Applicative Constructions in Setswana in LMT Theory

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Abstract:
Previous studies carried out on Setswana verbal affixes have confined their investigations to these morphemes as elements of morphology but have failed to observe that these affixes overlap into syntax. Yet current debates on the treatment of such Bantu languages morphemes are focused on the nature of the relation between syntax and morphology. (Sesotho: Machobane 1989); Chichewa: (Baker 1988), Alsina and Mchombo (1993); Chishona: Harford (1993); Kinyarwanda: Kimenyi (1990); Kiswahili: (Bresnan and Moshi 1993:47). Further, the studies do not give any theoretical insight in the analysis of the verbal extension in relation to argument structure Setswana. Therefore, certain features that Setswana shares with other Bantu language are prejudiced. This paper approaches the analysis of applicative verbal extension –el from a morpho-syntactic view point and shows that the applicative verbal extension -el is capable of bringing into effect morphological and syntactic marking to the sentence. In particular, this paper examines the applicative constructions and argues that the suffixation of the verbal suffix –el suggests an entity carrying out the action and somebody benefiting. This information is encoded in the constituent structure. The analyses of data in this paper will be based on Lexical Mapping theory (Bresnan and Kanerva (1989).

Introduction
This paper examines aspects of applicative constructions in Setswana. These are constructions in which the verbal suffix –el is directly suffixed to the verb root or to other morphemes in a suitable grammatical context. Previous studies carried out on Setswana verbal affixes have confined their investigations to these morphemes as elements of morphology but have failed to observe that these affixes overlap into syntax. For instance, Chebane (1996:84) observes that in Setswana, verbal extensions can combine within a single verbal base. However, Chebane does not say what happens to the argument structure of the verb once it has had some verbal affixes attached to it. Yet current debates on the treatment of such Bantu languages morphemes are focused on the nature of the relation between syntax and morphology. This paper analyses applicative constructions in Setswana from a morpho-syntactic view point, showing that when the applicative verbal extension –el is attached to the verb, it is capable of changing the verb's valency by introducing a new argument to its argument structure. The suffixation of the –el morpheme suggests an entity carrying out the action and somebody benefiting and this information is encoded in the constituent structure. Further, it is shown that the applicative constructions share these characteristics with other Bantu languages, Baker (1988:355) and Alsina and Mchombo (1993:18) observe that in Chichewa, the applied affix –ir or –er- that is added to the verb results in the applied object which may be expressed as a beneficiary or an

instrument or oblique. Harford (1993:94) observe that the applicative verbal extension in Chishona –ir- or –er- follows the verb root and that it changes the argument structure of the verb by adding an object referred to as the applied object (see Machobane (1989): Sesotho; (Bresnan and Moshi 1993:47): Kiswahili; Kimenyi (1990): Kinyarwanda. Hoffman (1991:116) observes that there are some basic properties that are found across the Bantu language family. In Bantu languages, the benefactive applicative brings about the word order V-applied object-Direct Object and the word order is fixed. These type of constructions commonly share the fact that they can be interpreted as do the English V+PP constructions (Kimenyi 1980), (Hoffman (1991:10). In all the languages with applicative constructions, the applicative is the only way of expressing the benefactive relation. The benefactive object shows all the characteristics of a direct object, such as the ability to become the grammatical subject of a passive sentence and trigger object agreement on the verb as does the object in canonical position. I also appeal to Lexical Mapping theory which shows the linking between, functional structures and arguments.

The paper is organized as follows: Section 2 gives a background of Setswana language. Section 3 describes how the applicative extension affects the argument structure of a verb. Section 3.3 shows the types of thematic roles and constituent structure categories that are borne by applicative arguments, and the syntactic realization of applicative arguments. Section 4 presents and illustrates the theoretical analysis of the data described.

Background on the Setswana language

Setswana belongs to the Bantu branch of the Niger-Congo language family. Within Bantu, Setswana is a member of the South Eastern branch, falling within the Sotho language sub-group together with two closely related languages, Southern Sotho and Northern Sotho (SIL 2005). This is illustrated by the language family tree below (Doke and Mofokeng 1957, Guthrie 1967, 1970).

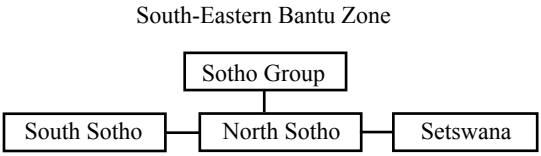


Fig 1 Setswana language family tree (Doke, C. M. and S. M. Mofokeng 1957 cited in Joffe 2004:1).

Setswana has thirteen dialects, which include Sekgatla, the dialect of investigation in this study. Two well-known properties of the Bantu languages are the noun class system and the fact that the Bantu languages are tone languages. Setswana shares these features with other Bantu languages.

The language has a noun class system, in which every noun belongs to a specific class. The noun classes are traditionally classified according to Meinhof's (1899) numbering system of nominal classification structure for Proto-Bantu (Carstens 1993, Newmann 1999:29). Noun class subsumes number and person, i.e., if something is noun class 1, then

it is necessarily singular (and 3rd person), if it is noun class 2, then it is plural. Plurals of classes 11 and 12 are found in class 10 because they share the same prefixes with this class (Cole 1955:230, Mogapi 1984:97). In contrast, the class prefix 15 go-, which combines with stems to make infinitive verbs; and the locative classes 16 *(fa-)*, 17 (go-) and 18 (mo-), which are prefixed to nouns or pronouns to form locative phrase of time and place, do not have plural counterparts. Noun classes play a very important role in the agreement patterning found within noun phrases and between noun phrases and verbs (and other) prefixes.

Setswana has two significant tonal values, high (H) and low (L). These tone levels can be combined within a syllable, thus forming contour tones (Cole 1955:54). In Setswana, tone is semantically significant as it helps to distinguish between different words with different meanings that may be segmentally the same (Cole 1955:53, Department of African Languages and Literature 2000:32). All the noun class prefixes are low toned, except for the class 1a plural prefix bó, which is high toned (Cole 1955).

Argument structure

Argument structure is a specification of the lexical entry of each predicator. In Setswana, as is in other languages, each verb that heads the clause requires a specific number of arguments that must be satisfied in the syntax. For instance, the Setswana verb ja 'eat' in (1a) normally takes two arguments, which take the semantic roles of AGENT and PATIENT. However, the number of arguments that the verb takes (its valency) may be modified by morpho-syntactic processes. Setswana, as is the case with other Bantu languages, has a set of affix-driven rules that alter the verb's argument structure in very specific ways. For instance, the suffix –eg is capable of reducing the arguments of the transitive verb like ja 'eat' in (1a) to one argument, as in (1b) below. The most common argument structures in Setswana, as in other languages, are: i) monotransitive, (ii) ditransitive, and (iii) intransitive. The monotransitive structures are those that take one argument that is internal to the verb phrase in addition to the external argument (i.e., the subject) as in (1a). The ditransitive constructions are those that take two internal arguments in addition to the external argument (AGENT), as in (1c) (Saeed 1997).

(1) a. Mo-nna o-j-a bo-gobe. [unmarkd verb]
1-man 1SM-eat-M 14-porridge
'The man eats porridge.'

b. Bo-gobe bo-aj-eg-a [marked]
14-porridge 14SM-PRES-eat-NEUT-M
'Porridge is edible.'

c. Mo-sadi o-je-s-ets-a mo-nna ba-na.
1-woman 1SM-eat-CAUS-APPL-M 1-man 2-child
'The woman feeds the children for the man.'

The intransitive constructions are those that take one external argument (the preposed object), as in (2). Intransitive constructions include unaccusative, ergative, and unergative

constructions. Semantically, this subject lacks the AGENT properties that are normally ascribed to subjects.

(2) a. Mo-nna o-a-gorog-a [unaccusative]
1-man 1SM-PRES-arrive-M
'The man arrives.'

Basic word order

Setswana, like other Bantu languages, has the SVO sentence pattern as its canonical word order. The grammatical subject precedes the verb and the object follows the verb. As shown by examples throughout section 2. The subject is followed by the subject marker (SM), which is prefixed to the verb and agrees with the subject, as in (3a). The object must be adjacent to the verb and agree with the verb (and object marker if present), as in (3b), (Morapedi 2006:75). The verb governs the object while the object complements it. Other patterns may involve Adjuncts, as in (3c) or Complements in (3b).

(3) a. *Di-kgomo* *di-ful-a* *phakela.*
10-cattle 10SM-graze-M in the morning
'The cattle are grazing in the morning.'

b. *Di-kgomo* *di-ful-a* *bo-jang.*
10-cattle 10SM-graze-M 14-grass
'The cattle are grazing the grass.'

c. *Di-kgomo* *di-fula* *bo-jang* *kgakala.*
10-cattle 10SM-graze-M 14-grass far away
'The cattle are grazing far away.'

d. *Mo-sadi* *o-log-el-a* *mo-le-tlape-ng.*
1-woman 1SM-weave-APPL-M 18-5-rock-LOC
'The woman weaves on the rock.'

Descriptive analysis of Applicative constructions

Setswana like many Bantu languages has verbal extensions which can alter the valency of the verb by adding a new object NP to the sentence. The applicative verbal extenstion –el that follows the verb root is capable of changing the argument structure of the verb's valency by adding an object appearing immediately after the verb. The newly formed argument is referred to as the applicative object. In this case, the original object of the base becomes secondary. Apart from the requirements of the extra object, the applicative extension is also associated with the occurrence of complement locative, adjunct locative and instrumental phrases. The meaning signified by the applied object is that of action carried out on behalf of (4b), to the detriment of (4c) or with respect to something (4d) or place (4e) and direction (4f) (Cole 1955:199).

(4) a. *Mo-sadi* *o-apay-a* *dijo.* [uninflected verb]
1-woman 2SM-cook-M 8.food
'The woman cooks food.'

b. Mo-sadi o-ape-el-a ba-na dijo
1-woman 1SM-cook-APPL-M 2-child 8.food
'The woman cooks food for the children.'

c. *Mo-nna* *o-utsw-el-a* *mo-tshimo-ng.*
1-man 1SM-steal-APPL-M 18-9-field-LOC
'The man steals in the field.'/Using it as an operational base'

d. *Mo-sadi* *o-segel-el-a* *ka* *thipa.*
1-woman 1SM-cut-APPL-M with 9.knife
'The woman cuts with the knife.'

e. *Mo-sadi* *o-seg-el-a* *mo-tafol-eng.*
1-woman 1SM-cut-APPL-M 18-table.LOC
'The woman cuts on the table.'

f. *Nonyane* *e-fof-el-a* *kwa-go-dimo.*
9.bird 9-fly-APPL-M 17-17-high
'The bird is flying high.'

In sentence (4a), the transitive verb apaya 'cook' has not been extended, whereas the transitive verb *ape-el-a* 'cook for' in (4b) has undergone a morphological change by having the applicative extension -el suffixed to it. This results in the increase of the verb's valency where the noun argument *bana* 'children' has been introduced in the sentence. The noun *bana* 'children' is the applied object bearing the thematic role of beneficiary. This type of object displaces the patient *dijo* 'food' which follows it.

Similarly, in examples (4c) through to (4f), the verbs have had the applied –el suffixed to them. In (4c), the transitive verb utswa 'steal' takes the locative argument as an complement. Similarly, in (4e) and (4f) the verbs seg 'cut' and *fofa* 'fly' have the effect of introducing the new obligatory instrument and locative arguments, respectively, to the valency of the verbs. Examples in (4c), (4d) and (4e) have the patient argument suppressed, whereas the applicative suffix of the intransitive verb *fofa* 'fly' in (4f) does not introduce an object argument. Sentence, (4c) and (4e) are locative in that they show the places where monna 'man' and mosadi 'woman' are stealing and cutting, respectively. Location is the place at which the action or state expressed by the predicate happens (Saeed 1997:150); (Morapedi 2006:26). Sentence (4f) shows the direction where nonyane 'bird' is flying. Baker (1992:21) also found the Chichewa newly formed phrase to bear any of the three thematic roles, benefactive, instrumental and locative.

Applicative and other verbal extensions
The applicative suffix –el can also occur with other verbal extension, as in (5) below.

(5) a. *Ngwana o-rut-eg-el-a ba-tsadi.*
1.child 1SM-educate-NEUT-APPL-M 2-parent
'The child is getting educated for the parents.'

b. *Mo-sadi o-je-s-ets-a mo-nna ba-na.*
1-woman 1SM-eat-CAUS-APPL-M 1-man 2-child
'The woman feeds the children for the man.'

In example (5a), the applicative suffix is preceded by the Neuter suffix -eg. The applicative suffix –el has introduced the applied object batsadi 'parents'. The infixed suffix –eg has not had any effect on the structure of the sentence. In example (5b), the applicative suffix –el is also preceded by the causative suffix –is. The infixed suffix –is has the effect of making bana 'children' the entity that performs the action of eating. The grammatical subject noun phrase mosadi 'woman' is the entity that causes bana 'children' to perform the action of eating. The applied suffix -el can also occur with passive constructions, as in (6b). In this case, the applied suffix –el precedes the passive suffix. The passive suffix –w has the effect of making the newly introduced argument (applied object) become the grammatical subject, and the canonical subject monna 'man' is expressed post-verbally as the AGENTIVE by phrase.

(6) a. Mo-nna o-rek-el-a mo-sadi nama.
1-man 1SM-buy-APPL-M 1-woman 9.meat
'The man buys the woman meat.'

b Mo-sadi o-rek-el-w-a nama ke mo-nna.
1-woman 1SM-buy-APPL-PASS-M 9.meat by 1-man
'The woman has the meat bought for her by the man.'

The applicative suffix can also occur with the reciprocal suffix. The applied suffix –el is preceded by the reciprocal suffix –an, as in (7). The applicative suffix introduces the new argument in the verb's structure.

(7) Ba-sadi ba-ita-an-el-a mo-nna.
2-woman 2SM-hit-RECIP-APPL-M 1-man
'The women are hitting each other for the man.'

Except for the case where there is a passive suffix -w, it seems to be the case that where the applicative suffix occurs with other verbal extensions, the order is such that the applicative suffix occurs last with the final vowel –a.

Applied object vs normal object
The applied objects can behave like a normal object in the sense that it can be realized as object markers (mo-) preceding the verb stem, as in (8a). It can occur as topic (expressed by mosadi 'woman'), as in (8b). It can also be the subject of the passive and this is marked on the verb by the suffix -w, as in (8c).

(8) a. *Mo-nna* *o-mo-rek-el-a* *nama.*
1-man 1SM-1OM-buy-APPL-M 9.meat
'The man buys meat.'

b. *Mo-nna o-mo-rek-el-a* *nama,* *(mo-sadi).*
1-man 1SM-1OM-buy-APPL-M 9.meat 1-woman
'The man buys him meat, the woman.'

c. *Mo-sadi* *o-rek-el-w-a* *nama ke* *mo-nna.*
1-woman 1SM-buy-APPL-PASS-M 9.meat by 1-man
'The woman is having the meat bought for her by the man.'

In the passivised applicative in (8c), the applied suffix precedes the passive suffix and the logical object is now in the subject position. The original object nama 'meat' appears immediately after the verb since the applied object appears in an (upper) subject position. The complex verb reka 'buy' carries both the meaning of the applicative and the passive which appears last in the verb morphology, as shown by the gloss in the verb. This is the order found in all the Bantu languages.

Other occurrences of Applicative constructions
The applicative is capable of occurring in a broad range of thematic roles. The only thematic role not taken by the applicative is the Agent. Other thematic roles, other than the benefactive will be discussed below. They are: malefactive, goal and source will be discussed below, see sentences in (9).

(9) a *Mo-simane* *o-romel-el-a mo-setsana* *mo-sese.* *(Goal)*
1-boy 1SM-send-APPL-M 1-girl 3-dress
'The boy sends the girl the dress.'

b. *Ke lwa-el-w-akemo-sadi wa-me.* (Maleficiary)
1-Pron sick-APPL-PASS-M COP 1-woman 1.mine 'My wife is sick.'

c. *Mo-setsana* *o-n-tlho-el-abo-sula* (Maleficiary)
1-girl 1SM-1aOM-send-APPL-M 14-evil
'The girl curses me/wishes me evil.'

d. Tiroo-phamol-el-a mo-sadi se-patshe. (source)
1a 1SM-snatch-APPL-M 1-woman 7-purse 'Tiro snatches the purse from the

woman.'

In sentence (9a), the goal, which is the applied object, shows movement from one place to another. Goal refers to the entity towards which something moves (Saeed 1997:150). Sentence (9b) and (9c) show maleficiary beneficiary (deteriment) applicative objects. In example (9b), the maleficiary applied object has been passivised. In (9c), the maleficiary applied object has been expressed as a verbal marker –n 'me', which precedes the verb stem tlholela 'curse'. In sentence (9d), the source applicative object mosadi 'woman' shows the source from which the purse was taken. This sentence can also be construed as maleficiary (Harford 1993:96).

Lexical Mapping Theory approach

Lexical Mapping Theory (Henceforth LMT) is a component of Lexical Functional Grammar (Henceforth LFG) developed by Bresnan and Kanerva (1989), Bresnan (1989) and Bresnan and Zaenen (1990). In LFG, the thematic roles are the arguments (semantic roles) to which the grammatical functions are mapped. The expression in (10) shows that the verb fa 'give' has three arguments, Masego, Neo and dijo 'food' that are associated with the thematic roles AGENT, BENEFACTIVE and THEME, respectively. The role of LMT is to constrain mapping relations between thematic roles (e.g. AGENT, PATIENT) and the corresponding grammatical functions (SUBJ, OBJ, OBL) that have been subcategorized for by a predicate. For instance, example (10b) shows the mapping between the argument structure and the grammatical functions subcategorized for by the verb fa 'give' in (10a).

(10) a. *Masego o-f-a* *Neo* *dijo.*
1a- 1aSM-give-M 1a 10-food 'Masego gives Neo food.'

b. Semantic form for verb fa 'give'.

	SUBJ	OBJben	OBth	
[f-structure] fa	↑	↑	↑	
active	AGENT	BENEFACTIVE	THEME	[a-structure/thematic roles]

In example (10), Masego is the entity initiating and carrying out an action, and is therefore the AGENT. Dijo 'food', which is moved by an action is the THEME, while Neo, who receives the food is the BENEFACTIVE. Further, the expression in (10b) shows that the arguments of the verb fa 'give' are also mapped onto the syntactic function, where the AGENT is associated with SUBJ, the THEME with direct OBJ and the indirect OBJ with the BENEFACTIVE. Thematic roles indicate the specific semantic functions performed by the entities involved in an event or process.

Lexical Mapping Theory claims that thematic roles in argument structure are ordered according to a universal thematic hierarchy correlating with the notion of discourse-salience. The hierarchy of thematic roles reflects the lexical semantics of the verb's arguments. The grammatical relational hierarchy relates to the thematic hierarchy in that the preferred leftmost element, such as the basic subject in the grammatical relational

hierarchy corresponds to the preferred leftmost element in the thematic hierarchy such as the AGENT. The grammatical relational hierarchy relates to the thematic hierarchy in that the preferred leftmost element, such as the basic subject in the grammatical relational hierarchy corresponds to the preferred leftmost element in the thematic hierarchy such as the AGENT. There is a tendency for subjects to be AGENTS, direct objects to be PATIENTS and THEMES, and indirect objects to be RECIPIENT and BENEFACTIVE. When the AGENT argument is not present, the lower role following it, such as the PATIENT, becomes the subject. In this sense, it is the highest available role in the hierarchy. The highest role on the hierarchy is AGENT and the lowest, LOCATIVE, as in (11a) below. The ordering proposed by Bresnan and Kanerva (1989:23) is derived from Kiparsky's (1987) and Dowty's (1987) semantic primitives (cited in Bresnan and Zaenen 1990:4). The hierarchy of thematic roles matches the relational hierarchy of grammatical functions, in which the argument functions (i.e SUBJ being the highest followed by OBJ or sometimes OBJben/rec) are more prominent than ADJ(juncts), as (11b). The relational hierarchy in (11b) excludes discourse functions, topic and focus, as they are not directly associated with a PRED by the coherence condition.

(11) a AGENT>RECIPIENT/BENEFACTIVE>THEME/
PATIENT>INSTRUMENT>
LOCATIVE (Bresnan and Kanerva 1989)

b. Relational Hierarchy (Keenan and Comrie 1977)

SUBJ > OBJben/rec > OBJpt> OBL> COMPL> ADJUNCT

(12)

AGENT	BENF.	PATIENT	INSTRUMENT	LOCATIVE
SUBJ	OBJben	OBJpt	OBL	OBL
Masego	*o-ape-ts-e*	*ngwa.na*	*di-jo*	*ka-pitsa mo-ntlo-ng.*

1a.Masego 1aSM-cook.APPL-M 1.child 10-food with-9-pot 18-9.house-LOC
'Masego is cooking food for the child with the pot in the house.'

Example (12) provides an illustration of a Setswana sentence in which grammatical functions are mapped on the thematic roles ordered according to the universal hierarchy of thematic roles. The thematic roles start from the highest (AGENT) down to the lowest (oblique-locative).

Not only are the thematic roles arranged into a meaningful order and the grammatical functions in relational hierarchy in LMT, the grammatical functions have also been grouped according to similarities among them. For instance, natural classes of grammatical functions are found to behave alike with regard to the realisation of thematic roles. These syntactic functions are captured through the argument structure features [±o] (object) and [±r] (restricted) which constrain the way in which the roles are mapped onto syntactic functions in the f-structure. The grammatical functions fall into natural classes as shown in (14) below, (Bresnan and Kanerva 1989:24-25).

(13) a. $\begin{bmatrix} -r \\ -o \end{bmatrix}$ SUBJ $\begin{bmatrix} +r \\ -o \end{bmatrix}$ $OBL_{\varnothing}$

b. $\begin{bmatrix} -r \\ +o \end{bmatrix}$ OBJ $\begin{bmatrix} +r \\ +o \end{bmatrix}$

OBJ*ben/rec*

The role [r] means restrictedness. In (13a) and (13b), [- r] indicates a function that is not restricted in terms of its semantic role, in that function can take any role, including, no role, in the case of expletive forms. Only subjects, and the objects of the transitive verbs are [-r]. The OBJben/rec and the OBL are classified as [+ r], meaning that they are restricted to a particular set of semantic roles. The OBJECTben/rec is restricted to having RECIPIENT/ BENEFICIARY role, while the OBLIQUE is restricted to INSTRUMENT or LOCATIVE roles. OBL(IQUE) ⌀ refers to the element (object) whose syntactic relation with the verb is not a direct one but is rather mediated by the preposition or locative, as in the locatives or instrument phrases in Bantu languages or the prepositional phrases in English. The non-object functions SUBJ and OBL ⌀ are assigned the feature [-o] by virtue of not being objects, while the objects and the restricted objects are assigned the feature [+ o].

Applicatives in LMT

The principle of syntactic feature classification can be applied to the applicative construction, as it is the case with other argument structure morphological operations. For instance, in sentence (14).

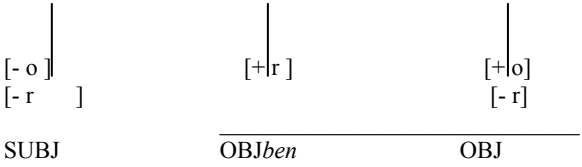
(14) Mo-sadi o-ape-el-a ba-na dijo.
1-woman 1SM-cook-APPL-M 2-child 1-food
'The woman is cooking food for the children.'

In sentence (14), the applicative suffix –el introduces the new theta role of beneficiary ngwana 'child' to the structure, Alsina and Mchombo (1989). The benefactive originates as external role. It is only when the applicative has applied to it that it becomes internal, where it is subject to intrinsic classification (Henceforth IC) and gets assigned the feature classification [-r]. The patient dijo 'food' is intrinsically an internal role and as such is subject to internal IC, in this case, it is assigned the feature classification [-r] and [+o]. This, therefore, implies that any internal role may receive either the value [-r] or [+o]. The subject mosadi 'woman' has also a thematically unrestricted function, and so, the feature [-r] means it alternates between SUBJ and OBJ. Consider example (15).

(15) a. Mo-sadi o-ape-el-a ngwa-na di-jo.
1-woman 1SM-cook-APPL-M 1.child 10-food
'The woman cooks food for the child.'

b.

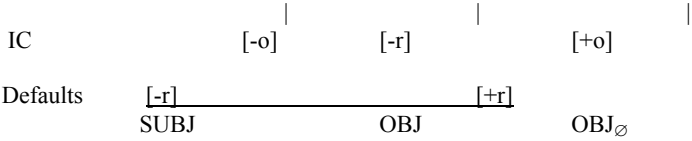
apaya <AGENTBENEFACTIVEappl PATIENT >
'cook'



In (15b), the AGENT role mapped on the subject function is associated with a function that is [-o] and [- r], the PATIENT role is associated with the function that is assigned the features [+ o] or [- r], while the BENEFACTIVE, is associated with the function [+ r]. The mapping is forced by the principle of Bi-uniqueness, which requires that only one role be mapped onto each function. Therefore the [-r] classification feature must be mapped onto OBJ instead of the SUBJ, the other [-r] role. Also, consider example (16)

Mo-simane o-romel-el-a mo-setsana mo-sese. (Goal)
1-boy 1SM-send-APPL-M 1-girl 3-dress
'The boy sends the girl the dress.'

b. romelela 'fry for <Agent Benefactive appl. Patient



In example (16b), the PATIENT mosese 'dress' is intrinsically an internal role, and as such, it is subject to internal intrinsic classification. In this case, it is assigned the feature classification [+o]. This therefore implies that any internal role may receive either the value [-r] pr [+o]. The subject mosimane 'boy' is also a thematically unrestricted function (Alsina and Mchombo (1990, 1993).

With regard to the passivised benefactive Applicative Object in (17a), the analysis is as in (17b below.

(17) a. *Ngwana o-ape-el-w-a dijo ke mo-sadi.*
1-woman 1SM-cook-APPL-PASS-M 10-food by 1-woman
'The child has food cooked for him by the woman.'

b. apaya 'cook' <Agent Benefactive appl. Patient

Passive Ø

Internal IC [- r] [+o]

Defaults [+r]

SUBJ OBJ∅

In example (17b), the Agent, which is the highest role, is suppressed and is expressed as an optional oblique phrase (ke mosadi 'by the woman'). The beneficiary is mapped onto the SUBJ in order to satisfy the requirement that one thematic role in a lexical form be mapped onto the SUBJ, as it is the only available role. The patient is mapped uniquely onto OBJ In example (17b), the Agent, which is the highest role, is suppressed and is expressed as an optional oblique phrase (ke mosadi 'by the woman'). The beneficiary is mapped onto the SUBJ in order to satisfy the requirement that one thematic role in a lexical form be mapped onto the SUBJ, as it is the only available role. The patient is mapped uniquely onto OBJ ⊘ Consider example (18) below. . Consider example (18) below.

(18) a. *Mo-simane o-romel-el-a ngwana mo-sese.*
1-boy 1SM-send-APPL-M 1.child 1-dress
'The boy sends the child the dress.'

b. romelela 'fry for <Agent Benefactive appl. Patient

IC [-o] [-r] [+o]

Defaults [-r] [+r]

SUBJ OBJ OBJ∅

In example (18b), the defaults make the highest role the subject, and the lowest a restricted object. The defaults have limitations. For instance, they cannot change the feature of the unrestricted [-r] benefactive applicative object. According to the well-formedness condition, it can only be realized as an object in this argument structure. The completeness condition requires that the verbal argument condition be met. In this case, something fills the applied object function. The VP-internal applied object *ngwana* 'child' is linked to the benefative role, whereas the VP-internal object *mosese* 'dress' is mapped on the Patient role. Also, consider sentence (19) below.

(19) a. *No-nyane e-fof-el-a kwa-go-dimo.* [complement]
9.bird 9SM-fly-APPL-M 18-17-high
'The bird flies high-up.'

b. fofa 'fly' <Theme Locative>

IC		[-o]	[+r]
Defaults	[-r]		[-o]
	SUBJ		OBL

In example (19b), the phrase kwa-godimo 'up-high' is mapped on the locative role, which receives the intrinsic classification feature [-r] as it is subcategorised. It receives the feature [-r] by virtue of being obligatory. The subject NP nonyane 'bird' in example (19a) is the unaccusative object which surfaces as the subject of the sentence in such constructions. The UNAOBJ NP nonyane 'bird' corresponds to the THEME argument. The THEME is classified as the [-r] by virtue of being the most marked function.

Conclusion

In this paper, I have shown how the Setswana applicative suffix as a verbal extension can change the argument structure of the verb from a two place verb to three place verb. The applicative suffix introduces a new argument called the applied object. The locative phrase which normally performs the ADJUNCT function can function as a complement when the applicative suffix is attached to the root of certain verbs, as in the case of locative verbs. The analysis has also been achieved through Lexical Mapping Theory which constrains mapping relations between thematic roles (e.g. AGENT, PATIENT) and the corresponding grammatical functions (SUBJ, OBJ, OBL) that have been subcategorized for by a predicate.

Bibliography

Alsina, Alex, and Sam A. Mchombo (1990) The syntax of Applicatives in Chichewa: Problems for a Theta-theoretic Asymmetry. *Natural Language and Linguistic Theory* 8, 493-506.

Alsina, Alex and Sam A. Mchombo (1993) "Object Asymmetries and the Chichewa Applicative constructions." In Theoretical Aspects of Bantu Grammar, ed. Sam A. Mchombo, 17-45. Stanford, CA: CSLI Publications.

Baker, M. (1988) *Elements of Typology of Applicatives in Bantu,* paper presented at the 19th Annual African Linguistics conference, Special Panel, Boston University, April, 14-17.

Baker, M. (1992) Thematic conditions on Syntactic Structures: Evidence from Locative Applicatives. In T*hematic Structure:* Its Role in Grammar, ed. Iggy M. Rocca, 23-46. Berlin and New York: Foris

Bresnan, Joan (2001) *Lexical Functional Syntax*. Oxford: Blackwell Publishers. Bresnan, Joan and Jonni M. Kanerva (1989). Locative inversion in Chichewa: A case of factorization. *Linguistic Inquiry* 20, 1:1-50.

Bresnan, Joan and Lioba Moshi (1990) Object Asymmetries in Comparative Bantu Syntax. *Theoretical Aspect of Bantu Grammar.* California: CSLI Publications. 47-91

Bresnan, Joan and Lioba Moshi (1990) Object Asymmetries in Comparative Bantu Syntax. *Linguistic Inquiry* 21: 47-87.

Carstens, Vicki (1993) On Nominal Morphology and DP Structure. *Theoretical Aspect of Bantu Grammar, Stanford:* CSLI Publications, 151-177

Chebane, A. (1996) Intersuffixing in Setswana: The case of the perfective –ile, the Applicative –el, and the causative –is. *Pula: Botswana Journal of African Studies*. Vol. 10 No. 2, 83-94

Cole, Desmond T. (1955) *An Introduction to Tswana Grammar*. Cape Town: Longman Penguin.

Conner, T. (2004) Language Systems in South Africa and Their Parallels to the Linguistic Struggle of Blacks in the U.S. In *Global Perspective on Human Language:* The South African Context, 9-19, 2004. Leland Stanford Junior University. http://www.stanford.edu/-jbaugh/saw/Tracy_Language_and_Ebonics. Html

Dalrymple, Mary (2001) *Lexical Functional Grammar.* San Diego, CA: Academic Press.

Hoffman, Mika (191) "The syntax of Argument-Structure-Changing Morphology" Doctoral dissertation, Massachusetts Institute of Technology.

Kaplan, Ronald M. and Joan Bresnan (1982) Lexical Functional Grammar: a formal system for grammatical representation. In Bresnan, J. (ed.), *The mental representation of Grammatical relations*. Cambridge MA: MIT Press.

Machobane, Malillo (1989) "Some Restrictions on the Sesotho Applicative and Causative Suffixes". *South African Journal of African Languages* 13: 129-137.

Machobane, Malillo, M. (1995) The Sesotho Locative constructions. *Journal of African Languages and Linguistics* 16, 115-136.

Mchombo, Samuel (1993) A Formal Analysis of the Stative Construction in Bantu. In *Journal of African Languages and Linguistics*. Vol. 14, 5-28

Mchombo, Samuel A. (1999a) Argument structure and Verbal Morphology in Chichewa. *Malilime. Malawian Journal of Linguistics* 1, 57-75.

Meinhof, Carl (1899) Grundriss einer Lauthlehre der Bantusprachen. Leipzig: Brockhaus.

Mogapi, Kgomotso (1984) *Thutapuo ya Setswana.* Gaborone: Longman Botswana (Pty) Limited.

Morapedi, S. (2001)Argument Structure Alternations in Setswana. Submitted in partial fulfillment of the requirement for Masters in Linguistics in November at theUniversity of Essex, UK.

Morapedi, S. (2006)The syntax of locative inversion and related constructions in Setswana: An approach to information structure in Lexical Functional Grammar. Doctoral Dissertation, University of Sussex.

Neumann, Sabine (1999) *The locative class in Shengologa (Kgalagadi)*. New York: Peter Lang.

Saeed, John I. (1997) Semantics. Oxford: Blackwell Publishing.

Summer Institute of Linguistics (SIL) (2005) Ethnologue.http://www.ethnologue.com/[Accessed [Accessed 22 Decembr 2005]