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Adjective Stacking and Classification in Nothern Sotho: A Southern Bantu Language of South Africa

Abstract

In this paper, I investigate the nature of complex nominal modification in Northern Sotho, a Southern Bantu language and an official language of South Africa. Adjectives in Northern Sotho have traditionally been recognised as a subclass of nouns, based on morphological similarities between nouns and adjectives. Based on recent work which proposes that all languages have a distinct word class 'adjective', I argue that adjectives in Northern Sotho constitute an independent grammatical category. I base this suggestion on the common morpho-syntactic behaviour of members of this class and present an in-depth analysis of the ordering of elements in Northern Sotho poly-adjectival nominal phrases. There has been some limited discussion of the theory that there are universal structures in adjective order across different languages, although sequencing in languages with postnominal adjectives is desperately under-researched. Using a combination of corpus data and original fieldwork, I provide support for the suggestion that there are patterns in the syntax of complex modification strings which operate on a universal level, above that of individual languages.

1. Introduction

This paper documents an investigation into the structure and organisation of poly-adjectival noun phrases (PNPs- Bache 1978) in Northern Sotho, a Southern Bantu language spoken mainly in South Africa. In section 2, I give some background on the language of Northern Sotho and in section 3, I discuss the phenomenon of 'adjective stacking' and outline critical theory which attempts to explain the ordering of attributive adjectives across different languages. In section 4, I provide an account and justification of my choice of a mixture of corpus and field methods for my study, before giving a detailed overview of the morphology, syntax and semantics of adjective class in Northern Sotho in section 5. In section 6, I present my results and provide some discussion of these data before offering some conclusions on the nature and structure of complex modification in Northern Sotho.

This study relates not only to the phenomenon of adjective stacking, but also to the wider argument concerning the nature of the adjective class as an independent lexical category. Although major theorists have suggested that not all languages have a word class of adjectives (Jespersen 1961; Rijkhoff 2002: 133; McGregor 2009: 84; Dryer 2013), in recent years, there has been considerable work done to provide a counter-argument to this assumption, most notably by Baker (2003) and Dixon and Aikhenvald (2004). In this paper, I provide compelling evidence for the existence of a distinctive adjective class in Northern Sotho, a language which has long been considered to have no adjectives, with the category commonly recognised only as a subclass of nouns (Van Wyk 1967). My study also provides evidence which supports Sproat and Shih's suggestion (1988) that complex modification chains show similarities in their internal order across different languages.

2. Northern Sotho: Background

Northern Sotho is a language or language cluster spoken predominantly in the North-East of South Africa by around 4 million people in the Limpopo and Mpumalanga provinces (Paul et al 2013). The language is commonly referred to as Sepedi, which is the dialect from which the standard form was developed by German missionaries in the 19th Century. However, this is only one of 27 dialects of the language (Mokgokong 1966), with other varieties such as Lobedu exhibiting considerable variation from Sepedi (Kotze 2001). There is a high degree of mutual intelligibility between Northern Sotho and other Southern Bantu languages, with Southern Sotho and more noticeably Tswana plausibly constituting something of a linguistic continuum. Lombard (1985: 5) suggests that ‘some speakers of a Northern Sotho dialect will understand speakers of a Tswana dialect better than they would understand speakers of another Northern Sotho dialect’.

During my work with the language, it became apparent that the nomenclature of the Northern Sotho language was a subject of considerable sensitivity to native speakers of the language. In the Constitution of South Africa (1998, available on *gov.za*, the South African Government website), the language is referred to as ‘Sepedi’ in its capacity as a designated official language. The most comprehensive electronic corpus developed for the language at the University of Pretoria is known as the *Pretoria Sepedi Corpus*, suggesting that the use of this term to refer to the language remains common and widespread in academic and linguistic arenas. The African Languages Website (2013) suggests that the language is often ‘wrongly referred to as "Sepedi", while in actual fact Sepedi is considered but a dialect of the language "Northern Sotho"’. Kotze (2001) supports this suggestion that Sepedi is an inappropriate name for the language as a whole, noting that speakers of the Lobedu dialect of Northern Sotho would be extremely unlikely to refer to their language as 'Sepedi'.

The term Northern Sotho is a label created by Western missionaries, who divided up the indigenous languages of the region as much by geography as by genealogy (Mojela 2008). While *sotho* is listed in some grammars of the language as a colour term (*brown*), none of my informants recognised this usage. In fact, *sotho* is a portmanteau word which blends the adjectival root *–so* (*black*) with the nominal root *–tho* (person), and hence has an interpretation which essential refers to 'black people' (Mokgoatjane 2013 p/c). In fact, even the term *Bantu* has negative connotations for similar reasons related to the labelling of African people and culture. Poulos and Louwrens (1994: 2) note that although this is an indigenous word simply meaning 'people', the term has 'also been used in contexts other than language, and in the Republic of South Africa, it has without doubt become stigmatised.' The authors suggest that, even within linguistic contexts the usage of the term Bantu has become something of a taboo as a result of the 'derogatory connotations that are associated with this term in its wider usage'.

For the purpose of this investigation, I refer to the language as Northern Sotho as this is the name most commonly used in linguistic literature, and is the term used by *Ethnologue* (Paul et al 2013) and the *World Atlas of Language Structures* (Dryer et al 2013).

3. The Order of Attributive Adjectives

The term 'Poly-adjectival Nominal Phrase (PNP)' was developed by Bache (1978) to refer to any noun phrase with more than one modifying adjective, and is the term I use for such structures in this paper. Bache separates adjectives in English PNPs into what he calls functional 'zones of modification', with Mod-I adjectives in the first zone, Mod-II in the second and Mod-III adjectives in the third zone, closest to the head. Mod-I adjectives such as *usual* are said to specify or identify a noun; Mod-II adjectives such as *big* describe or characterise a noun; Mod-III adjectives such as *political* classify or categorise a noun. Therefore, the ordering within a PNP such as *the usual big political issues* can be analysed based on Bache's theory into these three functional zones.

The order of adjectives within the second or 'central zone' (Quirk et al 1985: 1338) has been the subject of considerable investigation by linguists, with many theories proposed which predict adjective order based on the identification and sequencing of a variety of semantic subclasses. Scott (2002: 92) suggests that theorists do not always agree in their observations of 'just how many semantic categories of adjective there actually are', and points out that there is no general agreement between theorists on the ordering of such semantic categories. Even a brief glance at some of the more commonly cited semantic order typologies of PNPs shows that a number of patterns consistently occur:

Dixon (1982: 17):

VALUE > DIMESION > PHYSICAL PROPERTY > SPEED > HUMAN PROPENSITY > AGE > COLOUR

Goyvaerts (1968: 27):

QUALITY > SIZE > LENGTH > SHAPE > AGE > COLOUR > NATIONALITY > STYLE > GERUND > DENOMINAL

Quirk and Greenbaum (1973: 404)

GENERAL > AGE > COLOUR > PARTICIPLE > PROVENANCE > NOUN > DENOMINAL

Alexander (1990: 86)

OPINION > SIZE > AGE > SHAPE > COLOUR > ORIGIN/NATIONALITY > PARTICIPLE

Scott (2002: 114)

DETERMINER > ORDINAL NUMBER > CARDINAL NUMBER > SUBJECTIVE COMMENT > EVIDENTIAL > SIZE > LENGTH > HEIGHT > SPEED > DEPTH > WIDTH > WEIGHT > TEMPERATURE > WETNESS > AGE > SHAPE > COLOUR > NATIONALITY/ORIGIN > MATERIAL > COMPOUND ELEMENT > HEAD

It is clear to see in each of these examples the difference of opinion to which Scott refers. However, it is also noticeable that each ordering features ‘age’ before ‘colour’ and ‘nationality’, with ‘size’ preceding them in some form (dimension, general) along with some manner of evaluative judgement (quality, value, opinion, subjective comment, general). It is a notion commonly agreed upon that English adjectives denoting subjective properties of a head tend to precede those which are more objective and inherent (Whorf 1937; Teyssier 1968). Many theorists combine an explanation of adjective order based on functional and semantic factors, with an appreciation that contextual factors also affect such orders. Greenberg and Srinivasan (2003: 1) note that ‘there are some cases where multiple orderings are not only legitimate, but carry different semantic content’, and Quirk et al (1985: 1341) suggest that speakers will often place adjectives in an order which ‘corresponds to the ‘natural’ order of recursive qualification’, and which sometimes ‘reflects the non-linguistic world’. Often an adjective will be placed earlier in the sequence either to foreground and emphasise it, or even to suggest an adverbial relationship with the following modifier, as in the phrase *the beautiful tall trees*.

While adjective order has been studied to a considerable extent in English, the same cannot be said about other languages. As noted, the adjective class is one which divides linguists as to whether all languages possess such a category, but those which do exhibit considerable cross-linguistic variation in their syntax and morphology. While English has adjectives which appear before the noun (with the exception of occasional French calques and poetic usages), an estimated 62% of languages have adjectives which predominantly appear after the noun (Dryer 2013). Northern Sotho has exclusively postnominal adjectives and this study is intended to investigate to what extent the order of adjectives varies between languages with prenominal adjectives and those with postnominal adjectives.

Sproat and Shih (1991: 591) suggest that the ordering of adjectives in Chinese and English is largely very similar, and relates this to the fact that both languages have typically prenominal attributive adjectives. The same authors also note, however, that the order of adjectives should be ‘stated in terms of closeness to the head, rather than in terms of linear ordering’, and suggest that comparing this feature in languages with different orderings of adjective and noun is more complex than in languages with similar constituent orders in nominal phrases.

Cinque (1994: 87; 2010) compares adjective placement in Romance and Germanic languages, and suggests that ordering is universal. He notes that two possible orderings of adjectives exist: the same order as English, and the reverse, or mirror-image order of English. Willis (2011: 1807) argues against this observation, claiming that such an analysis is ‘grounded in the theoretical context of recent work in comparative syntax’. He suggests that N-raising analyses of noun phrases such as that proposed by Cinque are insufficient in explaining the nature of PNPs in Welsh which, as a language with predominantly postnominal adjectives, exhibits both patterns Cinque observes, as well as other more distinctive orders. An analysis of the ordering in Northern Sotho offers a fresh perspective on this issue, as well as an insight into the debate on the universality of the adjective class.

4. The Adjective Class in Northern Sotho

4.1 Morphosyntax

Like most Bantu languages, Northern Sotho is highly agglutinative in nature (Nurse and Philippson 2003: 44) and thus the morphological structure and syntax of attributive adjectives is particularly different to that of English. Adjectives are nearly always postnominal, are separated from the head by a particle and (in the case of central adjectives) an inflectional prefix, both of which express concord with the noun class of the head. Many theorists have referred to the adjective as a subclass of noun (Lombard 1985: 58, Ziervogel 1969, Van Wyk 1967), others refer to adjectival constructions (Prinsloo et al 2013) and Poulos and Louwrens (1994) consider 'qualificatives' as a loose equivalent of the adjective class in English. The usage by the first three authors of the term 'adjectival noun' is influenced by Doke's (1954) seminal work on the Southern Bantu which does not recognise adjectives as constituting an independent word class, instead labelling them as nouns based on their morphology.

Adjectives in Northern Sotho are made up of a lexical root (-*golo* 'big') and a concordial morpheme (Lombard 1985: 84) which changes to reflect the class prefix of the modified head. The adjective is separated from the head by a small particle of two or three letters, which also changes to express concord with the noun class of the head. This particle is most commonly called the qualificative particle (Lombard 1985: 171, Poulos and Louwrens 1994: 91), but is also referred to as the demonstrative (Ziervogel 1969: 58) the adjective prefix and the adjective particle (Poulos and Louwrens 1994: 91). Although the particle is very similar in form to the demonstrative, and it performs a different function here and works only as a linker between adjectives and nouns.

Monna	*yo*	*mogolo*
N1-man	QP1	CM6-ADJbig
‘big man’		

Selepe	*se*	*segolo*
N5-axe	QP5	CM5-ADJbig
‘big axe’		

Although adjectives do take a prefix which indicates noun class, this marker expresses a property of the head noun rather than of the adjective. The fact that all Northern Sotho adjectival roots can take all 13 class prefixes (admittedly with occasional semantic issues) marks them out as distinct from ‘basic nouns’ (Lombard 1985: 58), in the same way that Latin adjectives are distinct from Latin nouns. The adjective *good* in Latin can be masculine (*bonus*) or feminine (*bona*), while for nouns this is either not possible (*servus* ‘slave’ **serva*) or results in a change of meaning (*filius* ‘son’, *filia* ‘daughter’). In Northern Sotho, only qualificatives can appear after the combination of a basic noun and a qualificative particle, and reduplication has different functions for nouns and adjectives. For adjectives, this has the effect of intensification, while for nouns a change in meaning is usually incurred:

Dithata	*Dithatathata*	
N7-mountain	N6-mountain-mountain	
‘Mountains’	‘Many different mountains’	(Poulos & Louwrens 1994: 54)

Mosadi	*Mosadisadi*	
N1-woman	N1-woman-woman	
‘Woman’	‘A respectable woman’	(Poulos & Louwrens 1994: 53)

Galase	*ye*	*kotokoto*	
N7-Glass	QP7	CMØ-thick-thick	
‘a very big glass’			(Mphasha 2010: 115)

As well as adjectival nouns in Northern Sotho, there exists another group of modifiers which are commonly referred to as ‘relative nouns’ (Lombard 1985: 59-60), but also ‘nominal relatives’ and ‘pseudo-adjectival contructions’ (Prinsloo et al 2013: 76). The constructions do not share all the same morphosyntactic properties of full adjectival nouns, and constitute a class similar to ‘peripheral adjectives’ in English (see Quirk et al’s 1985: 1338). While relative nouns follow the qualificative particle to modify a noun, they have an initial bound morpheme instead of inflecting to express concord with the head:

Banna	*ba*	*bohlale*	
N2-men	QP2	RELNclever	(Ziervogel 1969: 55)

Pseudo-adjectival constructions, to use Prinsloo et al’s (2013: 76) term, constitute a very small class of words with only four members, which are similar to adjectival nouns. While they usually follow the subject concord and do not always take a concordial morpheme, they can also function with the adjective particle either with (like adjectival nouns) or without (like relative nouns) the concordial morpheme:

Metše	*ye*	*mešele*
N4-villages	QP4	CM4-strange
Metše	*ye*	*šele*
N4-villages	QP4	strange
Metše	*e*	*šele*
N4-villages	SC4	strange

‘foreign villages’ (Poulos & Louwrens 1994: 112)

When more than one adjective is used to modify a noun at the same time, the qualificative particle is repeated for each adjective:

Mahlo	*a*	*mabotse*	*a*	*matsothwa*
N6-eyes	QP6	CM6-ADJbeautiful	QP6	CM6-ADJbrown

‘beautiful brown eyes’ (De Schryver 2013: 110)

Selo	*se*	*sengwe*	*se*	*sekaone*
N7-thing	QP7	CM7-ADJother	QP6	CM6-ADJbetter

‘another better thing’ (*Pretoria Sepedi Corpus*)

Adjectival nouns can be combined in this way with relative nouns and enumerative nouns, as evidenced by the following examples (from De Schryver 2013: 110-115):

Dintšhi	*tše*	*telele*	*tše*	*boleta*
N8-many	QP8	CMØ-ADJtall	QP8	RELNsoft

‘long soft eyelashes’

Mathebo	*a*	*mabotse*	*a*	*dinkwe*
N6-skins	QP6	CM6-ADJbeautiful	QP6	RELNleopard

‘beautiful leopard skins’

4.2 Semantics

The adjectival category constitutes a fairly small and relatively closed class in Northern Sotho. Segerer (2008: 1) notes that the nature of adjective classes in African languages is well documented and suggests that nearly all members Niger-Congo family have a ‘small, closed class [in which] the number of items ranges from 2 to more than 100’. This description applies to that of adjectival nouns in Northern Sotho, in which the number of items varies slightly from one source to another. Lombard (1985) lists 30 adjectival bases, while Ziervogel (1969) only names 26. Mphasha (2010) names 33, while Poulos and Louwrens (1994) name 35.

In addition to the roots noted in these sources, De Schryver (2013: 446) suggests that *–pinki* ‘pink’, also functions as an adjectival noun, an argument which opposes the notion that Bantu adjective classes tend to be closed. Similarly, my own study of the *Pretoria Sepedi Corpus* reveals that the adverb *kaone* (better) can also be used as an adjectival noun, a fact confirmed by my native speakers. Overall, it is possible to identify as many as 44 adjectival roots in Northern Sotho, which suggests that it has a fairly large class for a Niger-Congo language, and one which is potentially more open than others.

The adjectives of Northern Sotho can be divided into semantic subclasses as follows:

NUMERAL	SPECIFIER	COLOUR	SIZE	AGE/GENDER	EVALUATIVE
-tee (one)	*-ngwe* (other)	*-hubedu* (red)	*-golo* (big)	*-fsa* (new, young)	*-botse* (beautiful)
-pedi (two)	*-bjang* (what kind?)	*-sehla* (grey)	*-nyane* (small)	*-tala* (old)	*-šoro* (cruel, vicious)
-raro (three)	*-bjalo* (such, so)	*-tala* (blue)	*-telele* (tall)	*-tona* (male)	*-šele* (strange)
-ne (four)	*-kaaka* (this/so big)	*-so* (black)	*-koto* (thick)	*-tshadi* (female)	*-thata* (hard)
-hlano (five)	*-kaakang* (how big?)	*-šweu* (white)	*-kopana* (short)		*-be* (bad, evil)
-ntši (many)	*-fe* (which?)	*-tsothwa* (brown)	*-sese* (thin)		*-bose* (nice, tasty)
-kae? (how many?)		*-pinki* (pink)	*-tona* (big)		*-kaone* (better, best)
-nyane (few)		*-tilo* (black & white)	*-kgopo* (crooked)		*-borethe* (smooth)
		-khunou (reddish-brown)			*-boleta* (nice, tasty)

Figure 1: Semantic Subclasses of Adjectives in Northern Sotho

As shown above, adjectives in Northern Sotho do not occupy the same semantic space as their English counterparts. Numerals, as in other Bantu languages, are adjectives in Northern Sotho, and there are also question words which work in the same way. However, my fieldwork suggests that even those which are also adjectives in English have particular distinctions in their usage and interpretation. Adjectives which denote size and age are very closely linked in Northern Sotho. This means that many phrases which make reference to both size and age might seem perfectly natural in English but cannot be collocated without a suggestion of contradiction or tautology in Northern Sotho:

**monna*	*yo*	*monyane*	*yo*	*motala*
N1-man	QP1	CM1-ADJsmall	QP1	CM1-ADJold
	'little old man'			

**basetsana*	*ba*	*batelele*
N2-girls	QP2	CM2-ADJtall
	'tall girls'	

**kgomo*	*ye*	*nnyane*
N9-cow	QP7	CM7-ADJsmall
	'small cow'	

**mošemane*	*yo*	*mofsa*
N1boy	QP1	CM1-ADJyoung
	'young boy'	

For the first two noun phrases, speakers of Northern Sotho would consider a strong sense of contradiction in the expression of qualities of size and age. In the first example, the adjective *nyane* 'small' is seen as contradictory to the adjective *tala* 'old'. While the phrase 'a little old man' is a common collocation in English, the Northern Sotho term *nyane* refers not just to something which is small in size, but also has a strong indication of being young in age. Similarly, *kgomo ye nnyane* has a literal translation of 'a small cow', but this term in

Northern Sotho refers more to a young cow, more commonly denoted by the noun *namane* 'calf'. Similar problems arise from the terms *basetsana ba batelele* and *mošemane yo mofsa*. *Basetsana* 'girls' are considered to be small and to describe them as 'tall' sounds strange to a native speaker of Northern Sotho, while to describe a *mošemane* 'boy' as 'young' sounds like a tautology.

While English adjectives can describe the property of an object in relation to other objects of its kind, Northern Sotho adjectives are more absolutive and there are more complex collocational restrictions, both with heads and with other modifiers. Cinque (2010: 10) refers to these kinds of modification as 'relative' and 'absolute' readings, citing *a big tank* as an example of the former. My research strongly suggests that Northern Sotho adjectives are far more arbitrarily absolute than those in English, which are more flexible.

Another interesting feature to note here is the variability in the interpretation of certain adjectives such as *–fsa, -telele* and *–tona*. Mphasha (2010: 23) suggests that for some adjectives, the meaning is selected by the head. The adjective *–fsa* can mean 'young' or 'new' depending upon the animacy of the modified head. If a snake or a road were modified by *–telele*, the interpretation would be 'long', while for a person it would be 'tall'. The adjective *–tona* is particularly interesting, as it can mean 'right', 'male' or 'big', depending upon the nature of the modified head. Consider the following examples:

Kgomo	*ye*	*tona*
N9-cow	QP9	CMØ-ADJ-male

'a male cow'

Seatle-ng	*se*	*setona*
N7-Hand-LOC	QP7	CM7-ADJ-big

'in the right hand'

Mello	*ye*	*mentši*	*ye*	*metona*
N4-fires	QP4	CM4-ADJmany	QP4	CM4-ADJ-big

‘many big fires’

The adjective *–tona* is quite rare in the *PSC* but based on my fieldwork, it seems to be most commonly used to refer to animals rather than people, with such a usage suggesting disrespect in a similar way to the adjective *bullish* might in English. It tends to refer to the alpha male in a group of animals and hence also has the interpretation of being of a large size. De Schryver (2013: 236) suggests that this term can also mean ‘important’. This interpretation, along with the usage to refer to the right hand or the right arm, seems to be the result of a semantic drift based on an association with power and strength. Interestingly, the adjective meaning ‘left’, *–tshadi* also denotes femininity (Prinsloo 2009: 169), suggesting a link between gender and the terms for right and left. This etymology is not quite clear, but it is reasonable to say that Mphasha’s suggestion that meaning is distinguished by head is particularly salient here.

5. Methodology- mixed method approach

For this investigation, I have adopted a mixed-method approach which combines the use of data from the *Pretoria Sepedi Corpus* with original fieldwork in the form of questionnaires with native speakers. The questionnaires are primarily quantitative in nature, but also allow participants to speculate as to what factors affect the order in which they choose to place adjectives in PNPs. The validity of an approach which combines corpus and field methods is widely attested, with Biber et al (1998: 9) suggesting that 'corpus-based analysis should be seen as a complementary approach to more traditional approaches' and that corpus studies alone are not always sufficient to investigate or explain fully, a linguistic phenomenon. McEnery and Wilson (2007: 30) suggest that corpus data allow us to investigate a language through a sample which is 'maximally representative' and which 'provides us with as accurate a picture as possible of the tendencies' of the grammar of a language.

Newman and Ratliff (2001: 49) suggest that it is important to work with native speakers of a language if a researcher wishes to gain valuable, realistic data. They suggest that native speakers 'have background knowledge of context that an outsider may lack' and that 'good speakers have a sense of the difference between not only what is grammatical and what is ungrammatical but also of what is said and what could be said but is not'. While a corpus study provides us with information on commonly-appearing structures, it is not always possible to speculate on the respective grammaticality of structures which do not appear in the data set. Newman and Ratliff (2001: 51) stress this suggestion and add that native speaker informants can offer judgements beyond the realm of a pure corpus-based study. They note that 'some speakers are especially sensitive to nuances of style and register, able to point out the effects of lexical and grammatical choices'.

My corpus data include over 300 Northern Sotho PNPs which feature a range of central and peripheral adjectives. A corpus search was performed of all structures in which a noun was followed by two or more ‘adjectives’, which included both ‘adjectival nouns’ and ‘relative nouns’. Therefore, all noun phrases studied had one of the following structures:

NOUN-ADJN-ADJN (-ADJN/RELN … and so on)
NOUN-ADJN-RELN (-ADJN/RELN … and so on)
NOUN-RELN-ADJN (-ADJN/RELN … and so on)
NOUN-RELN-RELN (-ADJN/RELN … and so on)

The questionnaire featured 42 questions in which participants were asked to select a preferred ordering for a variety of PNPs in Northern Sotho. A large range of combinations of different semantic types was selected, and the patterns were compared with the corpus data to identify whether the trends were comparable, and to provide a broader, varied and more reliable data set on which to base conclusions. For each question, a head noun was supplied, along with a minimum of two adjectives which were presented in brackets in alphabetical order:

Dikgabo ………………………………………………………………. (be/ tsothwa/ nyane/ tala)
(Monkeys) (evil/ brown/ small/ old)

Participants were asked to construct the sentence as they felt they would say it in natural language usage. The omission of concordial morphemes and qualificative particles in the question format was also instructive in this measure. In most cases, more than one participant completed the questionnaire simultaneously, and I encouraged them to discuss which order they felt most natural with a view to getting reliable, vernacular data.

Results and Discussion

6.1 Corpus Data

As noted above, the corpus data contains over 300 tokens featuring all combinations of two or more 'adjectives', under which umbrella term I refer to both adjectival nouns and relative nouns (Lombard 1985). The results are particularly interesting and display a number of trends. The most commonly occurring adjective is *–ngwe* 'other' which appears in nearly half of all PNPs in my data set. It appears closest to the head in 91% of tokens, with the remaining 9% most likely marked orders employed to foreground the other adjective. Even numerals appear further from the head than *–ngwe*. Consider the following table:

Collocate	Sem-type	ngwe-X	X-ngwe	Total	% initial
-golo	size	17	3	20	85
-bedi	num	15	2	17	88
-ntši	spec/num	14	2	16	88
-botse	eval	9	0	9	100
-fsa/swa	age	6	0	6	100
-be	eval	5	1	6	83
-nyane	size	6	0	6	100
-raro	num	3	0	3	100
-hlano	num	3	0	3	100
-šweu	col	3	0	3	100
-kaone	eval	3	0	3	100
-so	col	3	0	3	100
-telele	size	1	1	2	50
-ne	num	1	0	1	100
TOTAL		89	9	98	91%

Figure 2: Collocations with –ngwe 'other'

After *–ngwe*, the adjectives most commonly placed closest to the noun are numerals. The most commonly-occurring numeral is *–pedi* 'two', which appears closer to the head than other collocates in 94% of modification strings which do not include *–ngwe*. The other numerals, including *–ntshi* 'many', appear closest to the head in the majority of tokens. After numerals, adjectives of size tend to appear closer to the noun than adjectives from other semantic subclasses. Of these adjectives, *-golo* 'big' is by far the most common, and tends to precede other adjectives of size when they are combined. This is most likely because it is a more general descriptor, less specific than *–telele* 'tall' or *–koto* 'thick'. Whorf (1937, in Carroll 1956: 93) suggests that subjective judgements tend to precede those which are more objective, and this tendency seems to reflect Whorf's comments. The following table shows the percentage of tokens in which adjectives denoting size appear closest to the head:

	with –ngwe	*with numeral*	*with other size*	*with colour*	*with other*
-golo	15%	21%	83%	56%	100%
-telele	50%	20%	38%	83%	50%
-nyane	0%	0%	n/a	100%	n/a
-koto	n/a	0%	25%	100%	100%
-šese/-kopana	n/a	0%	33%	100%	n/a
TOTAL	15%	19%	50%	75%	88%

Figure 3: Size Adjectives in String-initial Position

It easy to deduct from these figures that there is a clear pattern in the order of adjectives, which is associated with semantic subclasses. Size adjectives precede colour adjectives and other more generally evaluative adjectives in a high proportion of cases, and follow numerals and *–ngwe* in similar proportion. Due to the fact that colour terms and evaluative adjectives are collocated in very few tokens in the data, it is difficult to provide an extensive theory as to their respective positions. However, in the eight tokens of such structures which exist, colour terms follow evaluative adjectives in each and every example, allowing us to speculate that this is the normative ordering. In addition to this, adjectival nouns appear closer to the head than relative nouns in 92% of combinations. In light of this, the most common order of adjectives appearing in the *Pretoria Sepedi Corpus* is as follows:

-*NGWE* > NUMERAL > DIMENSION > EVALUATIVE > COLOUR > RELATIVE

This ordering to a large extent reflects the order in which adjectives are placed in English PNPs and is explored and tested in my fieldwork.

5.2 Fieldwork

All field-based data were collected during a field trip to the Sekhukhune region of Limpopo, South Africa, which is considered to be the 'birthplace' of Northern Sotho, as it is the dialect area on which the first missionaries based the standardised form of the language (Mojela 2008). My questionnaire asks speakers to create noun phrases from a nominal head and a selection of adjectival roots. As well as exploring the conventions which seemed to exist based on my corpus data, I was able to gain valuable insights into the usage and interpretation of adjective strings, such as those discussed in 4.2.

A major element I wished to investigate was whether orders were fixed or could be changed to emphasise one or another quality. In particular, I wanted to know if numerals and *–ngwe* could be preceded by adjectives typically appearing later in strings from my corpus data. These are properties of PNPs which are very difficult to analyse through corpus-methods alone and strongly justify a mixed-method approach. While the normative ordering reflected that in the corpus examples, participants were generally in agreement that this order could be reversed to indicate emphasis or contrast.

Hence, the following two phrases are both possible:

Dieta	*tše*	*pedi*	*tše*	*ntsho*
N6-shoes	QP6	CM6-ADJtwo	QP6	CM6-ADJblack
	‘two black shoes’			

Dieta	*tše*	*ntsho*	*tše*	*pedi*
N6-shoes	QP6	CM6-ADJblack	QP6	CM6-ADJtwo
	‘the black two shoes’			

While the first example is the more normative ordering for *two black shoes*, the second example is also possible, but with a marked emphasis on the colour. In this context, this is most likely to suggest contrast with shoes of other colours, such as when suggesting one prefers *the black two shoes* to *the brown two shoes*. This sounds a little awkward in English and not all participants agreed that such a change is possible in Northern Sotho. However, 20% of participants felt this was the more natural-sounding order, which strongly suggests that there is a degree of reversibility in such structures.

Another interesting finding was that certain adjectives do not naturally appear in modification strings. The interrogative-type adjectives *–kae* ‘how many’ and *–bjang* ‘what kind of?’ are the most notably resistant to co-ordination. The former does not seem to collocate effectively with *–ngwe* while the using the latter in conjunction with other adjectives is particularly problematic. Participants asked to describe a vase using *–bjang, -so* and *–botse* found this very difficult. While it is possible to ask the question ‘what kind of beautiful black vase would you like?’ in English, native speakers generally agreed that such a compound sounded unnatural in Northern Sotho, with the other adjectives sounding like a response to the question posed by the use of *–bjang*.

The data obtained through my fieldwork largely reflect the order suggested by the corpus data, though I also investigated the combination of evaluative adjectives with colour terms in six different phrases. Overall, the evaluative adjectives precede colour terms in 75% of responses, lending support to my suggestion based on corpus data that this is the normative order. Where colour terms precede evaluative adjectives, this usually reflects contexts in which the colour is intrinsic to the head, while the evaluative adjective is more notional and transitory. Consider the following examples:

mae	*a*	*manyane*	*a*	*mašweu*	*a*	*mabose*
N4-eggs	QP4	CM4-ADJsmall	QP4	CM4-ADJwhite	QP4	CM4-ADJsweet
		'delicious small white eggs'				

mahlo	*a*	*mašweu*	*a*	*magolo*
N4-eyes	QP4	CM4-ADJwhite	QP4	CM4-ADJbig
		'big white eyes'		

In both of these phrases, the colour term *–šweu* 'white' is an intrinsic and important quality of the respective head. In the first example the colour term has a strong classificatory function (Warren 1984), in which it sub-classifies the head as being a 'white egg' rather than a 'brown egg'; in the second, it has an emphatic function. As all human eyes are by definition white, the usage of this colour term suggests that the whiteness is particularly striking and noticeable, and is hence foregrounded by being moved closer to the noun, raised above the dimension adjective *–golo*. The findings of both my corpus data and fieldwork are discussed in more detail in my PhD thesis (********* 2014, Ch. 6).

5.3 Discussion

The data from the *Pretoria Sepedi Corpus* and those obtained through questionnaires with native speakers both suggest that the ordering of adjectives in Northern Sotho PNPs follows a number of trends. Adjectival nouns typically precede relative nouns, and adjectives of dimension follow quantifiers (*–ngwe* and numerals) but are placed closer to the head than adjectives of evaluation and colour terms. This ordering is very similar to the order in which English adjectives are placed (Scott 2002, Dixon 1982). There is evidence to suggest that certain collocations of adjectives in Northern Sotho are problematic or even ungrammatical due largely to semantic restrictions.

There are, however, factors governing the order of attributive adjectives which go beyond the sentence-level, with such pragmatic considerations as emphasis, focus and contrast all being relevant. This suggests that, as well as proposing an arbitrary, normative order in which Northern Sotho adjectives are placed, we can study the respective force of individual adjectives within a string based on the extent to which these conventions are observed. When some property of a noun is to be emphasised (often its colour), the adjective denoting this quality is often raised upwards in the phrase and closer to the head.

6. Summary Remarks and Conclusions

This project allows us to draw conclusions on two distinct levels. Firstly, adjectives in Northern Sotho constitute a small, closed class much like other Bantu languages. The class is morphologically and syntactically distinct from the noun class, of which it has traditionally been considered a sub-class. Whether or not relative and enumerative nouns should be considered part of this class is debatable. I propose that it is reasonable to do so, and that those lexical roots commonly referred to as ‘adjectival nouns’ can be considered ‘central’ adjectives, while relative nouns and enumerative nouns might be labelled as ‘peripheral adjectives’ based on differences in their morphology. While such a definition may not attract universal approval, if a distinct class of adjectives is to be recognised in Northern Sotho, it is difficult to deny that relatives and enumeratives have more in common with adjectival nouns than they do with ‘basic nouns’ (Lombard 1985: 56).

Secondly, adjective order in Northern Sotho is similar to English in a number of ways. It is governed by collocational and syntactic restrictions, with some orders being fixed and arbitrary, while others are variable. Changing the order of adjectives in a string can have a variety of effects: It can change the meaning of the phrase; it can shift the focus of the phrase to emphasise one adjective over another; and it can even make the phrase ungrammatical. In unmarked orders, the sequence of adjectives is to a large extent similar to English and follows the order: QUANTIFIER > DIMENSION > EVALUATIVE > COLOUR > RELATIVE.

The fact that the structure of complex modification strings in Northern Sotho is similar to English is most interesting. As the syntactic and morphological structures of the two languages are considerably different, the factors which govern the ordering of adjectives on a cross-linguistic level cannot legitimately be related to grammatical form. The correlation between the positions assigned to the respective semantic subclasses of adjectives in English and Northern Sotho strongly suggests that there are universal syntactic structures which operate in accordance with these semantic subclasses. The possible variability in many orderings supports the notion that the ordering of adjectives is dependent upon discourse features such as focus and emphasis, but the overwhelming evidence here suggests that semantics is the dominant factor which governs adjective ordering at a universal level.

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