

Ndebele Verbal Morphology and DP Argument-Adjunct Asymmetries¹

GABRIELA ALBOIU (galboiu@yorku.ca) and PETER AVERY (pavery@yorku.ca)
York University, Toronto

1. Introduction

Ndebele (Nguni, Zimbabwe) has a highly inflected verbal domain, with obligatory subject marking and potential object agreement (OM).

(1) Verbal Template for Ndebele (see also Sibanda 2004)

pre-pronominal prefixes	Subject marking (S)	Tense	Object agreement (OM)	Verb $\sqrt{\quad}$	Derivational suffixes	Aspect 'FV'
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We focus on the 'long' versus 'short' forms of the present tense (in 2) and recent past tense (in 3):

(2) Present Tense:

- a. u- \emptyset -(**ku*)-dl-a *(uku-dla).
1S-TNS-OM15-eat-ASP 15-food
'S/he eats (the) food.'
- b. u-ya-(ku)-dl-a (uku-dla)
1S-TNS-OM15-eat-ASP 15-food
'S/he is eating / eats (the) food.'

- tense is either marked by **ya-** or is unmarked, while the final vowel, which we take to be an aspectual marker, is uniformly realized as **-a**.
- (2) shows that these markers interact with object marking (OM) and presence of a DP object, as follows:
 - [_T \emptyset -] requires an overt DP object and cannot occur with OM
 - [_T **ya-**] allows for optional DP object, as well as optional OM

(3) Recent past:

- a. u-Kuthula u- \emptyset -(**si*)-dl-é *(isi-tshwala).
1a-Kuthula 1S-TNS-OM7-eat-ASP 7-polenta
'Kuthula ate (the) polenta.'

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b. u-Kuthula u-Ø-(si)-dl-ile (isi-tshwala).
 1a-Kuthula 1S-TNS-OM7-eat-ASP 7-polenta
 ‘Kuthula ate (the) polenta.’

- Here tense is unmarked but there are two distinct aspectual markers, **-é** and **-ile**, which interact with object marking (OM) and presence of DP object, as follows:
 - overt DP object requires [_{Asp} **-é**] and cannot occur with OM
 - [_{Asp} **-ile**] allows for optional DP object, as well as optional OM
- Long vs. short forms in Bantu have typically been analysed analogously (see Buell 2005 and van der Spuy 1993 for Zulu, Ndayiragije 1999 for Kirundi, etc)
- The claims made center around phonological explanations related to weight of vP constituent (Buell 2005), prosodic analyses (van der Spuy 1993), or contrastive focus interpretations of the immediately postverbal element (Ndayiragije 1999)
- However, the generalization we note for Ndebele is that the short forms appear whenever an argument needs to be licensed, while the long forms appear in the absence of such a requirement

Theoretical Proposals:

- **The SHORT forms are linked to a phasal domain which, following Chomsky (2005, 2006) has Case and EPP properties, while the LONG forms are associated with a non-phasal domain, with no Case and no EPP;**
- **The SHORT forms occur when needed to license syntactic DP arguments, while the LONG forms associate with the absence of such a need and syntactic adjuncts;**
- **Choice between the SHORT versus LONG forms is intimately linked to presence versus absence of vP-internal material and thus (unsurprisingly) interacts with telicity properties, as well as information packaging strategies.**

2.- 4. Data on LONG versus SHORT forms

2. Simple transitives

2.1 QP objects:

Jelinek (1984) argues that in languages with OM, the associated DP is an adjunct. See also Baker (1996) for Mohawk.

Note that quantifiers cannot be merged as adjuncts as they need to bind a variable in argument position (Rizzi 1986, Cinque 1990). Hence absence of quantifiers in Mohawk.

Interestingly, in Ndebele, the ‘short’ forms (i.e., [_{ASP} -é] and [_T Ø-]) allow for QPs but the ‘long’ forms (i.e., [_{ASP} -ile] and [_T ya-]) exclude them. See (4)-(5).

- (4) a. u-Ø/ya-dl-a uku-dla.
 1S-TNS-eat-ASP 15-food
 ‘S/he eats (the) food.’
- b. u-Ø/*ya-dl-a **yinqe ku-dla**
 1S-TNS-eat-ASP any 15-food
 ‘She eats any food.’
- (5) a. u-Phita u-Ø-khab-é/ile in-ja.
 1a-Peter 1S-TNS-kick-ASP 9-dog
 ‘Peter kicked a/the dog.’
- b. u-Phita u-Ø-khab-é/*ile **yinqe n-ja.**
 1a-Peter 1S-TNS-kick-ASP any 9-dog
 ‘Peter kicked any dog.’

2.2 Optionality:

- the ‘short’ forms require an overt DP object or some other predicate-internal constituent, the ‘long’ forms do not. See (6)-(7).

- (6) a. u-Ø-dl-a *(uku-dla).
 1S-TNS-eat-ASP 15-food
 ‘S/he eats (the) food.’
- b. u-Kuthula u-Ø-dl-é *(isi-tshwala).
 1a-Kuthula 1S-TNS-eat-ASP 7-polenta
 ‘Kuthula ate (the) polenta.’
- c. u- Ø-phek-é *(kuhle).²
 1S-TNS-eat-ASP well
 ‘He cooked well.’
- (7) a. u-ya-dl-a (uku-dla).
 1S-TNS-eat-ASP 15-food
 ‘S/he eats (the) food.’
- b. u-Phita u-Ø-khab-ile (in-ja).

² Note (i) that *ya-* can co-occur with *kuhle*. The asymmetries between *-ile* and *ya-* can be relegated to habitual/generic readings of the latter but not the former. We return later to this issue.

(i) u-(ya)-phek-a kuhle.
 1S-TNS-eat-ASP well
 ‘S/he cooks / is cooking well.’

1a-Peter 1S-TNS-kick-ASP 9-dog
 ‘Peter kicked a/the dog.’

- c. u- Ø-phek-**ile** (*kuhle).
 1S-TNS-eat-ASP well
 ‘He cooked well.’

2.3 Adjacency:

- the ‘short’ forms require adjacency with the object DP, the ‘long’ forms do not.
 See (8)-(9).

- (8) a. u-Kuthula u-Ø-dl-é **uku-dla** em-kulw-ini.
 1a-Kuthula 1S-TNS-eat-ASP 15-food 3-kitchen-LOC
 ‘Kuthula ate food in the kitchen.’

- b. *u-Kuthula u-dl-é e-m-kulw-ini **uku-dla**.

- (9) a. u-ya-ku-dl-a **uku-dla** em-kulw-ini.
 1S-TNS-15OM-eat-ASP 15-food 3-kitchen-LOC
 ‘S/he is eating the food in the kitchen.’

- b. u-ya-ku-dl-a emkulwini **uku-dla**

2.4 Object marking (OM):

➤ **OM** only with ‘long’ forms:

- (10) a. u-Phita u-Ø-yi-khab-ile/-*é in-ja.
 1a-Peter 1S-TNS-9OM-kick-ASP 9-dog
 ‘Peter kicked the dog.’

- b. u-ya/-*Ø-ku-dl-a uku-dla
 1S-TNS-15OM-eat-ASP 15-food
 ‘S/he is eating/eats the food.’

→ **OM** indicates **adjunct status** of DP it associates with; this is reinforced by (11)

- (11) *u-Phita u-Ø-yi-khab-a yinqe n-ja.
 1a-Peter 1S-TNS-9OM-kick-ASP any 9-dog
 ‘Peter kicks any dog.’

➤ **OM** is optional (see 12) but forces Topic-related readings on DP object (i.e., specificity/definiteness); see (13) & also Buell (2005) for Zulu.

- (12) a. u-Phita u-(yi)-khab-ile in-ja esedlula
 1a-Peter 1S-TNS-9OM-kick-ASP 9-dog in passing
 ‘Peter kicked (the) dog in passing.’
- b. u-ya-(ku)-dl-a uku-dla
 1S-TNS-15OM-eat-ASP 15-food
 ‘S/he is eating/eats (the) food.’
- (13) a. u-Ø-dl-ile uku-dla u-Kuthula.
 1S-TNS-15OM-eat-ASP 15-food 1a-Kuthula
 ‘Kuthula ate **some** food.’
- b. u-ku-dl-ile uku-dla u-Kuthula.
 1S-TNS-15OM-eat-ASP 15-food 1a-Kuthula
 ‘Kuthula ate **the** food.’

Summing up:

- ❖ SHORT form compulsory for argument status of DP related to object theta-role
- ❖ OM indicates adjunct status and associates with LONG forms

3. Complex transitives

3.1 Ditransitives and double object constructions (DOC)

- (14) u-Kuthula u- Ø-ph-é u-Phita u-gwalo.
 1a-Kuthula 1S-TNS-give-ASP 1a-Peter 11-book
 ‘Kuthula gave Peter a/the book.’

- No OM required for ditransitives with the short form;

- Both indirect object (IO) & direct object (DO) DP are required with the short form but they can surface as either OM or independent DPs (15):

- (15) a. u-Ø-**lu**-ph-é *(u-Gabriela).
 1S-TNS-11-give-ASP
 ‘He gave it (book) to Gabriela.’
- b. u-Ø-**m**-ph-é *(u-gwalo)
 1S-TNS-HIM/HER-give-ASP 11-book
 ‘He gave him/her a/the book.’

- However, with the long form, the Theme but not the Goal OM can be omitted:

- (16) a. u-Ø-**ngi-ph-ile** (u-gwalo)
 1S-TNS-ME-give-ASP 11-book
 'He gave me the book / it.'
- b. *u-Ø-**lu-ph-ile** u-Gabriela
 1S-TNS-11-give-ASP 1a-Gabriela
 'He gave Gabriela the book.'
- c. u-Ø-**m-ph-ile** (u-Gabriela)
 1S-TNS-HER-give-ASP 1a-Gabriela
 'He gave Gabriela it.'

➤ **Long form takes away the Theme argument position³**

Note further that quantified objects can only occur with the short forms (17):

- (17) a. u-Kuthula u-Ø-fak-é yinqe n-ja yinqe bhokis-ini.
 1a-Kuthula 1S-TNS-put-ASP any 9-dog any box-LOC
 'Kuthula put any dog in any box.'
- b. * u-Kuthula u-Ø-fak-ile yinqe nja yinqe bhokisini.
- c. u-Kuthula u-Ø-fak-a yinqe n-ja yinqe bhokis-ini.
 1a-Kuthula 1S-TNS-put-ASP any 9-dog any box-LOC
 'Kuthula is putting any dog in any box.'
- d. * u-Kuthula u-ya-fak-a yinqe nja yinqe bhokisini.

3.2 Applicatives

Note that the applicative morpheme *-el*, which introduces an additional argument (i.e., Benefactive, Locative), also requires the 'short' form (though see complications below):

- (18) 'S/he eats in the kitchen':
- a. u-ya/*Ø-dl-a em-kulw-ini.
 1S-TNS-eat-ASP 3-kitchen-LOC
- b. u-*ya/Ø-dl-el-a em-kulw-ini.
 1S-TNS-eat-APPL-ASP 3-kitchen-LOC

³ Note that with ditransitives, OM does not necessarily indicate adjunct status of the theta-role it associates with. In fact, it seems to indicate quite the opposite. This is further supported by the privileged association of OM with the highest theta-role (i.e., the Goal).

→ locative can only be adjacent to the verb (i.e., an argument) in the presence of APPL

- (19) a. u-Kuthula u-Ø-dl-é (*em-kulw-ini) uku-dla emkulwini
 1a-Kuthula 1S-TNS-eat-ASP 3-kitchen-LOC 15-food 3-kitchen-LOC
- b. u-Kuthula u-Ø-dl-el-é emkulwini uku-dla
 1a-Kuthula 1S-TNS-eat-APPL-ASP 3-kitchen-LOC 15-food
 ‘Kuthula ate his food in the kitchen.’

→ benefactive QP is okay (i.e., an argument) in the presence of APPL:

- (20) *u-Kuthula u-*ya/Ø-phek-el-a yinqe ku-dla yinqe m-fazi.
 1a-Kuthula 1S-TNS-cook-APPL-ASP any 15-food any 1-woman
 ‘Kuthula is cooking any food for any woman.’

Interestingly, as with ditransitives, the APPL role is realized obligatorily, while the Theme role (or some other vP-internal element) is required only in the presence of the short form:⁴

- (21) a. u-Ø-m-phek-el-é *(isi-tshwala / yinqe ku-dla).
 1S-TNS-HER/HIM-cook-APPL-ASP 7-mush / any 15-food
 ‘S/he cooked polenta / any food for her/him.’
- b. Umphekelihe (isitshwala).
- c. u-Kuthula u-Ø-m-phek-el-a *(isi-tshwala / eziko)
 1a-Kuthula 1S-TNS-HER/HIM-cook-APPL-ASP 7-mush / fireplace
 ‘Kuthula is cooking polenta for him / cooking for him at the fireplace.’
- d. u-Kuthula u-ya-m-phek-el-a.
 1a-Kuthula 1S-TNS-HER/HIM-cook-APPL-ASP
 ‘Kuthula is cooking for him/her.’

- **Though more complex, this is consistent with an analysis where the SHORT but not the LONG form correlates with a syntactic argument-licensing domain (a phase).**

Summing up:

- ❖ OM associates both with SHORT and LONG forms
- ❖ SHORT form creates an additional syntactic argument position

⁴ Note that (21b) is an instance of “truncation”, as discussed by Hyman (1995)

4. Intransitives and Subject DPs

There are (at least) the following 3 subject positions in Ndebele: 1 preverbal, 2 postvbl

- The preverbal subject position:
 - an **argumental** (independently observed by Zeller 2008) and not Topic-related, as the subject need not be specific (contra what Buell 2005 observes for Zulu)
 - triggers **agreement** with the verb, so an IP-related position to which the subject moves for A-related purposes such as EPP and Case.
 - short or long form independent of the subject

- (22) a. Yinqe m-fazi a-nga-khab-a
any 1-woman 1S-could-kick-ASP
'Any woman could kick.'
- b. U-Ø-hamb-ile.
1S-TNS-walk-ASP
'Someone walked.'
- c. Imbodlela i-Ø-f-ile.
9-bottle 9S-TNS-break-ASP
'A/The bottle broke.'
- d. u-Kuthula u-ya-phek-a kuhle.
1a-Kuthula 1S-TNS-cook-ASP well
'Kuthula cooks well.' (as a general property)

- The agreeing postverbal subject position:
 - a **non-argumental**, presumably Topic-related position, to which the subject moves after it has dislocated to Spec,IP as discussed above; manifests **agreement** with the verb as expected
 - short or long verb form independent of the subject; note that the object in (23b) is itself a Topicalized adjunct

- (23) a. u-Ø-khab-é in-ja u-Phita
1S-TNS-kick-ASP 9-dog 1a-Peter
'Peter kicked a dog.'
- b. u-Ø-yi-khab-ile in-ja u-Phita
1S-TNS-9-kick-ASP 9-dog 1a-Peter
'Peter kicked **the** dog.'
- c. i-Ø-f-ile imbodlela / * yinqe m-bodlela.
'The bottle /any bottle broke.'

5. Analysis

- **The SHORT forms are linked to a phasal domain which, following Chomsky (2005, 2006) has Case and EPP properties;**
 - These A-related properties are transmitted to a proxy head
- **The LONG forms are associated with a non-phasal domain, with no Case and no EPP**
- **Suppose that in Ndebele (and, possibly, Zulu and/or Bantu more generally), phasal status is a property of Aspect, not v**
 - Not unlikely given the locus of short versus long form alternations
- **Suppose further that Asp and v constitute Merged heads (i.e., they are not separated unless further functional projections interfere between them)**
 - See Culicover (1999), Giorgi & Pianesi (1997), Haider (1988) for merged projections
- **So, for non-phasal AspP, there is no EPP and no Case transmitted to the predicate domain; this is the situation with LONG forms**

→ in the absence of a phasal domain, the associated nominal lacks Case. Here the nominal is a predicate modifier which restricts its denotation (see de Hoop 1996).

→ when the verb's thematic properties are satisfied via an adjunct, the associated nominal is a semantic but not a syntactic argument (see Chung and Ladusaw 2003).

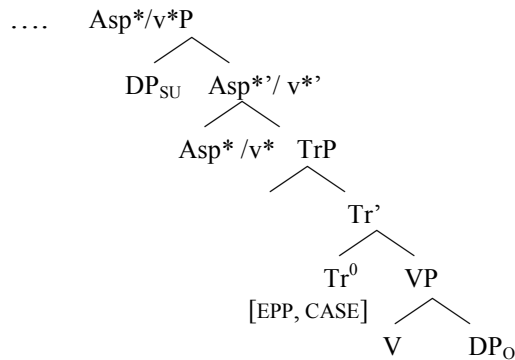
- **For phasal Asp*P, both EPP and Case are transmitted to the proxy head; this is the situation with SHORT forms**

→ in the presence of a phasal domain, the associated nominal functions as a syntactic argument checking EPP and Case.

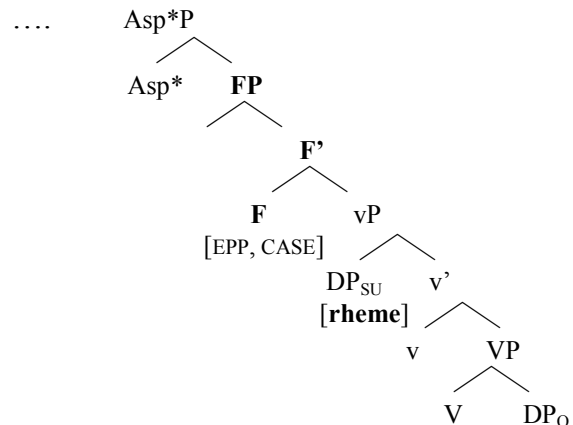
- **Assume the following Hierarchy of Projections, where 'F' is an optional head present when the subject is not part of the presuppositional domain (non-topical); its role is to provide a landing site for the rhematic subject before remnant vP movement (proposed by Buell 2005)**
 - FP could be some low Focus position as in Belletti (2001); however, the subject DP evacuates there, rather than undergo any movement for some [Focus] feature checking
 - Tr is the locus of vP-internal Case checking for transitive predicates (Bowers 2002)

(29) HP: C > I > Asp > (F) > v > Tr > (Appl) > (Caus) > V

→ (30)a.



b.



- In the presence of an Applicative domain (not shown above), yet another argument position is licensed given that these Applicatives are in turn phasal (McGinnis 2003), so capable of licensing syntactic arguments within VP

This analysis explains:

- Argument-adjunct asymmetries for internal arguments.
- Noted asymmetry between Bantu and Indo-European with respect to subject-verb agreement (Baker 2008, Zeller 2008):
 - While preverbal subjects agree in phi-features in both L families, in
 - Bantu, postverbal subjects do not
 - IE, postverbal subjects do
- Explains why postverbal subjects with *ku-* must be present (31):
 - Focus-related properties cannot be satisfied by null DPs

- (31) a. *Ku-Ø-hamb-ile.
 b. *Ku-ya-hamb-a.

- Note too that A-related properties for predicate-adjacent Focus domains have been noted for other languages too (Alboiu 1999, for Romanian, Ordóñez, 1998, for Spanish), so unsurprising for Ndebele.

6. Notes on Telicity

→ Borer (1994) assumes that telicity (or boundedness) effects are due to the presence of an Event Measure (EM). The EM is assigned its delimiter role in the specifier of an event functional projection, which also assigns ACC.

→ We assume EMs occupy the specifier of TrP of Bowers (2002), a proxy of a phasal Asp*/v*P, Case checking is also guaranteed.

→ for Ndebele, the prediction is that for verbs involved in telicity alternations the phasal-related forms (i.e., the ‘short’ forms) but not the non-phasal forms (i.e., the ‘long’ forms) receive a telic interpretation

- (32) a. u-**ya**/***Ø**-dl-a
 1S-TNS-eat-ASP
 ‘S/he is eating.’ (**atelic**)
- b. u-***ya**/**Ø**-dl-a uku-dla
 1S-TNS-eat-ASP 1S-food
 ‘S/he eats food.’ (**telic**)
- c. U-Phita udubul-**é**/***ile** zonke inyoni.
 ‘Peter shot all the birds.’ (**telic**)
- d. U-Kuthula unath-ile amanzi.
 ‘Kuthula drank water.’ (**atelic**)
- e. U-Kuthula unath-**é** amanzi.
 ‘Kuthula drank a specific bottle of water.’ (**telic**)

(33) **TELIC** √hamb ‘walk’

- a. U-***ya**/**Ø**-hamb-a esi-ya esi-ful-eni.
 1S-TNS-walk-ASP 7-toward 7-lake-LOC
 ‘She is walking to the lake.’
- b. U-**Ø**-hamb-**é**/***ile** esifuleni
 1S-TNS-walk-ASP 7-lake-LOC
 ‘She walked to the lake.’

(34) **ATELIC** √hamb ‘walk’

- a. u-**Ø**-hamb-***é**/**ile**
 1S-TNS-walk-ASP
 ‘She walked.’
- b. ngi-**Ø**-hamb-***é**/**ile** ekuseni
 1p.S-TNS-walk-ASP morning
 ‘I walked this morning.’

5. Conclusions

- ✓ **The SHORT forms are linked to an Aspectual phasal domain (Asp*P) with Case and EPP properties, while the LONG forms are associated with a non-phasal domain, with no Case and no EPP**
- ✓ **Asp*P is merged with vP unless the DP subject needs to remain in a non-presuppositional, rhematic domain**
- ✓ **The SHORT forms occur when needed to license syntactic DP arguments, while the LONG forms associate with syntactic adjuncts (or absence of any internal theta-role)**
- ✓ **Choice between the SHORT versus LONG forms is intimately linked to telicity properties, as well as information packaging strategies in Ndebele.**

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