

INSTRUMENT MARKING AND BINARY CONTRASTS IN BANTU VERB SUFFIXES

*Josephat M. Rugemalira**

Introduction

The description of the applicative and causative suffixes is usually cast in terms of the semantic (thematic) roles associated with each suffix. The applicative is often associated with the beneficiary and goal roles, while the causative suffix is described as introducing a higher agent (causer). Such analysis is situated within the framework of an assumed finite set of semantic roles, which include agent, patient/theme, instrument, goal, beneficiary, locative, etc. Dowty (1991) showed the traditional problems involved in the identification of semantic roles. The problems include role fragmentation and unclear boundaries, improper application of syntactic or semantic criteria in semantic role identification, and the failure of semantic roles to adequately distinguish arguments, especially in cases where the same role can be assigned to two arguments of the same predicate structure. Dowty proposed that instead of the “traditional system of discrete roles” linguistic theory should make use of two macro-roles, viz. proto-agent and proto-patient.

Following Dowty, Rugemalira (1994) argued that the applicative and causative verb suffixes in Bantu languages support a binary semantic role distinction between actor and non-actor. This binary organization is a basic linguistic property that maximizes distinctiveness among the various arguments of a predicate. In this paper further evidence to support this claim is presented. The evidence comes from the variation in the marking of instrumental arguments across Bantu languages, with some languages using the causative suffix while others use the applicative suffix. This fact is a signal of the inherent unity of the two suffixes. It also suggests that the instrument role, like the related roles such as agent and patient, is not a primitive (basic) notion but a constituent part of a

* Lecturer, Department of Foreign Languages and Linguistics, UDSM.

ABBREVIATIONS

A = applicative P = passive PST = past FUT = future C = causative FV = final vowel PRT = present

larger cluster concept or macro-role as suggested by Dowty (1991). For expository purposes three traditional semantic roles are illustrated with the following English sentence where *farmer* is agent, *banana* is patient/theme, and *knife* is instrument.

the *farmer* peeled the *banana* with a *knife*

Section 2 presents the patterns of instrument marking in Bantu languages, starting with languages that use the causative suffix (section 2.1), followed by languages that use the applicative suffix (section 2.2). Section 3 discusses the nature of the applicative and causative suffixes and argues that they are two sides of the same transitivising process.

Instrument Marking in Bantu

Guthrie (1970) classified the verb extensions into three groups.

- i. valency increasers i.e. causative and applicative
- ii. valency decreaseers e.g. passive
- iii. suffixes that do not change the valency of the verb e.g. intensive

This paper is mainly concerned with the suffixes in (i). The causative suffix is usually represented as introducing a ‘causer’ (agent) role, while the applicative suffix introduces a ‘beneficiary’ role. This is illustrated with the Kiswahili data in 1.

- | | | | |
|----|---|---------------------------------------|--|
| 1. | a | a - li - beb - a watoto | |
| | | she-PST - carry - Fv children | |
| | | ‘she carried children’ | |
| | b | a - li - m - beb - esh- a watoto | |
| | | he -PST -her - carry – C -FV children | |
| | | ‘he made her carry the children’ | |
| | c | a - li - m - beb - e - a watoto | |
| | | he -PST- her- carry -A -FV children | |
| | | ‘he carried the children for her’ | |

The verb is un-extended in (1a), carries the causative suffix in (1b) and the applicative suffix in (1c). Since - as already indicated - the identification of the roles associated with each suffix is problematic, I will for the moment resist the

temptation to present ‘other’ roles associated with the applicative and causative suffixes.* Instead I will present the data pertaining to the marking of the ‘instrument’ role.

In marking instrumental arguments some Bantu languages may make use of the verbal suffixation strategy and/or the preposition phrase construction illustrated in 2.

2. Kiswahili.
a - li - m - kat - a kwa kisu
he -PST-her- cut -FV with knife
‘he cut her with a knife’

Among the languages that can productively use verbal suffixation for instrument marking there is a choice of using either the applicative or the causative suffix.

Causative Instrumentals

In the languages illustrated in 3 to 8 the use of the causative is fairly productive.

3. Luganda (E15/11.9065)[†]
alimya byuma
‘he cultivates with ploughs’ (Ashton et al. (1954:343)
4. Runyankore (E13/11.90633)
y - aa - gi - hindu- [z]- a enkoni
he-PST- it – turn - C-FV stick
‘he turned it round with a stick’ (Taylor (1985:149)
5. Runyambo (E21/?)
a - ka - haandiic - is – a ekaráamu
he-PST- write - C – FV pen
‘he wrote with a pen’
6. Ruhaya (E22/ 11.9064)
Kat’ á - ka – bák - is’ - ómupíil’ ékikápu
Kato he-PST-catch-C - ball basket
‘Kato caught the ball with a basket’ (Trithart (1977:82)

¹ See Rugemalira (1993a) for an assignment of thematic roles to the applicative and causative suffixes in one language.

² The numbers after each language are classifications of the language in question according to Guthrie (1949) Heine (1972), the latter as reproduced in Trithart (1983). While Guthrie’s classification is a convenient referential system, Heine’s claims to be a genetic classification.

7. Kinyarwanda (D61/11.90621)
umukóobwa a - ra - andik- iish-a íbárúwa íkárámu
girl she-PRT -write- C -FV letter pen
'the girl is writing a letter with a pen' (Kimenyi (1980:32)
8. Shona (S14/11.921)
a) bángá rá- ka -chék- és- w-a zanze né murúmé
knife it -PST-cut - C - P-FV fruit by man
'the knife was caused to cut the fruit by the man'
(Hawkinson & Hyman 1974:158)
- b) badzá rekúsakurisa
'a hoe to clear away weeds with' Dembetembe (1987:64)

In the languages represented in 9 to 17 the use of the causative suffix does not appear to be productive any longer, but there are clear traces of its use.

9. Sesotho S33/11.92611
a) Ntate o -bola- is -a sethopo letsatsi
father he-kill - C -FV seedlings sun
'my father makes the sun destroy seedlings'
b) Bashanyana ba -hlab -is -itse banana nale
boys they-pierce-C - PST girls needle
'the boys made the needle pierce girls (Machobane
(1989:53-54)

Machobane provides these examples in a footnote after the significant statement that "sentences in which both the cause object and the basic object are inanimate are difficult to find" p.30. The author notes that "the use of -is- for instrumentals in Sesotho is not as productive as it is in Kinyarwanda", implying that it is limited to only a few verbs (p.53).

- 10 Tswana S31a/11.92612
a) gogat-is-a motho koloji
'to make a wagon run over (tramp on) a person'
b) gotlhab-is-a motho ditlhong
'to cause shame to stab a person, i.e. to make a person
ashamed or embarrassed' (Cole 1955:208)

Although Cole (1955:366-368) has a section on "instrumental adverbs" and "agentive adverbs", the examples in 10 are clearly not considered as

instrumental constructions. They are instead presented in the context of a discussion of the relative ordering of the objects in a causative construction. The author's examples show that the human or animate object is always closer to the verb than the nonhuman or inanimate object - even though Cole himself does not make this observation. For the discussion at hand, (10) and (9) are comparable, and they raise the question: What is an instrument?

- 11 Xhosa S41/11:92621
 a) Uthemba usebenzisa umlamu
 Themba uses hoe
 b) Uthemba ubhalisa ipene
 'Themba writes with a pen' (Yvone B Nthabu, personal
 communication)

The consultant pointed out that she would normally use the prepositional construction and that (11b) may be marginally acceptable. In (11a), however, we have a lexicalized causative derivation. This was quite suggestive in the investigation of the other Southern Bantu languages. Descriptions of these languages do not mention the instrument role in connection with either causative or applicative and/or usually present the prepositional construction in discussing instrumentals (see for instance Satyo (1985) on Xhosa; Baumbach (1987) on Tsonga; Ziervogel & Mabuza (1976) on Siswati; Taljaard & Bosch (1988) and Doke (1955) on Zulu; Cole (1955) on Tswana; and Lanham (1955) on Gitonga). But all these languages appear to have some form of a lexicalized causative for the verb "to use", derived from the verb meaning "to work", as shown in (12-17).

- 12 Zulu S42/11.92622
 bayazisebenzisa izincwadi zethu
 'they are using our books' (Doke(1955:87))
13. Ndebele S44/11.92624
 sebenza work
 sebenzisa use (Shabangu & Swanepoel(1989))
14. Siswati S43/11.92623
 sebenta work, labor
 sebentisa use, employ, spend (Rycroft 1981)
15. Silozi K21/?
 sebeza work, do, labour
 sebelisa give work to someone, supervise workmen, use

(Jalla (1982))

16. Gitonga S62/11.9251
i) thuma work
ii) thumisa use
iii) uyethumisile lipadza 'he used a hoe'
iv) uyelimile ku lipadza 'he cultivated with a hoe'
v) *uyelimisile lipadza 'he cultivated with a hoe'
(Firmino, personal communication)

Note that iii) has a lexicalized causative but the verb in (iv) and (v) has no lexicalized causative.

17. Tsonga S53/11.923
tidza work
tidzisa use (Firmino, personal communication)

Note that the lexical item in (12-15) is different from those in (16-17). The last two languages appear to be on the borderline separating Southern Bantu from North-Eastern Bantu. In the latter group *tuma* as well as applicative instrumentals are widespread. In Kiswahili, for instance, *tuma* "employ, send" has both a lexicalized sense of *tumia* "use", besides the regular 'beneficiary/goal' sense - "send to". In Chichewa *tuma* "send (person)" has a lexicalized causative+applicative *tumiza* "send (thing)" and a lexicalized applicative *tumila* "use".

In summary: there is a quite productive use of the causative suffix to mark instrument in the languages of the Great Lakes region (Heine's Interlacustrine subgroup). Further south, Shona appears to have a regular use of the causative suffix for instruments. But in the Sotho-Nguni group there are mainly historical traces but no productive use of causative instrumentals.

Applicative Instrumentals

The languages illustrated in (18 – 23) display a fairly productive use of the applicative suffix for instruments.

- 18 Kichaga E62b/11.909
Mushi na- le -kor - i - a ngwi
Mushi he-PST-cook-A-FV firewood
'Mushi cooked with firewood'
19 Luhya E32b/11.9066

Instrument Marking and Binary Contrasts in Bantu Verb Suffixes

- a - karany- ir - a umbano
he- cut - A -FV knife
'he's cutting with a knife' (Kanyoro (1983:124))
- 20 Chimwiini[‡]
Chisu, Nuru tilang-il- ile nama
knife Nuru cut -A- PST meat
'The knife, Nuru cut meat with it' (Kisseberth &
Abasheikh (1977:196))
- 21 Kiswahili G42/11.9121
a - li -kat -i - a kisu kikali
he-PST-cut-A- FV knife sharp
'he cut with a sharp knife'
- 22 Chichewa N31b/11.92032
mlenje a - ku - lémb- ér - a nthenga
hunter he - PRT- write- A - FV feather
'The hunter is writing with a feather' (Alsina & Mchombo
(1993:36))
- 23 Kuria E43/?
ba - giing -ir -re egekebi abagaata
they- shave -A -PST knife old men
'they should shave the old men with the knife'
(Gould (1987:181))

For the languages discussed next it is not clear to me how productive the applicative is for marking instrumentals. In some cases this is because the relevant data is not available, while in other cases this is because it is not clear how the data available should be interpreted. In the case of Hibena, for instance, Hodges & Stucky (1979:95) state that "the verb carries the applied affix and the instrument (NP) loses its preposition". For Chibemba, Sambeek (1955) provides the problematic examples in (24).

- 24 Chibemba M42/11.9031111
- a bwato bwa kwa-buk -il-a mo
canoe for to -cross-A-FV in
'a canoe for crossing the river'
- b fyani fya ku-pang -il -e cisote

³ Neither Guthrie nor Heine include this language in their classifications. Kisseberth and Abasheikh (1977) note that it has often been considered a dialect of Kiswahili.

grass for to -make -A -FV hat
'grass to make a hat' (Sambeek 1955:86)

While (24b) does seem to be a legitimate instrumental construction, (24a) is problematic because of the locative clitic *mo*, which suggests that “canoe” is a locative rather than an instrument.

Further west there is more uncertainty. Trithart (1983:151)[§] says that the evidence for Tunen (?Basa A43/4.08); Banen A44/?) and Mongo (C6la,b/11.15) is questionable. Kikongo (H16/11.31) is shown as having applicative instrumentals, but this is apparently based on Bentley (1967:628 - “The applied form is not only used in interrogative sentences of the kind given above, but also in making an emphatic and definite statement as to the *reason, purpose, aim, means, manner, instrument, locality, &c.*, of an action” (emphasis in the original). Apart from the examples for reason/aim/purpose**, no examples are given for means/instrument, and the example for manner is problematic since it has a preposition in it.

Whitehead (1899) does not ascribe any instrument use to either the applicative or the causative in Bobangi (C32/11.11). Similarly, Guthrie (1935) does not include instrumental use in his description of Lingala (C26d/11.121) applicatives and causatives.

The map (see Appendix) summarizes this provisional survey covering 28 languages^{††}. Applicative instrumentals are clearly regular in the eastern zone with probable traces in the west. Causative instrumentals are clearly regular in between these zones (the interlacustrine region) and have traces in the south. This distribution beats our expectation of a continuous distribution pattern. Still this data does indicate that the use of causative and applicative for instrument marking predates the movements that put the speakers of these languages where they are today.

Beyond this guarded statement it is debatable whether the question of the relative age of the instrumental use as opposed to the other uses, viz. causer, beneficiary, locative, etc., is a valid one. Concern with validity arises because the question takes a particular set of role distinctions for granted - an assumption

⁴ Trithart’s assignment of applicative instrumentals to Runyankore and Luganda is erroneous.

⁵ One example (for reason/purpose) from Bentley: *I kuma yasumbila zo* “that is why I bought them”

⁶ This is indeed provisional since data on many languages is not available to me.

that is problematic given the competing role inventories in the linguistics literature (cf. *inter alia*, Fillmore (1968, Jackendoff (1987, Starosta (1988, Grimshaw (1990). With a reduced inventory of roles to two, the question of which semantic role was originally associated with which suffix loses its significance.

The Nature of The Causative and Applicative Suffixes Instrument as a Derived Notion

It was earlier noted in connection with Sesotho and Tswana data in (9) and (10), as well as the Bemba data in (24), that certain constructions sharpen the question of what an instrument role is. Fillmore (1977:77) notes that instrument was a derived notion that did not fit squarely into his set of deep cases. In Jackendoff's (1987:401) conceptual structures view of thematic roles, "instrument is not a new primitive role but an intermediary between Actor and Patient..." Yet there is a sense in which every role label is a 'derived notion', an abstraction based on certain pragmatic factors related to human cognition.** This abstraction involves the sorting out of the various cues that contribute to the differentiation of the arguments in a construction. In this connection, Kisseberth and Abasheikh's (1977) discussion of the restrictions on applicative instrumentals in Chimwiini is instructive. The authors show that "the instrumental applied verb is limited in its occurrence to contexts where the instrument is the topic or, at least, presupposed (not asserted)" p.196. Only the instrument noun phrase can be topicalized; the instrument cannot be questioned; in a relative clause, the instrument, but not the noun phrase displaced by it, can be deleted under identity; and the neutral stress pattern is not available for sentences containing an instrumental applicative.

Somewhat similar restrictions exist in other languages irrespective of the form of marking available for instruments. But these are not restrictions associated with the 'instrumental' argument as such; rather they belong to a larger set of cues for argument differentiation. Consider the Runyambo and Kiswahili data.

- 25 Runyambo
- a ?Kató a -ka -haat-is-á omusyó ebitooce
 Kato he-PST-peel-C-FV knife bananas
 'Kato peeled bananas with a knife'
- b Kató a -ka -haat-is-á omusyó gwanjé ebitooce

⁷ Cf. Rugemalira (1993a) for a discussion of the significance of world knowledge and especially the animacy factor in the assignment of semantic role labels.

- Kato he-PST-peel-C-FV knife my bananas
 ‘Kato peeled bananas with my knife’
- c Kató a -ka -haat-is- á omwáaná ebitooce
 Kato he-PST-peel-C-FV child bananas
 ‘Kato made the child peel bananas’
 ‘Kato helped the child peel bananas’
- d Kató a -ka -haat -is - á omúsyó
 Kato he -PST- peel - C – FV knife
 ‘Kato peeled with a knife’
- 26 Kiswahili
- a ?Asha a -li -meny- e – a kisu ndizi
 Asha she -PST -peel - A -FV knife bananas
 ‘Asha peeled bananas with a knife’
- b Asha a -li -meny- e -a kisu changu ndizi
 Asha she -PST - peel -A -FV knife my bananas
 ‘Asha peeled bananas with my knife’
- c Asha a - li - ki -meny- e -a ndizi
 Asha she -PST- it -peel -A -FV bananas
 ‘Asha peeled bananas with it’
- d Asha a - li - meny- e - a kisu
 Asha she-PST- peel -A -FV knife
 ‘Asha peeled with a knife’

In 25a and 26a the constructions are rather odd but they are redeemed by the possessive pronoun in the (b) versions. In effect the pronoun serves to make the instrument noun phrase definite/specific, thereby clearly setting it apart from the other noun phrase (i.e. bananas). This appears to be necessitated by the absence of any other differentiating feature - both NPs are inanimate. In contrast 25c is fine since the post verbal NPs are clearly set apart by the animacy feature. Definiteness again is at play in 26c as the pronominal anaphor *ki* (signalling noun class and animacy) shows. The (d) versions differ from the (a) versions in having only one post verbal NP, which improves the acceptability tremendously.

Consideration of data like this changes the terms of the discussion by not taking semantic role labels for granted but instead seeking to determine what means exist in the language for keeping arguments distinct. In this vein the distinction between causative and applicative should be properly viewed as designed to fulfil this argument differentiation function.

The Marking of Macro-Role Cluster Concepts

It has been argued (Rugemalira 1994) that the applicative and causative extensions perform a similar syntactic function, namely that of adding an argument to the basic structure of the predicate. The contrast between them is captured in semantic terms: the causative licenses an actor role (or secondary agent), while the applicative licenses a non-actor role (non-agentive). These are broad or macro-role distinctions with which broad generalizations may be made. Narrower semantic role distinctions may be made within this broad framework. For Runyambo the narrow semantic roles associated with the causative extension are causee, helpee, instrument, and manner (for which see 32 below). In Kiswahili only the causee role is associated with causative. The applicative roles in Runyambo are beneficiary, maleficiary, locative, reason, purpose, and temporal. It should be noted that the NPs relevant to role assignment in both applicative and causative constructions are post verbal. The significance of this is that the causative suffix should not be characterized as introducing a subject or a higher cause. Doing so obscures the basic similarity between applicative and causative. But recognition of this basic similarity highlights their contrastive relationship.

27. a - ka - tem - es - a Kato omuti
 he-PST-cut - C -FV Kato tree
 'he made/helped Kato cut a tree'
28. a - ka - tem - er - a Kakuru omuti
 he - PST- cut - A -FV Kakuru tree
 'he cut a tree for Kakuru'
29. a - ka -tem -es -ez -a Kakuru omuti
 he-PST-cut -C -A -FV Kakuru tree
 'he had *someone* (*i.e. Kato*) cut a tree for Kakuru'

In 27 Kato did the action or at least participated in the action of cutting, hence an **actor** licensed by the causative suffix. In 28 Kakuru had no active part in the action of cutting, hence a **non-actor** licensed by the applicative suffix. When causative and applicative are combined in 29 their contrastive function is even more significant: with the causee omission strategy, **Kato** cannot be incorporated in the construction, in conformity with the limitations of argument structure (cf. Rugemalira 1993a)⁸⁸. The two transitivity suffixes (applicative

⁸ Causee deletion has been documented for a number of the Bantu languages including Kongo (Bentley (1967:633), Chibemba (Givon (1976):338), Kimeru (Hodges (1977):121,133,135), and

and causative) have licensed two new arguments (Kakuru and Kato) for a verb that already has two arguments (he, tree). It is the secondary actor (Kato) that is dispensed with from the surface structure although it is understood to be a participant in the event. Within the wider picture of suffix co-occurrence, the existence of two suffixes instead of one fits in very well: In order to maximize distinctiveness there is a constraint against repeating a suffix. It is not unreasonable to suggest that the distinction between applicative and causative arose to fulfil this differentiating function. Putting this slightly differently, since it is allowed to add up to two objects to the structure of a verb without repeating a suffix, a role distinction between applicative and causative works perfectly.

What is required of the applicative and the causative is that there be sufficient contrast to distinguish the arguments in a construction. The cross language variation in the use of applicative or causative for ‘instrumental’ arguments reflects the absence of a clear categorization of an instrument as an actor of the same kind as a human actor. Languages that use causative categorize the instrument as close enough to the human actor (causee, helpee)^{***}. Languages that use the applicative categorize the instrument as not deserving membership in the class of actors that causees/helpees are. This indeterminacy is clearly illustrated by constructions involving the ‘reason’ role in Runyambo (with parallels in Luganda - Ashton et al. (1954: 331, 342).

- 30 embúzi tu -raa - ji - baaj - ir -á ci
 goat we -FUT -it -slaughter -A -FV what
 ‘why will we slaughter the goat’
- 31 eci - raa - tu- baaj -is -á embúzi ní cici
 it that -FUT -we-slaughter-C -FV goat is what
 ‘why will we slaughter the goat’

In terms of role analysis both the applicative in 30 and the causative in 31 license a reason or cause. The variation in the choice of suffix depends on the type of construction: the normal wh-question uses the applicative, while the relative construction requires the causative. This suggests that we should not be focusing on role analysis in seeking to account for the distribution of the applicative and the causative. Consider the data in 32 and 33 from Runyambo.

Lingala (Guthrie (1935:23).

⁹ Wojcik (1976), arguing from within the generative semantics model, seeks to show that some instrumental NPs are underlyingly causative and that there is thus a relationship between agent and instrument.

- 32 a - ka - vuj - is - á amáani
 he-PST-ride -C -FV force
 ‘he rode with force/energetically’
- 33 a -ka - haandic-is-á ekaráamu
 he-PST- write - C-FV pen
 ‘he wrote with a pen’

It is likely that different people will assign different roles to the NP in 32: it could be considered an instrument, or, relying on the English gloss, it could be assigned the ‘manner’ role. The point is that some would consider it inappropriate to assign the instrument role to *amáani* “force”. Similarly languages that would use the applicative instead of the causative in 33 consider it inappropriate to classify *ekaráamu* “pen” as an actor.

Conclusion

The variation in the marking of instrument arguments (using the causative or the applicative suffix) across Bantu languages provides further support for regarding the two suffixes as two sides of the same transitivising process and claiming that the contrast between them serves an argument differentiation function. The variation also supports generalizations based on the macro-roles of actor and non-actor and suggests that lower level semantic role distinctions (agent, patient, goal, recipient, beneficiary, etc.) have limited significance and reliability.

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APPENDIX

Key to the Map of Languages Surveyed

Languages with clear causative instrumentals

a Luganda	b Runyankore	c Runyambo
d Ruhaya	e Kinyarwanda	f Shona

Languages with lexicalized traces of causative instrumentals

(g) Sesotho	(h) Tswana	(i) Xhosa	(j) Zulu (k) Ndebele
(l) Siswati	(m) Silozi	(n) Gitonga	(o) Tsonga

Languages with applicative instrumentals

A Luhyia	B Kuria	C Kichaga	D Chimwini
E Kiswahili	F Chichewa	G Chibemba	

Languages with doubtful applicative instrumentals

- (H) Bena (I) Mongo (J) Tunen (K) Kongo
(L) Bobangi (M) Lingala