Nigeria recorded a percentage score of 17% and 8% respectively, while '-ro' negative morpheme used in ABS only recorded a score of 8%.

Conclusion

This study investigates the phonological and morphological variation in spoken Standard Igbo, focusing on the language used by Igbo newscasters. This goal is considered as an essential one for the expansion of the frontier of the nature of spoken Standard Igbo in public space. Seven variants occurring at varying degrees involving 'l'and 'r', 'y' and 'r', 'f' and 'h', 'r' and 'h', 'n' and 'l', 'ghi' 'ro' and 'gi', and 'la' 'na' 'le' and 'go', were found in the pronunciation of Igbo newscasters. In the choice of 'l' and 'r', ABS, EBBS and Radio Nigeria adopt a two way pronunciation but at different proportions in the choice of 'l' and 'r' while BCA, Orient, EBBC and Bond FM adopts one pronunciation choice by sticking to only the 'r' pronunciation. In the choice of 'h' and 'r', the use of 'h' is absolute in BCA, Orient FM and Bond FM while ABS, ESBS, Radio Nigeria and EBBC used both /r/ and 'h' pronunciations at varying degrees. In the choice of 'y' and 'r', the 'y' only pronunciation is seen only in ABS, while the 'r' only pronunciation is recorded in EBBC, Orient FM, BCA and Bond FM, while other radio stations apart from ABS use the two variants. Bond FM, Orient FM, BCA, ESBS, ABS and EBBS use the 'h' pronunciation, while only ABS, ESBS, and Radio Nigeria use both the 'f' pronunciation and the 'r' pronunciation at varying degrees.

In the choice of 'l' and 'n', a two way pronunciation is seen in ABS, ESBS, and Radio Nigeria while 'l' pronunciation only is seen in Bond FM, BCA, Orient FM and EBBC. In the choice of the variants of aspectual morphemes, the use of 'la' aspectual morpheme spread in all stations, namely ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria and Bond FM. The '-go' aspectual morpheme is used in just six radio stations which are ABS,

EBBC, ESBS, BCA, Orient FM and Radio Nigeria. Also, the '-na' aspectual morpheme is used in three radio stations namely Orient FM, BCA and Bond FM, while the '-le' aspectual morpheme is used in just Orient FM. Also ABS, ESBS, EBBC, Radio Nigeria and Bond FM employed just two aspectual morphemes but different ones. ABS, ESBS, EBBC, Radio Nigeria and Bond FM use two aspectual morphemes of 'go' and '-la', Bond FM used same number but '-la' and '-na'. BCA used three aspectual morphemes, which are '-go', '-na' and '-la', while Orient use four aspectual morphemes, namely: '-go', '-la', '-na' and '-le'.

In the choice of variants of negative morphemes, the use of '-ghi' negative morpheme spreads in all stations, namely ABS, EBBC, ESBS, Orient FM, BCA, Radio Nigeria and Bond FM. The '-gi' negative morpheme is used in just five stations which are EBBC, Orient FM, BCA, Bond FM and Radio Nigeria, while the '-ro' negative morpheme is used in ABS and Radio Nigeria. Additionally, the '-hu' negative morpheme is only used in EBBC. Also, ESBS used just one negative morpheme which is '-ghi'. ABS, Orient FM, BCA and Bond FM employed just two negative morphemes but different ones. Bond FM, BCA, and Orient used only '-ghi' and '-gi', while ABS used '-ghi' and '-ro'. EBBC and Radio Nigeria employed three negative markers but different ones too. While EBBC used '-ghi', '-gi', and '-hu', radio Nigeria used '-ghi', '-gi', and '-ro'.

There is no doubt that various pronunciations pose a problem of uncertainty of right pronunciation for people in public space. Broadcast speech requires a spoken standard variety that will not put anyone in any situation of uncertainty because broadcast speech in most speech communities is an embodiment of standard variety (Bell 1983, Fromkin 2017 et al). If the issue of spoken standard is not resolved, it will definitely impact the spoken Igbo in media community and the public space in general. Since Igbo broadcast speech is the subtle face of the spoken standard Igbo, this study recommends the adoption of the variant with high frequency of occurrence in the standardisation of spoken standard Igbo which is also concur with Nwoga (1982) and Emananjo (2005).

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VISITING A NEGLECTED LEXICAL CATEGORY: AN OVERVIEW OF DAGBANI ADVERBIALS

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Abstract

This paper provides a descriptive overview of adverbials in Dagbani, a Mabia (Gur) language spoken in northern Ghana, focusing on their distributional characteristics and the possibilities of adverbial sequencing. We show that Dagbani adverbials occur in clause-initial, postverbal, and clause-final positions but are banned in the preverbal position. We also demonstrate that focalization and topicalization are instrumental in the occurrent of Dagbani adverbials in the sentential initial position. We further show that the default distributional property of Dagbani adverbials is the postverbal position, with the exception of the epistemic adverbials and the grammatical aspectual adverbials, which are disallowed in this position. Whereas the former category of adverbials occur only clause initially, the latter occur in the position immediately before the verb. Finally, we demonstrate that whereas certain adverbial combinations present a flexible linear ordering, some combinations occur in a fixed linear order, hence, do not give room for reordering. The descriptive approach employed in this paper enables us to provide an exhaustive analysis of the data presented without binding it to any formal syntactic theory, which may limit the discussions to its principles. The data used in this study are drawn from primary sources. Whereas some of the data are obtained from fieldwork, others are constructed based on the native intuitions of the authors.

Keywords: Dagbani, Mabia, syntax, adverbials, linear ordering

1. Introduction

This paper discusses the syntax of Dagbani adverbials, a lexical category that remains largely unexplored in West African languages. Although Dagbani has received considerable research attention, adverbials have remained neglected. This study explores the syntactic properties of adverbials in Dagbani, focusing on their distributional features and possible adverbial sequencing. Adverbs have received scholarly attention (Jackendoff, 1972; Cinque, 1999, 2004; Ernst, 2002, 2004, 2007, 2020; Givon, 1993; Yin, 2002; Seiichi,

1972; Allerton and Cruttenden, 1974; Haegeman, 2010; Laenzlinger, 2015; Diepeveen, 2015; Rauh, 2015), but are largely unexplored in West African languages (Saah 2004; Lusekelo, 2010; Nabarese, 2017; Asamoah, 2018).

The adverb class remains hard to define. Givon (1993) acknowledges this and several others (Saah, 2004; Berk, 1999; Pittner et al., 2015). According to Givon (1993:28), an adverb is "the hardest to define" among the four major word classes. For instance, it is described as the most "nebulous and puzzling of the traditional word classes" (Quirk et al., 1985: 438), "a mixed bag" and "a notoriously difficult class" (Borjas & Burridge, 2010: 22), a "wastebasket category" (Morzycki, 2015:193), and a "grammatical dustbin" (Trask, 1993: 10). All the same, there have been attempts to describe the adverb as a word class or a grammatical category (Trask, 1993; Schaefer, 2015) whose members are often grammatical adjuncts of a verb that mostly give a semantic notion of time, manner, place, instrument or circumstance (Trask, 1993: 9). In this paper, we see an adverb as any word (including grammatical particles) that modifies an adjective, verb, adverb, or an entire proposition.

We differentiate between adverbs and adverbials in Dagbani. Whereas an 'adverb' refers to a lexical word with a semantic notion of manner as in *vi*ɛ*nyɛla* 'well,' time, e.g., *pumpɔŋɔ* 'now,' place, e.g., *kpe* 'here,' frequency, e.g., *buta* 'thrice,' and pace, e.g., *baalim* 'slowly,' 'adverbial' is a grammatical element in the clause which provides more information about the verb, adjective or adverb. It may indicate time, manner, place, frequency, reason, condition, etc., which may come in different forms, either as adjectives, AdvPs, NPs, PPs, or clauses, in the case of Dagbani. Although the terms 'adverb' and 'adverbial' are used interchangeably, they differ. While an 'adverb' is a lexical category treated as an open word class, an 'adverbial' is an element of a clause, like the subject, verb, object, or complement (cf. Trask, 1993; Pittner et al., 2005; Schaefer, 2015).

This study focuses on a descriptive account of the distributional properties of Dagbani adverbials. Thus, we refer to any lexical category (belonging to the class of an adverb, NP, PP, AdjP, or verbal clause) with a syntactic function of the adverb as an adverbial since adverbs by syntactic function are referred to as adverbials.

Dagbani has three major dialects: Tomosili, Nanunli, and Nayahili (Issah, 2011a, 2011b; Olawsky, 1999). The data for this study were based on the Tomosili dialect, which the authors of this manuscript speak. The data presented in this study were collected from fieldwork in the Tomosili-speaking areas, and some were sourced from the authors' native introspections. When data are constructed by the authors, they confirm their grammaticality judgements from other native speakers to avoid bias in the analysis. The objectives of the study are as follows: (i) to explore the distributional characteristics of Dagbani adverbials, (ii) to provide a semantic classification of Dagbani adverbials, and (iii) to examine the combinational restrictions on the different adverbial types in Dagbani. The remainder of this paper is organized as follows. In Section 2, we explore the distributional characteristics of Dagbani adverbials, and the linear order of adverbials is discussed in Section 3. Section 4 summarizes the study.

2. The Distributional Properties of Dagbani Adverbials

Previous studies have shown that adverbials occur in varied positions in natural languages, including clause-initially, preverbally, postverbally, and clause-finally (Jackendoff, 1972; Potsdam, 2017; Saah, 2004; Nabaarese, 2017; Asamoah, 2018; Yiagnigni, 2016). The distributional characteristics are tied to their semantic classification because adverbials identified as belonging to the same subclass have similar syntax (cf: Jackendoff, 1972; Saah, 2004; Nabaarese, 2017; Asamoah, 2018; Yiagnigni, 2016; Issahaku, 2021). Jackendoff (1972) and Saah (2004) subclassified adverbials on their syntactic grounds as sentence-modifying adverbials (S-adverbials) and verb-phrase modifying adverbials (VP-adverbials). Another level of syntactic classification is their categorization is high-class and lower-class adverbials (see Yiagnigni, 2016 and references thereof). Semantically, adverbials are sub-classified based on the information they provide as they modify verbs, adjectives, adverbs, and, to some extent, the entire proposition. In this study, we adapt the semantic categorization of Dagbani adverbials as proposed by (Saah, 2004 Yiagnigni, 2016; Nabaarese, 2017; Asamoah, 2018) since we find their categorizations as appropriate for the patterns in Dagbani.

2.1 The Syntax of Manner Adverbials

This category of adverbials describes how an activity is carried out in a proposition (Tabe, 2015). In some African languages such as Akan, Kasem, Dangme, Kinyakyusa, Kenyang, and Shupamem, manner adverbials have unmarked postverbal and VP-final positions (Saah, 2004; Lusekelo, 2010; Tabe, 2015; Yiagnigni, 2016; Nabaarese, 2017; Asamoah, 2018), as seen in (1a), (1c), (2a) and (2c) for Akan, Kenyang, Dangme and Kasem respectively. Accordingly, Dagbani manner adverbials only occupy the clause-final (3a) or postverbal (3b) positions in the canonical clause structure but are banned in the clause-initial and preverbal positions. A sentence is rated ungrammatical if a manner adverbial appears clause-initially (if not marking focus (3c)) or preverbally, as shown in (4a) and (4b) respectively.

Studies in Akan (1b), Kenyang (1d), Dangme (2b) and Kasem (2d) revealed that manner adverbials can only occupy the initial position of a sentence through focalization (Saah, 2004: 49-50; Tabe, 2015: 125-126; Nabaarese, 2017: 86-87; Asamoah, 2018: 141). A similar conclusion can be drawn for Dagbani, as shown in (3c).

(1) a. **Amma kasa** **<u>bɔkɔɔ</u>.**
Amma speak.PRES softly
'Amma speaks softly.'

(Saah, 2004: 49-50)

b. **Abufuw so na Kofi frɛ-ɛ Kwadwo.**
Anger on FOC Kofi call.PST Kwadwo
(Saah, 2004: 51)

c. **Eta à púrí m-mwɛrɛ a-wì nɛ**
Eta 1SG.PFV push 1-friend AUG-3SG.POSS with
βɛbénti.
anger
'Eta pushed his friend in anger.'

d. **ʧi *pɛli* kɛ Eta ă kɔ.**
Cleft slowly FOC Eta 1SG.PFV walk.
'It is slowly that Eta walks.'
(Tabe, 2015: 126)

(2) a. **Jokuɛ yoyo-ɔ sa kuadaa tsɛtsɛɛrsɛ.**
child female-DEF grind-PFV pepper smartly
'The girl grinded the pepper smartly.'

b. **Tsɛtsɛɛrsɛ ne jokuɛ yoyo-ɔ sa kuadaa.**
Smartly FOC child female-DEF grind-PFV pepper
(Asamoah, 2018: 137)

c. **Bāārō wóm ŋòònè jwòrìm-ɣērānē.**
man CL-DET speak-PST foolish-completely
'The man spoke foolishly.'

d. **Jwòrìm-ɣērānē mó Bāārō wóm ŋòònè.**
foolish-completely FOC man CL-DET speak-PST
'It was foolishly that the man spoke.'
(Nabaarese, 2017: 89)

(3) a. **Alzindoo kpe tiliga maa viɛnyɛla.**
Azindoo carve.PFV pestle DEF well
'Azindoo has carved the pestle well.'

b. **Aduna kuhi-ri pam.**
Aduna cry-IPFV a lot
'Aduna cries a lot.'

c. **Yiriŋ ka doo maa tum tuma maa.**
Carelessly FOC man DEF do.PFV work DEF
'The man did the work CARELESSLY.'

(4) a. ***<u>Viɛnyɛla</u>** **Azindoo** **kpe** **tiliga** **maa.**
Well Azindoo carve.PFV pestle DEF

b. ***Azindoo** **<u>viɛnyɛla</u>** **kpe** **tiliga** **maa.**
Azindoo well carve.PFV pestle DEF

2.2. The Syntax of Pace Adverbials

Pace adverbials, like the true manner adverbials, exhibit the same distributional characteristics in the clause. There are no morphological or syntactic differences between place and manner adverbials in Dagbani. The difference is based on the context of use, of which the semantic component comes into play. Usually, the same lexical items are used to express both manner and pace notions, which might be one of the reasons why many linguists see one as a subtype of the other (Saah, 2004; Givon, 1993; Tabe, 2015; Lusekelo, 2010; Yiagnigni, 2016; Asamoah, 2018).

As shown in (5a), the unmarked position of pace adverbials is clause-finally. Similar to manner adverbials, they are shown to be VP-adverbials as described by Jackendoff (1972) because they are base-generated in the lower part of the clause and are noticed to be predicate modifiers in the clause. The only way they can be raised to the higher part of the clause is through focalization (5d). The ungrammatical construction in (5c) shows that pace adverbials in Dagbani cannot occur preverbally (i.e., between the subject and the verb/VP). They are also banned from the left periphery of the clause without the focus marker **ka** as in (5b).

(5) a. **Azindoo** **ŋmaai** **tia** **maa** **<u>yom</u>.**
Azindoo cut.PFV tree DEF quickly
'Azindoo cut the tree quickly.'

b. ***<u>Biɛlabiɛla</u>** **Azima** **guu-ra.**
Slowly Azima run-IPFV

c. ***Azindoo** **<u>yom</u>** **ŋmaai** **tia** **maa.**
Azindoo quickly cut.PFV tree DEF

d. **<u>Yom</u>** **ka** **Azindoo** **ŋmaai** **tia** **maa.**
Quickly FOC Azindoo cut.PFV tree DEF
'Azindoo has cut the tree quickly.'

2.2.2 The Syntax of Instrumental Adverbials

Syntactically, instrumental adverbials, although subsumed under manner adverbials, show varied distributional characteristics in the clause structure of Dagbani. First, instrumental adverbials come in the form of a combination of nouns and the preposition **ni** to create a prepositional phrase. Thus, though structurally a prepositional phrase, they function as an adverbial in the clause, showing how an action occurs in the clause. They occur only after the verb phrase and cannot be fronted for focus or topic. In (6) and (7), the adverbials identified in the constructions show that instrumental adverbials in Dagbani occur clause-finally (6a, 7b) and postverbally (7c) and are not permitted to occur elsewhere in the clause. They do not occur in the preverbal (6b) or clause-initial (6c) and (7a) positions. Also, unlike the true manner and pace adverbials, this subclass of manner adverbials cannot be fronted to mark topic (6c) or focus (7a) because these yield illicit constructions.

(6) a. **Sibiri labisi bɔhigu maa ni suhuʒia.**
Sibiri answer.PFV question DEF with confidence
'Sibiri has answered the question with confidence.'

b. ***O ni suhuyiɣisili kpe yili ŋɔ na.**
3SG with anger enter.PFV house DEM DM

c. ***Ni suhuyiɣisili, o kpe yili ŋɔ na.**
With anger 3SG enter.PFV house DEM DM

(7) a. ***Ni suhuyiɣisili ka o kpe yili ŋɔ na.**
With anger FOC 3SG enter.PFV house DEM DM

b. **Bɛ deei liɣiri maa ni suhumahili.**
3PL collect.PFV money DEF with quietness
'They collected the money quietly.'

c. **Zaanyɛya kuli-ya[1] ni suli.**
Zaanyɛya go.home-PFV with anger
'Zaanyɛya went home angrily.'

[1] Note that **kuli** as glossed in (7c) is in its base form and has not gone through any morphological process to encode go.home. The verb, 'go', in Dagbani is '**chaŋ**' but **kuli** is used to mean movement by any means towards home and nowhere else.

Secondly, instrumental adverbials are expressed through a combination of certain nouns and the verb **zaŋ**, yielding a serial verb construction. Similar patterns have been observed by (Osam, 1994; Saah, 2004; Tabe, 2015). This type of instrumental adverbials exhibits syntactic characteristics unique from those that come in the form of prepositional phrases in (6) and (7). The syntax of these adverbials is unique because they are not only different from their manner adverbial counterparts but also from all the adverbials in the language except those identified as grammatical aspectual adverbials (see Section 2.7). Moreover, this is because they are all base-generated in the preverbal position of the clause (8a) and are disallowed in the clause-initial (8c) and (9b) or the clause-final (9a) positions. This kind of instrumental adverbials can also occur with a nominal element preceding the sentence with the focus marker **ka**. When this happens, the verb **zaŋ**, still appears immediately before the main verb of the clause, as shown in (8b). The construction in (9b) is ungrammatical because these instrumental adverbials are banned in focus position.

(8) a. **Sibiri** **zaŋ**[2] **nineesim** **di** **bindirigu** **la**.
Sibiri take trick eat.PFV food DEF
'Sibiri used tricks to eat the food.'

b. **Suhuʒia** **ka** **Sibiri** **zaŋ** **labisi** **bɔhigu** **maa**.
Confidence FOC Sibiri take answer.PFV question DEF
'Sibiri used confidence to answer the question.'

c. ***Zaŋ** **nineesim** **Sibiri** **di** **bindirigu** **la.**
Take trick Sibiri eat.PFV food DEF

(9) a. ***Sibiri** **di** **bindirigu** **la** **zaŋ** **nineesim.**
Sibiri eat.PFV food DEF take trick

b. ***Zaŋ** **baŋsim** **ka** **Sibiri** **deei** **bolli** **maa.**
Take skill FOC Sibiri collect.PFV football DEF

The data in (6) through (9) provide evidence in support of the proposal that instrumental adverbials, which are sub-categorized under manner adverbials, have wider distributional features. They can occur preverbally (8a), clause-finally (6a, 7b), and in the postverbal position (when the verb in the clause is used intransitively (7c). They can also be spread around the subject of the clause where the nominal element of the adverbial phrase is fronted for focus while the serialized verb, **zaŋ**, occurs between the subject and the main verb of the clause (8b).

[2] We note that **zaŋ 'use/take'** is not a defective verb. Syntactically, this is just a serial verb construction. Semantically, it has a sense which may be translated adverbially as 'with' (+ means/instrument.) but could also be translated as a verb 'use'.

2.2.3 The Syntax of Ideophonic Adverbials

In languages such as Akan, Kasem, Dangme Kenyang, and Shupamem, some manner adverbials appear in the form of ideophones (Saah, 2004; Agyekum, 2008; Nabaarese, 2017, Asamoah, 2018; Tabe, 2015; Yiagnigni, 2016). Tabe (2015:121) refers to these adverbials as ideophonic adverbials because "they are used to describe how an action is performed by appealing to some of our senses." An ideophone is defined as "a vivid representation of an idea in sound or a word, often onomatopoeic, which describes a predicate, qualificative or adverb in respect to manner, colour, smell, action, state, or intensity." (Doke, 1935: 118-119). Welmers (1973) further explains that in almost all the Niger-Congo and Nilo-Saharan languages, including a few Chadic branches of Afro-Asiatic languages, speakers employ many ideophonic words to express adverbials. Consequently, ideophones contribute significantly to their function as adverbials in languages across the globe.

Ideophonic adverbials in Dagbani share similar distributional properties with manner and pace adverbials. They occur clause-finally in their unmarked position, similar to manner adverbials and its sub-categories. They can also take the clause-initial position through focalization. From (10) and (11), we notice that the ideophonic adverbials occur clause-finally (10a), (11a) and (11b). In addition, they appear in clause-initial positions through focalization, as illustrated in (11c). The ungrammatical construction in (10b) shows that like manner and pace adverbials, ideophonic adverbials are banned in the preverbal position. Instrumental, pace, and ideophonic adverbials, even though are classified in the same semantic category as manner adverbials, have distinct syntactic characteristics in Dagbani.

In addition, we observe here that some ideophonic adverbials come in the form of multiple reduplication (11b and 11d). These adverbials do not occur in the clause-initial position even when fronted for focus, as illustrated in (11d), unlike those that are reduplicated once (11c). It is also worth noting that ideophonic adverbials that are reduplicated multiple times and those that appear in a single reduplicated form do not only differ by distribution. They also present different semantic interpretations as well. While the single reduplicated form in (11a and 11c) is interpreted as 'very soft or so soft', the multiple reduplicated form in (11b) is interpreted as 'extremely soft'. For details on ideophones and reduplication, see (Dingemanse, 2015).

(10) a. **O duu maa nyo mi <u>vum</u>.**
3SG room DEF small.PFV FOC IDEOPH
'His/her room smells so good.'

b. ***Bia maa <u>parigili</u> lu na.**
Child DEF IDEOPH fall.PFV DM

c. **<u>Vaɣivaɣi</u>** **ka** **Sibiri** **di** **moongu** **maa.**
IDEOP FOC Sibiri eat.PFV mango DEF
'Sibiri has eaten the mango vigorously.'

(11) a. **Amina nuu** **bali** **la** **<u>nobanoba</u>**.
Amina hand soft FOC IDEOPH
'Amina's hand is so soft.'

b. **Amina nuu** **bali** **la** **<u>nobanobanobanoba</u>.**
Amina hand soft FOC IDEOPH
'Amina's hand is extremely soft.'

c. **<u>Nobanoba</u>** **ka** **Amina nuu** **bala.**
IDEOPH FOC Amina hand soft
'Amina's hand is so soft.'

d. **<u>*Timtimtimtimtimtim</u>** **ka** **liiga** **maa** **sabigi.**
IDEOPH FOC shirt DEF black.be

2.3 The syntax of time/temporal adverbials

Time/temporal adverbials have wider distributional characteristics. Adverbials in this category take both the initial and final positions of the clause. They can also occur in the postverbal position of a clause when the verb is used intransitively. In the initial position, they can be fronted to mark either focus or topics. They are, however, disallowed in the preverbal position except the durational adverbial, where it occurs in a serial verb construction with **zaŋ** 'take,' similar to that of the instrumental manner adverbial.[3] Apart from the situation where the durational adverbial is constructed with the verb **zaŋ** 'take', all other forms of durational adverbials, like other temporal adverbials, take the clause-initial, clause-final, and postverbal positions.

The data in (12) through (14) show that adverbials of time can occur postverbally (12b) and clause-finally (after the VP) (12a). They can also occupy the clause-initial position through focalization (13a and 14b) or topicalization, as in (12c). Thus, Dagbani adverbials can be fronted through focalization or topicalization, except epistemic adverbials, as illustrated in Section 2.5, which are restricted in the clause-initial position and cannot mark focus. Further, it is observed that Dagbani temporal adverbials have three key distributional

[3] We note that this is the same situation as instrumental adverbials that are in the form of **zaŋ** +noun. It is observed that whenever a nominal element occurs with the verb, **zaŋ** 'take' in an SVC, to express adverbial notion, such adverbials take the pre-verbal position in the clause.

positions regardless of their internal structure. The only place they are restricted from occurring is the preverbal position (14d and 13b). Another observation worth mentioning is that durational adverbials that are coded by a combination of the verbs **zaŋ** 'take' and **niŋ** 'do,' with nominal elements have temporal notions. These adverbials, like those discussed in section 2.2.2, have a semantic interpretation of **+instrument** in their use as modifiers. Like instrumental manner adverbials, they take the preverbal position (14a) in the clause. They modify the VP by indicating the duration of a particular activity in a sentence. Without the defective verbs **zaŋ** 'take' and **niŋ** 'do,' they cannot take the preverbal position in the clause, as shown in (14d).

(12) a. **Saamba maa paai na pumpɔŋɔ.**
Strangers DEF arrive.PFV DM now
'The strangers have arrived now.'

b. **Tidoo bi di zuŋɔ.**
Tidoo NEG eat.PFV today
'Tidoo did not eat today.'

c. **Pumpɔŋɔ, saamba maa paai na.**
Now, strangers DEF arrive.PFV DM
'Now, the strangers have arrived.'

(13) a. **Asiba ŋɔ ka saamba maa paai na.**
morning DEM FOC strangers DEF arrive.PFV DEF
'The strangers have arrived THIS MORNING.'

b. ***Saamba maa pumpɔŋɔ paai na.**
strangers DEF now arrive.PFV DM

(14) a. **Bia maa zaŋ hawa yini di leemu maa.**
child DEF take. PFV hour one eat.PFV orange DEF
'The child used one hour to eat the orange.'

b. **Goli muni ka ti zaŋ wari dari ŋɔ.**
month full FOC 1PL take split.PFV firewood DEM
'We used to split this firewood in a FULL MONTH.'

c. **Ti tum la tuma maa chira ayi.**
1PL work.PFV FOC work DEF monthstwo
'We did the work in two months.'

d. ***Ti chira ayi tum tuma maa.**
1PL months two work.PFV work DEF

2.4 The syntax of place/locative adverbials

Place/locative adverbials occur postverbally, and clause-finally (VP-final). They are restricted from occurring in clause-initial positions without being focused. Place/locative adverbials are disallowed in the preverbal position of the clause. This applies to both adverbials that specify a location and those that give direction. Locational and directional adverbials share similar distributional properties with manner adverbials. Examples (15-17) show that both directional and locational adverbials in Dagbani have three syntactic slots in the clause, with the clause-final and postverbal as their unmarked positions. The illustrations in (15b) and (17b) show that place/location adverbials can occur in the postverbal position. We also observe in (15c) that locative adverbials can also occupy the clause-final position. Their occurrence in the clause-initial position is possible only by focalization, as shown in (15a) and (17a). The constructions in (16b) and (17d) are ungrammatical because place/locative adverbials cannot occur in the clause-initial position without the **ka** focus particle. Moreover, (16a) and (17c) show that, like manner adverbials, Dagbani place/locative adverbials are restricted from occurring preverbally.

(15) a. **Kpe ka Adam bo o paɣa maa.**
Here FOC Adam find.PFV 3SG wife DEF
'It is from here that Adam has married his wife.'

b. **Bua maa be duu maa puuni.**
Goat DEF be.at room DEF inside
'The goat is inside the room.' (Issah, 2020: 52)

c. **Danaa nya la o bua maa yili ŋɔ.**
Danaa see.PFV FOC 3SG goat DEF house DEM
'Danaa saw his goat in this house.'

(16) a. ***Bua maa duu maa puuni be.**
Goat DEF room DEF inside be.at

b. ***Tia zuɣu kpaŋ maa tam.**
Tree on guinea.fowl DEF stand.top

(17) a. **Yaɣili ŋɔ ha ka Azima mini Napari be.**
Side DEM DIST FOC Azima CONJ Napari be.at
'Azima and Napari are at THAT SIDE.'

b. **Baa maa kpa ŋ-ŋɔ polo.**
Dog DEF head.towards.PFV DEM side
'The dog headed towards this side.

c. ***Baa maa ŋ-ŋɔ polo kpa.**
Dog DEF this side head.towards.PFV

d. ***Daa maa polo loori maa kpa.**
Market DEF side car DEF head.towards.PFV

2.5 The syntax of epistemic/speaker-oriented adverbials

These adverbials modify the entire clause because of their broader scope. In Dagbani, these adverbials are quite restricted in their distribution. The data in (18) show that the clause-initial position remains unmarked for epistemic adverbials in Dagbani and in several languages (Jackendoff, 1972; Travis, 1988; Saah, 2004; Asamoah, 2018; Laenzlinger, 2015) and others. The verbal particle **bahi** 'unavoidably,' which bears epistemic adverbial notion, is the only adverbial capable of occurring in the preverbal position. This adverbial can neither be focalized nor topicalized, similar to what Yiagnigni (2016) presents in Shupamem, and thus, banned in clause-initial, postverbal, or VP-final positions.

In (18a), the epistemic adverbial precedes the entire clause but is disallowed in the preverbal position (18c). In addition, they are banned in the clause-final position (18b). Sentence (18d) shows that epistemic adverbials cannot also occur in the clause-initial position to mark focus. However, apart from the preverbal position, the epistemic adverbial, **bahi '**unavoidably,' in (19) is a grammatical word and is disallowed in other positions in the clause (19b, 19c and (19d). Thus, **bahi** is the only grammatical word that performs an epistemic adverbial function and is licensed in the preverbal position, as shown in (19a).

(18) a. **ŋ-ŋɔ Dawuni kuli maa m bala.**
Maybe Dawuni hoe DEF FOC DEM
'Maybe, that is Dawuni's hoe.'

b. ***Dawuni kuli maa m bala ŋ-ŋɔ.**
Dawuni hoe DEF FOC DEM maybe

c. ***Bihi maa laabirata ku tooi ŋmaai tia maa.**
Children DEF actually NEG can cut tree DEF

d. ***Dooli ka Azima ni paai na zuŋɔ.**
Certainly FOC Azima will arrive DM today

(19) a. **Lahiri bahi kpe yili maa ni.**
Lahiri unavoidably enter.PFV house DEF in
'Lahiri has unavoidably entered into the house.'

b. ***Bihi** **maa** **kpe** **yili** **maa** **ni** **<u>bahi</u>.**
children DEF enter.PFV house DEF LOC unavoidably

c. ***<u>Bahi</u>** **ka** **Danaa zaɣisi** **liɣiri** **maa.**
unavoidably FOC Danaa refuse.PFV money DEF

d. ***<u>Bahi</u>,** **Danaa zaɣisi** **liɣiri** **maa.**
unavoidably Danaa refuse.PFV money DEF

2.6 The syntax of frequency adverbials

Regarding the syntax of frequency adverbials, we further classify them into two categories: those that clearly define the number of times an event or action takes place and those that provide information on how often an action or event occurs. For this purpose, two different data sets are provided for the analysis. Examples in (20) present the distributional characteristics of frequency adverbials that indicate the number of times an activity is carried out, while (21) and (22) present frequency adverbials that spell out how often an activity is carried out in the clause.

Adverbials of frequency that specify the number of times an activity takes place, as shown in (20a), occur in the clause-final position. They are also allowed in clause-initial position (20b) through focalization. However, this kind of frequency adverbials is not permitted to occur in clause-initial position through topicalization (20d). As shown in (20c), they are also banned in the preverbal position of the clause.

(20) a. **Niina** **di** **bindirigu** **maa** **<u>buɣi.</u>**
Niina eat.PFV food DEF twice
'Niina ate the food twice/two times.'

b. **<u>Buta</u>** **ka** **bɛ** **kali** **liɣiri** **maa.**
Thrice FOC 3PL count.PFV money DEF
'It is thrice that they counted the money.'

c. ***Niina <u>yim</u>** **di** **bindirigu** **maa.**
Niina once eat.PFV food DEF

d. ***<u>Bunu</u>** **ti** **ka** **na** **a** **yiŋa.**
Five.times 1PL come.PFV DM 2SG house

Contrary to the first sub-class of the frequency adverbials presented in (20), the second type of frequency adverbials in (21) and (22) share similar distributional characteristics with time/temporal adverbials. Therefore, they have a wider distribution. It can be seen in (21a) that adverbials in this sub-category are allowed to occupy the clause-initial position through topicalization. Secondly, as shown in (22b), there type of adverbial can also take the initial position of the clause through focalization. They are also permitted to occur postverbally (22a) and after the VP (21b) in Dagbani.

Lastly, like time/temporal adverbials, they are restricted from occurring in the preverbal position, as shown in (22c).

(21) a. **Chira ata kam, ti kaa-ri bihi maa.**
Months three every 1PL visit-IPFV children DEF
'Every three months, we visit the children.'

b. **Suhuyini kɔ-ri nyuuli yuuni kam**.
Suhuyini farm-IPFV yam year every
'Suhuyini farms yam every year.'

(22) a. **Suhuyini kɔ-ri yuuni kam**.
Suhuyini farm-IPFV year every
'Suhuyini farms every year.'

b. **Biɛɣu kam ka o kani na kpe.**
Day every FOC 3SG come.IPFV DM here
'It is every day that he comes here.'

c. ***Doo maa saha kam kani na kpe.**
Man DEF time every come.IPFV DM here

2.7 The syntax of aspectual adverbials

Aspectual adverbials are restricted in the clause structure by distribution. Aspectual adverbials can only occur either postverbally or preverbally, depending on which sub-type they belong. Adverbials in this category are further classified as *lexical aspectual adverbials* and *grammatical aspectual adverbials*, which are analyzed as verbal particles. As a result, these two sub-types display varied syntactic distribution in the clause as (23), (24) and (25) illustrate. The dataset in (23) presents the distribution of lexical aspectual adverbials, while (24) and (25) provide illustrations for grammatical aspectual adverbials.

Sentence (23a) shows that Dagbani aspectual adverbials can occur in the clause-final position. Evidence from (23c), (23d), (24b), and (25b) indicates that these aspectual adverbials are banned in the left periphery of the clause and cannot be fronted for focus or topics. Sentence (23b) illustrates that lexical aspectual adverbials do not occur in the preverbal position. However, the grammatical words functioning as aspectual adverbials in (24) and (25) are allowed in the preverbal position (25a), contrary to not only the lexical aspectual adverbials but also all other adverbials in Dagbani except the adverbial, **bahi** in (19a). The only grammatical aspectual adverbial that exhibits an exact distributional characteristic as the lexical aspectual adverbial is **yaha** 'again' in (24) with its synonym as **lahi** 'again.' All the same, they are restricted to occurring in only one syntactic position in the clause, just like their counterpart lexical aspectual adverbials. The ungrammatical constructions in (25b and 25c) show that they are banned from occurring in clause-initial and clause-final positions, respectively.

(23) a. **Paɣaba la pihi tuya maa zaa <u>kolikoli</u>.**
Women DEF harvest.PFV beans DEF all completely
'Those women have harvested the beans completely.'

b. *__Buɣum__ **<u>wuliwuli</u> di puu maa zaa.**
Fire entirely burn.PFV farm DEF all

c. *__Wuliwuli__ **buɣum di puu maa zaa**.
Entirely fire burn.PFV farm DEF all

d. *__Kahikahi__ **ka niɣi maa ŋubi kawana maa**
Entirely FOC cattle DEF chop.PFV maize DEF

zaa.
all

(24) a. **Doo maa kpuɣi buku maa <u>yaha</u>.**
Man DEF take.PFV book DEF again
'The man has taken the book again.'

b. ***<u>Yaha</u> doo maa kpuɣi buku maa.**
Again man DEF take.PFV book DEF

c. *__Doo__ **maa <u>ɣaha</u> kpuɣi buku maa.**
Man DEF again take.PFV book DEF

d. *__Yaha__ **ka doo maa puɣi buku maa.**
Again FOC man DEF take.PFV book DEF

(25) a. **A paɣa <u>[yaa/pun/lahi]</u> ka na**.
2SG wife ['as usual'/already/just/again] come.PFV DM
'Your wife came [as usual/already/just/again].'

b. ***<u>[Yaa/Pun//Lahi]</u> a paɣa ka na.**
['As usual'/Already/just/again] 2SG wife come.PFV DM

c. *__A__ **paɣa ka na <u>[yaa/pun/lahi].</u>**
2SG wife come.PFV DM ['as usual'/Already/just/again]

3.0 Adverb sequencing in Dagbani

This section presents the sequencing of adverbials in clauses when there is more than one adverbial from different classes. Many studies have shown that more than one adverbial can co-occur in a single syntactic structure to perform an adverbial function in a language (Cinque, 1999; Saah, 2004; Tabe, 2015; Yiagnigni, 2016; Nabaarese, 2017; Asamoah, 2018). Similarly, adverbials in Dagbani are also observed to exhibit this kind of phenomenon. A single clause can have more than one adverbial from different adverbial categories that modify each other or come together to perform adverbial functions in the clause. In the following subsections, we discuss how the different categories of adverbials are sequenced in the clause structure of Dagbani.

3.1 Linear order of manner and place adverbials

As mentioned earlier, more than one adverbial from different sub-categories is permitted to co-occur in the same syntactic construction in Dagbani. Manner and place adverbials exhibit this phenomenon, as seen in (26) and (27) below. Observations from the data sets in (26) and (27) show that it is possible for locative/place adverbials and manner adverbials to co-occur in a clause. When this happens, any of them can precede the other, depending on the type of action expressed by the verb in the clause. The data show that locative/place adverbials precede manner adverbials in constructions with verbs that denote movement from one place to another (27), and the reverse this sequencing is not allowed, as this will result in ungrammaticality (27b) and (27d). For sentences where, especially, stative verbs are used, any of the two is allowed to precede the other without any change in meaning or misinterpretation, as shown in (26).

(26) a. **Danaa duhi loori maa yiriŋ palli maa zuɣu.**
Danaa drive.PFV car DEF recklessly road DEF on.top
'Danaa drove the car recklessly on the road.'

b. **Danaa duhi loori maa palli maa zuɣu yiriŋ.**
Danaa drive.PFV car DEF road DEF on.top recklessly
'Danaa drove the car on the road recklessly.'

c. **Niina tu Azima yaɣi laɣingu maa ni.**
Niina insult.PFV Azima over meeting DEF LOC
'Niina insulted Azima a lot at the meeting.'

d. **Niina tu Azima laɣingu maa ni yaɣi.**
Niina insult.PFV Azima meeting DEF LOC over
'Niina has over insulted Azima at the meeting.'

(27) a. **Abu chaŋ daa yom.**
Abu go.PFV market quickly
'Abu has quickly gone to market.'

b. ***Abu chaŋ yom daa.**
Abu go.PFV quickly market

c. **Dawuni cha-ni puu ni pam**.
Dawuni go-IPFV farm LOC a lot
'Dawuni goes to farm a lot.'

d. ***Dawuni cha-ni pam puu ni.**
Dawuni go-IPFV a lot farm LOC

3.2 Linear order of manner and frequency adverbials

Another possibility for the co-occurrence of adverbials from different classes is the manner and frequency adverbials. These two adverbials are also allowed to co-occur in sequential order in the clause, as we can see in (28) and (29). From the illustrations in (28) and (29), one can posit that in situations where we have the manner adverbials occurring in the same construction as the frequency adverbials, it will be the manner adverbials that are supposed to precede the frequency adverbials (28a), (28c) and (29a). The reverse of this order is not possible, as can be seen in the illicit sentences in (28b), (28d) and (29b). The only way we can have a frequency adverbial preceding a manner adverbial is through topicalization of the frequency adverbial, as (29c) shows.

(28) a. **Bɛ bu-ri la Niina kutikuti Asibiri dali kam.**
3PL beat-IPFV FOC Niina randomly Saturday every
'They beat Niina randomly on every Saturday.'

b. ***Bɛ bu-ri la Niina Asibiri dali kam kutikuti.**
3PL beat-IPFV FOC Niina Saturday every IDOEPH

c. **Niɣi maa di-ri viɛnyɛla saha kam.**
Cattle DEF eat-IPFV well every time
'The cattle eat well all the time.'

d. ***Niɣi maa di-ri saha kam viɛnyɛla**.
Cattle DEF eat-IPFV timeevery well

(29) a. **Mahami ba-ri wahu jɛrilimjɛrilim bɛɣu kam.**
Mahami ride-IPFV horse foolishness day every
'Mahami rides a horse foolishly every day.'

b. ***Mahami** **fiɛbi-ri** **bihi** **<u>bɛɣu kam</u>** **<u>jɛrilimjɛrilim</u>**.
Mahami cane-IPFV children day every foolishness

c. **<u>Bɛɣu kam</u>, Mahami** **fiɛbi-ri** **bihi** **<u>jɛrilimjɛrilim</u>.**
Day every, Mahami cane-IPFV children foolishness
'Every day, Mahami canes children foolishly.'

3.3 Linear order of manner and time/temporal adverbials

Adverbials of manner also co-occur with adverbials of time in the same syntactic construction in Dagbani. From the data presented in (30), any of the two different categories of adverbials can precede the other. In this sense, manner adverbials can precede time/temporal adverbials, and vice versa. The adverbials of manner precede those in the class of time in (30a) and (30c) but are seen to be preceded by the adverbials of time in (30b) and (30d). From the data presented in (30), it can then be concluded that there is no fixed order for Dagbani adverbials of manner and time when they co-occur in the same syntactic construction. Regardless of the order of these two adverbials, they do not give different semantic interpretation. The construction in (30a) for instance, could imply that Napari will beat the child today, more than she has been beating him/her. It could also imply that for today, Napari will beat the child and will not spare him/her. The same semantic interpretation could be given to (30b), and so, there is obviously no difference in their semantic interpretations. This is similar to (30c and 30d).

(30) a. **Napari** **ni** **bu** **bia** **maa** **<u>pam</u>** **<u>zuŋɔ</u>**.
Napari FUT beat.IPFV child DEF a lot today
Napari will beat the child a lot today.

b. **Napari** **ni** **bu** **bia** **maa** **<u>zuŋɔ</u>** **<u>pam</u>.**
Napari FUT beat.IPFV child DEF today a lot
'Napari will beat the child today a lot.'

c. **Bɛ** **ko** **koli** **maa** **<u>viɛnyɛla</u>** **<u>yuuni ŋɔ.</u>**
3PL plough farmland DEF well year DEM
'They have plowed the farmland well this year.'

d. **Bɛ** **ko** **koli** **maa** **<u>yuuni ŋɔ</u>** **<u>viɛnyɛla</u>.**
3PL plough farmland DEF year dem well
'They have plowed the farmland this year well.'

3.4 Linear order of place and time/temporal adverbials

It is also possible for adverbials belonging to the class of place and those belonging to the class of time to co-occur in a sequential order in the clause structure of Dagbani. From the data in (31) and (32), when temporal adverbials and place adverbials co-occur in a syntactic construction, the temporal adverbials are observed to be preceded by the place adverbials (31a) and (31c), and a reverse of this order is not possible as it will result in ungrammaticality (31b), (31d), and (32a). However, as we observe in the constructions in (32), temporal adverbials can only precede place adverbials in the lineal order by adverbial fronting through topicalization in (32b) and focalization in (32c).

(31) a. **Loori maa ni ʒi bindira maa na daa**
Car DEF FUT carry.IPFV food DEF DM market
ni zaawuni kurigaata.
in evening three.o'clock
'The car will bring the foodstuff to the market at three o'clock in the evening.'

b. ***Loori maa ni ʒi bindira maa na**
Car DEF FUT carry.IPFV food DEF DM
zaawuni kurigaata daa ni.
evening three o'clock market LOC

c. **Azima ni be yiŋa Alahiri dali.**
Azima FUT be.at house Sunday
'Azima will be at home on Sunday.'

d. ***Azima ni be Alahiri dali yiŋa.**
Azima FUT be.at Sunday house

(32) a. ***Piɛri maa kpe pumpɔŋɔ napɔɣu ni.**
Sheep DEF enter.PFV now pen LOC

b. **Pumpɔŋɔ, piɛri maa kpe duu.**
Now, sheep DEF enter.PFV room
'Now, the sheep has entered into the room.'

c. **Zuŋɔ ka Sibiri ka na kpe.**
Today FOC Sibiri come.PFV DM here
'It is today that Sibiri came here.'

3.5 Linear order of place and frequency adverbials

It is possible for place and frequency adverbials in Dagbani to co-occur in a clause. Similar to the co-occurrence of manner and frequency adverbials, place adverbials precede frequency adverbials

in unmarked structures as shown in (33). Sentences (33a) and (33c) show that place adverbials precede frequency adverbials when they co-occur in the same clause. The reverse of this sequence is allowed, as seen in the constructions in (33b) and (33d). This presents a flexible sequencing because both can precede each other in the clause without resulting in ungrammaticality.

(33) a. **Baako ka na yili ŋɔ bunahi.**
Baako come.PFV DM house DEM four times
'Baako came to this house four times.'

b. **Bihi la kpe na buyi shitɔɣ ŋɔ ni.**
Children DEF enter.PFV DM twice store DEM LOC
'Those children entered twice into this store.'

c. **Karimbanima maa ʒii-ni la kpe yuŋ kam.**
Teachers DEF sit-IPFV FOC here night every
'The teachers sit here every night.'

d. **Bɛ wa-ri waa goli kam palli maa zuɣu.**
3PL dance.IPFV dance month every road DEF on top
'They dance every month on the road.'

3.6 Linear order of place and epistemic adverbials

Epistemic adverbials and place/locative adverbials are a set of two different categories of adverbials that can co-occur in the same syntactic construction. These adverbials appear to co-occur in a fixed and rigid order in their linear sequencing. This is because epistemic adverbials, as we have already learned, are base-generated in the clause-initial position. As a result, any adverbial from another category taking the clause-initial position must be preceded by the epistemic adverbial, and the reverse of this order will render the construction ungrammatical. This is because apart from the epistemic adverbial, all adverbials from the various sub-categories are base-generated in the clause-final position and can only occupy the clause-initial position by focalization or topicalization.

When epistemic adverbials co-occur with place/locative adverbials, the epistemic adverbials precede the locative adverbials (34a) and (34b), and the reverse is not allowed (34c) and (34d). In earlier combinations, we saw that certain adverbials could precede other adverbials in their marked sequential order by either focalization or topicalization. This is impossible in cases where epistemic and place/locative adverbials co-occur, as seen in (34c). Notice in (34a) that the place adverbial in the construction precedes the subject, **bɛ** 'they,' of the clause but is preceded by the epistemic adverbial, **ŋ-ŋɔ** 'maybe.' In addition, in (34b), the epistemic adverbial, **laabirata** 'actually,' precedes the locative adverbial, **daa maa polo** 'at the market side.' Epistemic adverbials are not flexible for movement in the

clause by any syntactic process (refer to section 2.5), unlike those of manner, place, time, and frequency adverbials, where they are allowed to be moved to other positions. In other words, epistemic adverbials are not mobile within the Dagbani clause structure. This further explains why place adverbials are not permitted to precede them, as (34c) and (34d) illustrate.

(34) a. **ŋ-ŋɔ, puu maa ni ka bɛ zu nɔhi**
Maybe, farm DEF LOC FOC 3PL steal.PFV fowls
maa.
DEF
'Maybe, it is in the farm that they have stolen the fowls.'

b. **Laabirata, ti nya la Mbaŋba ni loori**
Actually, 1PL see.PFV FOC Mbaŋba with car
maa daa maa polo.
DEF market DEF side
'Actually, we saw Mbaŋba with the car at the market side.'

c. ***Shikuru ka ŋ-ŋɔ, bihi maa chaŋ.**
School FOC maybe children DEF go.PFV

d. ***Bihi maa chaŋ shikuru ŋ-ŋɔ.**
Children DEF go.PFV school maybe

3.7 Linear order of frequency and epistemic adverbials

Another adverbial combination is the co-occurrence of frequency with epistemic adverbials. As stated earlier, epistemic adverbials are restricted to occur only in the left periphery of the clause. No clause element precedes it, indicating that they are inevitably bound to precede any adverbial they may co-occur within the clause structure. This explains why the epistemic adverbials in (35a) and (35b) precede the frequency adverbials in the constructions. The ungrammatical constructions in (35c) and (35d) indicate that frequency adverbials are not permitted to precede epistemic adverbials regardless of their place of occurrence in the clause.

(35) a. **Laabirata yuuni kam, ti ti-ri o la nahu.**
Actually, year every 1PL give-IPFV 3SG FOC cow
'Actually, every year, we give him/her a cow.'

b. **ŋ-ŋɔ bɛ pa tum-di la biɛɣi-kam.**
Maybe, 3PL now work-IPFV FOC day-every
'Maybe, they now work every day.'

c. ***Buta, yɛlimaŋli, Suhuyini chibi shɛriga maa.**
Thrice, truly, Suhuyini piece.PFV syringe DEF

d. ***Yim ka laabirata Tia di bindirigu maa.**
Once FOC actually Tia eat.PFV food DEF

3.8 Linear order of epistemic, place, frequency, and temporal adverbials

It is possible for more than two adverbials from different subclasses to co-occur in a single sentence, as shown in (36) and (37). The sequential order of this combination is presented in (36a) and (36b). The epistemic adverbials precede all the adverbials, followed by the locative adverbial. The frequency adverbials precede the time/temporal adverbials but the two are preceded by the locative adverbials in the basic clause structure. In (36c), the temporal adverbial precedes both place and frequency adverbials by adverbial fronting through topicalization but still occurs after the epistemic adverbial. In addition, in (36d), the frequency adverbial precedes the place/locative adverbial through focalization but is preceded by the temporal adverbial. The frequency adverbial is preceded by the epistemic adverbial, which also precedes both place and temporal adverbials (37a). From (37b) and (37c), three types of adverbials (frequency, place/locative, and time adverbials) precede an epistemic adverbial, resulting in illicit constructions in the language.

(36) a. **ŋ-ŋɔ Danaa pun chaŋ laɣingu maa ni**
Maybe Danaa already go.PFV meeting DEF LOC
naba-ayi zuŋɔ.
legs-two today
'Maybe, Danaa has already gone to the meeting twice today.'

b. **Laabirita, shikurubihi maa ka na yili ŋɔ**
Actually, students DEF come.PFV DM house DEM
buta wuntaŋ ŋɔ ni.
three.times afternoon DEM LOC
'Actually, the students came to this house three times this afternoon.'

c. **Laabirita, wuntaŋ ŋɔ ni, shikurubihi maa**
Actually, afternoon DEM LOC students DEF
ka na yili ŋɔ buta.
come.PFV DM house DEM three.times
'Actually, this afternoon, the students came to this house three times.'

d. **Laabirita, wuntaŋ ŋɔ ni, buta ka**
Actually afternoon DEM LOC three.times FOC
shikurubihi maa ka na yili ŋɔ.
students DEF come.PFV DM house DEM
'Actually, this afternoon, it is three times that the students came to this house.'

(37) a. **Laabirita, buta ka shikurubihi maa**
Actually three.times FOC students DEM
ka na yili ŋɔ wuntaŋ ŋɔ ni.
come.PFV DM house DEM afternoon DEM in
'Actually, it is three times that the students came to this house.'

b. ***Wuntaŋ ŋɔ ni shikurubihi maa ka na**
Afternoon DEM LOC students DEF come.PFV DM
yili ŋɔ buta ŋ-ŋɔ.
house DEM three.times maybe

c. ***Buta ka ŋ-ŋɔ shikurubihi maa ka na**
three.times FOC maybe students DEF come.PFV DM
yili ŋɔ zuŋɔ.
house DEM today

The linear ordering of the adverbials suggests that reordering is allowed in some adverbial sequencing and disallowed for others. Thus, Dagbani adverbial sequencing does not satisfy the observation that adverbials co-occur in a fixed linear order cross-linguistically (Cinque, 1999; Tabe, 2015; Yiagnigni, 2016; Laenzlinger, 2015). Cross-linguistic studies on adverbials show that they are hierarchically ranked as high-class and lower-class adverbials, as proposed by (Cinque, 1999; Yiagnigni, 2016; Tabe, 2015; Laenzlinger, 2015)[4]. It is also shown that lower-class adverbs are further divided into preverbal and postverbal lower-class adverbials. Generally, this ranking significantly influences the sequencing of adverbials in every language. The Dagbani data show that the hierarchical ranking of adverbials influences adverbial ordering in linear form, as high-class adverbials must always precede lower-class adverbials. Table 1 presents a summary of the distribution of Dagbani adverbials, Table 2 summarizes some adverbial sequencing, and Table 3 presents the categorization of adverbials based on hierarchical classifications.

[4] Our current paper does not focus on the ranking of these adverbials. For detail discussion on the hierarchical classification of adverbs, readers are refered to (Cinque, 1999).

Table 1: A summary of the distribution of Dagbani adverbials

Adverbial Type	Clause-initial by focalization	Clause-initial by topicalization	Preverbal	Postverbal	Clause -final
Manner	✓	*	*	✓	✓
Ideophonic	✓	*	*	✓	✓
Pace	✓	*	*	✓	✓
Instrumental	✓	*	* (but occurs with zaŋ+noun in SVC)	✓	✓
Time (when)	✓	✓	*	✓	✓
Time (duration)	✓	*	* (but occurs with zaŋ+ noun in SVC)	✓	✓
Place (location)	✓	*	*	✓	✓
Place (direction)	✓	*	*	✓	✓
Frequency (number of times)	✓	*	*	✓	✓
Frequency (how often)	✓	✓	*	✓	✓
Epistemic	*	✓	*	*	*
Aspectual (lexical)	*	*	*	✓	✓
Aspectual (grammatical)	*	*	✓	*	*

Tabke 2: Sequencing of Dagbani adverbials into a linear order

Possible Combination	**Reversibility**
Manner > Place	(reversible)
Manner > Frequency	(irreversible)
Manner > time/temporal	(reversible)
Place > Frequency	(reversible)
Place > Time/temporal	(irreversible)
Epistemic > Place	(irreversible)
Epistemic > Frequency	(irreversible)
Epistemic > Place > Frequency > Time	(reversible for all except Epistemic)

Table 3: Categorization of Dagbani adverbials into their hierarchical classifications

High-Class Adverbials	Lower Class Adverbials	
	preverbal lower-class	**postverbal lower-class**
Epistemic adverbials	grammatical aspectual adverbials	Lexical aspectual adverbials
		Manner adverbials
		Pace adverbials
		Instrumental adverbials
		Ideophonic adverbials
		Time/temporal Adverbials
		Locative adverbials
		Frequency adverbials

4. Conclusion

We established that Dagbani adverbials occur clause-finally (VP-final) and clause-initially. The latter position is triggered by A-bar constructions, such as focalization and topicalization. They also occur in the postverbal position when the finite verb in the clause occurs intransitively. However, when there is an object or postverbal particle in the clause, the adverbial comes after the object and/or that particle. Except for grammatical adverbials, Dagbani adverbials are banned in the preverbal position. We conclude that the view that adverbials co-occur in a fixed linear order is not entirely accurate for Dagbani, as reordering is possible in some combinations, a phenomenon already observed by Yiagnigni (2016). We also attested with the data in Dagbani that adverbials are hierarchically classified as high-class and lower-class adverbials as proposed by (Cinque, 1999). This classification highly influences the sequential ordering of adverbials in their linear ordering (Cinque, 1999 and Yiagnigni, 2016). Finally, it is also established that Dagbani adverbials can be classified as S-adverbials and VP-adverbials (Jackendoff, 1972 and Saah, 2004), depending on whether they modify the entire sentence or the VPs. This study has achieved its goal by exploring an aspect of Dagbani linguistics that has since remained uninvestigated by linguists, as it reveals some syntactic properties of Dagbani adverbials and what pertains in areal languages. We conclude here by recommending that further studies on adverbials in Dagbani or any of its Mabia language counterparts be focused on any formal linguistic theory that can further explore the syntactic properties of adverbials for a broader understanding of this lexical category in Dagbani and the Mabia language group at large.

List of abbreviations

1	first person pronoun
2	second person pronoun
3	third person pronoun
AdjP	adjective phrase
AdvP	adverb phrase
CONJ	conjunction
DEF	definite
DEM	demonstrative
DIST	distal marker
DM	directional marker
FOC	focus marker
FUT	future marker
IDEOPH	ideophonic
IPFV	imperfective
LOC	locative marker
NEG	negative
NP	noun phrase
PFV	perfective
PL	plural
PP	prepositional phrase
SG	singular
SVC	serial verb construction
*	ungrammatical

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THE PRAGMATIC FUNCTIONS OF DAGBANI DIMINUTIVES

Fusheini Hudu

Abstract

This paper analyses the pragmatics of Dagbani diminutives. It describes the various diminutive markers in the language, the principal ones being *bia* 'a child', *bila* 'small' and *bini* 'a thing'; the use of feminine gender markers as diminutives and the structure of diminutive constructions. It argues that the functions of diminutives can only be accurately portrayed by considering the context of usage and speakers' conceptualisation of the diminutive morphemes. The diminutive function of *bini* only emerges in context, as the word lacks any semantic notion of smallness. In some contexts, the use of *bila* to encode smallness or young age semantically may apply to entities that emerge relatively later; in other contexts, it may refer to entities that emerge earlier. Similarly, the diminutive *bia* 'child' and morphemes that compare family relations do not strictly and consistently encode diminution based on age or physical size. These contradictory and seemingly inconsistent encodings are reconciled when the context of usage and sociolinguistics are considered. The paper concludes that even though the semantic content of smallness is present in most diminutive constructions, the unifying function of all diminutive constructions in the language is to encode lesser significance.

Keywords: Dagbani, diminutives, morphopragmatics, pragmatics, evaluative morphology

1. Introduction

Languages of the world employ various means to evaluate concepts and attributes. The common evaluative constructions include diminutives, augmentatives, pejoratives, contempt, amelioratives, endearment. Among these, diminutives are probably the most widespread in languages of the world, and the most widely researched. As presented extensively in the edited volume of Grandi and Körtvélyessy (2015), evaluative constructions are typically encoded within the morphological component of the grammar. This paper provides the first known description of diminutive constructions in Dagbani, a language of Ghana belonging to the Gur family of Niger-Congo languages and shows that diminutive forms are encoded morphologically (via compounding and suffixation) and lexically to express smallness in size or quantity, weakness in strength, attenuation, individuation, part-whole relations and temporal order of emergence. It also presents a pragmatic analysis of the functions of diminutives in Dagbani. It argues that it is only within the pragmatics that the diminutivising function of some of these markers emerge. It also shows that while various diminutive constructions express various meanings, within the pragmatics, they are all used to encode the lesser significance of an entity.

Several morphemes are used to express diminution in the morphology and syntax. The default and most common diminutive marker in Dagbani, as in most languages of the world (e.g. Dressler and Merlini Barbaresi 1994, Jurafsky 1996, Appah and Amfo 2011, Agbetsoamedo and Agbedor 2015) is the same or has the same lexical root as the word for child: ***bia***. This word, or the semantically related word ***bila*** (pronounced ***/bɨ́lá/***) 'small' are the most productive diminutive markers in Dagbani. They surface as the second lexeme in noun-adjective or noun-noun compounds. In addition to these two, the word ***bini*** (pronounced /***bínɪ̂***/) 'a thing' is also common as the first lexeme in noun-noun or noun-adjective compounds. While it lacks any inherent semantic content of smallness, it is used to mark diminution contextually.

Still within the morphology, there is one suffix (***-fu***) that is attached to nouns to encode diminution. There are also lexical items that are used to encode various forms of diminution and may either be reduced to form compounds or stand alone as diminutive markers. These include ***biɛla*** 'small (quantity)', ***tuzo*** 'a younger sibling (of the same gender), ***-pira*** 'a parent's younger sibling or cousin, and others. The language also employs gender markers for evaluative purposes, with the feminine gender marker (***nyaŋ***) encoding diminution and various allomorphs of the masculine marker (***laa, daa, lɔɣu***) serving as augmentative markers. The main argument presented in the paper is that, the overarching function of all diminutive forms is to encode lesser significance.

The analysis is largely descriptive. Beyond presenting an analysis based on the sociolinguistic contexts of use, no restrictive theoretical assumption (semantic or pragmatic) underpins the arguments presented here. The analysis is driven mainly by the argument that the lexical semantic content of individual words and morphemes only contributes to their role as diminutives; it is not sufficient to appreciate the full extent of their relevance as evaluative markers of diminution. When evidence is sought from the sociolinguistics and pragmatics of these lexical items, it becomes easier to understand not only their wider relevance as diminutives but also the deeper diminutive encoding common to all of them.

Most of the data were obtained from native speakers of two of the three major dialects of the language: the Eastern (Nayahili) and Western (Tomosili) dialects. No speakers of the Southern Dialect spoken by the Nanumba were consulted. Secondary data were also obtained from a Dagbani-English dictionary (Naden 2014) and other publications on the language. Since no phonetic or phonological analyses are carried out in the paper, the data are presented in the orthography of the language. For this reason, even though Dagbani is a tone language (Olawsky 1999), tone is not marked. The two main departures from the rules of the orthography are the marking of morpheme boundaries in some words with more than one morpheme, which is needed for a better understanding of the analyses, and the non-marking of elided letters with the elision mark (the apostrophe). For instance, the compound word /***naʔ bɨla***/ 'a small cow' (from ***nah-u*** 'cow-sg.' and ***bɨl-a*** 'small-sg.') is rendered in this paper as '<***naɣ-bila***>, even though the rules of the orthography dictate that it is written as <***naɣ' bila***> (for an extensive discussion on Dagbani orthography, see Hudu (2021)).

The rest of this introductory section introduces aspects of Dagbani morphology that are needed to understand the discussion in this paper (Section 1.1) and presents a brief discussion on the role of pragmatics in the analysis of the functions of diminutives. Section 2 looks at the structure of diminutive constructions in the language, including various morphological processes and lexical items used to encode diminutive forms. In Section 3, the semantics and pragmatics of diminutivisation in Dagbani are discussed. Section 4 also discusses the pragmatics, with a focus on address terms among family

relations, the interaction between gender and diminutive marking as well as plausible diachronic changes that may have affected the productivity of the only diminutive suffix in the language. The paper ends with a summary and concluding remarks in Section 5.

1.1. Background to Dagbani morphology

For the analyses in this paper, the most essential aspect of the morphology is the structure of nouns and adjectives. This has received attention in the research of previous scholars, including Olawsky (1999, 2004); Hudu (2005, 2010, 2014); Issah (2013); Hudu and Iddrisu (2023). As noted in these studies, nouns and adjectives share a key morphological property that distinguishes them from verbs: they typically consist of a bound lexical root and an inflectional or derivational suffix whose primary function is to project these words as nouns and adjectives. The suffixes also encode various grammatical and lexical properties, the most dominant being (singular and plural) number (e.g. ***zuɣ-u*** 'head-sg.' ***/zuɣ-ri/*** 'head-pl.', ***/viɛl-li/*** 'beautiful-sg.' ***/viɛl-a/*** 'beautiful-pl.'). Because there has been no known study on diminution in Dagbani, the diminutive role of these suffixes, discussed in this paper, has not featured in any previous study.

This structure of nouns and adjectives is maintained in complex forms such as compounds, which may combine two or more nouns in their inflected forms (e.g. ***do-o yil-i*** man-sg. house-sg. 'a man's house') or the lexical roots of two or more nouns and adjectives with one nominal suffix (e.g. ***na-bi-a*** chief-child-sg. 'a prince'; ***na-bi-puɣiŋ-ga*** chief-child-female-sg. 'a princess'). In this paper, it will be shown that while some diminutives are suffixes added to bound lexical roots, some lexical roots are added to other lexical roots to derive compounds and encode diminution.

1.2. The pragmatic functions of diminutives

In the past few decades, one of the issues that have taken centre stage in analyses of diminution is the role of pragmatics, as reflected in studies such as Dressler and Merlini Barbaresi (1994); Schneider (2003, 2013); Prieto (2005); Spasovski (2012); Ponsonnet (2018) (for further discussion, see Merlini Barbaresi (2015)). While it may be difficult in some instances to distinguish between the semantic and pragmatic functions of diminutives, as noted by Prieto (2005), many studies see smallness, littleness, or childness as the typical, purely semantic function of diminutives and categorise other functions such as lesser significance, amelioration, affection and pejoration as the pragmatic functions.

Pragmatic functions of diminutives are based on context and norms of the society. Some studies such as Prieto (2005) even include maxims of conversation as part of the factors that define the pragmatic use of diminutives. Schneider (2013) provides extensive discussion, citating many other previous studies, on the use of diminutives to encode intentional understatement. These include Schneider (2003) on English, Staverman (1953) on Dutch, Dressler and Merlini Barbaresi (1994) on Italian, Ettinger (1974) on German, Sifianou (1992) on Greek and Agbetsoamedo (2011) on Selee. Schneider uses the English sentences in (1) (and many equivalents in different languages) to illustrate how speakers can sometimes use diminutives to show modesty and play down the value of things that may be of great value. In the examples shown below, the birthday gift could be as valuable as an expensive car and the chalet could be worth a fortune.

(1) The use of diminutives to encode understatement (Schneider 2013: 147)

a. ***Here's a little something for your birthday.***

b. ***I've got a little chalet in the mountains.***

Prieto (2005) notes that the use of diminutives to encode pragmatic effects constituted 78% of a corpus of 443 instances of diminutive use in Spanish, and affection-driven use, which, in his analysis, includes endearment, intensifying and commiseration functions constituted 49% of the entire corpus. Other pragmatic functions discussed by Prieto include derogation (consisting of irony and pejoration) and attenuation or politeness (consisting of mitigation and euphemism). Travis (2004) argues that the Spanish diminutive suffix ***-ito/-ita*** has taken on the pragmatic functions such as affection, contempt, and hedging speech acts. Wierzbicka (1992) (cited in Travis 2004) argues that in languages such as Russian and Polish, the frequent use of the diminutive positively contributes to speakers good feeling towards others.

Spasovski (2012) shows that in Macedonian, diminutives are typically associated with communication with children (see King and Melzi (2004) and Savickienė (2007) for similar studies on Spanish and Lithuanian respectively). Other pragmatic contexts of diminutive use discussed by Spasovski include requests, offers, compliments, in-group solidarity as well as irony, sarcasm and contempt. Spasovski also shows that diminutives also play a hedging function. Gibson et. al. (2017) discuss the pragmatic functions of diminutives in Bantu languages, noting many of the functions already mentioned with references to many previous studies. Ponsonnet (2018), in another survey, presents a typology of emotional connotations of diminutives, highlighting its role in encoding emotions such as compassion, love, admiration and contempt in nineteen languages. In arguing for the role of context, many of these studies also highlight the role of sociolinguistics and ethnolinguistics in the analysis of diminutives (e.g. Prieto 2005; Spasovski 2012).

The argument that Dagbani diminutive construction can only be fully understood by resorting to the pragmatics is supported in several ways, including the lack of semantic notion of smallness in the marker ***bini***, the semantically contradictory senses presented by the marker ***bila*** in different contexts and many others discussed in the sections below.

2. The structure of diminutive constructions

Diminutive constructions in Dagbani are marked mainly morphologically through compounding with lexemes that encode diminution, and through suffixation using the suffix ***-fu***. But there are also a few lexical items that mark diminution syntactically by modifying nominal forms. These are discussed below.

2.1. Morphological encoding: Compounding

Many lexical morphemes are compounded to encode diminution. These are discussed below.

2.1.1. *bia/bila*

The most often used diminutive lexical forms in Dagbani are ***bi-a*** 'child-sg.' and ***bil-a*** 'small-sg'. When used to describe one thing relative to another, the diminution expressed by ***bil-a*** relates to the relative age, size, and temporal order of occurrence, as discussed further below. In their plural forms, the two words are the same: ***bi-hi***. While these words are free morphemes in the lexicon, ***bila*** mostly surfaces in compound forms

as the second of the two or more lexical roots. In fact, the only time it surfaces in a non-compound form is when it is used to modify the pronoun ***zaɣ***, (***zaɣ bil-a*** pronoun small-sg. 'a small one'). Thus, despite their position as free lexical forms, their diminutive use is morphologically encoded via compounding. Examples are shown below.

(2) The use of *bila* as a diminutive

a. ***nu-bila***
hand-small 'a finger'

b. ***napɔm-bila***
foot-small 'a toe'

c. ***nim-bila***
face-small 'an eye'

d. ***bu-bila***
goat-small 'a kid'

e. ***piɛ-bila***
sheep-small 'a lamb

f. ***yidaan-bila***
husband-small 'a husband's younger brother'

The use of ***bia*** as a diminutive is almost exclusively metaphorical. This is discussed extensively in Section 3. In its diminutive use, the word ***bia*** 'child' has more to do with the smallness of the human being than the humanness or animacy of the noun. A sample of examples are shown in (3). In a non-diminutive use, ***bia*** appears in associative construction to mean a child associated with the noun it follows (e.g. ***na-bia*** chief-child 'prince').

(3) Words with the diminutive bia.

a. ***du-no-bia***
room-mouth-child 'doorstep'

b. ***tiŋ-bia***
town-child 'a native'

c. ***duum-bia***
knee-child 'a knee cup'

d. ***tib-bia***
ear-child 'eardrum'

e. ***ludu-bia***
ludo-child 'a dice in a game of ludo'

2.1.2. *bini*

The word ***bin-i*** 'thing-sg' (a thing) is a noun. Like ***bia*** and ***bila***, it is used in a compound form to encode diminution, which happens only in a pragmatic/metaphorical sense. Unlike ***bia*** and ***bila***, it is the first lexeme in the compound that is constructed. It also differs from ***bia*** and ***bila*** in other respects. When it is used in a non-diminutive sense, it precedes an adjectival lexical root in the compound (e.g. ***bin-suŋ*** 'a good thing', ***bin-sabinli*** 'a black thing'); when it is used to mark diminution, it precedes a nominal lexical root, as illustrated in (4).

(4) The use of *bini* as a diminutive marker

a. ***bin-yaanga*** 'the back'

b. ***bin-puli*** ‘the stomach’
c. ***bin-sabli*** ‘the liver’
d. ***bin-gbaŋ*** ‘the skin’
e. ***bin-zuɣu*** ‘the head’
f. ***bin-bɛma*** ‘the shins’

A *bin-adjective* compound, which is non-diminutive, is resorted to when the speaker does not know the name of the entity, is not sure of the identity, or simply does not want to repeat or name the entity described by the adjective. A *bin-noun* compound may or may not encode diminution. It only gains a diminutive encoding when it refers to the severed limb of an animal. For all the words in (4), the addition of ***bin***- to the word makes it a part of animal taken out as meat after slaughter. When *bin*- is not added, it merely refers to a part of any animate being, including humans.[1]

2.2. Morphological encoding: Suffixation
The suffix ***-fu*** is added to nouns that connote weakness/insufficiency to express a greater degree of weakness/insufficiency. Evidence supporting the diminutive marking of this suffix comes from their plural forms, in which both diminutive and non-diminutive forms are the same.

(5) Words with *fu* marking diminution.

	reg. sg.	dim. sg.	pl.	
a.	***biɛl-a***	***biɛl-fu***	***biɛl-a***	‘small (in quantity)’
b.	***bil-a***	***bil-fu***	***bih-i***	‘small (in size)/tiny’
c.	***chɔɣiŋ-gu***	***chɔɣ-fu***	***chɔɣ-ma***	‘weak/timid’
d.	***laɣ-ri*** (money)	***laɣ-fu***		‘a cowrie’

2.3. Syntactic encoding
Some lexical items in Dagbani inherently connote (relative) insufficiency in quantity, size, age, value, usefulness or significance (see Cahill 2015 for an observation about lexical encoding of diminution in Kɔnni, a genetically related Gur language). Examples of such lexical items in Dagbani include ***tuzo*** ‘a younger relative of the same gender’; ***nyɛl-fu*** ‘guinea worm’ and ***difu*** chaff/bran’). The data in (6) show different adjectives that are used to encode diminution. All but the last of these examples can loosely be translated as ‘a small piece’. A discussion on the semantics of these diminutive forms is presented in Section 3. The words in (6)a-c are cited from Hudu (2014).

(6) Other diminutive forms
a. ***chee***: A small piece that has to be small to be useful (e.g. ***nim-chee*** ‘a piece of meat that is of a suitable size for cooking/eating’; ***tan chee*** ‘a piece of cloth cut out to be sown into a dress’).
b. ***chɛɣu***: A piece that is too small to serve any useful purpose (e.g. ***la chɛɣu*** ‘a broken piece of earthenware’; ***nim chɛɣu*** ‘a tiny piece of meat such as one picked out of the teeth).
c. ***chɛrili***: a torn piece of a whole that renders the whole incomplete/inelegant (e.g. ***daliya chɛrili*** ‘a torn shirt’.

[1] This is not universal. Some speakers may choose to refer to the severed body part without the addition of *bin*-. However, such a reference may be ambiguous without the relevant context.

d. ***bulli***: A tiny piece out of a delicate object, typically used for a piece of cake (e.g. ***mah bulli*** 'a piece of deep fried corn cake').
e. ***biɛlli***: Used mainly to refer to particles of grains (e.g. ***za biɛlli*** 'a grain of millet').
f. ***biɛla***: A small amount, the equivalent of English ***little***, and used to modify mass or non-count nouns (e.g. ***bindirigu biɛla*** 'a little amount of food').

In (6)e, the word ***biɛlli*** picks out a grain out of a mass noun, which is non-count. The diminutive thus serves the purpose of making the mass noun countable. Thus, several grains are ***biɛl-a***.

3. The semantics and pragmatics of diminutives

The various diminutive forms discussed in the preceding section encode different semantic and pragmatic content. As already noted, when the pragmatics of these diminutive forms is considered, we arrive at the conclusion that all diminutive forms in Dagbani encode one effect: lesser significance or value. This is discussed in the different sub-sections below.

3.1. Size

When the most frequent diminutive word ***bila*** is used to describe one thing relative to another, one of the most common literal meanings that is encoded is smallness in size. For instance, ***bila*** is often used to distinguish between two people of the same name using their physical appearance, especially if their age is not known. Thus, ***Azindo Bila*** can mean the ***Azindoo*** with a smaller physique. In this usage, the lesser significance is to the physical size of the person.

The words ***bila*** and ***bini*** may also be added optionally to nouns that are inherently small (e.g. (7)a-b), or relatively small (7)c. In (7)c, the smallness of a lid is relative to the bigger object that it is used to cover (see Section 3.5 for further discussion of the use of diminutive markers to encode part-whole relations).

(7) The optional use of *bila* and *bini* as diminutives
a. ***ŋmani ~ ŋmam-bila*** 'a dove'
b. ***noon-ga ~noom-bila*** 'a (flying) bird'
c. ***liŋa ~ bin-liŋa*** 'a lid'

In a number of ways, the semantics alone is not enough to appreciate the use of *bila* as a diminutive in these examples. The addition of ***bila*** or ***bini*** is not intended to add any further semantic content to the word. The meanings of these nouns with or without ***bila*** or ***bini*** are the same, so its addition is not strictly motivated by semantics. Besides, the objects depicted by these words are not the smallest of objects that can be found. There are animate beings much smaller than birds such as ants of various types, that do not receive optional ***bila.*** A plausible explanation for the optional use of ***bila*** can be obtained contextually when these birds are compared to other birds that are commonly eaten. The use of ***bila*** for a dove marks it as the smallest of all domesticated birds, compared with guinea fowls, turkeys, ducks and fowls. In the case of ***noom-bila,*** it is used as a cover term for all small birds that fly in the sky. Large birds such as hawks and eagles may be referred to with the cover term ***noonga***, but not ***noom-bila.***

3.2. Quantity

Smallness in quantity is encoded by the word ***biɛla*** post-nominally. Unlike ***bila,*** it cannot be compounded with a noun.

(8) The encoding of lesser quantity with *biɛla*.

a.	***taŋkpa-ɣu biɛla***	****taŋkpa-biɛla***	a little quantity of sand
b.	***bindiri-gu biɛla***	**** bindiri- biɛla***	a little quantity of food
c.	***ʒɛ-ri biɛla***	**** ʒɛ-biɛla***	a little amount of soup
d.	***nambɔ-ɣu biɛla***	**** nambɔ-biɛla***	a little bit of pity
e.	***suhupiɛl-li biɛla***	**** suhupiɛl-biɛla***	a little bit of joy

It is worth noting that the role of ***biɛla*** as a modifier is not restricted to nouns. It can also be used to modify actions (e.g. ***chaŋ biɛla*** 'walk a little bit', ***gbihi biɛla*** 'sleep for a short while'). Thus, the position of ***biɛla*** as a nominal diminutive marker is relatively weak. It is merely a quantifier which expresses insufficiency of nouns, actions and attributes.

3.3. Immaturity

The diminutive ***bila*** is also used to encode immaturity or lesser maturity. While this is often conflated with size and age, there are cases where only the lack of maturity is encoded. The exact diminutive encoding depends on the context of use. In some contexts where it encodes lack of maturity, its addition is optional, as the data in (9) show.

(9) The addition of *bila* to words with relative diminutive connotation.

a.	***bi-a ~ bi-bila***	'a child'
b.	***bi-dib-ga ~ bidib-bila***	'a boy';
c.	***bi-puɣiŋ-ga ~ bi-puɣim-bila***	'a girl'
d.	***paɣ-sarli ~ paɣ-sar-bila***	'an adolescent girl
e.	***nachimba ~ nachim-bihi***	'adolescent boys'

In other contexts, its addition may be intended to achieve contrast. For instance, the augmentative word ***kurli*** 'old/mature/big' may replace some of the words in (9), as shown in (10). Thus, both ***bila*** and ***kurli*** may be used in a conversation to categorise people based on their (perceived) maturity.

(10) The contrastive use of *kurli* to words with relative diminutive connotation.

a.	***bi-kurli***	'a big child'
b.	***paɣ-sar-kurli***	'a big adolescent girl
c.	***nachin kurli***	'a big adolescent boy'

3.4. Order of realisation

One of the commonest meanings encoded by evaluative markers crosslinguistically (especially diminutives and augmentatives) is age, understood as the relative temporal order of realisation or coming into being of entities. Diminutive markers are typically used when comparing two entities standing in temporal relations, typically marking the one that comes later as the younger and usually also the smaller and less matured of the two. In Dagbani, there is more to the exact pragmatic content encoded than age or temporal order of existence. When the pragmatic and sociolinguistic contexts are considered, it turns out that the temporal order is useful only as a maker of relative

value or significance of an entity. The entity that receives the diminutive marker gets it not necessarily because it is younger or comes later, it gets diminutivised only when being younger is perceived to be of lesser significance. The various pragmatic encodings of diminutive forms encoding temporality are discussed in this section.

3.4.1. Age

For most animate beings, the typical means of distinguishing between the young and old is using ***bila***. Examples are shown below.

(11) The use of *bila* to encode small size/age

a. ***bu-bila*** goat-small' (a kid)
b. ***pɛ-bila*** 'sheep-small' (a lamb)
c. ***no-bila*** 'fowl-small' (a chick)
d. ***naɣ-bila*** 'cow-small' (a calf)

The use of ***bila*** to encode younger age as shown in (11) is not always literal, but metaphorical. For a deeper understanding of the metaphorical use of ***bila*** and why the literal encoding does not provide a comprehensive account of its diminutive use, it is important to consider the value of age in Dagbani sociolinguistics. This is discussed in Section 4.1.

3.4.2. Order of ascension to a throne

Both ***bila*** (and sometimes also ***kpɛma*** 'elder/older') are also used to differentiate between chiefs of the same name who have occupied the same throne. It is the equivalent of the use of the numerals First, Second in English. Thus, in the Dagbon Kingdom, ***bila*** was added to the names of several kings because they bore the same name with others who occupied the same throne before them (e.g. ***Naa Abdulai Bila***). The earlier king would acquire the term ***kpɛma*** (***Naa Abdulai Kpɛma***) only after the enthronement of the latter one with the same name.

The latter chief will typically be younger than the former. For this reason, the use of ***bila*** in this context also encodes the age difference between them. However, it does not strictly do so. The latter chief will still have ***bila*** added to his name even if he was older than his namesake who occupied the throne before him. The use of ***bila*** in this sense has more to do with the belief of the Dagomba that every chief is the son (or daughter) of the one that preceded him/her on the same throne even if the reigning chief is not a descendant of the preceding one. If the late chief even died at an age younger than the age of the successor at the time of his ascension to the throne, the late chief will be considered the father of the reigning chief. Thus, among chiefs who have occupied the same throne, precedence on a throne is of great significance (for further discussion on the relations between chiefs in Dagbon, see Hudu 2023). The addition of *bila* to the names of those who come later is intended to encode the message that they lack that significant trait relative to their namesake that preceded them on the same throne.

3.4.3. Names of months of the year

The analysis in this section (Section 3) rests on the argument that (a) precedence does not always imply older age and (b) it is not always the latter one that is diminutivised. The strongest source of evidence supporting both arguments comes from the names for the months of the year. Dagbani uses the lunar calendar, and festivals are reference

events for naming them. In addition to naming the months after festivals that are celebrated in them, months that lack festivals are paired with those with festivals using the word ***bila***. Thus, a month that lacks any festival gets its significance by its association with another month that has one. But there is a further restriction: a festival-free month is only named after and for that matter is a diminutive of the month that follows it, not the one that precedes it.

There are six months in which festivals or some other religiously significant events are marked. Two of the festivals, the Fire and Kpini festivals, that serve as the basis for naming these months are native to the people. The remaining festivals are based on Islamic practices that have influenced the culture and traditions of the Dagomba due to its centuries-old presence in the Kingdom.

(12) Dagomba months with festivals

Order	Name	(Literal) meaning	Festival/significant event
1st	***Buɣum***	'fire'	Fire festival.
3rd	***Damba***	'Damba'	Damba festival
7th	***Kpini***	'guinea fowl'	Kpini festival
9th	***No-lɔri***	'mouth-tying (fasting)'	Islamic fasting month (Ramadan)
10th	***Ko-nyuri Chuɣu***	'water drinking feast'	Eid-ul-Fitr celebration
12th	***Chimsi Chuɣu***	(meaning unclear)	Eid-ul-adha celebration

Out of these six months, two are preceded by months in which festivals are celebrated. These are the first and the tenth months. For this reason, the months preceding them, the twelfth and the ninth, are not named after them. Each of the remaining four months is used as the referent in naming the month preceding it, as shown in (13):

(13) Months with diminutive *bila*

Order	Name	
2nd	***Damba Bila***	'small Damba' (the 3rd month).
6th	***Kpini Bila***	'small Kpini' (the 7th month).
8th	***Nolɔri Bila***	'small Nɔlɔri' (the 9th month).
11th	***Chimsi Bila***	'small Chimsi' (the 12th month).

Throughout the year, there are only three successive months that lack a festival. These are the fourth, fifth and sixth. The sixth month precedes the seventh, which has a festival, and is named as the 'small Kpini'. Incidentally, neither the fourth nor fifth month is named with reference to the other. In other words, neither of them is of lesser or greater significance than the other. The fourth month is called ***Gaambanda***, the fifth is ***Bandacheena*** whose meanings are not clear. The fourth follows the third (*Damba*), which has a festival, and could have taken its name by its association with Damba if the associative naming were arbitrary. However, because it follows the Damba month, the appropriate name would have been ****Damba Kpema*** 'the greater/elder ***Damba'***. This is not the case. The Dagbani calendar is thus a set of four twin months each of which consists of a significant month and its diminutive twin sister, and another set of four single months.

The point about the use of ***bila*** to encode lesser significance is that, if a month lacks any festival, it becomes significant for being the month when the people prepare themselves for the festival in the month that follows it. This may not involve any rituals, and may be merely psychological, as they look forward to the month that will give them

the opportunity to celebrate the festival. However, the festival-free month preceding the festival gets the diminutive marker because preparing for a festival is of lesser significance than celebrating the festival. For a festival-free month following the festival, there is nothing about it that makes it deserving of association with the festival given that no cultural or ritual activities related to a festival takes place in the month following the celebration of the festival.

3.5. Part-whole relations

The final category of meaning encoded by diminutives is part-whole relations. This is manifested in different ways, as discussed below.

3.5.1. Individuation

When ***bia/bila*** is attached to the name of a group such as an ethnicity, clan, community or institution, it picks out an individual (or individuals, when the plural form ***bihi*** is used) as a member of the group. In this usage, the group identity or institution of affiliation of the individual is what is of interest to the user. Thus, the word for a *student/pupil* in Dagbani is ***ʃikuru-bia*** 'school-child (school's child)' or ***ʃikuru-bila*** 'school-small'. Other examples are shown below.

(14) Individuating meaning of *bila/bia*.

a.	***Lagɔŋ-bia***	'a student of Legon'
b.	***Machɛl-bila***	'A blacksmith'
c.	***lum-bila***	'a drummer'
d.	***Kambom-bila***	'Akan person'
e.	***Silmiim-bila***	'a white person
f.	***Mo-bila***	'a Moshi person'

In addition to groups or communities, the Dagbani word for twin, ***ja-a***, is most often modified with ***bila*** when used in reference to a specific individual as ***ja-bila/ja-bihi***, even if the twins are old enough to be grandparents. Thus, it is more common to hear a sentence such as ***o nyɛla jabila*** 's/he is a twin' than ***o nyɛla jaa***.

While the individuating sense is the surface meaning, there is a deeper sense of highlighting the lesser significance of individuals compared to the groups they belong to. That is because people are understood to live together as members belonging to the same clan or ethnic group. They derive their strength, value or significance from their collectivity. When referring to one or a few of them, the use of *bila* indicates that as individuals, they lack the strength and significance that define them as a collective. The same analysis holds for contexts where ***bila*** is used to indicate the institutional affiliation of an individual such as a student. In the compound ***Lagɔŋ-bia*** (a student of Legon), what is encoded is the lesser significance of the individual, in contrast to Legon as an institution, with thousands of students, professors and other workers.

3.5.2. Partitive marker

The words ***bila/bia*** can be used to indicate that the noun is a small, and thus, less significant part of a larger object. This is most common with body parts, as shown in (15).

(15) Body part (Based on size: a small part of a whole)

	literal	contextual

a.	***nu-bila***	'small hand'	'finger'
b.	***napɔm-bila***	'small foot'	'toe'
c.	***nim-bila***	'small face'	'eye'
d.	***duum-bia***	'knee's child'	'knee cap'
e.	***tib-bia***	'ear's child'	'eardrum'
f.	***chinchin-bia***	'cloth's child'	'a small cloth worn on top of a bigger one'

The literal interpretations for these words are based on a purely semantic interpretation, which are not the actual meanings. The word ***bin-i*** 'thing-sg' (a thing) is also used to indicate a part-whole relation between two entities. When a part of an animate being is severed, usually as meat, ***bini*** is used to express the smallness or reduced significance of that part relative to the whole. Relevant data on this were shown in (4), repeated in (16).

(16) Words with ***bini*** marking part-whole relations.

a.	***bin-yaanga***	'the back'
b.	***bin-puli***	'the stomach'
c.	***bin-sabli***	'the liver'
d.	***bin-gbaŋ***	'the skin'
e.	***bin-zuɣu***	'the head'
f.	***bin-bɛma***	'the shins'

4. Other issues in the encoding of diminution

In this section, three issues that are important in the encoding of diminution are discussed. These are age-related address terms among family relations, gender and a possible diachronic change that may have affected the productivity of ***-fu***, the only diminutive suffix in the language.

4.1. Diminutives in age-related address terms among family relations

One sociolinguistic domain within which diminutives emerge is address terms for family relations. This is because these terms are based on the relative age of the interlocutors. For this reason, many of the address terms also encode diminution. The purpose of the discussion in this page is to show that the use of these diminutives mostly emerges contextually. The use of a diminutive denoting a younger or smaller physical size does not often hold when the literal meaning of these words are considered. Rather, age or physical size interacts with gender and family relations to encode diminution.

Among the Dagomba, the social relationship between people in the community anchors largely on age and gender than any other social constructs. Within the clan, the oldest man is the leader by virtue of his gender and age. Every person carries an address term based on his or her age relative to the interlocutor, and each person is required to address the other, especially the ones older than them, using an age-related address term. However, as noted below, the use of these age-related address terms also has more to do with family relations than the date of birth of individuals. The data in (17) provides the address terms. The relevant age-related terms are ***-pira*** and ***-kpɛma***. Note that while ***-pira*** is always used as a bound morpheme, ***kpɛma*** is a free morpheme. In the glossing of these terms, the contextual, and sometimes metaphorical meanings are put in parenthesis to distinguish them from the literal meanings. This is discussed further below.

(17) Age-related names/address terms[2]

a. Parents and their siblings, cousins
   i. ***ba*** 'father'
   ii. ***ma*** 'mother'
   iii. ***ba-pira*** '(father's younger brother or younger male cousin)'
   iv. ***ma-pira*** '(a mother's younger sister or younger female cousin)'
   v. ***ba-kpɛma*** 'a father's elder brother or elder male cousin'
   vi. ***ma-kpɛma*** 'a mother's elder sister or elder female cousin'

b. Siblings and cousins
   i. ***tuzo(-bila)*** 'a younger sibling or cousin of the same gender.
   ii. ***biɛli*** 'an older sibling or cousin of the same gender;
   (a woman's husband, a woman's sibling-in-law')
   (a woman's co-wife married into the family earlier)

c. Spouses
   i. ***waljira*** 'the first wife of a man'
   ii. ***paɣ-bila*** '(the last wife of a man)'

d. Spouses' siblings
   i. ***yidaan-bila*** ('a woman's husband's younger brother')
   ii. ***yidaan-kpɛma*** ('a woman's husband's elder brother')

While all these are names of relatives, the only ones that are most often used as address terms and must be added to the personal names of relatives are the names for parents, parents' siblings, and older siblings. The term for younger sibling is not necessarily a title because younger siblings do not deserve recognition for their age. In an interaction between two people, the one who must be treated with deference is the older of the two. For this reason, in a household with two people bearing the same name, ***kpɛma*** and ***bila*** is often used to distinguish between them based on their age. Thus, ***Azindo kpɛma*** means the elder of two people bearing the name ***Azindoo***, while ***Azindo bila*** is the younger of the two. This is regardless of the relative physique of the two persons, contrary to the discussion in Section 3.1 regarding the use of ***bila*** for people with smaller physique.

Many of these terms extend beyond the family. Within the larger community, people are addressed, especially by those younger than them, based on their age. Anyone old enough to be one's parent or elder sibling is addressed with the honorific ***m ba*** 'my father'; ***m ma*** 'my mother' or ***m biɛli*** 'my elder'. For instance, ***Azindoo*** will be addressed as ***m be-Azindoo*** if he is older than the person addressing him but too young to be the addresser's father's age mate. He will then be entitled to more respect and other courtesies by virtue of his age. With age playing such an important role in the interpersonal relationship between people and in the entire sociolinguistics of the people, the reference to someone as ***bila*** implies the lack of something of significance.

[2] The data shown here are based on what is deemed relevant for the analysis here. Neither the terms nor the glosses for some of them are exhaustive. For instance, each of the address terms for parents and their siblings are also used by younger in-laws. For instance, *ba* also refers to one's father-in-law, *ma* for mother-in-law etc. Other age-related address terms not included here are *ŋahiba* (maternal uncle, regardless of his relative age with one's mother and *piriba* (a paternal aunt regardless of her age relative to one's father). And *tuzo-paɣa*, *tuzo-doo* refer respectively to a cross-gender sister/cousin and a cross-gender brother/cousin regardless of relative age.

However, the use of these age-related address terms goes beyond the relative date of birth between the addresser and addressee. Nephews or nieces will use the same address terms for uncles and aunties who are younger than them. In a polygamous family, the last wife of the man will always be referred to as the ***paɣ-bila*** ('wife-small/young') even if she is older and physically bigger than the first. What is of significance here is the relative time of marriage, not date of birth. The wife who was married first deserves more respect than the one married later. A married woman will address the husband as her ***biɛli*** (literally, older sibling) even if she is older than him. What is significant here is the power relations between the couple. The husband is the head of the family, a position that elevates him above the wife to the position of the wife's elder brother. What is more, the husband's siblings get a share in this honour, as they also get addressed with the same title even if the wife is older than them by decades. Similarly, she will refer to her husband's younger brother as her ***yidaam-bila*** small husband' even if the brother-in-law is older than her. The use of ***bila*** applies to the age relations between the husband and his brother, not between the wife and the brother-in-law. Among siblings, ***bila*** is also often added to ***tuzo***, such that the term for younger sibling is realized as ***tuzo-bila***, even if the younger sibling is physically of bigger size. The overall effect is to re-enforce the understanding that the younger sibling lacks something of significance: age.

Beyond family relations, the same pragmatic sense is encoded in the use of the word ***bia*** 'child'. For instance, it is used to refer to a leaner, ***karim bia*** 'learning child'. By contrast, a teacher is known as ***karim ba*** 'learning father'. These terms are used regardless of the age of the learner relative to the teacher. What is relevant here is the lesser status or significance of the learner as far as knowledge is concerned.

4.2. Gender markers in the encoding of diminution and augmentation

Across languages of the world, gender marking and diminution interact in two ways. Diminutive markers may also be used to mark one gender. For instance, Appah and Amfo (2011) argue that the diminutive morpheme (***-ba***/***-wa***) whose origin is the Akan word for child, is also used to encode feminine gender. Another interaction involves the use of a gender suffix for evaluative purpose, including diminution and augmentation. For instance, citing several authors, Grandi 2015a, 2015b lists Maltese and Berber languages as examples of languages that encode diminution using the feminine gender-marking suffix[3].

In Dagbani, the masculine gender is typically used as augmentatives and the feminine gender as diminutives. Dagbani has four different allomorphs of the morpheme that marks masculinity: ***laa***, ***lɔɣu***, ***daa*** and ***dibga***. All but ***dibga*** can be suffixed to nouns to project their relative size, strength, or significance. For instance, a sick person will not just hope to treat the sickness with ***tim*** 'medicine' but will hope to get a ***ti-laa*** 'a potent medicine' that can cure the sickness. Other examples include ***so-lɔɣu*** 'big/major road', ***bɔɣi lɔɣu*** 'huge pit/crater' and ***vuɣ-laa*** 'a giant farm bed'. In many cases where masculine gender marks augmentation, the masculine suffix cannot be replaced by a feminine suffix or some other diminutive marker to diminutivise the noun. But in some cases, this is possible, as in the word ***so-bila*** 'a path', which contrasts with ***so-lɔɣu*** 'main road'.

[3] There are other languages such as Slovak (Gregová (2015) that use both feminine and masculine markers to encode diminution.

Similarly, the feminine morpheme ***nyaŋ*** is used to mark objects that are (perceived to be) relatively smaller, weaker or of lesser value or significance. The commonest use of ***nyaŋ*** to mark diminution is in the name of paired musical instruments. For such instruments, the smaller, usually high-pitched pair is named the female of the pair while the bigger and louder of the two is the male. For some of them, ***bila*** may replace ***nyaŋ*** as an alternative means of diminutivising the smaller one. This is shown in (18)c-e.

(18) Gender morphemes as evaluative (augmentatives and diminutives) markers

a.	***kika-a***	***kika-lɔɣu***	***kika-nyaŋ***	'trumpet'
b.	***timpan-i***	***timpan-daa***	***timpan-nyaŋ***	'talking drum'
c.	***dal-gu***	***dal-lɔɣu***	***dal-nyaŋ / dal-bila***	'standing drum'
d.	***luŋ-a***	***lun-daa***	***lun-nyaŋ / lum-bila***	'double-edged hour-glass drum'
e.	***dawul-e***	***dawul-lɔɣu***	***dawul-nyaŋ /dawul-bila***	'double bell'

4.3. Diachronic change in diminutive marker

In Section 2.2, it was shown that the suffix ***-fu*** marks diminution. However, the use of this suffix to diminutivise nouns is not productive. Indeed, words ending in ***fu*** in Dagbani are generally rare. This rarity appears to be due to a diachronic change that debuccalized the sound [f] in such words into [h] (see Hudu 2018 for further discussion on debuccalisation in Dagbani). This analysis is based on a comparison with Mampruli, a genetically close relative of Dagbani (considered by many speakers of both languages as a dialect of Dagbani) in which many cognate words with final [-*fu*] end in [-*hu*] in Dagbani. Such words are shown in (19) with the Dagbani forms in parenthesis. The fact that words such as those in (19) end in ***-fu*** suggests that unlike Dagbani, the diminutivising function of this suffix may be weaker or non-existent in Mampruli.

(19) Mampruli words that take the suffix -fu.

a.	***naafu (nahu)***	'cow/bovine'
b.	***sufu (suhu)***	'heart'
c.	***yoofu (wahu)***	'horse'
d.	***waafu (wahu)***	'snake'
e.	***kaafu (kahu)***	'a grain'

The context of this debuccalisation is intervocalic position where the syllable *fu* follows a short vowel, as is the case in Dagbani synchronic grammar (Hudu and Nindow 2020; Hudu 2022). For words in both languages in which ***fu*** is not preceded by a short vowel, [f] maintains its place of articulation, as shown in (20).

(20) Dagbani and Mampruli words with *fu*.

a.	***laɣ-fu***	'a cowrie'
b.	***nyɛl-fu***	'guinea worm'
c.	***difu/dufu***	'chaff, bran'
d.	***baafu***	'flick-knife'

In spite of this diachronic explanation, these words also are inherently diminutive. They add weight to the clearly synchronically diminutive use of the suffix ***-fu*** shown in (5), and repeated in (21) . This raises the possibility that the rarity of words demonstrating

the diminutive use of ***-fu*** is due to this diachronic change. A further investigation into this in future research will be worthwhile.

(21) Synchronic diminutivisation with suffix *-fu*.

	reg. sg.	dim. sg.	pl.	
a.	***biɛl-a***	***biɛl-fu***	***biɛl-a***	'small (in quantity)'
b.	***bil-a***	***bil-fu***	***bih-i***	'small (in size)/tiny'
c.	***chɔɣiŋ-gu***	***chɔɣ-fu***	***chɔɣ-ma***	'weak/timid'
d.	***laɣ-ri*** 'money'	***laɣ-fu***		'a cowrie'

5. Concluding remarks

The goal of this paper has been to describe the encoding of diminution in Dagbani and to specifically show that this emerges within the pragmatics. While it is significant for being the first such study on the language to the best of my knowledge, and perhaps among genetic relatives in Ghana, it is by no means exhaustive, and was not intended to be. In this concluding section, a summary is presented on the role of pragmatics, socio- and ethno-linguistics in understanding Dagbani diminution. This is followed by remarks on directions for future research to advance our understanding of diminution in Dagbani.

5.1. Summing up the arguments on the pragmatic analysis

The main argument that the encoding of diminution and the value of various diminutive morphemes goes beyond their basic semantics can be summed up as follows. First, the diminutive ***bini*** lacks 'smallness' as part of its semantic content. It acquires it only in a restricted morphological context of the first lexeme in a noun-noun compound with its referent as the severed body part of an animal. Second, the literal evaluative meanings encoded by some markers are contradictory in different contexts. The marker *bila* literally encodes relative youngness, defined as the more recent to come into existence. But when used to modify the name of the months of the year, it refers to the month that comes earlier.

Third, the diminutive encoding of some of these morphemes is non-existent when the semantic content alone is relied upon. In the partitive use of ***bila*** and ***bia***, the literal meaning derived by combining the semantic content of the morphemes in the compounds is non-existent. In the individuating function, the addition of ***bila*** to the name of a clan or group does not imply that the person referred to is small. Fourth, the literal meaning, even if existent, may be wrong. The actual meanings can only be derived using the socio- and ethno-linguistic context. The markers ***bila***, and ***-pira***, when used as an address term for a relative, does not necessarily indicate that the person addressed is younger or smaller. Finally, the differences in the distribution and diminutivising functions of semantically related words ***bila*** and ***biɛla*** shows that encoding attenuation semantically does not suffice to predict the form or extent of diminution of a morpheme. While ***bila*** is very productive as a diminutive marker and does so morphologically, ***biɛla*** is less productive and only marks diminution lexically as a post-nominal quantifier.

5.2. Future research

The present study has not investigated phonological means of encoding diminution, though intonation has been found to play a role in Dagbani semantics and pragmatics (Hudu 2012). Cahill (2015) in particular, has shown that the major component of the

grammar responsible for diminutive construction in Kɔnni is tone. For this reason, the role of tone in Dagbani diminutive marking cannot be ruled out. Indeed, a preliminary observation on the individuating function of ***bila*** suggest that in some cases, it carries a different tone from other contexts where it merely modifies a noun. For instance, in the Eastern Dialect the English-Dagbani loanword for *school* is ***ʃikúrû*.** The word for *student/pupil*, ***ʃikuru-bila*** carries the following tone: ***ʃikúrú-bílá***. However, in a non-individuating use of the term ***bila*** in the same compound, which produces the meaning *a small school* the second and third vowels in the word ***ʃikúrú*** carry a down stepped high tone: ***ʃik!úr!ú-bílá***. It is thus plausible that compound forms that contain diminutives show unique tonal patterns or intonational contours in some of the dialects of Dagbani. It will also be worth investigating whether a diminutive marker like ***bini***, which does not encode diminution until it appears in a compound carries a unique tone as a diminutive in any of the dialects. All these and other possibilities deserve attention, in light of Cahill's finding on Kɔnni and the Dagbani example just cited.

The discussion on the interaction between gender marking and diminution also unavoidably touched on the use of male gender marker as an augmentative. Like diminutives, there has been no known study on this nor any other evaluative marker in Dagbani. Indeed, the observation regarding the paucity of research on these evaluative markers and evaluative morphology in general applies to most languages in Ghana. Very few studies have been conducted on evaluative markers in Ghanaian languages. The only studies on diminution that came up during a search were on Akan, Ewe, Selee, and Kɔnni (see also Agbetsoamedo Di Garbo (2015) for analysis of Selee diminutives). The analyses presented here, I hope, will trigger further interest in research into the encoding of diminution and other evaluative forms in Ghanaian languages. I also hope that the findings make a useful input into theoretical studies of diminution and evaluative morphology in general.

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A QUANTITATIVE STUDY OF PHONOLOGICAL AND MORPHOLOGICAL VARIANTS IN THE EVOLVING SPOKEN STANDARD IGBO VARIETY

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VISITING A NEGLECTED LEXICAL CATEGORY: AN OVERVIEW OF DAGBANI ADVERBIALS

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THE PRAGMATIC FUNCTIONS OF DAGBANI DIMINUTIVES

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