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WHAT IS THE PHONOLOGICAL WORD IN DAGBANI? A POSITIONAL FAITHFULNESS ACCOUNT[*]

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Abstract

This paper offers a phonological diagnostic for defining the word in Dagbani, a Gur language of Ghana. It shows that a morphological unit that constitutes a complete word blocks contrast-neutralising phonological processes from target segments within its boundaries when triggered across its boundary. In sub-word units, these processes (e.g. nasal place assimilation, vowel harmony, segmental deletion) apply to target sounds without restrictions. The result is the maintenance of contrast in words and neutralisation of contrast in sub-words. The paper further argues that the asymmetrical application of these rules is an indication of a morphological strength distinction between the word as a strong position where segments are fully specified for phonological features, and the sub-word domain as a non-privileged position where segments may be underspecified for features. A formal analysis of the asymmetry is presented using the theory of positional faithfulness within the framework of Optimality Theory.

1   Introduction

The goals of this paper are three. First, it reviews previous descriptions of the various morphological units in Dagbani, a Gur language of Ghana. These units have been described at different levels of detail in previous studies (e.g. Olawsky 1999, 2002; Hudu 2005, 2010, 2012). The second goal is to define the phonological word in Dagbani using phonological processes. In doing so, a boundary is drawn between morphological units that are full words and those that are sub-words. The third goal is

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to demonstrate that the distinction between a full word and a sub-word can be accounted for using the theory of position faithfulness (Beckman 1997, 1998) within the framework of Optimality Theory (Prince and Smolensky 1993/2004). The paper illustrates this with a formal account of nasal place assimilation (NPA), vowel harmony and lateral deletion.

This is not the first study to use phonological processes to define the Dagbani phonological word. Similar previous studies include Olawsky (2002) and others. The analyses show that phonological processes have the tendency to compromise the featural integrity of segments in various constituents. The asymmetrical effect of these processes on various morphological units is useful in defining the differences between these units and ultimately determining their wordhood. The phonological patterns in Dagbani show that a unit that constitutes a phonological word is positionally strong. It blocks phonological processes triggered across its boundary to ensure that phonemic contrasts between segments are fully maximised. Sub-word morphological units, on the other hand, are non-privileged positions which impose less restrictions on the application of phonological processes. Segments within them are targets of phonological processes triggered within or across their boundaries. Thus in arguing for the role of these processes as phonological diagnostics in defining a morphological category, the paper also makes the crucial claim that a successful account of the asymmetries observed here can not be achieved without reference to the morphological units within which segments surface.

The data used in this paper reflect the Eastern and Western dialects of Dagbani. The primary data are based on my intuitions as a native speaker and elicitations and observations from other speakers. All data are presented in phonemic or phonetic transcription, not in the orthography. Tone marking is based solely on the Eastern Dialect, and restricted to high, low and falling tones. The vowels and consonants forming the segmental inventory of Dagbani are shown in (1) and (2), cited from Hudu (2010). Allophones are in square brackets.

(1) Vowel inventory

    iː i   [u] uː
                ɨ   ʊ

    eː [e]   [o] oː
        ɛ   ɔ
            [a̝]
        aː a

(2)   Consonant inventory

p	t		k [ʧ]	k͡p [t͡p]		[ʔ]
b	d [ɾ]		g [ʤ]	g͡b [d͡b]		
f	s [ʃ]		[x]			[h]
v	z [ʒ]					
	l					
m	n	ɲ	ŋ	ŋ͡m [n͡m]		
	j		w			

The rest of this introduction takes a look at the phonological word in a cross linguistic perspective and the notion of positional privilege in phonology. Section 2 describes Dagbani morphology and the various morphological units that are discussed in this paper. The two subsequent sections analyse various phonological processes that serve as diagnostics for defining the phonological wordhood of various morphological constituents. These are nasal place assimilation in Section 3, and vowel harmony and segmental deletion in Section 4. Section 5 demonstrates how a positional faithfulness approach can account for the differences between sub-phonological words and full words, illustrating this with a formal account of these processes. Section 6 presents the summary and conclusions of the paper.

1.1   Defining the phonological word

Research on the word as a linguistic unit has hardly succeeded in providing a comprehensive definition that characterises the nature of the word cross-linguistically. What has been relatively successful is a distinction between phonological word and grammatical word as two different cross-linguistic units. Dixon and Aikhenvald (2002:13) define a phonological word as a phonological unit typically larger than the syllable which generally has more than one phonological defining property chosen from the three areas shown in (3).

(3)   (a) Segmental features - internal syllabic and segmental structure; phonetic realisations in terms of this; word boundary phenomena; pause phenomena.

   (b) Prosodic features - stress (or accent) and/or tone assignment; prosodic features such as nasalisation, retroflexion, vowel harmony.

   (c) Phonological rules - some rules apply only within a phonological word; others (external sandhi rules) apply specifically across a phonological word boundary.

Discussions of the phonological word in Dagbani have touched on each of the three areas noted by Dixon and Aikhenvald. Dakubu (1997) observes that the phonological word in Central Gur, of which Dagbani is part, typically consists of two morphological units: (i) a thematic CV syllable which has a full range of articulatory contrasts and (ii) a mono- or bi-syllabic suffix which has restricted vowels and consonants. She further notes that the vowels of suffixes 'tend to be at least partly determined by the features of the thematic syllable vowel' (Dakubu 1997:83). Olawsky (2002) explores the nature of the Dagbani phonological word using syllable structure, tone, vowel harmony and other phonological processes. Hudu (2010, 2013) shows that [ATR] harmony is restricted to the domain of one lexical root. He defines the phonological word as a lexical root accompanied by prefixes, suffixes, proclitics and enclitics.

In this paper, the phonological word is established using one diagnostic: phonological rules triggered across the boundary of the morphological unit to which the target segment belongs. The various phonological processes discussed here are those that trigger the loss of constrast through harmony, phonetic assimilation, featural dissimilation or even deletion. Most of these processes take place when morphemes are concatenated. The observation is that, the application of these processes is conditioned on the mophological category containing the potential target. When the triggering segment or environment and the potential target are not part of the same morpheme, harmony will take place only when the potential target is part of an affix, clitic or bound lexical root. When the morphological environment within which the potential target surfaces is a word, these processes are blocked. The conclusion is that, these processes only apply across sub-word boundaries, they do not apply across the boundaries of full phonological words.

1.2   Positional privilege and positional faithfulness

The observation that phonological processes may be constrained by linguistic units has been made in previous research as far back as Troubetzkoy (1939). More recent studies and observations include Casali (1997); Beckman (1997, 1998) among others. These studies show that there exists an asymmetry between two domain types. One domain category consists of forms in which various phonological processes that result in the neutralisation of underlying contrast (e.g. lenition, various forms of assimilation, deletion etc) readily take place. The other category includes forms in which such forms of neutralisation are blocked. Lexical roots, root-initial syllables, stressed syllables and syllable onsets are privileged positions, prosodically and psycholinguistically, that often preserve segmental contrasts. Affixes, root-internal syllables, unstressed syllables, and syllable codas are non-privileged positions where contrasts are often lost.

Also observed as a factor in conditioning phonological processes is lexical category. Compared with other lexical categories, nouns show privileged phonological behaviour in that they license more phonological contrasts and resist processes of neutralisation or deletion. This has been shown in research on many languages such as Spanish (Harris, 1969), Sinhala (Letterman, 1997), Arabic (McCarthy and Prince, 1990, 1995) (see Smith 2001 for extensive review and discussion). Even though it is not the focus of this paper, and no known previous study on Dagbani discusses it, a preliminary observation of nasal place assimilation shows that Dagbani also treats nouns as a more privileged lexical category than verbs. As shown in Section 3, when preceded by an underlyingly placeless nasal proclitic, a vowel-initial noun inserts the syllable **da** initially to provide a consonant to licence the place specification of the nasal proclitic. A vowel-initial verb in a similar context deletes the initial vowel to produce a consonant-initial surface form that licenses the place specification of the preceding nasal.

The focus of this paper is on the contrast between bound roots, affixes and clitics on one hand and simplex words, complex words and compounds on the other. This contrast also bears similarities with the asymmetries observed in the languages cited. The non-lexical and bound lexical morphemes pattern together as non-privileged positions, the non-bound lexical items behave as privileged positions. Units in the former category are subject to phonological neutralisation resulting from various phonological processes. In the latter positions, these forms of neutralisation are blocked.

One approach within Optimality Theory to analysing the asymmetry has been with the use of positional faithfulness constraints (Beckman 1997, 1998). These are constraints that require output preservation of underlying contrast in privileged linguistic positions. Through appropriate ranking with other constraints, positional faithfulness constraints have the effect of blocking in prominent positions, phonological processes that lead to neutralisation of underlying contrast, thus limiting such neutralisation patterns to non-privileged positions. This paper argues that the various processes can be unified under a positional faithfulness account, illustrating this with analysis of nasal place assimilation.

2   Dagbani morphology

Morphologically, Dagbani is an agglutinative language, with some level of fusion caused by morphophonological rules typically affecting nouns and adjectives. The word order is SVO. For the purpose of the discussion in this section, morphological units in the language are categorised into words, affixes and clitics.

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2.1 Words

Dagbani words can be categorised into three: simplex, complex and compound words. A simplex word consists of only one lexical root. For verbs, this can be as short as a CV or CVC root in the infinitive form, which does not require an affix. The simplex verb may also be inflected for aspectual markers (4a-b) or followed by clitics (4c-e). An underlying verb may also take a derivational suffix to produce words of different lexical categories, as in (4f-g). In (4) and all other data, a segment in square brackets is epenthetic. Clitics are not preceded by hyphens, unlike affixes.

(4)   Verbs
a.	**tì**	'give'	**tì-já**	'give-perf.'
b.	**wɔ́lg[ɨ̀]**	'separate'	**wɔ̀lg[ɨ̀]-rá**	'separate-imperf.'
c.	**màl[ɨ̀]**	'make'	**màl lɨ́**	'make it'
d.	**zàŋ**	'take/have'	**zàŋ nà**	'take hither (bring)'
e.	**kpàŋs[ɨ̀]**	'encourage'	**kpàŋs ô**	'encourage him/her'
f.	**bɔ́h[ɨ̀]**	'ask'	**bɔ̀h-gʊ́**	'question-sg.'
g.	**lù**	'fall'	**lʊ́-á**	'fall-sg.'

For typical nouns and adjectives, a simplex word consists of a lexical root and a number suffix bound to each other. Unlike the lexical root, there are a limited number of nominal/adjectival suffixes which mark singular and plural number, among other functions, and form the basis for the classification of nouns and adjectives in the language, as discussed further in Section 2.2. The smallest free standing unit for a typical noun or adjective is a lexical root inflected with a singular or plural nominal suffix. However, the underlying phonological featural composition of a nominal/adjectival root appears in complex words, which consist of more than one lexical root inflected with only one number suffix. In a simple singular/plural form, segments in the root may be targets of assimilatory processes triggered by segments in the suffix. They may also undergo phonological processes resulting from the suffixation of the number markers. In complex words, only the final root is followed by a number suffix. All roots preceding the final root are followed by other lexical roots. The data in (5) show the distinction between simplex nouns and adjectives in the singular and plural forms and complex nouns consisting of only two lexical roots.

(5)   Structure of Dagbani nouns and adjectives
	Singular	Plural		noun+adjective/noun+noun	
a.	**bɔ́ʔ-ʊ́**	**bɔ́ʔ-rɨ́**	'arm'	**bɔ̀ʔ bɨ́l-á**	'small arm'
b.	**páʔ-á**	**páʔ-bá**	'wife'	**pàʔ-pál̩-ó**	'new wife'
c.	**dór-ó**	**dɔ̀r-tɨ́**	'disease'	**dɔ̀r kʊ́r-lɨ́**	'old disease'
d.	**ɲé-é**	**ɲé-hí**	'nose'	**ɲè vɔ́-lɨ́**	'nostril'

e. **máːn-í**	**mán-â**	'okra'	**máːŋ kúːn-ɨ**	'dry okra'
f. **jíl-î**	**jí-jâ**	'house'	**jíl títá-lɨ**	'big house'
g. **wàh-ʊ́**	**jùr-î**	'horse'	**wàr díb-gâ**	'stallion'
h. **k͡pán-gá** [k͡pá´ŋː]	**k͡pín-î**	'guinea fowl'	**k͡páːn g͡bál-ɨ**	'guinea fowl leg'

The examples in (5a-b) are cases with roots unchanged in all contexts in their segmental and featural composition. (5c-d) are instances where features of segments in the singular forms of the roots change due to an assimilatory process triggered by the singular nominal suffix while (5e-f) represent instances where the plural root forms are different. Although quite rare, there are cases where both singular and plural root forms differ from the underlying root form shown in the complex word. Examples are shown in (5g-h). The rules governing some of these changes form part of the subject of discussion in the sections to come. In the rest of this paper, any reference to the underlying form of a nominal or adjectival root means the form of the root in a complex word preceding one or more nominal/adjectival roots. The data in (6) show that many nominal/adjectival roots can be stacked into one complex word whose suffix is the suffix of the last nominal or adjectival root.

(6)   Building complex nouns

a.	**nà-á**	'chief-sg.'
b.	**nà-bí-hí**	'chief's child-pl. (princes)'
c.	**nà-bì-pʊ̀ʔíŋ-gá**	'chief's female child-sg. (princess)'
d.	**nà-bì-pʊ̀ʔíɲ-ʒé-é**	'fair coloured princess'
e.	**nà-bì-pʊ̀ʔíɲ-ʒé-vèl-lɨ́**	'beautiful fair coloured princess'
f.	**nà-bì-pʊ̀ʔíɲ-ʒé-vèl-wɔ́ʔɨ́l-á**	'tall beautiful fair coloured princesses'

Compounds differ from complex words in that they combine two simplex words without restrictions on their inflection. The data in (7) illustrate associative construction in Dagbani, a compound construction that combines two nouns, the second noun associated with the first.

(7)   Possessive Construction

	possessor	possessed	compound	
a.	**nà-á**	**bí-hí**	**nàà bíhí**	'chief's children'
b.	**náh-ʊ́**	**zʊ́ʔ-ʊ̂**	**náhʊ́ zʊ́ʔʊ̂**	'cow's head'
c.	**wɔ́b-gʊ̂**	**mà**	**wɔ́bgʊ́ mâ**	'elephant's mother'
d.	**bá-á**	**bín-dí**	**báá bín-dí**	'dog's shit'
e.	**báʔ-á**	**kɔ̀l-gʊ́**	**báʔá kɔ́l-gʊ́**	'soothsayer's sack'

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The difference between (6b) and (7a) is that, in **nàbíhí**, **nàá** is modifying **bíhí** whereas in **nàà bíhí**, **bíhí** is associated with **nàá**. Thus **nàà bíhí** is an associative construction surfacing as a compound headed by **nàá**. The two words in (6b) and (7a) thus differ significantly in their meanings. In **nàà bíhí**, the children are identified as having some unique association with the chief. There are several pragmatic contexts in which it can be used. It could refer to princes beloved to the chief and used to make a distinction between such princes and other children of the chief. But it could also be used to refer to children who are not the chief's sons or daughters. The children could be the chief's messengers or servants. Similarly, **náhʊ́ zʊ́ʔʊ̂** refers to the head of a live cow. The severed head of a dead cow is expressed as a complex word with cow describing head (**náʔ zʊ́ʔʊ̂** 'cow head').

Thus for each of the compounds in (7), there could be a complex construction that differs along a similar line. The compound in (7c) is interesting in the sense that it is ambiguous. One meaning is the compositional meaning stated in (7). Another meaning is semantically non-compositional, and refers to a type of rodent, about the size of a baby rat. Another such example is the word **sá-á páʔ-á** which literally means 'rain's wife' but actually means 'dragonfly'. The point of these comparisons is that, while compounds sometimes convey such non-compositional meanings, complex words are compositional in meaning.

In compounding, the last vowel of the first noun of a compound may be reduced to [ɨ] or elided all together due to its location within the compound. When the suffix of this noun does not have an onset, such a deletion may give the impression that the suffix is deleted, making the compound similar to a complex word. For instance, **náh-ʊ́ zʊ́ʔ-ʊ̂** 'cow's head' may be pronounced as **náh zʊ́ʔʊ̂**, and **báʔ-á kɔ́l-gʊ́** 'soothsayer's sack' as **báʔ kɔ́l-gʊ́**. This is especially likely in casual speech. However, such a reduction is not phonological, as it does not affect the phonology in any way. With the exception of the vowel elision or reduction, the first root of the compound remains phonologically distinct from that of a complex word in all other ways. Thus **náh zʊ́ʔʊ̂** maintains a root coda distinct from **náʔ zʊ́ʔʊ̂**. **báʔ kɔ́l-gʊ́** also maintains the high tone of the root vowel making it different from **bàʔ kɔ̀l-gʊ́**, a complex word in which 'soothsayer' modifies 'sack'. This is further demonstrated in Section 3.4, where such a vocalic elision may leave a preceding nasal exposed to an oral consonant in the following word. However, in such forms, nasal place assimilation fails to take place, unlike the root-root sequence in complex words, where a nasal at the right edge of the first lexical root assumes the place specification of the initial consonant of the second lexical root.

2.2 Affixes and clitics

The most studied affixes in Dagbani are nominal/adjectival suffixes that mark singular and plural number, as evidenced from the already cited literature. These have been shown in the preceding data. There are three important roles nominal/adjectival number suffixes play, beyond encoding number and making the nouns and adjectives to which they are suffixed complete words. First, the limited set of suffixes form the basis for classifying Dagbani nouns and adjectives, such that all nouns and adjectives that belong to one class take the same singular and plural nominal suffixes. For instance, nouns that take the singular nominal suffix **-lɨ** also take the plural nominal suffix **-a**, and thus belong to one class, as observed in previous studies on Dagbani morphology (e.g. Benzing 1971, Wilson 1972, Olawsky 1999, Hudu 2005, Miehe 2012). Previous proposals on the noun class system of Dagbani range from five to seven classes, with some proposing sub-classes. Number suffixes have also been used in determining the noun class systems of related Gur languages such as Mampruli, Frafra, Kasem, Buli, Talni (Naden 1988), and Gur languages in general, following the works of early researchers such as Gabriel Manessy and others from the early 1960s and before. This is discussed extensively in the eidted collections of Gudrun Miehe, Brigitte Reineke and Kerstin Winkelmann (Miehe and Winkelmann 2007 and Miehe et al. 2012).

Second, suffixes sometimes help to disambiguate homophonous roots. The noun pairs in (8), cited from Olawsky (1999), with some changes to transcription and added tone marks, illustrate this point.

(8)   Number suffixes disambiguating homophonous roots (Olawsky 1999)

	singular	plural		singular	plural	
a.	**ʧɛ́ɾ-lɨ̂**	**ʧɛ́ɾ-â**	'driver ant'	**ʧɛ́ɾ-gá**	**ʧɛ́ɾ-tɨ́**	'ladle'
b.	**sál-lɨ́**	**sál-á**	'charcoal'	**sál-gá**	**sál-sɨ́**	'weevil'
c.	**jʊ́-lɨ̂**	**jʊ́-jâ**	'name'	**jʊ́-â**	**jʊ́-hɨ̂**	'flute'
d.	**kál-lɨ́**	**kál-á**	'segment'	**kál-ó**	**kál-tɨ́**	'enamelware'
e.	**k͡pál-gá**	**k͡pál-sɨ́**	'type of tree'	**k͡pál-gʊ̂**	**k͡pál-tɨ̂**	'dawadawa spice'

Third, suffixes play a semantic role in that the choice between two nominal suffixes both marking singularity or plurality for suffixation to the same root may result in slight meaning differences or encode another semantic property such as animacy. Examples are shown in (9).

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(9)   Modifying nominal suffixes
        a. **pál-ó**   'new-sg. (anim.)'   **pál-lí**   'new-sg. (inanim.)'
        b. **pál-bá**   'new-pl. (anim.)'   **pál-á**   'new-pl. (inanim)'
        c. **kúr-ó**   'old-sg. (anim)'   **kúr-lí**   'old-sg. (inanim.)'
        d. **ʧé-é**   'small piece-sg.'   **ʧé-ʔú**   'broken piece-sg.'
        e. **bé-é**   'mischievous person-sg.'   **bé-ʔú**   'bad/ugly one-sg.'
        f. **ʒè-é**   'red-sg.'   **ʒè-ʔú**   'reddish-sg.'
        g. **pèl-lí**   'white-sg.'   **pèl-gá**   'sparkling white'
        h. **sábín-lí** 'black-sg.'   **sáblí-gá** 'ugly black-sg.'
        i. **kòr-ê**   'desire'   **kɔr-sɪ**   'temptations/'
                                                                      unattained interests'

The different suffixes in (9a-c), mark distinct animacy, in addition to being number suffixes. The adjective **ʧé-é** describes a noun that, by its nature, exists as a piece. For instance, in **ním ʧéé** 'a piece of meat', **ʧé-é** modifies meat of a size that can be consumed without the need to cut it into further pieces. It describes the meat as a part of an animal. **ʧé-ʔú**, on the other hand, is used to describe something that is incomplete, and for which reason, typically less or not useful. For instance, a piece of a broken earthenware of any size is described as **la ʧé-ʔú**. In (9e), the suffixes encode different 'objects'. In **bé-é**, it is solely the character of a person that is encoded, and is used solely to describe humans. **bé-ʔú** is, by default, used to encode the physical appearance of any noun, but can also be extended to encode the character of an animate being. The use of a suffix can also encode a generic/neutral sense of a colour term (e.g. **-lí** in **pèl-lí**, **sábín-lí**), complementation (e.g. **-gá** in **pèl-gá**) or perjoration (as in **-gá** in **sáblí-gá**).

The limitation is that, compared with the number marking function of the suffixes, the semantic function only seems to apply to a limited set of words. Nevertheless, given these varied roles of the nominal suffixes, it is more accurate to refer to them generally as nominal suffixes and use the terms 'singular nominal suffix' and 'plural nominal suffix' when focusing on their number marking roles, as done in this paper. The term 'number suffix' used in previous research limits their function to number marking. It also fails to recognise that some nouns that take these suffixes (e.g. **dʒèlín-sí** 'fatigue') clearly do not have two forms marking singular and plural number. While the encoding of singular and plural number is the most widespread use of these suffixes, the need for the suffixes is driven fundamentally by the morphological rule that nominal and adjectival forms take a suffix to make them distinct from verbs.

Dagbani also has suffixes and prefixes surfacing as reduplicants to roots of different lexical categories, as observed in some previous studies (e.g. Hudu 2010, 2013). Verbs take prefixes and suffixes that mark aspect. There are also derivational suffixes and grammaticalised lexical words that surface as prefixes to lexical roots. As

discussed in the following sections, the differences in the roles of verbal and nominal/adjectival affixes are crucial to understanding the status of nominal/adjectival roots as sub-phonological words.

There are proclitics and enclitics surfacing as pronominal markers, focus markers among others. Like bound roots and affixes, the clitics always require a lexical root to surface. However, they are separate grammatical words, as some of them are full phonological words when they surface in emphatic forms. For this paper, the only clitics that are of interest are the first person singular possessive and the infinitive markers, which surface as nasals. The clitics are discussed further in Section (3).

3   Nasals in various morphological units

As the consonant inventory in (2) shows, Dagbani has five contrastive nasals: /m, n, ɲ, ŋ, ŋ͡m/. The labial-dorsal /ŋ͡m/ surfaces as a labial-coronal [n͡m] before front vowels, (where /k͡p, ɡ͡b/ also surface respectively as [t͡p, d͡b] (Ladefoged 1968)). With the exception of /ŋ͡m/, for which there are no available data, all nasals undergo assimilation to the place of an immediately following consonant. Depending on the place specification of the following consonant, any of the nasals, including [ŋ͡m], may surface as the output of nasal assimilation. Nasal place assimilation is thus very widespread in Dagbani, as it is in many languages. However, a critical look at the various contexts where nasals assimilate reveals that only nasals located in affixes or serving as clitics and bound roots undergo the process when the trigger and target are located in different morphemes. Nasals that surface in free standing words maintain their underlying place specification when a potential trigger of NPA is located outside of the minimal word that contains the nasal. Each of the subsections below discusses one of these contexts. Because NPA only targets nasals that immediately precede other consonants (NC sequences), the focus is on nasals at the right edge of the various morphological constituents.

3.1   Affix nasals

The data in (10) show the cardinal prefix in Dagbani, which is a nasal. It assumes the same place of articulation as the following consonant.

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(10) Effects of NPA on nasal cardinal prefix
  a. **n-dà:m** 'one' e. **n-ní:** 'eight'
  b. **n-tá** 'three' f. **ɲ-jí** 'two'
  c. **n-náhɨ** 'four' g. **ɲ-jɔ́bʊ́** 'six'
  d. **n-nú** 'five' h. **ŋ-wɔ́ɨ** 'nine'

Similarly, a nasal at the right edge of a reduplicant prefix assumes the place specification of the consonant it immediately precedes, (11). The reduplicants are underlined.

(11) NPA in reduplicant prefixes.
  a. **pʊ́m-pɔ́ŋó** 'right now'
  b. **bʊ̀m-bɔ̀ɲ̀:** 'extreme darkness'
  c. **dʊ̀n-dɔ̀ɲ̀** 'court yard'
  d. **zʊ̀n-zʊ́-lɨ́** 'maggot-sg.'
  e. **kʊ̀ŋ-kɔ̂ŋ** 'can/tin'
  f. **ɡ͡bɨ́ŋ͡m-ɡ͡báŋ** 'elephant grass'
  g. **ŋ͡mɨ́ŋ͡m-ŋ͡mɨ́n-ɨ́** 'closely kept secrete'

In addition to the reduplicant prefix, Dagbani has a fixed suffix **lɨN** syllable in some reduplicants. The nasal in this fixed syllable assumes the place specification of the initial consonant of the following base. This is illustrated in (12).

(12) Fixed -lɨn syllable in Dagbani reduplication[1]
  a. **pʊ̀-lʊ̀m-pʊ̀m-ɡá [pʊ̀-lʊ̀m-pʊ̀ɲ́]** 'type of tree'
  b. **dɛ̀-lɨ̀n-dɛ́-ʔʊ̂** 'leech-sg.'
  c. **sá-lɨ́n-sá-hɨ̂** 'tiny ant-pl.'
  d. **dɨ́-lɨ́n-dɨ́-hɨ̂** 'numbness'
  e. **ʃɨ́-lɨ́ɲ-ʃɨ́-hɨ̂** 'shadow-pl.'
  f. **ká-lɨ́ŋ-ká-ʔʊ̂** 'crown-sg.'
  g. **kʊ́-lʊ́ŋ-kʊ́-hɨ̂** 'beetle-like insect-pl.' (Blench 2004)
  h. **kpí-lɨ́ŋ͡m-kpí-hɨ̂** 'epilepsy'

Unlike nasal clitics, discussed in Section 3.2, there seem to be no data in which these N and CVN affixes precede vowel-initial words, which are quite rare in the language. For this reason, it is difficult to determine what the underlying place specification of the nasals may be. Without such evidence, the default conclusion that these nasals are underlyingly unspecified for any place feature holds.

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[1] See Hudu (2010) for arguments on why the data in (12) constitute a suffixing reduplication with **lɨN** as a suffix to the preceding syllable and not a prefix to the following syllable.

3.2 Clitic nasals

A nasal proclitic (1st person singular, 1st person singular possessive, infinitive) always assumes the place specification of the following consonant. The data in (13) show this.

(13)   Effects of NPA on nasal proclitics

	1st person singular possessive				Infinitive particle	
a.	**ɲ ʃɛ́ɾ-gá**	'my needle'		g.	**ɲ ʃè**	'sew'
b.	**ŋ ŋɔ́-ʔʊ̆**	'my fox'		h.	**ŋ ŋʊ̀bì**	'chew'
c.	**ŋ wɔ̀-hʊ̆**	'my horse'		i.	**ŋ wʊ̀hì**	'teach'
d.	**n sám-lɨ̆**	'my debt'		j.	**n sâm**	'to mash'
e.	**m bâ**	'my father'		k.	**m bá**	'to ride'
f.	**ɱ vɔ́-ʔʊ̂**	'my leaf'		l.	**ɱ vʊ́hɨ**	'to rest'

Given that Dagbani lexical words typically begin with consonants, the pattern in these words is what is typically found in the language. However, there are vowel-initial lexical words, typically loans, which may also be preceded by nasal clitics. In such cases, two strategies are adopted to provide a consonant to license the place specification of the nasal. The first is the insertion of a CV syllable **da** into the lexical word whose onset provides a place to trigger assimilation of the nasal clitic, (14).

(14)   NPA in vowel-initial nouns: **da** insertion.

a.	**/N ànfò:ní/**	[**n dàànfò:ní**]	'my picture' (Akan)
b.	**/N àlàhʒíbá/**	[**n dààlàhʒíbá**]	'my wonders' (Arabic via Hausa)
c.	**/N àlìʒí:fʊ́/**	[**n dààlìʒí:fʊ́**]	'my pocket'
d.	**/N àlìzàmá/**	[**n dààlìzàmá**]	'my conversation'
e.	**/N ámání/**	[**n dààmání**]	'my cooking fish'
f.	**/N ànfa:ní/**	[**n dàànfà:ní**]	'my grace' (Hausa)
g.	**/N àlìzíní/**	[**n dààlìzíní**]	'my genie' (Arabic)

The second strategy is to delete the initial vowel of the lexical word to make way for the following consonant to license the place specification of the nasal, as shown in (15). All loans in (15) are from English.[2]

(15)   NPA in vowel-initial verbs: vowel deletion.

a.	**/N ata:k[ɨ̂]/**	[**n tá:kɨ̂**]	'to attack'
b.	**/N ana:ns[ɨ̂]/**	[**n ná:nsɨ̂**]	'to announce'
c.	**/N inva:t[ɨ̂]/**	[**ɱ vá:tɨ̂**]	'to invite'

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[2]The view that these words, especially (15b, c), are loans is a bit contentious. While their use is quite widespread among peakers who do not understand English, it is not obvious that they are simply not trying to demonstrate that they have some knowledge of English. In the case of speakers who understand English, (15a) often surfaces as a codemixed word in sentences.

It is not obvious why a syllable (rather than a consonant) is inserted in (14), and where the syllable comes from. The epenthesised **-da** does not seem to be related to any known morpheme in the language. However, the differences between the data in (14) and those in (15) is quite obvious. In (14), the words are nouns and adjectives, whereas in (15), they are verbs. While vowel deletion and **da** insertion are two opposing strategies, they have the same goal of ensuring that the lexical word has a consonant at its left edge to license the place of articulation of the nasal clitic. This provides an indication that the N proclitic in Dagbani is underlyingly placeless. If the proclitic had an underlying place of articulation, that underlying place specification would have surfaced when preceding a vowel-initial lexical word. The difference in repair strategy for nouns and adjectives on one hand and verbs on the other also suggests that Dagbani nouns and adjectives constitute a more privileged class than verbs, as already discussed in Section 1.2.

3.3 Bound root nasals

The data in (16) illustrate the effects of NPA on bound nominal roots in simplex nouns.

(16) **Effects of NPA on nominal/adjectival roots: Simplex words**

	UR	Singular	Plural form	
a.	/ɠbɪ́ʔ[ɪ́]m-/	ɠbɪ́ʔɪ́n-lɪ́	ɠbɪ́ʔɪ́m-á	'lion'
b.	/wɔ̀ʔlɪ́m-/	wɔ̀ʔlɪ́n-lɪ́	wɔ̀ʔlɪ́m-á	'boil'
c.	/sál[ɪ]m-/	sál[ɪ]n-lɪ́	sálm-á	'gold'
d.	/zɪ̀l[ɪ̀]m-/	zɪ̀l[ɪ̀]n-lɪ́	zɪ̀lm-á	'tongue'
e.	/kpáɾ[ɪ]m-/	kpáɾ[ɪ]n-lɪ́	kpáɾm-á	'cheek'
f.	/ʧɔ́ʔ[ɪ]m-/	ʧɔ́ʔ[ɪ]ŋ-gʊ́	ʧɔ́ʔm-á	'weak'

In (16), the plural forms of the roots end with /m/ before the plural nominal suffix **-a.** The lack of a buccal place of articulation for the plural nominal morpheme means that the place of articulation of the root-final nasal is underlying and independent of the place of any neighbouring segment. In the singular forms, the root-final nasal shares the same place of articulation with the onset of the suffix, an indication of assimilation to the suffix onset.

In (17), NPA takes place along with a coalescence with the onset of singular nominal suffix **-gá**, a deletion of the suffix vowel and a lengthening of the resulting root-final velar nasal (17a-d). In (17a-c), the vocalic deletion and nasal lengthening are optional.

(17) **NPA with suffix onset deletion: Simplex words**

	UR	singular	plural form	
a.	**kɔ̀N**	**kɔ̀n-gá [kɔ̀ŋá]/[kɔ̀ŋ́ː]**	**kɔ̀n-sɪ́**	'leper'
b.	**zɔ́N**	**zɔ́n-gá [zɔ́ŋá]/[zɔ́ŋ́ː]**	**zɔ́n-sɪ́**	'bat'
c.	**bʊ̀N**	**bʊ̀n-gá [bʊ̀ŋá]/[bʊ̀ŋ́ː]**	**bʊ̀n-sɪ́**	'donkey'
d.	**sʊ̀m**	**sʊ̀m-gá [sʊ̀ŋ́ː]**	**sʊ̀m-á**	'good'
e.	**pɔ́m**	**pɔ́m-gá [pɔ́ŋ́]**	**pɔ́m-á**	'rotten'

The singular and plural forms in (17a-c) and the complex words in (18d) also show that the underlying place specification of the nasal can not always be determined. The behaviour of nominal and adjectival roots is not different regardless of whether the root occurs in a simplex or complex word. The root-final nasals are subject to NPA both from suffix onsets in simplex words and from onsets of following roots in complex words.

(18) **Effects of NPA on nominal/adjectival roots: Complex words**

UR	complex words			
a. **bɨn** 'thing'	**bɨ́ŋ-káh-lɪ́** 'unripe thing'	**bɪ́m-bɪ́l-á** 'small thing'	**bɪ́n-tɪ́tá-lɪ́** 'big thing'	**bɪ́ŋ͡m-ŋ͡má-á** 'short thing'
b. **duːn** 'knee'	**dʊ̀ːŋ-kɔ̀-ʔʊ́** 'slim knee'	**dʊ̀ːm-bɪ́-á** 'knee cap'	**dɔ̀n-tɪ́tá-lɪ́** 'big knee'	**dʊ̀ɲ-ɲɔ́ŋ** 'stinky knee'
c. **zɔn** 'bat'	**zɔ̀ŋ-kʊ́ɾ-lɪ́** 'old bat'	**zɔ̀m-bɪ́l-á** 'small bat'	**zɔ̀n-tɪ́tá-lɪ́** 'big bat'	**zɔ̀ɲ-ɲáŋ́** 'female bat'
d. **laN** 'net'	**làŋ-wɔ́ʔín-lɪ́** 'long net'	**làm-pèl-lɪ́** 'white net'	**làn-tɪ́tá-lɪ́** 'big net'	**làɲ-ɲɔ́ŋ** 'stinky net'

The behaviour of nasals in these bound units contrasts with the observed pattern in free standing words. Section 3.4 shows this contrast.

3.4 Word-final nasals

Like nominal and adjectival roots, nasals of different place specifications may surface at the right edge of a verb. Unlike nasals in nominal and adjectival roots, verb-final nasals always have underlying place specification which is maintained in all contexts. Where the verb root is followed by a suffix or clitic to form a phrase, the root maintains its category as a word. In other words, nasals at the right edge of verb roots are not targets of assimilation from potential triggers outside of the word domain. The data in (19) illustrate this in different morphological contexts. The suffixes **-da** and **-ja** respectively

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mark the imperfective and perfective aspects while **-bʊ** and **-sɨm** derive nouns from verbs. In the rightmost collumn are verb phrases, where the verbs are preceded by various particles.

(19) **Verb morphology**

STEM		IMPERF.	PERF.	NOM.	PHRASE	
a. **kɔ̀ŋ**	'lose'	**kɔ̀ŋ-dá**	**kɔ̀ŋ-já**	**kɔ́ŋ-bʊ̂**	**kɔ̀ŋ lɨ́**	'lose it'
b. **bàŋ**	'know'	**bàŋ-dá**	**bàŋ-já**	**bàŋ-sɨ̂m**	**bàŋ bá**	'recognise them'
c. **tàm**	'forget'	**tàm-dá**	**tàm-já**	**tàm-sɨ̂m**	**tàm lɨ́**	'forget of it'
d. **dìm**	'bite'	**dìm-dá**	**dìm-já**	**dím-bʊ̂**	**dìm só**	'bite someone'
e. **ɡbán[ɨ]**	'squat'	**ɡbàn-dá**	**ɡbàn-já**	**ɡbán-bʊ̂**	**ɡbán kó**	'squat-farm'

Unlike the data in (16)-(18), in (19), NPA is blocked, and nasals bear independent place specifications. This asymmetry in the application of the rule can be understood when the morphological units the nasals surface in are examined. In (16), (17) and (18), the assimilated nasals surface at the right edge of morphologically bound units: affixes, clitics and bound roots. In (19), the nasals are at the right edge of free standing words.

The argument here is not necessarily about segments within verbs resisting assimilation which nouns and adjectives undergo. The argument is that, the word as a morphological unit is a strong position. The featural composition of segments within it are protected from any contrast-neutralising change or loss that may be triggered across its boundary. This is supported by the behaviour of nasals at the right edge of fully derived nouns and adjectives, as observed in associative compounds, shown in (20).

(20) **Associative construction**

		possessor	possessed	compound	
	a.	**/kɔ̀n-ɡá/ [kɔ̀ɲ́:]**	**bí-á**	**kɔ̀ŋ bí-á**	'a leper's child'
	b.	**/zɔ́n-ɡá/ [zɔ́ɲ́:]**	**nápɔ́ŋ**	**zɔ́ɲ́: nápɔ́ŋ**	'a bat's foot'
	c.	**/bʊ̀n-ɡá/ [bʊ̀ɲ́:]**	**tàpàʔ-á**	**bʊ̀ŋ tápáʔ-á**	'a donkey's cheek'
	d.	**[dàɡbán-â]**	**bí-á**	**dàɡbán bí-á**	'a Dagomba's child'
	e.	**[kɔ̀m̂:]**	**dŭ:**	**kɔ̀ḿ dú:**	'a water room' (room for water storage)

The first lexical roots in (20a-c) are the same as those in (17a-c). In (20), NPA applies in the singular forms as it does in the singular and plural forms in (17). Unlike the complex words in (18), the first lexical root in (20) maintains its nominal suffix, making it a complete word and opaque to NPA. This opacity is observed even in cases of vocalic deletion and compensatory lengthening of preceding nasals (20a-c). The compound in

(20d) also demonstrates that the non-assimilation is not due to the nasal having already undergone assimilation in the singular root form. Indeed, the underlying form of 'a Dagomba's child' is **dàɡbán-a bí-á**. The suffix **-a** undergoes a non-phonological deletion with no concomitant effect on preceding nasal, leaving the underlying coronal /n/ exposed to the following root-initial /b/. In spite of this, the nasal maintains its place specification. The position of **dàɡbán** as a complete word in the compound can be contrasted with **dàɡbán-** as a bound root in the complex word **dàɡbám bí-á** 'a Dagomba child', where the morphological absence of suffix **-a** makes the root-final nasal a target of NPA[3].

In sum, the discussion of NPA in this section has demonstrated that it is a good diagnostic in defining the distinction between words and subwords in two ways. First, in sub-words, the place of articulation of nasals may not be specified; in words, the places of nasals are fully specified. Second, a nasal at the boundary of a bound unit assimilates to the place of a following consonant. At the boundary of a free standing word, it maintains its specified places of articulation when preceding suffixes, clitics or lexical roots. Section 4 shows further diagnostics in defining the boundary between words and sub-words.

4 Other phonological processes

The processes discussed in this section are vowel harmony (based on ATR, height, and rounding features) and dissimilation through lateral deletion. Given that the discussion is aimed at demonstrating how these processes serve as diagnostics in defining the distinction between words and sub-words, no exhaustive theoretical analysis of any of the processes is provided.

4.1 ATR and height harmony patterns

In Dagbani [ATR] harmony, two broad patterns have been observed in previous research (Hudu 2010, 2012, 2013). One is a progressive pattern of harmony triggered by /i/ and targetting high [-ATR] vowels that surface in suffixes, enclitics or as epenthetic vowels. The other is a regressive pattern triggered by the mid vowels [e, o] and targeting non-high root vowels. Both spreadings are bounded by the limit of one lexical root

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[3]In Hudu (2010), I argue that the surfacing of (20d) **kɔ̀m̂:** with a long nasal is a diachronic processes of deletion of the singular nominal vowel suffix and compensatory lengthening of the root vowel. This argument is based on a comparison with similar nouns where the deletion and lengthening are clearly synchronic, (as in 20a-b), and the plural form of the noun which bears the falling tone on the nasal in the root (**kɔ̀m-â.**)

morpheme and adjacent affixes and clitics. In other words, a root vowel may trigger harmony targetting vowels in non-lexical morphemes and vice versa. A vowel of one lexical root is not a target of harmony triggered by a vowel of another lexical root, as harmonic feature spreading does not cross the boundaries of two lexical roots.

The data in (21) show word pairs with the same suffixes or epenthetic vowels. The non-root vowels are always [-ATR] except when the root vowel is /i/. Those in (22) show that epenthetic and clitic vowels are targets of harmony also triggered by /i/. The second **mi** in (22c) is a predicate focus marker. Both datasets illustrate the first broad pattern of harmony.

(21) /i/ as trigger of left-to-right [+ATR] harmony (Cited from Hudu 2013, 2014)
      Root-to-affix harmony   [-ATR] roots
    a. **pín-î**   'gift-sg.'   **bín-ɨ̂**   'thing-sg.'
    b. **díʔ-í**   'mirror-sg.'   **dʊ́ʔɨ́**   'cook.V'
    c. **tí-bû**   'vomit-imperf.' **dá-bʊ̂**   'buy-imperf.'
    d. **dí-h[í]-bû** 'feed-imperf.'   **dɔ́l[ɨ]-bʊ̂** 'follow-imperf.'
    e. **vìh[ì]**   'investigate.V' **ɡ̌báh[ɨ̀]** 'catch (many)'
    f. **píh[í]g[î]**   'postpone.V' **pɔ́h[ɨ]g[ɨ̂]** 'pluck.V'
    g. **jíʔ[í]**   'fly.V'   **jáʔ[ɨ]**   'jump over.V'

(22) Epenthetic and clitic vowels as targets of [+ATR] harmony (Hudu 2013)
    a. **lìh[ì] tí**   'look at us'
    b. **kpíhí-bû** 'extinguish-imperf. (fire)'
    c. **mì mî**   'know foc.'
    d. **ʒìn ní**   'sit there'
    e. **vìh[ì] mì tî** 'investigate focus us (investigate us)'
    f. **kpín ní**   'in (the month of) Kpini'

The other pattern is illustrated by the data in (23) and (24). (23) show that mid vowels in non-final position are [-ATR] except when the domain ends with another mid vowel. In (24), the target vowel is /a/.

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(23) Word-final [o, e] as harmonic triggers

[-ATR] roots			suffix-to-root harmony		
a.	**dɔ́r-tí**	'disease-pl.'	**dór-ó**	'disease-sg.'
b.	**ʧɔ̀r-tɨ̂**	'blow-pl.'	**ʧòr-ê**	'blow-sg.'
c.	**bɛ́-hɨ̂**	'shin-pl.'	**bé-é**	'shin-sg.'
d.	**kɔ̀h[ɨ] lɨ́**	'sell it'	**kòh ó**	'sell it (anim.)'
e.	**bɛ́-ʔʊ́**	'bad/ugly one-sg.'	**bé-é**	'mischievous person-sg.'
f.	**ʒɛ̀-ʔʊ́**	'reddish-sg.'	**ʒè-é**	'red-sg.'
g.	**kɔ̀r-sɨ̂**	'interests/ temptation'	**kòr-ê**	'desire'

(24) [+ATR] low vowel before final mid vowel (cited from Hudu 2013)

a.	**dà lí**	'buy it'	**[dà ó]**	'buy it (animate)'
b.	**bá lɨ̂**	'ride it'	**[bá ô]**	'ride it (animate)'
c.	**kál-tí**	'enamel ware-pl.'	**[kál-ó]**	'enamel ware-sg.'
d.	**pál-á**	'new-pl.'	**[pál-ó]**	'new-sg. (animate)'
e.	**sàl-á**	'human'	**[sàl-ô]**	'human-pl. (crowd)'
f.	**tàdáb-tɨ̂**	'writing ink-pl.'	**[tàdáb-ô]**	'writing ink-sg.'
g.	**tàtáb-tɨ̂**	'the like of-pl.'	**[tàtáb-ô]**	'the like of-sg.'

In addition to these observations, Dagbani has a pattern of harmony in which the root vowel agrees both in height and [+ATR] with a suffix /i/. The suffix **-i/-hi** is the trigger of harmony targetting an underlying non-high or [-ATR] root vowel.

(25) Plural nominal suffix as trigger in [+ATR] and [+high] harmony patterns

	Roots	singular	plural	
a.	**kpáːn-**	**kpán-gá [kpáŋ́ː]**	**kpín-ɨ̂**	'guinea fowl'
b.	**wàr-**	**wàh-ʊ́**	**jùr-ɨ̂**	'horse'
c.	**náʔ-**	**náh-ʊ́**	**níʔ-ɨ̂**	'cow'
d.	**ká-**	**ká-hɨ́**	**ʧ-ɨ̂**	'guinea corn'
e.	**bɨ̀l-**	**bɨ́l-á**	**bí-hí**	'small'

There are two plausible analyses of this pattern. The analysis implied in the presentation of the data in (25) is based on the assumption that the root vowel is underlyingly low. The basis for that assumption is the singular forms in (25), all of which have low vowels except (25e), which would have an underlying /i/. Under this analsyis, the suffix /i/ changes root ([+low]), [-ATR] vowels into [+high, +ATR]. In some cases, it results in a complete neutralisation with the suffix vowel. The main point of difference, then, between the root forms in (25), which are sub-words under the present analysis, and

full words is that, there are no instances of vowels in full words undergoing harmony triggered by a clitic that changes the height specification of the root vowel or leads to a height neutralisation with vowels of different height specification. This asymmetry is discussed further below.

An alternative analysis of the data is one that invokes the notion of underspecification. In an underspecification approach, the vowels in (25) are assumed to be not underlyingly specified for the vocalic features [high, low, ATR]. This approach becomes clearer when we consider the data in (25) again, with an additional word that does not display [+ATR] or [+high] harmony, as illustrated in (26).

(26)　Non-specified segmental features?

	UR.	Root	sg. form	pl. form	
a.	k͡pV́ːn-	k͡páːn-	k͡pán-gá	k͡pín-î	'guinea fowl'
b.	wV̀ʷɾ-	wàɾ-	wàh-ʊ́	jùɾ-î	'horse'
c.	nV́ʔ-	ná?-	náh-ʊ́	ní?-î	'cow'
d.	kV́-	ká-	ká-hɪ́	ʧî	'guinea corn'
e.	bl-	bɪ̀l-	bɪ́l-á	bí-hí	'small'
f.	wV́ʔ-	wá?-	wáh-ʊ́	wá?-ɾî	'snake'

With the exception of (26e), the form of the root vowel in a larger construction and in the singular form is always [a]. In the plural form, it is a high [+ATR] vowel, [i] or [u], in harmony with a plural nominal suffix vowel [i]. When the plural nominal suffix vowel is not [i], the root vowel surfaces as [a], as in (26f). When viewed as a case of underspecification, the surfacing of [a] in the root and in [-ATR] contexts can be attributed to a sonority effect. The vowel /a/ surfaces because it is the most sonorous [-ATR] vowel to harmonise with the vowel in the singular morphemes and the plural form in (26f). This is supported by the fact that in Dagbani, vowel alternations lead to sonority enhancement in non-final positions and reduction in final positions. For instance, Hudu (2010, 2013) show that underlying mid vowels /ɛ, ɔ/ surface phonetically as [a] in non-final position. In domain-final positions, the same vowels surface as [e, o].

In the plural forms, the realisation of the vowel is driven by a harmony consideration, producing the most harmonic [+ATR] vowel [i] to harmonise with plural /i/. In (26b), the realisation of the root vowel as [u] in the plural form is due to an underlying specification for [+round]. In the singular and complex noun forms, the underlying rounding does not have an effect because Dagbani lacks rounded low vowels. In (26d), suffixing the plural nominal **-i** to a codaless root results in an underlying vowel hiatus k**V́-î**. This is resolved by a coalescence in which [i] expectedly becomes the surface vowel (**kî**), as the root vowel has no underlying featural specification for height

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or [ATR]. The underlying root [k] changes to [tʃ], a regular pattern of palatalisation of velar consonants before front vowels in Dagbani (Olawsky 1999; Hudu 2010).

The surface vowels in the words **bɨl-á** and **bí-hí** in (25e) apparently make these words exceptions to the underspecification analysis just presented. However, the adjective 'small' is unique in a different way. The noun **bí-á** 'child-sg.' has the same plural form (**bí-hí**) as the adjective **bɨl-á**. However, unlike **bí-hí** 'small-pl.', in **bí-hí** 'child-pl.', the root vowel is clearly the trigger of [+ATR] harmony, as is the case in Dagbani regular progressive [ATR] harmony shown in (21) and (22). In the underspecification analysis of this word, there is no underlying root vowel. In its singular form, [ɨ], the regular epenthetic vowel in Dagbani, is inserted. In the plural form, this epenthetic vowel harmonises with the plural nominal suffix vowel.

The underspecification account is further supported by several observations within the phonology of Dagbani. First, [+ATR] harmony neither changes the height specification of target vowels nor leads to complete assimilation to the trigger, unless both trigger and target have the same underlying height feature specification. This is discussed extensively by (Hudu 2010). In particular, low vowels remain low when targeted by mid vowels in [+ATR] harmony, as already shown in (24). Thus any other account of how the vowels in the plural forms in (25) surface as [+high] is difficult to motivate, as it is inconsistent with the observed pattern of [ATR] harmony in Dagbani.

The second source of support for underspecification is the opacity of the low vowel to harmony triggered by a high vowel. This is shown in (27), where harmony fails to take place. If the underlying vowels in (25) were specified for [+low], the root [+ATR] harmonic forms would not have surfaced.

(27)   Low vowel as non-targets of [ATR] (cited from Hudu 2013)

a.	**pí â**	*[pí ậ]	'bury you'
b.	**bí-á**	*[bí-ậ]	'child-sg.'
c.	**tì bá**	*[tì bậ]	'give them'
d.	**dìm-á**	*[dìm-ậ]	'eat-imper.'
e.	**kpím-á**	*[kpím-ậ]	'dead person-sg.'
f.	**vìh á**	*[vìh ậ]	'investigate you'
g.	**kpìh[ì]-má**	*[kpìhì-mậ]	'put off-imper.'

The final observation supporting underspecification is the fact that height harmony resulting in [-high] vowels surfacing as [+high] is not observed anywhere else in the phonology of Dagbani. This provides little motivation for the argument that the apparent pattern of height harmony observed here is part of a systematic harmony pattern in Dagbani.

The goal of this rather lengthy discussion is to show the unusual nature of the harmony patterns in (26). When viewed within the context of the vowel harmony system of Dagbani, especially compared with the data in (24), the height harmony is not expected. Yet the differences between the morphological units that hold the target vowels provide an answer to the apparent inconsistency. In (26), the height-harmonising vowels are located in nominal roots, bound units. In (24), the height-opaque vowels are located in verbs, free standing words. These observations lead to two generalisations similar to those that were reached in the discussion on NPA. First, vowels in a sub-word may not be fully specified for all features, unlike vowels in a full phonological word. Second, the height harmony of a root vowel to the suffix trigger takes place because the nominal/adjectival root is not a full phonological word. Harmonic target vowels that surface in full words, such as those in (24) do not change their height specification. In other words, height harmony is restricted to targets in bound units (sub-words). This generalisation holds whether underspecification is assumed or not.

4.2 Rounding harmony

Rounding harmony is manifested in reduplicated as well as non-reduplicated forms. In reduplicated forms, it is a root-controlled process, regressively targeting vowels in a reduplicant prefix and the vowel of a fixed **IVN** syllable. Sample data are shown in (28) and (29), where the reduplicants are underlined. The data in (29) lack synchronic non-reduplicated forms, unlike the forms in (28). In (29), the fixed syllable is itallicised.

(28) Rounding harmony
    a. **kpìl-lí**   'round'   **kpì-kpìl-lí**   'portably round'
    b. **/kpàn-gá/ [kpàŋ:]** 'wing'   **kpìŋm-kpàŋ:**   '(mature) wing'
    c. **/bòn-gá/ [bòŋ:]**   'darkness'   **bùm-bòŋ**   'extreme darkness
    d. **/pòngó/ [pòŋó]**   'now'   **púm-póŋó**   'right now'

(29) Rounding harmony
    a. **púm-póŋ-ʧí-hí**   'strychnos fruit-pl' (Blench 2004)
    b. **dùn-dòŋ:**   'court yard'
    c. **kpí-*lín*-kpí-hî**   'epilepsy'
    d. **sá-*lín*-sa-hî**   'tiny ant-pl.'
    e. **pù-*lùm*-pùŋ:**   'Sterculia Tomentosa' (Blench 2004)
    f. **kú-*lúŋ*-kú-hî**   'beetle-like insect-pl.' (Blench 2004)

The reduplicant vowel and the vowel of the fixed syllable are underlyingly /ɨ/, as shown in (28a, b) and (29 c, d), which lack round vowels in the base. In the remaining

data, the reduplicant and all preceding vowels surface as [ʊ] because the base has [o] or [ʊ]. In non-reduplicated forms, domain-final [o, ʊ] are the triggers, targeting a root or epenthetic [ɨ].

(30)   Rounding harmony

			cf.		
a.	**túm-ô**	'messenger-sg.'	cf.	**tìm**	'send'
b.	**zún-ô**	'odd/alien/stranger-sg.'	cf.	**zîŋ**	'alienate'
c.	**tèːn lùɾò**	'unkempt thick beard'	cf.	**lìrìm**	'to mess up'
d.	**sùm-ó**	'bosom friend-sg.'	cf.	**sìm-nìmá**	'friend-pl.'
e.	**báh[ú]-gú**	'adder-sg.'	cf.	**báh[ɨ]-sɨ**	'adder-pl.'
f.	**bìlkɔʔ[ú]n-ó**	'villain-sg.'	cf.	**bɨlkɔʔ[ɨ]n-sî**	'villainy'

The verbs **tìm**, **zîŋ** and **lìrìm** from which **túm-ô**, **zún-ô** and **lùɾò** are derived, provide evidence of underlying root /ɨ/ in (30a-c). In (30d) the plural form of the noun has root /ɨ/ when there is no domain-final round vowel. Unlike these root forms, the pattern shown in the examples with epenthetic /ɨ/ becoming [ʊ] is not universal. Some speakers may lack these forms, and some epenthetic /ɨ/ may not get rounded. However, there is no contrast between /ɨ/ and /ʊ/ in epenthetic position when the domain-final vowel is round. In other words, whether these forms are produced with /ɨ/ or /ʊ/, their meanings remain the same, in spite of these two vowels being contrastive in lexical roots.

Of interest to the discussion here is the apparent opacity of the same vowel to rounding harmony when it surfaces in verb roots.

(31)   No Rounding harmony

a.	**tìm ó**	*****tùm ó**	'send him/her'
b.	**zíŋ ó**	*****zúŋ ó**	'alienate him/her'
c.	**síŋ ó**	*****súŋ ó**	'treat him/her with contempt'
d.	**dìm ó**	*****dùm ó**	'bite him/her'
e.	**tìr ó**	*****tùr ó**	'point at him
f.	**mírí-bû**	*****mírʊ-bû**	'getting close'

The phrases **tìm ó** in (31a) and **túm-ô** (30a) have the same underlying segmental sequences (**/tɨm o/**). Similarly, **zíŋ ó** (31b) and **zún-ô** (30a) have **/zíŋ o/** as their underlying form. The only reason rounding harmony fails in the forms in (31) is the word boundary between the trigger and the target. The similarity between rounding harmony in reduplicated forms and the non-reduplicated forms is quite obvious. In all cases where rounding harmony applies, the target vowels are located in bound nominal roots, reduplicant and fixed affixes, all of which are bound forms. The behaviour of segments

in these units stands in sharp contrast to those located in the words **tìm** and **zíŋ** whose vowel is not a target of rounding harmony. Thus rounding harmony provides evidence that the bound morphological units pattern together as undergoers of a process triggered across their boundaries.

4.3 Lateral deletion

Lateral deletion applies in a number of contexts in Dagbani as a means of blocking adjacent coronal consonants. As in the phonological processes already discussed, whether dissimilation occurs or not depends on the morphological category in which the lateral consonant occurs. In one context, a nominal/adjectival root-final /l/ is deleted when followed by a suffix with initial /j/, (32).

(32) Deletion of /l/ in nominal roots

	UR	singular	plural	
a.	**jíl**	**jíl-ɨ**	**jí-jâ**	'house'
b.	**gál**	**gál-ɨ**	**gá-já**	'thread'
c.	**ɡbál**	**ɡbál-ɨ**	**ɡbá-jâ**	'leg'
d.	**gɔ́l**	**gɔ́l-ɨ**	**gɔ́-jâ**	'moon'
e.	**zùngùl**	**zùngúl-í**	**zùngú-já**	'clitoris'
f.	**dàgùl**	**dàgúl-í**	**dàgú-já**	'merchandise'
g.	**kàl**	**kàl-ɨ**	**kà-jâ**	'tradition'
h.	**ɲèvíl**	**ɲèvíl-ɨ**	**ɲèví-jâ**	'soul'
i.	**tà:ntʃil**	**tà:ntʃíl-ɨ**	**tà:ntʃí-já**	'woman's loin cloth'

This contrasts with the observed pattern in verb morphology. When the perfective aspectual suffix [**-ja**] follows a verb that ends with [l], the lateral is not deleted.

(33) No root-final /l/ deletion before perfective marker **-ja**

a.	**pìl[ì]**	**pìl-já**	'start'
b.	**bíl[ɨ]**	**bìl-já**	'rape'
c.	**kúl[ɨ]**	**kùl-já**	'go home'
d.	**wɔ́l[ɨ]**	**wɔ̀l-já**	'bear fruit'
e.	**dèl[ì]**	**dèl-já**	'dry.V'
f.	**vál[ɨ]**	**vàl-já**	'swallow'
g.	**màl[ì]**	**màl-já**	'make'
h.	**jíl[ɨ]**	**jìl-já**	'sing'

The nominal/adjectival roots pattern with suffixes as domains where /l/ is deleted. In singular and plural nominal suffixes, /l/ is deleted when preceded by a root-final /n/. This is shown in the third column of the data in (34), along with NPA.

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(34) NPA, /l/ deletion and vowel shortening

	UR	UR sg. (NPA)	surface sg. (l-deletion)	surface pl. (V-shortening)	
a.	**juːm**	/jùːn-lɨ́/	[jùːn-ɨ́]	jʊ̀m-á	'year'
b.	**tuːm**	/túːn-lɨ́/	[túːn-ɨ́]	tʊ́m-á	'work'
c.	**taːm**	/táːn-lɨ́/	[táːn-ɨ́]	tám-â	'shea nut'
d.	**maːm**	/máːn-lɨ́/	[máːn-ɨ́]	mán-â	'okra'
e.	**moːm**	/mɔ́ːn-lɨ́/	[mɔ́ːn-ɨ́]	mɔ́m-á	'ripe'
f.	**goːm**	/gòːn-lɨ́/	[gòːn-ɨ́]	gɔ̀m-á	'wall'
g.	**beːm**	/béːn-lɨ́/	[béːn-ɨ́]	bɛ́m-á	'shin'
h.	**k͡peːm**	/k͡péːn-lɨ́/	[k͡péːn-ɨ́]	k͡pɛ́m-á	'strong'
i.	**kuːm**	/kúːn-lɨ́/	[kúːn-ɨ́]	kʊ́m-á	'dry'

In (34), underlying nominal/adjectival **CVːm** roots become **CVːn** in singular forms due to NPA triggered by an abstract singular suffix onset lateral. The roots surface with [m] in the plural forms with suffix **-a**, which does not have an onset that could change the place of articulation of the root nasal. This gives an indication that [m] is the underlying nasal at the right edge of the root. The only reason this underlying [m] surfaces as [n] is an underlying suffix onset /l/. This onset remains abstract because it deletes after triggering NPA onto the root-final nasal. These nouns are thus similar to the data shown in (16), Section 3, (e.g. **ɠbɨ́ʔín-lɨ́/ ɠbɨ́ʔím-á** 'lion') which also show underlying root-final [m] surfacing as [n] due to NPA to suffix onset [l]. The difference between the data in (16) and those shown in (34) is that, in the former, no suffix-onset deletion takes place.

If lateral deletion had not taken place, the resulting surface form would have featured a sequence of two coronal consonants. In (32), the lateral is deleted to avoid a sequence of [l] and [j], both of which are coronal. Similarly, a sequence of [l] and [n] are avoided through lateral deletion in (34) because both are coronal. The deletion of [l] both as a root coda and suffix onset is needed to avoid such a sequence of two consonants sharing the same place of articulation. Deletion is used in this context to achieve dissimilation, driven by the Obligatory Contour Principle (Leben 1973; McCarthy 1988), defined in (35).

(35) Obligatory Contour Principle (OCP) (McCarthy 1988:88):
      Adjacent identical elements are prohibited.

The differences between the data in (33), where OCP violations are tolerated, and those in (32) and (34) where the avoidance of coronal sequences triggers lateral deletion

is at the heart of the discussion here. The conclusion is that, an OCP effect compromises the segmental or featural composition of a morphological unit. Thus the application of OCP is an indication of the relative positional strength of various morphological positions, such that morphemes that display equal strength are subject to the same generalisation with respect to OCP and those that display unequal positional strength are subject to different genralisations - segments in non-previliged positions undergoing OCP effects blocked from segments in previliged positions.[4]

In sum, the discussions in this and the preceding section point to the generalisation that affixes, clitics and bound lexical roots pattern together in permiting contrast-neutralising phonological processes triggered across their boundaries, as opposed to free standing words, which block these processes. This assymetry forms the basis for the conclusion that NPA, vowel harmony and OCP are diagnostics for defining the distinction between a full word and a sub-word. I conclude the description and analysis with a summary of the various morphological units in Dagbani which, based on evidence from the application of the processes discussed, constitute phonological words.

(36) A morphological unit that constitutes a phonological word in Dagbani
    a. A verb root (e.g. **dì** 'eat', **pìlì** 'start').
    b. A suffixed verb (**dí-bû** 'eating', **pìl-já**. 'started')
    c. A verb with a clitic (e.g. **n dì** to eat, **pìl lí** 'start it').
    d. A simplex noun/adjective (e.g. **bìl-á** 'small-sg.', **bí-hí** 'small-pl.').
    e. A nominal root with two or more affixes (e.g **sá-lín-sá-hì** 'tiny ant-pl.').
    f. A complex noun/adjective (e.g. **nà-bì-pʊ̀ʔíɲ-ʒé-é** 'a fair coloured princess').
    g. A noun/adjective with a clitic (e.g. **m bí-á** 'my child-sg.').

With the exception of the verb root in (36a), each of the phonological words consists of two or more morphemes: a lexical root combined with one or more affixes or clitics. And with the exception of the verbs in (36a-c), no morpheme in any word can independently pass for a word except in combination with one or more other morphemes. On the other hand, the words in (36a, d, e) are the only words with the minimal number of morphemes in their respective categories to form a phonological word. All the remaining word forms contain an affix or clitic added to a minimal phonological word.

The list further becomes more insightful when some of the phonological words are compared with other morphological units that are not in the list. For instance, while the verb root **dì** 'eat' is a word, the nominal root **bí** in **bí-á** 'child-sg.' is not. Again, the

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[4]While this proposal makes sense, there is obviously the need for a more detailed research and analysis given that adjacent coronals are observed in other bound morphemes, as can be seen in the data on NPA. Perhaps this is just a tendency, as OCP itself is, in general.

complex noun **nà-bì-pʊ̀ʔíɲ-ʒé-é** with four nominal/adjectival roots is only one phono-logical word. By contrast, the compound noun **dàɠbán bí-á** 'a Dagomba person's child' which has only two nominal roots has two phonological words.

Section 5 provides a formal account of NPA to illustrate how the asymmetry be-tween the morphological units discussed in the preceding sections is accounted for us-ing the theory of positional faithfulness within Optimality Theory.

5 Formal positional faithfulness account

A major claim in the preceding sections is that, the asymmetrical application of the phonological patterns is due to differences in the relative strength of various mor-phemes. This section presents a formal analysis of the asymmetries based on the theory of positional faithfulness. The strength of the positional faithfulness approach relative to alternative approaches is not the focus of this paper, as the paper focuses more on the various processes, the role they play in defining the phonological word, and the unified analysis that they can be subjected to. Potential alternative approaches are not ruled out.

5.1 Analysis of nasal place assimilation

Analysis of NPA has to take into account the cross-linguistically diverse environments in which the process takes place. The most common environment is the coda position or the right edge of a syllable boundary preceding another consonant. This is the case for the Dagbani patterns discussed here. However, NPA may affect nasals that are not preconsonantal nor contiguous to the licensing consonant, as in the German example **haben** → **habm̩**, the Spanish example **Adam** → **adan** and the English examples such as **kent**, **hampton** (Padgett 1995). For the purpose of the analysis in this paper, elements of two approaches to analysis of NPA are assumed. One approach is based on Feature Geometry (e.g. Archangeli and Pulleyblank 1994; Padgett 1994) which views NPA as resulting from a rule inserting an association line (path), leftwards from the place of a stop to that of a nasal. This forms the basis for the constraint **NPA**.

(37) **NPA**: Place on a path to a [+nasal] segment must be linked to a place on the path to another segment.

The other approach is the licensing approach, rooted in prosodic principles (Gold-smith 1990) and built on the hypothesis that a segment must be specified for a place feature. This has been expressed as a **HAVE PLACE** or **SPECIFY PLACE** constraint in past studies (e.g Itô and Mester 1993; Padgett 1995, 2002; Pulleyblank 1997; Kim 2003; Beckman and Ringen 2004; Kim and Pulleyblank 2009).

(38) **SPECIFY-PLACE:** Every segment is specified for some Place feature
(SPEC-PLACE)

Regardless of their relative ranking, the combined effects of these two constraints ensure that (i) every nasal surfaces with a place of articulation and (ii) the place of articulation of a nasal is shared with another segment. This is shown in (39).

(39) Effects of **NPA** and **SPEC-PLACE**

N bá	NPA	SPEC-PLACE
a. **N bá**		*!
b. **n bá**	*!	
☞ c. **m bá**		

N bá (39a) has no place specification, which leads to a fatal violation of **SPEC-PLACE**. (39b), on the other hand, fails to satisfy the constraint **NPA**, as the place specification of the nasal differs from that of the following consonant. (39c) is the optimal candidate because it satisfies both constraints.

The tableau in (39) shows the result of interaction of two constraints in deriving the surface place specification of a nasal with indeterminate underlying place feature. To determine the remaining constraints required for the analysis of NPA, there is the need to answer another fundamental question: why nasals with underlying place specification still lose their place specifications to following obstruents, whereas oral consonants in NC sequences maintain their place specifications.

5.1.1   Nasals versus non-nasals in NC sequences

Previous acoustic studies such as House (1957); Malécot (1956, 1960); Ohala (1975) attribute the differences in the behaviour of nasal and oral consonants in NC sequences to the weakness of nasals. Ohala notes "a step-function change" in both amplitude and spectrum in the transitions between a vowel and a nasal. Formant transitions of nasals in adjoining vowels are not as effective cues for differentiating place of articulation of nasals compared with the formant transitions of oral obstruents. Evidence from Sacia and Beck (1926), also shows that the large size of the surface area of the nasal cavity causes a damping of the sound in nasals which results in large bandwidths for nasal formants and anti-formants, and decreases the sound amplitude.

For the OT analysis of NPA and the other processes, I adopt the theory of correspondence McCarthy and Prince (1995) which enforces input segmental and feature preservation using a family of constraints known as faithfulness constraints. McCarthy

and Prince's formulation of the theory includes three main faithfulness constraint categories that enforce resemblace between two strings such as input and output forms. These are MAXIMALITY, DEPENDENCY and IDENTITY, defined in (40).

(40) Correspondence constraints (McCarthy and Prince 1995:16)
   a. MAX-IO: Every segment of the input has a correspondent in the output (No phonological deletion.)
   b. DEP-IO: Every segment of the output has a correspondent in the input (Prohibits phonological epenthesis.)
   c. IDENT-IO(F): Output correspondents of an input [γF] segment are also [γF]. (Features may not be changed.)

Subsequent researchers using correspondence theory have proposed a conception of correspondence by which DEP and MAX constraints are applied to both segments and features, making IDENT constraints superflous (see for instance Itô et al. 1995, Pulleyblank 1996, 1997 Myers 1997). Thus any change in the featural specification of an input segment amounts to a deletion of the feature which can be penalised by a MAX constraint. Alternatively, any feature in an output segment that is not in the input correspondent amounts to an insertion of the feature, which may incur a violation of a DEP constraint. This approach is used for the analysis in this paper. The constraints that block changes in features are expressed as MAX or DEP constraints. The DEP constraints are shown in (41).

(41) a. **DEP-PL(N)**: The place specification of an output [+nasal] segment has an input correspondent.

   b. **DEP-PL(-N)**: The place specification of an output [-nasal] segment has an input correspondent.

The relative weakness of nasals motivates the ranking of **DEP-PL(-N)** above **DEP-PL(N)**. That ranking makes nasals the more likely to assimilate in NC sequences than oral segments. A crucial ranking also exists between the two constraints **NPA** and **DEP-PL(N)** when the faithfulness constraints in (41) are added to the constraint set. As already noted, **NPA** requires a nasal to have its place linked to that of another segment. When the place specification of the licensing segment is different from that of the nasal, satisfying the demands of **NPA** will involve changing the underlying specification of the nasal, which in turn violates the demands of **IDENT-PL(N)**. Thus the two constraints make potentially conflicting demands on the surface realisation of nasals with underlying place specifications. The fact that the nasal sound assimilates to the place of the

neighbouring segment in such sequences implies that **NPA** outranks **DEP-PL(N)**. However, this conflict (and others discussed below) is realised only when **SPEC-PLACE** is active. Its activity is required to avoid output forms that are unspecified for place. All nasals surface with a place specification, an indication that **SPEC-PLACE** is undominated in the language. The hierarchy is shown in (42).

(42)   **SPEC-PLACE, DEP-PL(-N), NPA » DEP-PL(N)**

This hierarchy predicts nasals undergoing place assimilation, but not liquids or laryngeals. For instance, in a complex word, nasals at the right edge of lexical roots will undergo place assimilation, liquids and laryngeals in the same position will not. This is illustrated in (43) with the word **/bín-káh-lí/** 'unriped thing-sg.'

(43)   **/bín-káh-lí/** →[bíŋ-káh-lí]

/bín-káh-lí/	SPEC-PLACE	DEP-PL(-N)	NPA	DEP-PL(N)
a. **bíN-káh-lí**	*!		*	
b. **bíŋ-kás-lí**		*!		*
c. **bín-káh-lí**			*!	
☞d. **bíŋ-káh-lí**				*

In (43), **bíN-káh-lí** incurs a fatal violation of the **SPEC-PLACE** constraint because it has a consonant, the nasal, which is placeless. Given that all the input segments have place specifications, any output form with a place specification different from that of its input correspondent violates **DEP-PL(N)**. However, such a violation may not be fatal because this constraint is dominated by **DEP-PL(-N)** and **NPA**. While the failure of the nasal in (43c) to assimilate incurs a fatal violation of **NPA**, the glottal fricative vacuously satisfies this constraint because it has no nasal feature. Changing its input place feature to agree with the suffix onset as in (43b) only leads to a needless violation of **DEP-PL(-N)**. Thus **bíŋ-káh-lí** surfaces as the optimal form in spite of violating **DEP-PL(N)**. This explains the asymmetric behaviour of nasals and non-nasals in identical environments.

5.1.2   Blocking assimilation in privileged positions

In Optimality Theory, contrast depends on the relative ranking of faithfulness and markedness constraints. Faithfulness constraints require maximal resemblance between input and output forms along some featural dimension; markedness constraints ban specific marked structures from surface forms without regard to their input specifications. This breeds potential conflict between the two constraint categories. Surface contrast is triggered in a language when faithfulness constraints outrank markedness ones while a reverse ranking leads to the neutralisation of contrast in a language.

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There have been two major approaches to analyses of positional asymmetry such as displayed in Dagbani. These are positional faithfulness and positional markedness accounts. In the positional faithfulness approach, the focus is on the use of faithfulness constraints that preserve the features of privileged positions. When these position-sensitive constraints outrank general markedness constraints, contrast is maintained in privileged positions. When such a ranking is integrated into another hierarchy in which the general markedness constraints outrank general faithfulness constraints, contrast is maintained only in privileged positions. In other positions, contrast between two segments is neutralised. Positional markedness, on the other hand, focuses on markedness constraints targeted at weak or non-privileged positions. The result of this is that, contrast neutralisation is confined to non-privileged positions while the privileged positions remain unaffected. While either approach could potentially account for the asymmetries discussed in this paper, only positional faithfulness is considered.[5]

The constraint hierarchy in (44) (Beckman 1998 etc.) represents a ranking schema in a positional faithfulness analysis of phonological asymmetries. FAITH(pos) represents a position-sensitive constraint, MARK is a markedness constraint that triggers changes in all positions, and FAITH is a general faithfulness constraint preserving contrast in all positions.

(44) Ranking schema for positional faithfulness analysis
FAITH(pos) » MARK » FAITH

Given that NPA results in the loss of underlying place specification of nasals, a positional faithfulness constraint blocking NPA must militate against the loss of place specification for segments in strong positions. The constraint responsible for blocking assimilation across the boundary of a phonological word is **DEP-PL]**$_{wd}$, defined in (45).

(45) **DEP-PL]**$_{wd}$: Within a phonological word, every output place specification has an input correspondent.

The existence of **DEP-PL]**$_{wd}$ also implies that of a general, context-insensitive faithfulness constraint to the place features of all segments, (**DEP-PL**). Since assimilation involves feature insertion, the constraint triggering it must rank above the one that blocks insertion. This motivates the ranking **NPA » DEP-PL**.

(46) **DEP-PL**: Every output place specification has an input correspondent.

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[5]For details on the use of either approach, see Beckman (1998); Casali (1996); McCarthy and Prince (1995); Smith (2001); Zoll (1997, 2004) and others. See also Alderete (2003) on the problems with the use of positional markedness approach and Zoll (2004) on why positional markedness is preferred.

It is important to note that the segment whose featural contrast is preserved with **DEP-PL]**$_{wd}$ may be a nasal. This breeds a potential conflict with the **NPA** constraint, which makes the opposite demand. The preservation of input specification for the place of nasals in phonological words is the result of ranking **NPA** below the positional constraint: **DEP-PL]**$_{wd}$ » **NPA**. Thus the ranking of the three constraints stands as **DEP-PL]**$_{wd}$ » **NPA** » **DEP-PL**. Given that **SPEC-PLACE** and **DEP-PL(-N)** are undominated in the language, the ranking **DEP-PL]**$_{wd}$ » **NPA** implies that **NPA** ranks below **SPEC-PLACE** and **DEP-PL(-N)** to produce the hierarchy in (47).

(47) **SPEC-PLACE, DEP-PL(-N), DEP-PL]**$_{wd}$ » **NPA** » **DEP-PL(N), DEP-PL**

The tableau in (48) shows that with this ranking, the only acceptable surface form in NC sequences where the two segments belong to different phonological words is one in which the two segments are faithful to their underlying place specifications.

(48) No NPA across a phonological word: **kɔ̀ŋ bí-á** 'a laper's child'

kɔ̀ŋ]$_{wd}$ **bí-á**	SPEC-PLACE	DEP-PL(-N)	DEP-PL]$_{wd}$	NPA	DEP-PL(N)	DEP-PL
a. **kɔ̀N]**$_{wd}$ **bí-á**	*!					
b. **kɔ̀ŋ]**$_{wd}$ **gí-á**		*!				*
c. **kɔ̀m]**$_{wd}$ **bí-á**			*!		*	*
☞d. **kɔ̀ŋ]**$_{wd}$ **bí-á**				*		

With **DEP-PL(-N)** and **DEP-PL]**$_{wd}$ now in the hierarchy, changing the place of a nasal through assimilation to the place of another consonant is no more optimal if the trigger and target are in different phonological words. This explains why **kɔ̀m]**$_{wd}$ **bí-á** is ruled out. A possible means of achieving assimilation without changing word-final nasal place specification is to change the place specification of the following oral segment. However, that incurs a violation of undominated **DEP-PL(-N)**, as in (48b). The only option left is to preserve the different place specifications of the segments in the NC sequence, at the expense of violation of the assimilation driving constraint **NPA**.

Section 5.2 takes a brief look at the outline of a positional faithfulness analyses of the remaining phonological processes discussed in this paper: vowel harmony and the OCP.

5.2   Positional faithfulness in other phonological processes

A positional faithfulness account of the remaining phonological processes discussed in the paper bears much resemblance to the analysis of NPA in the preceding section. As

shown below, analyses of these processes are unified by (i) an undominated **SPECIFY** constraint for the relevant phonological feature, (ii) a markedness constraint that has the potential to change the underlying specification of the relevant feature, (iii) a general faithfulness constraint preserving the relevant feature, (iv) a position-sensitive faithfulness constraint preserving underlying specification of the relevant feature and (v) the positional faithfulness ranking schema in (44).

5.2.1 Vowel harmony

The outline of vowel harmony is illustrated here with rounding harmony. Formal analyses of harmony within Optimality Theory typically involve the use of a harmony driving constraint or constraint interaction that ensures that segments within the harmonic domain bear the same specification for the harmonic feature. In the positional faithfulness approach argued for by Beckman (1997, 1998), no such harmony driving constraint is needed.[6] A positional faithfulness constraint interacts with other markedness constraints to derive harmony, in a way similar to the interaction that derives other positional asymmetric phonological patterns. What makes this possible is a proposal that in assessing output forms, markedness constraints are particular about the number of featural autosegments an output form contains, not the number of segments that bear the feature. For instance, in the word **[túm-ô]** 'a messenger', the two vowels together incur one violation of the markedness constraint against a surface form with the feature specification [+round] (***+ROUND**) if both vowels are dominated by one [round] node, as in (49a). By contrast, the output form incurs two violations of ***+ROUND** if the two vowels are linked to two different [round] nodes (49b).

(49)   Single versus double/multiple node domination
       a. [round]   b. [round] [round]   c. [round] [round]   d.   [round]
            /\   \ | \ | |
          túm-ô   túm-ô   tìm ó   tìm ó

Having both vowels dominated by one [+round] node is thus a better way of satisfying the constraint. Indeed, such an association incurs the same number of violations as in (49d), where the [round] feature is associated with only one vowel. (49b) and (49c) are similar in the sense that each vowel is linked to only one [round] feature; they differ in the specifications of the vowels for rounding. In (49c), the two vowels have different specifications, in (49b), both are [+round]. (49d) shows an output form in

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[6]Alternative approaches include featural alignment (e.g. Kirchner 1993), feature spreading (Walker 1998), feature agreement (Baković 2000), targetted constraints (Wilson 2003) Span Theory (McCarthy 2004)), Serial Harmony (McCarthy 2009) and others.

which a vowel has no specification for round. Such an output form violates **SPECIFY ROUND**, which requires that every vowel has a specification for the feature [round]. In the tableaux below, such output forms are left out, along with the specifier constraints, which are only needed to rule out output forms which lack specification for the relevant features.

An important generalisation central to understanding the rounding harmony is that, it only targets [ɨ]. This is the only vowel that does not have a distinct place specification: it is [-front, -back]. Thus changing [ɨ] to any other vowel comes at a very minimal cost, compared to changing any other vowel in a harmony process. When viewed as a loss of vowel place feature, the rounding harmony pattern does not lead to a loss in an underlying place feature. The vulnerability of this vowel to harmony processes is further evident in the fact that it is the only vowel that is changed in both [ATR] and rounding harmony. As a suffix or epenthetic vowel, it becomes [i] when preceded by a root vowel [i]. The relative weakness of this vowel makes it a target of an implicational markedness constraint that says that non-front vowels be [+round], (50).

(50) **-FRONT/ROUND**: If [-front] then [+round].

While this constraint should be in a position to change an underlying /ɨ/ to [ʊ] in a rounding harmonic context, there are two things it should not be allowed to do: (i) change this vowel into [ʊ] in non-harmonic contexts and (ii) trigger a /ɨ/ → [i] change and satisfy the constraint vacuously. For instance, the word **/tɨm/** 'send' could either surface as [tʊm] due to the force of this constraint or [tìm] to eliminate the feature that will make it a target of the constraint. These two liklely outcomes are blocked with the two faithfulness constraints in (51).

(51) a. **DEP-COR**: Every output [Cor] has an input correspondent [Cor].
      b. **DEP-ROUND**: Every output [+round] has an input correspondent [+round].

As long as these two constraints outrank **-FRONT/ROUND**, underlying /ɨ/ will remain unchanged in non-harmonic contexts, as shown in (52).

(52) Faithfulness over markedness in non-harmonic contexts: **/tɨm/ → [tɨm]**
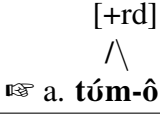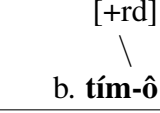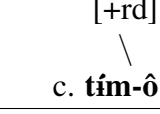
/tɨm/	DEP-COR	DEP-ROUND	-FRONT/ROUND
a. tʊm		*!	
b. tìm	*!		
☞ c. tɨm			*

The difference between harmonic /ɨ/ → [ʊ] and non-harmonic /ɨ/ → [ʊ] is that, in the latter, the [+round] feature is inserted. In harmonic rounding, the [+round] feature already exists in the harmonic domain. Thus DEP-ROUND is not violated since there is no insertion of the [+round] feature. What changes is the extension of the association line from the domain-final round vowel to [ɨ]. Pulleyblank (1996) refers to such output associations that do not exist in the input as DEPPATH violations. The relevant DEPPATH constraint is defined in (53).

(53) **DEPPATH-ROUND**: Any output path between [+round] and an anchor must have a correspondent path in the input.

The fact that harmony takes place is an indication that **DEPPATH-ROUND** ranks below **-FRONT/ROUND**, as shown in (54).

(54) Markedness over faithfulness in harmonic contexts: **/tɨ́m ô/** → [**tʊ́m-ô**]

[+round] /tɨ́m-ô/	DEP- COR	DEP- ROUND	-FRONT/ ROUND	DEPPATH- ROUND
[+rd] /\ ☞ a. **tʊ́m-ô**				**
[+rd] \ b. **tɨ́m-ô**	*!			*
[+rd] \ c. **tɨ́m-ô**			*!	*

With [+round] in the input, **DEP-ROUND** becomes inactive in (54), allowing the harmonic form in (54a) to surface as the optimal form, in spite of a double violation of **DEPPATH-ROUND**. With this result, the analysis has accounted for the surfacing of contrastive /ɨ/ in non-harmonic contexts and harmonic targetting of the same vowel preceding final round vowels. What remains to be accounted for is the positional asymmetry, by which /ɨ/ is opaque to rounding harmony when it occurs in a word (**/tɨ́m ó/** → [**tɨ̀m ó**] 'send him/her'). With the ranking schema of **FAITH(pos)** » **MARK** » **FAITH**, all that is required to derive opacity is for a positional faithfulness constraint to dominate the markedness constraint **-FRONT/ROUND**. This constraint is defined in (55).

(55) **DEP-ROUND**$_{wd}$: Every output [+round] in a phonological word has an input correspondent [+round].

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(56) Positional faithfulness over general faithfulness: **/tìm ó/** → [**tìm-ó**]

[-rd] [+rd]					
| **/tìm]**$_{wd}$ **ó/**	DEP- ROUND$_{wd}$	DEP- COR	DEP- ROUND	-FRONT/ ROUND	DEPPATH- ROUND
[-rd] [+rd] ⌢ **a. tʊ̀m]**$_{wd}$ ó	*!				*
[-rd] [+rd] | | **b. tìm]**$_{wd}$ ó		*!			*
[-rd] [+rd] ⌢ **c. tìm]**$_{wd}$ é		*!		*	
[-rd] [+rd] | | ☞**d. tìm]**$_{wd}$ ó				*	*

With the ranking **DEP-ROUND**$_{wd}$ » **-FRONT/ROUND**, the otherwise optimal harmonic output form **tʊ̀m ó** is now ruled out. The failure of (56c) to surface optimal also shows that changing the [+round] specification of the final clitic is not a viable means of avoiding **DEPPATH-ROUND** violation, as doing so results in the insertion of a coronal feature against the demands of highly ranked **DEP-COR**.

5.2.2 OCP and consonant deletion

Under the analysis that the deletion of a coronal is driven by the Obligatory Contour Principle, this principle, formalised as an OT constraint, becomes the markedness constraint triggering the deletion of one of the adjacent coronal consonants. For deletion to take place, the **OCP** must outrank the anti-deletion faithfulness constraint: **OCP** » **MAX**. However, that is not sufficient to determine the optimal output form. As shown in (57), it does not determine which of the two coronals in sequence is deleted. Deleting either consonant satisfies **OCP**.

(57) Effects of **OCP** over **MAX**: **/jíl-jâ/** → [**jí-jâ**] 'house-pl.'

/jíl-jâ/	OCP	MAX
a. **[jíl-jâ]**	*!	
☞ b. **[jí-jâ]**		*
💣 c. **[jíl-â]**		*

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In the same way, a positional faithfulness variant of **MAX**, (**MAX**]$_{wd}$), is sufficient to block deletion in words, when it outranks **OCP**. However, it predicts the wrong surface form, as it is unable to stop an OCP-driven deletion of the suffix-initial coronal.

(58)   Effects of **MAX**]$_{wd}$ » **OCP** » **MAX**: /jìl-já/ → [jìl-já] 'sing-perf.'

/jìl]$_{wd}$-já/	**MAX**]$_{wd}$	**OCP**	**MAX**
☞ a. [jìl]$_{wd}$-**já**		*	
b. [jì]$_{wd}$-**já**	*!		*
☢ c. [jìl]$_{wd}$-**á**			*

Indeed, as noted in Section 4.3, the deletion is not confined to one morphological position. In some instances a root-final coronal is deleted, in other cases, the suffix onset coronal is deleted. What is consistent is that, the deletion always targets the lateral consonant /l/. In (32), root-final /l/ is deleted when followed by a suffix with initial /j/. In (34), suffix-initial /l/ is deleted when preceded by a root-final /n/. This motivates a harmony scale in which central coronal sonorants are more harmonic than lateral ones: [j, ɾ, n] ≻ [l]. This translates into a faithfulness constraint hierarchy **MAX-CENTRAL** » **MAX-LATERAL**.[7]

The results in (58) show that the deletion triggered by **OCP** can not come at the expense of deletion of a central coronal. This provides an indication that **MAX-CENTRAL** outranks **OCP**, which in turn ranks above **MAX-LATERAL**. When the two constraints are integrated into the already existing hierarchy, the new ranking stands as **MAX**]$_{wd}$, **MAX-CENTRAL** » **OCP** » **MAX-LATERAL** » **MAX**. The tableaux in (59) and (60) show how the ranking succeeds in blocking the deletion of non-laterals.

(59)   Effects of **MAX-CENTRAL** » **OCP**: /jíl-jâ/ → [jí-jâ] 'house-pl.'

/jíl-jâ/	**MAX**]$_{wd}$	**MAX-CENTRAL**	**OCP**	**MAX-LATERAL**	**MAX**
a. **jíl-jâ**			*!		
☞ b. **jí-jâ**				*	*
c. **jíl-â**		*!			*

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[7]A reference is made to sonorants here because the deletion takes place only when the lateral is adjacent to another coronal sonorant. An alternative formulation of this harmonic scale in terms of markedness (i.e. ***LATERAL** » ***CENTRAL**) could also account for the pattern of lateral deletion. However, see Howe and Pulleyblank (2004) for arguments in favour of formulating harmony scales as faithfulness constraints.

(60) Effects of **MAX-CENTRAL** » **OCP**: /jìl-já/ → [jìl-já] 'sing-perf.'

/jìl]_{wd}-já/	MAX]_{wd}	MAX-CENTRAL	OCP	MAX-LATERAL	MAX
☞ a. **jìl]_{wd}-já**			*		
b. **jì]_{wd}-já**	*!			*	*
c. **jìl]_{wd}-á**		*!			*

In terms of underlying segmental sequence, 'house-pl.' and 'sing-perf.' are homophonous: **/jil-ja/**. The difference between them is the word boundary between the two morphemes in 'sing-perf.' Because there is no word boundary between the morphemes in **/jíl-jâ/**, the constraint **MAX]_{wd}** is not active in (59). This leaves the combined effects of **OCP** and **MAX-CENTRAL** to ensure that [l] is deleted. With the word boundary in (60), **MAX]_{wd}** and **MAX-CENTRAL** respectively protect [l] and [j] from deletion by their being ranked higher than **OCP**. Thus deletion within the word domain is blocked.

In sum, this section demonstrates that by incorporating sensitivity to the word domain into constraints, two of the observations made in this paper (the asymmetrical application of phonological processes and the clear distinction between the morphological units affected and those not affected) receive a straightforward formal phonological analysis. Therein lies the relevance of the positional faithfulness analysis.

6   Summary and Conclusions

This paper has sought to demonstrate how different phonological processes can be used to define the phonological word in Dagbani. It argues that the application of these phonological processes is conditioned by the morphological domains in which potential target sounds occur. In some of these domains, processes that lead to deletion, neutralisation or loss of contrast apply without restrictions. In other domains, such processes are blocked when triggered across their boundaries. This has the effect of preserving segmental contrast or the featural integrity of segments. It argues that the asymmetry between these domains reflects their positional strength or privilege. The strong or privileged positions impose restrictions on the application of phonological rules; the weak positions have less restrictions. A formal account of the asymmetry is illustrated using positional faithfulness approach to analysis of nasal place assimilation, rounding harmony and lateral deletion.

The overall goal has been to demonstrate that the processes discussed here fall within the areas which, in Dixon and Aikhenvald's (2002) definition, the defining properties of a phonological word surface. The conclusion for Dagbani is that, when any

of the processes or rules triggered by an element within a domain A affects a segment located in a domain B, then domain B does not constitute a phonological word. A full phonological word is one that permits these processes only when they are triggered by elements within the same domain. In other words, when these phonological processes take place, the trigger and targets must be part of the same phonological word. When segments within a morphological domain fail to undergo a process, the likelihood is that the trigger of that process is not part of the same phonological word as the potential targets that fail to undergo the process.

In addition to providing further details about aspects of Dagbani morphology discussed in past studies, this paper is the first description of some of the phonological processes discussed, including lateral deletion and height harmony. In this respect, the paper has made a significant contribution to the understanding of Dagbani morphophonology. The paper has also contextualised these morphophonological processes within cross-linguistic observations, used them to explain phonological principles such as the Obligatory Contour Principle and underspecification, and subjected them to theoretical analyses such as Feature Geometry and Optimality Theory. What is more, it has shown that a coherent account of some of these processes can not be achieved without reference to the morphological domains within which the target segments occur. For instance, without reference to the morphological differences between nouns and verbs, it will be difficult to explain why **/jíl-jâ/** 'house-pl.' surfaces as **[jí-jâ]**, with lateral deletion, while **/jìl-já/** 'sing-perf.' surfaces as **[jìl-já]**, without deletion.

The conclusions drawn in the discussions and analyses need to be understood within the context of the variations observed with respect to the application of the phonological processes discussed here. Saying that affixes, bound roots and clitics do not constitute phonological words by themselves does not imply that each of the phonological processes discussed here will affect any of these constituents when triggered across its boundary. Rather, the conclusion is that, the effect of these processes on any of these constituents is sufficient as a diagnostic of its sub-wordhood as long as an asymmetrical pattern of their lack of effect on free roots, complex words and compounds can be established. For instance, vowel height harmony is shown to affect some nominal forms, changing their height specification. The argument is that, the height neutralisation takes place because the root vowel is underlyingly unspecified for some vocalic features. The key point here is that, underspecification and its resulting effect of height neutralisation are associated with bound roots, not full words. In a full phonological word, all segments must be fully specified. However, not all bound roots show these phonological traits. A root does not have to be underlyingly unspecified for features to be included in the category of bound root. In other words, non-uniformity in rule application to segments in various morphological units is expected.

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Person Deixis as Discursive Practice
in Nigeria's "June 12" Conflict Rhetoric

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Abstract

Drawing on the "June 12" political crisis in Nigeria, this study analyses the speeches of some political figures in the vanguard of the unprecedented power tussle between the military and civilians in Nigeria's political history between 1993 and 1998. The paper applies the tools of Critical Discourse Analysis to examine person deixis as a discursive strategy appropriated for ideological purposes in the power play. The study reveals that by deploying person deixis in the conflict rhetoric, the political figures seek to reproduce 'dominance' in a bid to control the cognition and actions of their audiences.

1. Introduction

According to Yule (1985: 99), deictic expressions generally are "[…] bits of language which we can only understand in terms of speaker's intended meaning". To Renkema (2004: 121), "[d]eictic words are words with a reference point that is speaker- or writer-dependent and is determined by the speaker's or writer's position in space and time". Simply put, the reference of such expressions cannot be determined without knowing the extra-linguistic context of the utterance (who uttered them, where and when). They are generally classified into: person deixis referring to interactants in a communicative event, e.g., *I*, *we*, *you*, *he*, *she*, *it*, *they*; place deixis referring to spatial relations in a communicative event, e.g., *here*, *there*, *this*, *that*; and temporal deixis referring to time relations in a communicative event, e.g., *now*, *then*, *yesterday*, *tomorrow*.

For our present purposes, we focus on person deictic elements (realised by using personal pronouns) and their rhetorical uses. It is interesting that the classification of

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person deixis on the basis of number and person – first person *I* (singular) and *we* (plural); the second person *you* (singular) and *you* (plural); and the third person *he*, *she* and *it* (singular) and *they* (plural) – is purely a grammatical issue. For, according to Chen (2009: 27), "[t]his […] does not mean that you cannot use the plural form of the first person when you alone are speaking. We may flout the regulation of person and number, thus giving rise to signs of rhetorical motivation".

Kuo (2002: 30) indicates that "studies of political language have explored how politicians from various parts of the world select and distribute pronouns for political and personal purposes". In political speeches, personal pronouns are often used as a form of address, either to refer to the audience, the speaker or the opponent. Beyond the referential function, it has been found that politicians tend to "manipulate pronouns to develop and indicate their ideological positions on specific issues" (Wilson 1990: 46). Thompson (1990) cited in Hart (2005: 9) sees ideology as a study of "the ways in which meaning is constructed and conveyed by symbolic forms of various kinds". Thus, discourse is shaped by relations of power and invested with ideologies.

Allen's (2007) study of pronominal choice in campaign speeches in Australian political discourse investigates the pragmatics of pronominal choice and the way in which politicians construct and convey their identities and those of their parties and opponents within political speeches. Taking six speeches by John Howard and Mark Latham across the course of the 2004 federal election campaign, the researcher examines the ways in which pronominal choice indicates a shifting scope of reference to create pragmatic effects and serve political functions. Allen (2007: 2) observes:

> Politicians, when making speeches during an election campaign present positive aspects of themselves and negative aspects of their opponents. One way of doing this is by selectively using personal pronouns. The personal pronouns chosen can be used to refer to themselves and to others, and to evoke multiple identities of themselves and others, presented from a range of perspectives. The pronominal choices politicians make serve persuasive and strategic political functions.

Kuo's (2002) study on the uses of second-person singular pronouns in Chinese political discourse is based on videotaped data from two televised Taipei mayoral debates that took place in 1998. The study, which examines the communicative functions of the second-person singular pronoun **ni** 'you', focuses on how three mayoral candidates' use of **ni** reflects their attitudes and relations toward the other

participants as well as their perceptions of the interactive goals of the speech activity. The analysis found that the functions of **ni** in the two debates are very different. In the first debate, more than sixty per cent of the occurrences of **ni** are used by the three debaters either to address the audience/voters or to refer to an indefinite person, thereby establishing solidarity with the audience or voters. In contrast, more than eighty per cent of the occurrences of **ni** in the second debate are used when debaters address their opponents directly to challenge or attack them.

With regard to the use of personal pronouns in Nigerian political discourse, Adetunji's (2006) study of the inclusion/exclusion dichotomy reflected in the use of deictic expressions in Nigeria's former President Olusegun Obasanjo's speeches deserves attention. The study examines, among other deictic expressions, the use of person deixis in political discourse, focusing on two thematically and contextually different speeches of President Obasanjo. The first speech, which was delivered at Harvard University, USA in year 2000 entitled "Nigeria, Africa and the World: A New Dawn", and the second speech, which was on the declaration of a state of emergency in Plateau State, Nigeria in May 2004, are analysed. The study finds that **we** as the commonest person deictic in the first speech was deliberately employed by the speaker to convince and manipulate the audience to reason like him and help him in sharing the load of responsibility. In the second speech where there is the preponderance of **I**, the speaker speaks from a personal point of view, trying to verbalise a particular conviction.

From the foregoing, we can establish that in political rhetoric, the relationships among participants in the discourse situation are mediated by personal pronouns. Citing Chilton and Schaffner (1997: 216), Awonuga (2005: 111) explains that such pronouns "delineate a social 'space' in which people and groups have a 'position'". This motivation brings to the fore the focus of this study: the deployment of person deixis as discursive practice in the speeches of some key actors in Nigeria's "June 12" conflict rhetoric.

2. Nigeria's "June 12" Political Crisis

After long years of military rule and the general expression of people's dissatisfaction with military regime and consequent craving for democratic governance, President Ibrahim Babangida, Nigeria's military ruler between 27th August 1985 and 26th August 1993, embarked upon a transition programme that was to usher in a civilian government after his eight-year rule as military leader. The democratisation process culminated in the conduct of general elections in 1993. The presidential election which was the climax was conducted on 12 June 1993 and was widely acclaimed to be Nigeria's freest and fairest election, not only by local assessment but by international standards. To the disappointment of most people, the

election which was presumably won by the business mogul, Chief M. K. O. Abiola of the Social Democratic Party, was annulled by the military government. This action was strongly condemned as a great setback to the institution of democracy in Africa's most populous Black country.

In the heat of the ensuing political imbroglio, President Ibrahim Babangida unconstitutionally instituted an Interim National Government (ING) and handed over the reins of power to Chief Ernest Shonekan. Chief Shonekan had barely spent three months in office when his unconstitutional government was overthrown by General Babangida's close military aide, General Sani Abacha, on 17 November 1993. With the enthronement of another military regime while there were spirited efforts to validate the annulled presidential election, the hope of instituting the much-coveted democratic governance was dashed. Consequently, the presumed winner of the election, Chief M. K. O. Abiola, with the support of pro-democracy groups challenged the military government. Thus, the "June 12" political conflict is a watershed in Nigeria's political history, as civilians had to challenge the military over the acquisition and retention of power. Although June 12 1993 was a day on which a presidential election was actually held in Nigeria, it has since assumed symbolic status as a signifier for the attendant struggle for the entrenchment of democratic governance in Nigeria, hence the tag "June 12".

3. Data for the Study

The data for the study are drawn from the speeches of Ibrahim Babangida, Sani Abacha and M. K. O. Abiola who were the main actors in the "June 12" political conflict. So, the speeches they made reflect the problems attendant to the struggle for power between the military and civilians. The maiden speech of each of the actors in reaction to the "June 12" crisis is considered for this study, viz. Babangida's "Expediency and the Path of Honour" (an address to the nation on the occasion of the annulment of the presidential election of 12th June 1993), Abiola's "A Deliberate Intention to Insult and Ridicule the Entire Nigerian People" (being a text of Abiola's press statement on the annulment of the election) and Abacha's "Child of Necessity" (maiden broadcast to the nation on 18 November 1993). Apart from these maiden speeches, Babangida's "Crisis and the Search for Peace I: Dialogue with State Governors" and "Stepping Aside for Peace and National Concord" (address to the National Assembly on 17th August 1993) are also considered. For M. K. O. Abiola, his speeches "Salute to the People" and his momentous "Epetedo Declaration" are sampled. And finally, we sample Abacha's speech "The Big-Stick Declaration" of Wednesday 17th August 1994 in which he ruled out the possibility of actualising the "June 12" mandate.

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The data are sampled from books and magazines. These sources are, no doubt, second-hand material compared with first-hand material of the anthology/anthologies of the speeches of each of the speakers in form of memoir(s). We are constrained to rely on the former sources in view of the transient roles of the speakers in the conflict, especially the untimely deaths of Sani Abacha and M. K. O. Abiola. In Babangida's case, however, anthologies of his speeches exist in volumes edited by Sam Oyovbaire and Tunji Olagunju. The first two volumes entitled *For Their Tomorrow, We Gave Our Today* do not include speeches of the "June 12" crisis. Therefore, we use Volume III entitled *Crisis of Democratisation in Nigeria: Selected Speeches of IBB*.

4. Theoretical Framework

Hoepfner (2006: 4) argues that, "Discursive practices establish, conceal or transform power relations between those involved in a specific discourse". Hence, we apply the tools of Critical Discourse Analysis (CDA), bearing in mind van Dijk's (2001: 353) position that critical research on discourse needs to satisfy a number of requirements, among which are: (i) rather than merely describe discourse structures, it tries to explain them in terms of properties of social interaction and especially social structure; and (ii) more specifically, CDA focuses on the way discourse structures enact, confirm, legitimate, reproduce, or challenge relations of power and dominance in society.

CDA is an orientation towards language which highlights how language conventions and language practices are invested with power relations and ideological processes which people are often unaware of. Wodak (1999) quoted in Hoepfner (2006: 5) says: "The aim of Critical Discourse Analysis is to unmask ideologically permeated and often obscured structures of power, political control, and dominance, as well as strategies of discriminatory inclusion and exclusion in language in use". Writing on language-power relations, Wodak (2002: 11) posits:

> The constant unity of language and other social matters ensures that language is entwined in social power in a number of ways: language indexes power, expresses power, is involved where there is contention over power and where power is challenged.

Since power is a property of relations between social groups, institutions or organisations, social power is defined in terms of the control exercised by one group or organisation (or its members) over the actions and/or the minds of (the members of) another group, thus limiting the freedom of action of the others, or influencing their knowledge, attitudes or ideologies (van Dijk, 1993a). Social power is defined in terms of 'control': groups that have power control not only the action but also the cognition of other groups. The exercise of power usually presupposes mind

management, involving the influence of knowledge, beliefs, attitudes, understanding, ideologies, norms and values. The relevance of the cognitive dimension of control is central to the discussion of CDA. For it is argued that modern and more effective power is mostly cognitive and enacted by persuasion, dissimulation or manipulation, among other strategic ways to change the mind of others in one's own interests (van Dijk, 1993b).

Therefore, when powerful speakers enact or exhibit power based on privileged access to public discourse and communication as evidenced in the case of the "June 12" crisis, there is need to know how the speakers are able to persuade and influence their audiences, by the gentle stroke of subtle linguistic form(s). In view of the fact that "texts are often sites of struggle in that they show traces of differing discourses and ideologies all contending and struggling for dominance" (Wodak, 2002: 10), we attempt to forge meaningful links between linguistic forms, speaker intent and political goals within the context of the social action in which the discourse is embedded. In this regard, we hinge the analysis of the discourse on Locke's (2004: 38) view: "CDA's concern is with the opacity of texts and utterances – the discursive constructions or stories that are embedded in texts as information that is readily available to consciousness. Analysis is a method of dealing with this opacity." Wodak (2002: 10) lends credence to this view when she says: "One of the aims of CDA is to 'demystify' discourses by deciphering ideologies."

5. Discussion

In this section of the study, we focus on four categories of person deixis that the speakers try to manipulate for political effect in their speeches.

5.1 First Person Plural Pronominal Forms

The first category that the speakers tactically deploy in the discourse is that of the first-person plural subject/object, reflexive and possessive pronominals: **we/us**, **ourselves**, and **our** respectively. As forms of address system, such pronominals are deictic devices performing certain pragmatic functions. Brown and Gilman (1972: 252), while pointing out the discursive practice of using such pronominals, write:

> The interesting thing about such pronouns is their close association with two dimensions fundamental to the analysis of all social life – the dimensions of power and solidarity. Semantic and stylistic analysis of these forms takes us well into psychology and sociology as well as into linguistics and the study of literature.

It is pertinent to note that the dimensions of power and solidarity hinted at by Brown and Gilman (1972) above are integral to the speakers' use of such pronominals in the discourse. Consider the following excerpts:

(i) We must not deviate from the issue before us as duly identified. We must not allow ourselves to be misguided into fratricidal conflict […]. We must eschew undue selfish motives, self-interest and sectional group interests and pursue with vigour national interest which is central to our country's democratic aspirations.

> (Babangida, "Crisis and the Search for Peace I", *Selected Speeches of IBB, Vol*. III, 1996: 54)

(ii) Nigeria is the only country we have. We must solve our problems ourselves. We must lay very solid foundation for the growth of true democracy. We should avoid any ad hoc or temporary solutions. The problems must be addressed firmly, objectively and with all sincerity of purpose.

> (Abacha, "Child of Necessity", *Newswatch*, November 29, 1993: 18)

(iii) People of Nigeria, these are challenging times in the history of our continent, Africa, and we in Nigeria must not allow ourselves to be left behind. Our struggle is the same as that waged by the people of South Africa [...]. We in Nigeria are also fighting to replace MINORITY rule, for we are ruled by only a tiny section of our armed forces. Like the South Africans, we want MAJORITY rule today […].

> (Abiola, "Epetedo Declaration", *Tell*, July 20, 1998: 20)

One striking discursive practice that cuts across the three excerpts cited above is the speakers' use of the plural first-person pronominals (**we, us, our, ourselves**). This creates the impression of a symmetrical relation that holds among a people fighting the same (political) cause, which is presented in such a way that the interest of the country matters most. Meanwhile, each of the speakers has a distinct ideological position for which he seeks the support of Nigerians. Thus, Babangida, Abacha and Abiola adopt the rhetorical strategy of solidarity engineering. The use of the plural first-person pronominals as a solidarity-engineering tactic respectively by Babangida and Abacha in excerpts (i) and (ii) above brings to bear the inspirational function that language serves in the army. Amafah (1990: 75) argues that the inspirational function of language in the army is "desired to boost the morale of soldiers, soldiers mobilised towards the achievement of a goal through an appeal to some corporate ideals (e.g.,

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masculinity, *esprit de corps*, national survival, etc". The speakers' transference of military ideals to national politics would give the audience the impression that they are committed to such ideals in the same manner in which they are duty-bound to uphold them in the military circle.

In addition, the coalescence of voices in the plural first-person pronominal forms in relation to encoding of power deserves attention. In excerpts (i), (ii) and (iii) respectively, Babangida, Abacha and Abiola use the modal auxiliary *must* with the plural first-person pronominal form **we** to encode power and control. Each of them presents his speech in such a way that he coalesces the voice of self, that is, the speaker's voice, with the voice of the audience (society), thereby giving the impression that he has the backing of the Nigerian people to speak on their behalf. This rhetorical style dates back to the ancient Roman Empire when the emperor's consistent pronoun style gave away his class status and political views. Writing on the emperor's use of the plural first person pronominal forms, Brown and Gilman (1972: 254) explain:

> An emperor […] is the summation of his people and can speak as their representative. Royal persons sometimes say 'we' when an ordinary man would say 'I' […]. The usage need not have been mediated by a prosaic association with actual plurality, for plurality is a very old and ubiquitous metaphor for power.

This viewpoint corroborates that of Arendt (1970: 44) who writes:

> Power corresponds to the human ability not just to act but to act in concert. Power is never the property of an individual; it belongs to a group and remains in existence only so long as the group keeps together. When we say of somebody that he is 'in power' we actually refer to his being empowered by a certain number of people to act in their name.

From the views expressed above by Brown and Gilman (1972) and Arendt (1970), there appears to be an intrinsic link between the encoding of power and the expression of solidarity in the speakers' use of the plural first-person pronominals, geared towards the attainment of collective goals. To this end, Habermas (1977: 4) argues:

> The fundamental phenomenon of power is not the instrumentalisation of 'another's' will, but the formation of a 'common' will in a communication directed to reaching agreement […]. 'Power' would then mean the consent of the governed that is mobilised for collective goals, that is, their readiness to support the political leadership […].

It is imperative to note that there are some limitations to Habermas' view here. First, although the audiences (or the people) are given the impression of being mobilised towards the attainment of collective goals, we should not gloss over the possibility of the speakers' attempt to satisfy their own (selfish) ends/personal goals which would run counter to the people's will. This is based on the fact that political intentions are often inscrutable. Second, pronominal forms have a way of alienating and assimilating the other. For instance, Babangida's and Abacha's use of the plural first person pronominal forms as "inclusive devices", Oha (1997) argues, may be face-threatening to those groups who might not want to identify with Babangida and Abacha, on the one hand, and their respective regimes and political programmes, on the other, especially the Yoruba ethnic group that appeared to be most aggrieved on account of the annulment of the June 12, 1993 presidential election. Also, Abiola's coalescence of the voice of self with the voice of the people, using the plural first person pronominals, could threaten the face of the ethnic groups that might not want to identify with the "June 12" cause. To this end, Oha (1997: 46-47) argues:

> To include one who does not want to be included, or to attribute responsibility to one who does not identify with a cause seems to agree with the design of military dictatorship. The plural first person pronominals are, therefore, tactical means of assimilating the other and making a single voice (of the dictatorship) appear to be plural.

Although it is only Babangida and Abacha that are military, we may not be able to exonerate Abiola (a civilian) from the use of this strategy because he too could have imbibed the military dictatorial tendency. Generally speaking, however, the speakers' dictatorial tendency seems to be predicated on the monologic nature of the speeches in which the speakers' perspectives and convictions are forcefully presented to their respective audiences. Thus, the "one–sidedness of the flow of information seems to satisfy power demands" (Oha, 1994: 117); for political speakers' privileged access to and control of public discourse is a major resource for political manipulation.

At this juncture, it is pertinent that we pay attention to Babangida's recourse to the use of 'exclusive **we**' in the face of widespread condemnation of the annulment of the "June 12" election. He explains:

(iv) We have had to turn around at the presidential election because we had to be wiser for the nation than for ourselves and the presidential candidates. There is no denying the fact that the nation matters more than individual ambitions and friendship.

> ("Crisis and the Search for Peace I", *Selected Speeches of IBB Vol.* III, 1996: 140-141.)

The use of "we" in this excerpt gives the impression that the cancellation of the "June 12" presidential election was the decision of a group and not that of an individual. This strategy of complete self-effacement and attempt to pass the buck to a collective group is a popular rhetorical strategy in political discourses, as it shields the leader from direct attacks on his/her person. Babangida's appeal to group responsibility here is questionable if we recall that the orientation of the military is the supremacy of the view of the most senior officer. With regard to the decision to annul the election, one cannot be so sure that just a single person (the leader of the military government) did not take the decision, only for the ruling body (National Defence and Security Council) to rubberstamp it. After all, in military circles, the word of the superior officer is law; the subordinates have to "obey the last order", as popularly expressed in military parlance.

We also find out that while Babangida and Abacha were being criticised for having taken actions that threatened the entrenchment of democracy in Nigeria, they also tried to show that they had a stake in the development of the country like any other Nigerian. So, in the conflict rhetoric, they constantly refer to Nigeria as "our country" and "our fatherland", and the people, "our people" and the ethnic groups, "our various ethnic groups". By using the determiner **our**, each of them tries to whip up patriotic sentiments to give the impression that they too have the interests of the country and the people at heart. Judging them, therefore, as having taken certain actions that would adversely affect the interests of their country and the people, for whom they supposedly have strong emotional attachments, is tantamount to hurting their sense of patriotism.

But we have to note that since these speakers control the discourse, such a linguistic form readily provides an escapist route for them to explain away their actions as having been taken in "national interests". In fact, it is ritualistic in political discourses that no matter how desperately a leader is pursuing a self or group interest, the moment they use **our** to show a collective sense of belonging, it takes the discerning audience to figure out traces of deceit in such a linguistic manipulation. In this sense, meaning becomes slippery, as it is difficult to differentiate personal interest or group interest from the much-touted "national interests".

5.2 First Person Singular Pronominal Forms

Besides the speakers' use of the plural first person pronominal forms, the transmutation of identity signalled in the discourse through their shift from plural first-person pronominals to singular first-person pronominals is noteworthy. In this wise, Brown and Gilman (1972: 253) contend that "a man may vary his pronoun style from time to time so as to express transient moods and attitudes". Consider the following:

(v) Let me confess that the many and varied attacks hurt me personally and expectedly my family […]. My worry in the past few weeks has been that the attacks directed at my person and the innocent members of my family may deter other patriots who genuinely wish to offer themselves for service to the father land to <mark>par</mark>ry [sic] a while.

> (Babangida, "Stepping Aside for Peace and National Concord"
> *Selected Speeches of IBB,* Vol. III, 1996: 166)

In excerpt (v) above, Babangida uses the first person singular pronominals object/possessive (**me/my**) to narrow down identity. This expresses a momentary shift of mood which reflects a particular attitude or emotion, giving the impression that Babangida wants to personalise the problem occasioned by the annulment of the "June 12" election. This is a characteristic disposition he assumes in the conflict rhetoric in an attempt to possibly detract from the magnitude and national dimension of the crisis. Elsewhere, he laments:

(vi) The implication of the conception of politics in the first-person singular, and the problem it has created for current efforts at evolving an acceptable solution to the political impasse is to make me, **General Ibrahim Badamasi Babangida**, the issue and hence the focus of all possible ways to the resolution of present impasse. [emphasis in original]

> ("Stepping Aside for Peace and National Concord", *Selected Speeches of IBB* Vol. III, 1996: 165)

Here, Babangida still emphasises the personalisation of the problem but he seems to play to the gallery, trying to impress the audience with the "game" he plays in, and with, language with his linguistic analysis of pronominal forms, particularly his identification of the first person singular, at the expense of addressing issues or facing facts. This hints at the fact that in some situations political speeches are not necessarily meant to inform or reveal to the audience hidden facts but to gloss over the issue at stake, and project the image of the speaker as an intellectual. In this instance, although we may not doubt Babangida's knowledge of and competence in linguistic analysis, the trappings of the erudition of (ghost) speech writers specially trained in such an art cannot be ruled out.

As part of the use of the first person singular pronominals to personalise the problem of the annulment of the election, Babangida frequently uses the pronoun **I** with such verbs as **believe, wish** and **feel** in the discourse. According to Quirk *et al.* (1985: 202), such stative verbs 'denote "private" states of mind which can only be subjectively verified'. It is noteworthy that Babangida ruled for eight years and experimented with varied transition programmes culminating in the conduct of "June 12" presidential election. Thus, Nigerians would have appreciated a successful

transition to a civilian government, thereby showing that Babangida's expressions of wishes, feelings and beliefs were, in the nick of time, translated to tangible and realistic political results beneficial to the polity and the people. Interestingly, barely two months to his avowed date of leaving office in the wake of the cancellation of the June 12 presidential election, he still committed himself:

(vii) In annulling the presidential election, this administration was keenly aware of its promise in November, 1992 that it would disengage and institute a return to democracy on 27 August, 1993. We are determined to keep that promise. Since this transition and any transition must have an end, I believe that our transition programme should and must come to an end, honestly and honourably.

("Expediency and the Path of Honour", *Selected Speeches of IBB* Vol. III, 1996: 134)

Elsewhere in the conflict rhetoric he boasts:

(viii) I believe that at the exit of this administration from power, we would leave behind for posterity a country with an economy the structures of which have been turned around for good.

("Expediency and the Path of Honour", *Selected Speeches of IBB* Vol. III, 1996: 133)

While Babangida is pontificating here about the economic base of the country, the audience would rather be interested in the political structure he was leaving behind that would sustain and consolidate the economic base. This is because no matter how economically viable the country was at the point of his leaving office, the political brouhaha that he left behind would mess it up in no time. Therefore, his expressions of personal views and opinions appear to be mere rantings.

The construction of identity in Babangida's use of the first person singular pronoun contrasts with that of Abiola. While Babangida tries to deflect individual responsibility in the annulment of the election and seeks complete self-effacement, Abiola tries to project his own identity as a victim of injustice in order to draw people's sympathy:

(ix) As I speak today, I am by the infinite grace of God, and the wishes of the people of this country, the President-elect of the Federal Republic of Nigeria. I am the custodian of a sacred mandate, freely given, which I cannot surrender unless the people so demand […].

(Abiola, "A Deliberate Intention to Insult and Ridicule the Entire Nigerian People", cf. Olanrewaju, 1999: 72)

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Here, Abiola's predilection for the first person singular pronominal is expected, as he would like to parade himself as the proud (presumed) winner of the election which was cancelled by the military government. By assuming this posture, he brings to the fore his social role in the vanguard of the crusade against the annulment of the election. In spite of his preference for this pronominal form which is ego-boosting, his counting on the wishes, cooperation and support of the people to claim the mandate is noteworthy. For instance, he resolves not to betray the trust reposed in him by the Nigerian people. Thus, he gives the impression that he is not a 'lone-ranger' in the struggle. Elsewhere, he assures the people:

(x) I am going to struggle with you for the materialisation of the mandate of
    12 June for the benefit of our nation and its people.
        ("Salute to the People" *African Concord*, October 1993: 64)

Hence, the equation of **I** and **you** in the excerpt above to fabricate **we** is suggestive of collective responsibility. As a victim of perceived injustice that needs the support of the people, Abiola just has to say this because people would like to hear such. Saying what will interest the people is a strategy of the political speaker who would construct a positive image of himself/herself to help to actualise his/her goals.

For Sani Abacha, his use of the first person singular pronoun **I** in his maiden speech as Head of State deserves attention. For he constructs for himself the image of a concerned Nigerian citizen who would respond to the challenge of serving the country in the face of very serious threats to the polity.

(xi) SEQUEL [sic] TO THE RESIGNATION OF THE FORMER Head of
      the Interim National Government and Commander-in-Chief of the
      Armed Forces, Ernest Shonekan, and my subsequent appointment as
      Head of State and Commander-in-Chief, I have had extensive
      consultations within the Armed Forces hierarchy and other well-meaning
      Nigerians in a bid to find solutions to the various political, economic and
      social problems which have engulfed our beloved country and which
      have made life most difficult to the ordinary citizen of this nation.
          (Abacha, "Child of Necessity", *Newswatch*, November 29, 1993: 18)

His messianic posture evidenced in the use of the first person pronominals **I** and **my** in this extract is to give the audience the impression that his taking over the reins of power as Head of State from the Chairman of the Interim National Government, Chief Ernest Shonekan, was not to serve any self interest. But we know, considering the slippery nature of political discourse that it is difficult to separate personal from national interests.

5.3 Second Person Pronominal Element

At this point, it is germane that we pay attention to the speakers' deployment of the second person pronominal **you** in such expressions as: "as you all know"; "you are all (living) witnesses"; "you may wish to recall"; "as you are aware"; "as you may be aware"; "permit me to remind you"; "as you are all now aware"; and "you will recall that […]" in the conflict rhetoric. All the three speakers have a predilection for the use of this pronominal form couched in the above expressions. To all appearances, its use sheds light on what is known in discourse analysis as the notion of "shared knowledge" or "assumed common ground" or "presupposition" "defined in terms of assumptions the speaker makes about what the hearer is likely to accept without challenge" (Givon 1979a: 50; quoted in Brown & Yule 1983: 29). Hence, the speakers tend to justify whatever claims they make with regard to the conflict, as they presuppose that the audience appreciate and share such claims.

Pragmatically, the use of **you** in such expressions underlines the crucial role discourse plays in eliciting the consent of others. Such a manipulation fits into Nader's (1995) notion of "coerced harmony", explained in terms of "the ways in which the powerful force those with less power to agree to a consensus, or the appearance of it, although it may not be in the latter's interests" (Lakoff 2001: 313). Allen (2007: 4) wraps up the rhetorical function of **you** in political discourse, saying: "For politicians, one advantage of presenting their propositions as common sense is that it makes it more difficult to question what they are saying." Thus, by appropriating the pronoun **you** in the conflict rhetoric, Babangida, Abacha and Abiola subject their audiences to divergent ideological positions for which the people have to make either an informed or an uninformed choice depending on their ideological bent or their discerning spirit. Abusing the sensibilities of the people by positioning the discourse in such a way that the people are torn between opposing forces and "voices" scrambling for their minds resonates with the role of discourse in the (re)production of "dominance" defined by van Dijk (1993a: 84) thus: "*Dominance* is here understood as a form of social power abuse, that, as a legally or morally illegitimate exercise of control over others in one's own interests, often resulting in social inequality."

5.4 Third Person Plural Pronominal Form

The pronominal form **they** also serves some rhetorical functions in the discourse of the "June 12" crisis, as each of the speakers tries to portray a group of people (the perceived opposition) in a particular light in order to further reinforce their messages to the audiences. Let us consider the following excerpts:

(xii) In recent times, our country has been inundated by the sporadic rise of unregistered groups seeking to play the role of political associations. Such groups have wantonly and recklessly paraded themselves as

advocates of democracy. They create the erroneous impression of commanding national spread whereas they are local, sectional, economically motivated and ethnic in their composition and orientation.
   (Abacha: "The Big-Stick Declaration", *Tell* August 29, 1994: 8)

We find out in the excerpt above that the major political propaganda technique employed by Abacha to run down the opposition groups is "name-calling", as those who are agitating for the de-annulment of the June 12 election are portrayed in a negative light. This is a rhetorical weapon of distancing that group from his audience while trying to endear himself to them. In particular, there is an allegation levelled against the opposition which touches on a very crucial but delicate issue which has become ritualistic in the political discourse of post-colonial Nigeria. Trying to engineer ethnocentric emotion against those calling for the de-annulment of the election is rhetorically compelling.

   It is interesting to note that his recourse to the issue of ethnicity in a pluri-ethnic society such as Nigeria could be a potent scoring point for the speaker who wishes to alienate the oppositions' goals from the ever ethnic-conscious audience. However, as Oha (1997) observes, political public speaking involves subjecting the audiences to the "weight" of words to influence their views and attitudes on certain political issues without the speakers' bothering about how such groups weigh or carry the weight of their words. Thus, ethnicity has become a manipulative weapon of political deceit in the hands of political speakers to score cheap political goals in a pluri-ethnic society such as Nigeria. So, in such a complex society, Oha (1997: 45-46) argues that "if there is anything the ethnic groups in Nigeria, particularly the "minorities" would like to hear said, it is that they must be protected within the nation, and that their rights as co-equals with other ethnic groups must not be denied."

   In a similar vein, Babangida vilified the groups agitating for the de-annulment of the June 12 election:

   (xiii) We have in the past few weeks witnessed the highly provocative, divisive and potentially destabilising designs of the so-called custodians of democracy, good governance and human rights associations or groups […] they push for their private, parochial and self-serving agendas on our urban streets and pages of newspapers taking with them the innocent and the gullible. They threaten fire and brimstone. They tread the path of confrontation and sometimes treason. They are a small group, but they make the most noise like the proverbial empty barrel. Their patriotism is suspect especially in their reliance on external base for power.
      ("Stepping Aside for Peace and National Concord", *Selected Speeches of IBB* Vol. III, 1996: 168)

Babangida's reference to the numerical strength of the opposition smacks of the diminutive portrayal of the "enemy" in political rhetoric, where the impression is always given to the audience that the opposition is a negligible few whose views will invariably be unpopular. Besides, it is an attempt to conjure up the popular 'us-them' dichotomy in political discourses where the speaker attempts to draw a battle line between his or her own group and that of the opposition. Usually, the "**they**" group is negatively labelled so that the audience could pitch their tent with the speaker. But we must note here that such adjectives as "private", "parochial", and "self-serving" used by Babangida to vilify the opposition have meanings in the construction of reality favourable only to the speaker's dominant group. To the other group (the opposition) and their apologists, their agendas could be public, broad-based and selfless.

Abiola's use of **they** is interesting in two dimensions. First, he uses the pronoun to refer to the military, as he also engages in the political ritual of vilification of the opposition:

> (xiv) We are tired of the military's repetitive tendency to experiment with our economy. Today, they say: "No controls". Tomorrow, they say: "Full controls". The day after, they say: "Fine tuning". The next day, they say: "Devaluation". A few days later, they say: "Revalue the same naira upwards again" […]. All we can see are the consequences of this permanent game of military "about-turns": high inflation; a huge budget deficit; enormous foreign debt; repayment burden; dying industries; high unemployment and a demoralised populace.
>
> ("Epetedo Declaration", *Tell,* July 20, 1998, p. 20)

Abiola's portrayal of military's role in governance as 'military about-turns' deserves analysis. In the military parlance, "about-turn" is a command to soldiers on parade to turn round and face the opposite direction. This is the literal sense of the use of the lexical item. However, in the conflict rhetoric, 'about-turn' is used as a parody which assumes a metaphorical significance. In this regard, military "about-turns" refer to the inconsistencies in the military's system of governance. This is an attempt to picture the military as not being able to make steady progress in governance, as they had to turn around (as they do on the parade ground) to take steps in the opposite direction.

We have to comment here that Abiola's picture of the military appears to be an oversimplification of the role of the military in governance. A good number of soldiers are intellectuals and they know a lot about governance, their incursion into politics and the mode of acquiring power notwithstanding. Are civilians necessarily experts or saints in politics? Have civilians not functioned as military apologists,

sycophants and accomplices? These are issues that might never have crossed Abiola's mind or which he deliberately glosses over for ideological reasons.

The other interesting dimension in which Abiola uses the pronoun **they** is with regard to the Nigerian people who voted for him in the "June 12" presidential election:

> (xv) The people of Nigeria have spoken. They have loudly and firmly proclaimed their preference for democracy. They have chosen me as their president for the next four years. They have determined that 27 August, 1993, shall be the terminal date of military dictatorship in Nigeria. On that date, the people of Nigeria, through their democratic decision of 12 June 1993, expect me to assume the reins of government. I fully intend to keep that date with history.
>
> <div align="center">("A Deliberate Intention to Insult and Ridicule the
Entire Nigerian People" cf. Olanrewaju, 1999: 72)</div>

It is common knowledge that Nigerians voted across regional, religious and ethnic divides in the election that Abiola presumably won. However, the moment it was annulled, the struggle for its validation became an ethnic issue championed by the Yoruba, although there were some men and women from other ethnic groups that sympathised with the perceived "Yoruba agenda". Apparently, by using the pronoun **they** in the extract above to refer to all Nigerians across the ethnic divide, as opposed to only the sectional group that was then still supporting him after the elections had been cancelled, Abiola gives the impression that he still had the full support of people nationwide. But the truth of the matter is that it was only the Yoruba ethnic group that championed the cause to have their own "son" as the president of the country for the very first time.

6. Conclusion

This study has attempted an analysis of the discursive practice of appropriating person deixis for political effect in the conflict rhetoric of Nigeria's "June 12" crisis. Applying a critical discourse analytical approach, it tries to unmask varied political goals which the speakers strive to achieve with their control of the discourse, and consequent management of the minds of the audiences, in the manner that would serve the interest of each of them in the conflict situation. An insight is provided in this paper into how the conflict rhetoric is positioned and how such positioning serves the speakers' interests and undermines those of their hearers. The study lends credence to McGregor's viewpoint that "[o]ur words are politicised, even if we are not aware of it, because they carry the power that reflects the interests of those who speak" (McGregor 2003: 2).

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CONFERENCE REPORTS

7th Annual Conference of the Linguistics Association of Ghana

The seventh annual conference of the Linguistics Association of Ghana was held from the 28th through the 30th of July, 2014, at the University of Professional Studies, Accra. The theme for the conference was **Harnessing Linguistic Resources for Effective Academic and Professional Practice**. The Conference was opened by Mr. Godwin Adagawine representing the Vice-Chancellor of UPSA, Prof. Joshua Alabi, and the Keynote Address was delivered by Professor Ozo-mekuri Ndimele of the University of Port Harcourt, Nigeria.

Fifty-two papers were presented. Over 70 participants came from Togo, the Netherlands and Nigeria and the United Kingdom as well as eight Ghanaian universities.

The Annual General Meeting was held on 28th July, and a new executive was elected for a two-year term, as follows:

President: Dr. Charles Marfo (Kwame Nkrumah University of Science and
 Technology)
Vice-President: Dr. Jemima Anderson (University of Ghana)
Secretary: Dr. Gladys Ansah (University of Ghana)
Organizing Secretary: Regina O. Caesar (University of Education Winneba)
Treasurer: Juliet Oppong (University of Cape Coast)

The next conference will be held in 2015 at Kwame Nkrumah University of Science and Technology, Kumasi.

A. S. Issah and M. E. Kropp Dakubu.

45th Annual Conference on African Linguistics

The University of Kansas, Lawrence, hosted the 45th Annual Conference on African Linguistics. The conference, under the theme: **Africa's Endangered Languages: Documentary and Theoretical Approaches** took place from April 17 to 19, 2014.

The conference brought together delegates from Algeria, Cameroon, Ghana, Ethiopia, Mali, Nigeria, South Africa, South Sudan, Germany, Sweden, United Kingdom, Brazil, Canada and United States of America. There were Ghanaian participants from Kwame Nkrumah University of Science and Technology, University of Education at Winneba and the University of Ghana. There were a total of 165 participants, from 67 institutions. Twenty-four African universities were represented.

Up to 131 papers were presented during the conference. The presentations covered Phonetics and Phonology, Morphology, Syntax, Semantics, Language Loss, Language Shift and Maintenance, Endangered Languages in Africa, as well as Language Documentation, Language Revitalization, Language Policy, Corpus Linguistics, Language Acquisition, Educational Linguistics, Language and Culture, Information Structure, Typology, Language Classification, and Purgative Urban Youth Language. There were also workshops and poster presentations.

The opening remarks were delivered by Sara Thomas Rosen, Senior Vice Provost. There were seven plenary talk sessions. Kofi Agyekum, of the department of Linguistics, University of Ghana, participated as one of the keynote speakers.

The First Plenary talk was delivered by Malte Zimmerman of Potsdam University on the topic "Universal and Existential Quantifiers in Chadic and Beyond". The Second Plenary talk was presented by Prof. Kofi Agyekum, of University of Ghana on the topic "Decolonising Linguistic Imperialism in Africa through Documentation and Preservation". The third was by Chris Collins of the New York University on "The Linker in the Khoisan Languages", and the fourth was delivered by Bonny Sands of Northern Arizona University on the topic "The Challenge (s) of Documenting Africa's Least Known Languages".

The fifth plenary talk was delivered by Ruth Kramer of Georgetown University on the topic: "The Morphology and Syntax of Gender", and the sixth was delivered by Michael R. Marlo of University of Missouri on "The Exceptional Properties of the 1st SG and Reflexive Object Markers in Bantu: Syntax, Phonology, or Both?". The final plenary talk was presented by Carlos M. Nash of University of Kansas, on the topic "Working with the Abagusil of Kenya: Applying and 'Empowering' Research Model in Linguistic Fieldwork".

Kofi Agyekum.

Preferred Formats for References

References made in the notes or in the text should include author's last name, the date of publication and the relevant page number(s), e.g. (Chomsky 1972: 63-4).

There should be a separate list of references at the end of the paper, but before any appendices, in which <u>all and only</u> items referred to in the text and the notes are listed in alphabetical order according to the <u>surname of the first author</u>. When the item is a book by a single author or a collection of articles with a single editor, give full bibliographical details in this order: name of author or editor, date of publication, title of the work, place of publication and publisher. Be absolutely sure that <u>all names and titles are correctly spelled</u>. Examples:

Bauman, Richard, 1986. *Story, Performance and Event*. Cambridge & New York: Cambridge University Press.
Fiona Mc Laughlin, ed., 2009. *The Languages of Urban Africa*. London & New York: Continuum International Publishing Group.

If the book has more than one author or editor, they should all be given, the first appearing as above, the others with their first name or initial placed before the surname:

Heine, Bernd and Derek Nurse, eds., 2000. *African Languages, an Introduction*. Cambridge: Cambridge University Press.

An article appearing in an edited book should be referenced under the author's name, with the editor(s) and full details of the book and page numbers of the particular article. For example:

Bender, Lionel M., 2000. Nilo-Saharan. In Bernd Heine and Derek Nurse, eds., *African Languages, an Introduction*. Cambridge: Cambridge University Press. Pp. 43-73.

However, if you cite several articles from the same book you can give the full details just once, in a reference under the editor's name, as the one for the book edited by Heine and Nurse above, and abbreviate the reference details for the specific article, as below:

Bender, Lionel M., 2000. Nilo-Saharan. In Heine and Nurse, eds., *African Languages* pp. 43-73.

Or, you can mention just the editors and the publication date:

Bender, Lionel M., 2000. Nilo-Saharan. In Heine and Nurse eds., 2000: 43-73.

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Zaborski, Andrzej, 1976. The Semitic external plural in Afroasiatic perspective. *Afroasiatic Languages* 3.6: 1-9.

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Items in newspapers can be cited in the same way as journal articles. Unpublished papers will not have a place of publication or a publisher: simply add 'ms' (for 'manuscript'), or the name and place of the meeting at which it was presented.

The editors will be grateful if you do NOT format your paragraphs including hanging and indented paragraphs by using the Return or Enter key – please use the paragraph formatting menu!

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PLEASE follow these guidelines closely when preparing your paper for submission. The editors reserve the right to reject inadequately prepared papers. All areas of linguistics are invited – the journal is not limited to articles on languages of or in Ghana or Africa.

ALL CONTRIBUTIONS must be submitted in English, in electronic format to the current Editor-in-Chief, at medakubu@ug.edu.gh or medakubu@gmail.com. Authors should be sure to keep hard and soft copies for their own future reference. Articles should not exceed 10,000 words in length. They should be written in a text format or a recent version of Word. PDF format is not acceptable.

TITLE PAGE: The article should have a separate title page including the title and the author's name in the form it should appear in print, with full contact information including mailing address, phone numbers and email address. This page should also include a brief biographical note giving current academic or professional position and field of research interest.

THE FIRST PAGE should contain the title but not the author's name. It should begin with an ABSTRACT of the paper. Abstracts in both English and French are particularly welcome.

LANGUAGE EXAMPLES:

All examples **must** be in a Unicode font and Bold. Times New Roman that comes with Word 10 (but not earlier versions) is Unicode and may be used for occasional words cited in the text, if diacritics are few. More extensive examples with glossing and translation should be in DoulosSIL, although Unicode Times New Roman may again be used if diacritics are not needed, and Charis SIL is acceptable. Doulos and Charis SIL can be downloaded from www.sil.org. All such examples should be indented and numbered. Glossing should follow the Leipzig Glossing Rules. These may be found at http://www.eva.mpg.de/lingua/resources/glossing-rules.php

Translations of examples should be in single quotation marks.

QUOTATIONS from other authors should be used sparingly. Any quotation less than two lines long should be within double quotation marks ("…") and not separated from the text. Longer quotations may be set out and indented on both sides. The source reference should come immediately after the quotation or in the sentence immediately before it.

FIGURES, TABLES AND DIAGRAMS should be created in such a way that they will fit legibly into a print space of 19cm by 15cm, and the same for PHOTOGRAPHS.

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