

ARGUMENT-ADJUNCT ASYMMETRIES IN NDEBELE: THE LONG AND THE SHORT OF IT¹

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Abstract: We propose that the ‘short’ versus ‘long’ form alternation available to the present and recent past tenses in many Bantu languages signals an asymmetry of phasal domains in Ndebele (Nguni, Zimbabwe). Specifically, the short form associates with a phasal, hence Case-licensing, domain and, implicitly, syntactic arguments, while the long form associates with a non-phasal domain which can only engage adjuncts and/or predicates. By looking at quantifier availability, optionality and linearization facts, interactions with object marking, as well as passivization facts, we put forth a syntactic analysis of a phenomenon typically linked to prosody (van der Spuy 1993), phonological weight of vP (Buell 2005), or focusing strategies (Ndayiragije 1999). While not incompatible with former analyses, our approach also has the merit of accounting for previously unnoticed syntactic and semantic idiosyncrasies (e.g. telicity) associated with the short/long split, as well as agreement asymmetries between Bantu and Indo-European.

Keywords: Ndebele, short/long tense, phase, Case, telicity

1. Introduction

Ndebele is an Nguni language (Southern Bantu), spoken primarily in Zimbabwe and closely related to Zulu, Xhosa, and Swati. As is typical of Bantu, the language has a highly inflected verbal domain, consisting of both derivational and inflectional affixes. The verb manifests obligatory subject marking (except for infinitives and some imperatives) and contextually defined object marking (OM) denoting agreement with Ndebele’s varied system of nominals (i.e. there are 15 noun/grammatical gender classes). The verbal template is given in (1).²

(1) **Verbal Template for Ndebele** (see also Buell 2005 for Zulu, Sibanda 2004)

pre-pronominal prefixes	Subject marking (S)	Tense	Object agreement (OM)	Verb √	Derivational Suffixes	Aspect ‘FV’
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On a par with Zulu (discussed in Buell 2005), Ndebele has two forms for the affirmative present tense and the recent past tense. Following the tradition of pedagogical grammars, we label these the ‘long’ versus ‘short’ forms.³ The short present tense is a zero morpheme, while the long form is morphologically instantiated as *ya-*. In the present tense, the final vowel is uniformly realized as *-a*. The recent past has no overt tense morphology but exhibits the short versus long dichotomy in its aspectual system, as *-é* and *-ile*, respectively. Examples of the present and recent past tenses are given in (2) and (3).

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² The final suffix is assumed to either be an inflectional marker (IFV) or the default final vowel (FV) *-a* (Sibanda 2004). However, all our data suggest that this suffix systematically encodes polarity or aspect, specifically, information tied in to the inflectional domain (see also Buell 2005, for Zulu, Ferrari-Bridgers, p.c., Pak 2008, for Luganda, Zeller 2008). For this reason, we take it to represent an Aspect head.

³ See also ‘conjoint’ versus ‘disjoint’ for the ‘short’ versus ‘long’, respectively (Buell 2006, and references therein).

2. Simple transitives

This section looks at various empirical properties connected to the short versus long form dichotomy, all of which support the claim that these forms are intimately tied to an argument-adjunct potential asymmetry.

2.1 Indefinite quantifiers

Non-unique universal quantifiers (i.e. quantifiers “identifying without exclusion”, Kiss 1998:252) must raise to scope positions to bind IP internal variables. As non-variables, pronouns should not be able to interfere in this A-bar relationship.⁵ That this holds true was shown by both Rizzi (1986) and Cinque (1990) for Italian. Drawing on clitic left dislocation facts in Italian, which involve an adjunct DP coindexed with a *pro* argument, these authors show that such quantifiers cannot be merged as adjuncts. Specifically, Rizzi (1986: 395-397) argues that (4a) is explained under (4b).

- (4) a. *Nessuno, lo conosco in questa città.
 ‘Nobody, I know him in this city.’
- b. A pronoun cannot be locally A-bar bound by a quantifier.

In other words, quantifiers in need of establishing operator-variable chains must of necessity be initially merged as arguments and only then undergo A-bar movement; they must bind an actual trace and not a pronoun in argument position. Consequently, in languages and/or contexts where such quantified DPs are ruled out, the respective DP position is an adjunct position and the argument position is occupied by a pronoun. Given that non-referential quantifiers are absent in Mohawk, Baker (1996) argues that, in this language, all DP positions are adjunct positions and arguments are restricted to *pro*-forms. Interestingly, in Ndebele, non-referential *yinqe* ‘any’ NP forms are only available with the short inflection. See (5)-(6).

- (5) 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
 ‘S/he eats any food.’
- (6) 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.’

This suggests that long forms cannot license syntactic arguments and, implicitly, that the DP they occur with is in a right-dislocated adjunct position. Note that adjunct status of these DPs is in line with theoretical claims in van der Spuy (1993) who argues that long forms are IP final. As such, any material following these forms would be outside of IP, hence non-argumental.

⁵ In effect, this would trigger a Weak Crossover effect.

2.2 XP optionality

As noted in the introduction, short forms cannot occur without another constituent linearized after them. Typically, they require an overt DP object but, in some cases, some other predicate-internal constituent (e.g. a manner adverb) will suffice. Consider the data in (7):

- (7) 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).⁶
 1S-TNS-eat-ASP well
 ‘He cooked well.’

Conversely, long forms, need not be followed by any other constituent, as seen in (8a-b) and often what follows is restricted in specific ways, see (8c) where the manner adverb is ruled out.

- (8) 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).
 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.’

The above facts further support the assumption that the DP object is not a syntactic argument with transitives in the long form (see also Buell 2005, 2006, for similar claims for Zulu). Rather it looks like an adjunct potentially occupying some position in the CP periphery (which would explain the exclusion of VP internal adverbs).⁷

2.3 Adjacency

The short forms require adjacency with their object DP, the long forms do not. This additional argument-adjunct asymmetry is shown in (9)-(10).

- (9) a. u-Kuthula u-Ø-dl-é **uku-dla** em-kulw-ini.
 1a-Kuthula 1S-TNS-eat-ASP 15-food 3-kitchen-LOC

⁶ Note in (i) that, independently of the short versus long dichotomy, *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.’

⁷ Following Cecchetto (1999) for Italian, Buell (2008) argues that, in Zulu, right-dislocation is VP-external but IP-internal. While scope interactions with Negation support such a view, we remain agnostic here as to the exact locus of dislocation pending further research.

- (10) b. *u-Kuthula u-Ø-dl-é e-m-kulw-ini **uku-dla**.
 1a-Kuthula 1S-TNS-eat-ASP 3-kitchen-LOC 15-food
 ‘Kuthula ate food in the kitchen.’
- a. u-**ya**-ku-dl-a **uku-dla** em-kulw-ini.
 1S-TNS-15OM-eat-ASP 15-food 3-kitchen-LOC
- b. u-**ya**-ku-dl-a emkulwini **uku-dla**
 1S-TNS-15OM-eat-ASP 3-kitchen-LOC 15-food
 ‘S/he is eating the food in the kitchen.’

2.4 Object marking

As mentioned, in Ndebele object marking (OM) does not occur in all cases. However, as in Bantu more generally, it is quite extensively used. With monotransitives, OM can only occur with long forms, never with short forms. See (11a) for the recent past and (11b) for the present.

- (11) 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.’

Furthermore, OM need not be accompanied by a coindexed overt DP, see (12a) where *isitshwala* ‘polenta’ is optional. When both OM and DP are present, we refer to “clitic doubling”, following Buell (2005:63). Note that, OM itself is optional with the long form, as shown in (12b), though there are interpretive effects to be discussed below.

- (12) a. u-Kuthula u-Ø-si-dl-ile (isi-tshwala).
 1a-Kuthula 1S-TNS-7OM-eat-ASP 7-polenta
 ‘Kuthula ate it / the polenta.’
- b. u-**ya**-(ku)-dl-a uku-dla
 1S-TNS-15OM-eat-ASP 15-food
 ‘S/he is eating / eats (the) food.’

Crucially, short forms lack agreement morphology with the adjacent argument, while long forms may (but need not) show OM with the object DP.

Jelinek (1984) argues that in languages with OM, the associated DP is an adjunct. All the empirical facts introduced in this section point to the same conclusion. With respect to the effect that OM has on interpretation, in clitic doubling contexts the DP associate has topic-related readings, such as specificity and/or definiteness. This is illustrated in (13)-(14) and has also been noted for Zulu (Buell 2005).

- (13) a. u-Phita u-Ø-(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.’

- (14) a. u-Ø-dl-ile uku-dla u-Kuthula.
 1S-TNS-eat-ASP 15-food 1a-Kuthula
 ‘Kuthula ate **some** food.’
- b. u-Ø-ku-dl-ile uku-dla u-Kuthula.
 1S-TNS-15OM-eat-ASP 15-food 1a-Kuthula
 ‘Kuthula ate **the** food.’

Given the topic effects of OM and the indefinite interpretation of *yinqe* DPs, (15) is also expected.

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

To sum up then, the data indicate that with simple transitives the short forms of both the recent past and present tenses associate with overt syntactic arguments (i.e. the DP related to the object theta-role is in an A-related position). This explains availability of certain quantified DPs and adjacency requirements with these forms, as well as compulsory presence of the selected VP material. On the other hand, as evidenced by lack of *yinqe* QPs, the long forms of both these tenses do not license DP arguments. Rather, if an overt constituent is present, it is of necessity a right-dislocated adjunct, despite the fact that it most frequently denotes the object theta-role. Furthermore, the long forms may occur with OM, with or without the coindexed DP adjunct. In clitic doubling contexts, the coindexed DP has a topic-like flavour. Consequently, the presence of the OM (i.e. agreement with the object) could be taken to correlate with a null *pro* argument situated within the VP, as is often proposed for similar constructions cross-linguistically (e.g. Baker 1996, for Mohawk, Buell 2005, for Zulu, Cinque 1990, for Italian, etc.), or else the object marker is itself a pronominal clitic (see Zwart 1997) initially merged in a thematic position and subsequently moved within the inflectional domain. As both (5,6b) are ruled out with the long forms despite the absence of an OM, (4b) must be violated due to the presence of some nominal within the VP. Given that this nominal can only be realized as a bundle of phi-features, we take it to be ϕ P. ϕ P may be null or overt (in the latter case we see OM). We revisit the ϕ P versus the *pro* label in the next section, after first addressing data involving complex transitives.

3. Complex transitives

This section looks at verbal domains that select internal (i.e. non-subject related) arguments beyond a direct object. Specifically, ‘three-place’ predicates or constructions with an applied object. The focus is on the relationship between the short/long forms, predication, and OM.

3.1 Ditransitives and double object constructions (DOC)

Predicates selecting both a direct (DO) and an indirect (IO) object also show asymmetries linked to the short/long split. Let us first look at short forms.⁸ Crucially both the

⁸ Note that we only discuss the recent past tense data here. For the present tense with complex transitives, the long versus short form seem to either correlate with syntactic argument asymmetries (as for simple transitives) or with a generic versus progressive/continuous reading. Further research is necessary to tease these facts apart.

IO and the DO must be spelled out with the short form, surfacing as either OM or independent DPs, as shown in (16).

- (16) a. 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.’
 b. u-Ø-**ngi**-ph-a ***(i-mota)**.
 1S-TNS-1SG.OM-give-ASP 9-car
 ‘He gave me a/the car.’
 c. u-Ø-**lu**-ph-é ***(u-Gabriela)**.
 1S-TNS-11OM -give-ASP
 ‘He gave it (book) to Gabriela.’
 d. u-Ø-**m**-ph-é ***(u-gwalo)**.
 1S-TNS-3SG.OM-give-ASP 11-book
 ‘He gave him/her a/the book.’

Given the above, it seems that both DPs have argument status, a fact reinforced by linearization properties: IO can either precede or follow DO as seen comparing (17) to (16a).

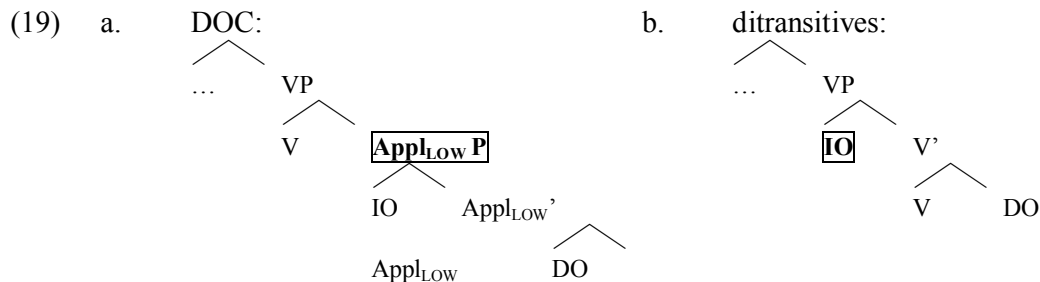
- (17) u-Kuthula u-Ø-ph-é u-gwalo u-Phita
 1a-Kuthula 1S-TNS-give-ASP 11-book 1a-Peter
 ‘Kuthula gave Peter a/the book.’

Interaction with OM is a bit more complicated than with simple transitives. Data from the short recent past indicate that IO agreement cannot co-occur with a coindexed DP Goal (18a), while clitic doubling of the DO is permitted (18b).

- (18) a. u-Kuthula u-Ø-**m**-ph-é **(*u-Phita)** ugwalo **(*u-Phita)**
 1a-Kuthula 1S-TNS-3SG.OM-give-ASP 1a-Peter 11-book 1a-Peter
 ‘Kuthula gave Peter a/the book.’
 b. u-Kuthula u-Ø-**lu**-ph-é u-Phita **u-gwalo**
 1a-Kuthula 1S-TNS-11OM -give-ASP 1a-Peter 11-book
 ‘Kuthula gave Peter the book.’

We suggest that in (18b), DO agreement points to the adjunct status of the overt DP *ugwalo* ‘book’ associated with the Theme role; specifically, clitic doubling indicates a dislocated DP. Given that in the previous section we concluded that short forms are associated with syntactic arguments, such a statement might seem contradictory. However, it is not unreasonable to assume that once the syntactic argument requirement is satisfied by one of the two arguments, the other DP can/must merge as an adjunct. What then would explain the asymmetry in (18)? Presumably the dichotomy between a double object construction (DOC), in (18a), and a ditransitive construction, in (18b). Following Pytkänen (2007), DOC structures involve a low applicative phrase (Appl_{LOW}P) merged as the complement of the verb, so in essence, a unique VP internal argument. This applicative head has the DO as the complement and the IO as its specifier and it satisfies the syntactic argument requirement for the short form. As both Theme and Goal are selected by the Appl_{LOW} head, they must both surface. With ditransitives, on the other hand, the verb itself has two internal theta-roles to assign: Goal and Theme.

Following UTAH (Baker 1996), the Theme role merges as complement, with the Goal as specifier.⁹ Due to general locality conditions (Chomsky 1995, Rizzi 1990) and given that the Goal is structurally higher, the IO will have to satisfy the syntactic argument requirements related to the short form (to be reformulated as a phasal EPP property in section 5), so can never be merged as an adjunct. Conversely, the Theme DP can (or perhaps needs to) be an adjunct. Further investigation is needed to confirm these speculations. However, given that these issues are not central to our discussion, we leave them for further research. Snippets of structures are offered in (19), with the constituent responsible for satisfying the syntactic argument needs of the short form boxed and in bold.



Moving next to long forms, we note several differences. The data in (20) show: (i) optionality of the Theme, but not of Goal, seen in (20a,b), (ii) impossibility of Theme OM (20b), (iii) optional clitic doubling of the Goal, seen in (20c), and (iv) preference for OM of the Goal, seen in (20d) where the overt DP by itself is deemed “incomplete”.

- (20) a. u-Ø-**ngi**-ph-ile (u-gwalo).
1S-TNS-1SG.OM-give-ASP 1I-book
'He gave me the book / it.'
- b. *u-Ø-**lu**-ph-ile (u-Gabriela).
1S-TNS-1IOM -give-ASP 1a-Gabriela
'He gave Gabriela the book.'
- c. u-Ø-**m**-ph-ile (u-Gabriela).
1S-TNS-3SG.OM-give-ASP 1a-Gabriela
'He gave Gabriela it.'
- d. # u-Ø-ph-ile u-Phita.
1S-TNS-give-ASP 1a-Peter

These facts can be explained once we assume that the overt DPs associating with both Goal and Theme theta roles can only be realized as adjuncts. (20a) indicates this for the Theme and (20c), for the Goal (compare to 18a, with the short form, where the IO cannot be clitic doubled).

Such argument-adjunct asymmetries are further confirmed by passivization facts. With the short form, both IO and DO can passivize, see (21a,b,c), but passivization is ruled out with the long form, see (21d,e) for ditransitives and (21f) for simple transitives.

- (21) a. u-Phita u-Ø-ph-**iw-é** u-gwalo.
1a-Peter 1S-TNS-give-PASS-ASP 1I-book
'Peter was given the book.'

⁹ This fact is reinforced by cases like *Uphé uPhita*, which are marginally possible. Interestingly, these can never mean 'gave x to Peter' but only 'gave Peter (to some previously specified person)' (i.e. *uPhita* is a Theme).

- | | | | |
|----|-----------------------------|------------------------------|----------|
| b. | u-gwalo | lu-Ø-ph-iw-é | u-Phita. |
| | 11-book | 11S-TNS-give-PASS-ASP | 1a-Peter |
| | 'The book was given Peter.' | | |
| c. | i-khekhe | li-Ø-dl-iw-é. | |
| | 5-cake | 5S-TNS-eat-PASS-ASP | |
| | 'The cake was eaten.' | | |
| d. | *u-gwalo | lu-Ø-m-ph-iw-ile. | |
| | 11-book | 11S-TNS-3SG.OM-give-PASS-ASP | |
| e. | *u-Phita | u-Ø-ph-iw-ile. | |
| | 1a-Peter | 1S-TNS-give-PASS-ASP | |
| f. | *i-khekhe | li-Ø-dl-iw-ile. | |
| | 5-cake | 5S-TNS-eat-PASS-ASP | |

Even if we were to argue that (21d) is independently ruled out due to locality conditions (i.e. DO crossing an IO OM), both (21e) and (21f) show that with the long form the IO DP and the DO DP, respectively, are non-argumental.

A quick look at *yinqe* quantified objects shows the same argument-adjunct asymmetry. Such quantified Themes and Goals are licit with the short form but ruled out with the long form; compare (22a) to (22b).

- | | | | | | | |
|---------|-----------------------------------|----------------|-------|-------|-------|-------------|
| (22) 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 |
| b. | *u-Kuthula | u-Ø-fak-ile | yinqe | n-ja | yinqe | bhokisini. |
| | 1a-Kuthula | 1S-TNS-put-ASP | any | 9-dog | any | box-LOC |
| | 'Kuthula put any dog in any box.' | | | | | |

To sum up these findings, despite additional complications, constructions with complex transitives provide further support for the claim that short forms license syntactic arguments, while long forms do not, such that the overt DPs associated with the various theta-roles are adjoined outside of IP. In addition, the discussion sheds further light on the nature of OM. Recall that with simple transitives, OM is optional, can only occur with the long forms and has topic-like interpretive effects, so denotes association with a sentence peripheral adjunct position. With complex transitives, on the other hand, OM is also seen with short forms and can associate with syntactic argument status. This apparent contradiction can be reconciled once we assume OM is equivalent to a ϕ P projection which distributes as either an *argument* or a *predicate* (in the spirit of Déchaine and Wiltschko 2002). Note that a *pro* analysis would not work as *pro* cannot be a predicate. Further discussion is provided in section 5.

3.2 High Applicatives

As is characteristic of Bantu more generally, Ndebele has derivational suffixes to introduce theta-roles beyond those selected by the lexical root. The applicative morpheme *-el* is one such example (the other is the causative which we do not discuss here for lack of space). This morpheme introduces Benefactive and Locative participants into the syntactic structure of the vP shell and it is a High applicative ($\text{Appl}_{\text{HIGH}}$) in the sense of Pytkänen (2007); specifically, it does not involve transfer of possession. Consider (23).

- (23) a. u-Ø-phek-é/ile em-kulw-ini.
 1S-TNS-cook-ASP 3-kitchen-LOC
 b. u-Ø-phek-el-é/*ile em-kulw-ini.
 1S-TNS-cook-ASP 3-kitchen-LOC
 ‘S/he cooked in the kitchen.’
 c. u-*ya/Ø-dl-el-a em-kulw-ini.
 1S-TNS-eat-APPL-ASP 3-kitchen-LOC
 ‘S/he eats in the kitchen.’

While, the locative *emkulwini* ‘kitchen’ can occur with either the short or the long form (23a), the presence of Appl_{HIGH} is excluded with the long form (23b,c) in the absence of another constituent. This suggests that the applicative morpheme introduces an argument and that its properties cannot be satisfied by the long form.

Note further, in (24), that without the Appl_{HIGH} head, the locative cannot be adjacent to the verb but must follow the Theme argument.

- (24) 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.’

In (24a), the locative is an adjunct, while in (24b), it is an argument licensed by *-el*. (24b) is unsurprising under an account where both DPs are syntactic arguments and linearization of DP arguments follows hierarchical order (i.e., vP > Appl_{HIGH}P [DP_{LOC} Appl_{HIGH}] > VP [V DP]).

Furthermore, quantified *yinqe* applied arguments are licit but only in the presence of Appl_{HIGH} and only with the short form. (25) illustrates these facts with a Benefactive argument and the present tense.

- (25) a. 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.’
 b. I-gqwetha li-Ø-bhal-el-a yinqe m-fazi in-cwadi
 5-lawyer 5S-TNS-write-APPL-ASP any 3-woman 9-letter
 ‘The lawyer is writing any woman a letter.’
 c. *I-gqwetha li-Ø-bhal-a yinqe m-fazi in-cwadi
 5-lawyer 5S-TNS-write-APPL-ASP any 3-woman 9-letter

While the above facts strengthen the argument/adjunct correlation with the short/long forms, interesting insight is further gained by looking at the interaction of these applicatives with a lower argument, such as Theme. To this purpose, consider (26) in the recent past.

- (26) a. *u-Ø-phek-el-é (isi-tshwala).
 1S-TNS-cook-APPL-ASP 7-polenta
 ‘She cooked polenta.’
 b. u-Ø-m-phek-el-é *(isi-tshwala/yinqe ku-dla).
 1S-TNS-her/him-cook-APPL-ASP 7-polenta/any 15-food
 ‘S/he cooked polenta/any food for her/him.’

- c. u-Ø-m-phek-el-ile (isitshwala).
 1S-TNS-her/him-cook-APPL-ASP 7-polenta
 ‘S/he cooked him/her polenta.’

(26a) shows that the Appl_{HIGH} role is obligatory in the presence of *-el*. (26b,c) show that the Theme role is also compulsory with the short form when the applied object is instantiated as OM only.¹⁰ Here there is a correlation between the short form and the Theme role, such that the Theme is an argument in (26b) but not in (26c). This is expected given our previous data, but occurrence of an applicative OM with the long form, as in (26c), might seem puzzling in light of (23) where we saw that the short form is needed to syntactically license such arguments. The thing to note is that in (26c), the Appl_{HIGH} role is realized as an overt ϕ P and not a DP. Assuming a structure where Appl_{HIGH} P is above the VP, should we nonetheless be concerned that a lower syntactic position (i.e. that of Theme) is syntactically A-licensed by the short form across an intervening argument? Perhaps, but note that Theme objects can also passivize across Appl_{HIGH} arguments. This is shown in (27), where the Benefactive is an *yinqe* QP, so argumental, and the Theme has moved across it to the preverbal subject position.

- (27) uku-dla ku-Ø-phek-el-w-a yinqe m-fazi.
 15-food 15S-TNS-cook-APPL-PASS-ASP any 3-woman
 ‘The food is being cooked for any woman.’

Under accounts which view the Appl_{HIGH}P as a phasal domain (McGinnis 2001, Pak 2008, and references therein), there is an extra EPP feature enabling an outer Spec, such that the Theme may “leap-frog” across exactly one other argument and consequently engage in A-relationships with higher domains without violating locality conditions.

From our discussion it is clear that transitives of various complexity levels can only license DP arguments in the presence of the short tenses. Given that the short/long forms denote inflectional properties (i.e. tense, aspect) and are not purely vP-related, we also need to investigate the behavior of subjects before we can spell out an analysis.

4. Subject DPs in Ndebele

Ndebele has (at least) three distinct subject positions, one preverbal, two postverbal. These positions and their properties are briefly discussed below in connection to the short/long alternation.

4.1 The preverbal subject position

The preverbal subject always triggers agreement with finite verbs, shown in (28), has no specificity requirements (this last property contradicts observations for Zulu, Buell 2005), see (28b, c), may host QPs, as in (28a), and occurs with both the short form, (28e) and much of the data discussed so far, as well as the long form, (28b-d) and throughout the paper.

- (28) a. Yinqe m-fazi a-nga-khab-a
 any 1-woman 1S-could-kick-ASP
 ‘Any woman could kick.’

¹⁰ Note that (26c) is an instance of “truncation”, as discussed by Hyman (1995).

- b. U-Ø-hamb-ile.
1S-TNS-walk-ASP
'Someone walked.'
- c. Im-bodlela 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)
- e. In-ja i-Ø-bule-w-é
9-dog 9S-TNS-kill-PASS-ASP
'The dog was killed.'

Crucially, this subject position is an IP-internal position, presumably Spec,IP, to which the subject moves for A-related purposes such as EPP and/or Case. This position is insensitive to the short/long split, so of no further interest to our present study.

4.2 The agreeing post-verbal subject position

There are two types of post-verbal subjects. Here we look at the agreeing one. In (29), the subject DP agrees with the verb. While it may occur with other arguments, it follows rather than precedes them, see (29a,b). It is non-quantifiable (see 29c) and occurs with either the short or long forms, see (29a) and (29b-d), respectively.

- (29) a. u-Ø-khab-é (*u-Phita) in-ja u-Phita
1S-TNS-kick-ASP 1a-Peter 9-dog 1a-Peter
'Peter kicked a dog.'
- b. u-Ø-yi-khab-ile in-ja u-Phita
1S-TNS-9OM-kick-ASP 9-dog 1a-Peter
'Peter kicked the dog.'
- c. i-Ø-f-ile im-bodlela / * yinqe m-bodlela.
9-TNS-break-ASP 9-bottle / any 9-bottle
'The bottle broke.'
- d. u-Ø-ku-dl-ile u-Kuthula.
1S-TNS-eat-ASP 1a-Kuthula
'Kuthula ate it.'

If OM is present with the long form, as in (29b), the Theme DP is interpreted as specific and is an adjunct; compare to (29a). Given linearization facts, the subject DP in (29b) is also an adjunct. Adjunct status of this subject position is further reinforced by word ordering in (29a), as well as by the impossibility to host a *yinqe* QP.

To conclude, this agreeing post-verbal subject is situated in a non-argumental position, to which it has either moved after having first dislocated to Spec,IP to satisfy A-related purposes, as discussed above, or where it is base-generated, on a par with adjuncts satisfying internal theta-roles. Pending further research, we remain agnostic as to how the DP associated with the subject role gets to reside outside the IP domain. What is crucial is that the short/long distinction is independent of this subject position.

4.3 The non-agreeing post-verbal subject position

There is a second type of post-verbal subject in Ndebele. Consider (30).

- (30) a. **ku-f-é/*ile** yinqe m-bodlela.
EXPL-break-ASP any 9-bottle
'Any bottle broke.'
- b. **ku-f-é/*ile** im-bodlela.
EXPL-break-ASP 9-bottle
'A / The bottle broke.'
- c. **ku-hlek-é** in-gane. (Zeller 2008)
EXPL-laugh-ASP 9-child
'The child laughed.'

Note that the subject in (30) does not trigger agreement with the verb. Rather, the locative *ku*-marker is inserted instead (either as an expletive, see Zeller 2008, or as a head, see Buell 2005, for Zulu). This post-verbal position is insensitive to intransitive predicate type (unergative, as in (30c), or unaccusative, as in (30a, b), see also Zeller 2008) but seems more restricted with transitives, which are left out here. It is argumental, as evidenced by the availability of the *yinqe* QP subject seen in (30a). Furthermore, subjects in this predicate-related position require the short form (30a, b). Data in (31) shows that the long form is also ruled out in the present tense.

- (31) a. **ku-Ø-cul-a** aba-culi. (felicitous answer to 'What's going on?')
EXPL-TNS-sing-ASP 2-singer
'The singers are singing.'
'*Singers sing.'
- b. **aba-culi** **ba-ya-cul-a**
2-singer 2S-TNS-sing-ASP
'The singers are singing (now).'
'Singers sing.' (habitual/generic)

Note that the VS linearization with a non-agreeing subject is pragmatically favoured inthetic, out of the blue contexts where the subject is part of new information. More data in (32).

- (32) New info focus: Question: 'What happened?'
Answer:
- a. **ku-Ø-hamb-é** u-Gabriela.
EXPL-TNS-go-ASP 1a-Gabriela
'Gabriela left.'
- b. **ku-Ø-ph-é** u-Gabriela isi-tshwala.
EXPL-TNS-give-ASP 1a-Gabriela 7-polenta
'Gabriela gave (out) polenta.'

Given the new information focus association with this type of post-verbal subject, the absence of a generic reading in (31a) is straightforward: the rhematic domain is bound by the existential operator, \exists , while generics are bound by the universal quantifier, \forall , the two being semantically incompatible.

Compare next (32) to (33), where the subject is part of the presuppositional domain. In this case, the subject is optional and agrees with the predicate. Consequently, the DP *uGabriela* occupies a peripheral position coindexed with ϕ P in IP. DP optionality and the presence of the long form suggest an analysis similar to topicalized objects with OM discussed in section 2.

- (33) Presupposed info: Question: ‘What happened to Gabriela?’
 Answer: ‘**u-Ø-hamb-ile** (u-Gabriela).’
 1S-TNS-go-ASP 1a-Gabriela
 ‘Gabriela left.’

Nonetheless, the non-agreeing post-verbal subject can also be used with contrastive focus, as evidenced by the translation in (34), but, crucially, it does not require it (pace Ndayiragije 1999).

- (34) ku-Ø-hamb-é u-Gabriela.
 EXPL-TNS-go-ASP 1a-Gabriela
 ‘It’s Gabriela who went.’

To sum up, the non-agreeing post-verbal subject occupies an A-related position, with the subject DP either in-situ or some IP-internal position that is not Spec,IP. The short/long asymmetry suggests that the short tenses are indicative of a phasal domain which ensures Case (see Chomsky 2006, 2008) and, consequently, syntactic licensing of arguments within the rhematic domain. The next section provides an analysis to accommodate the data discussed in this paper.

5. Analysis

Following Chomsky (2006, 2008), phasal domains host A-related properties, such as Case, EPP, and phi-features. In order for convergent derivations to obtain, these features must be transmitted to a proxy head (see also discussion in Richards 2007). Given that CP and v^*P are the canonical phasal domains, feature-inheritance is by T (I, more generally) and V (or, rather, the proxy functor in the predicate domain). We adopt the feature-inheritance model here and argue that the descriptive asymmetries seen for Ndebele can be accounted for once we assume that the short but not the long forms are linked to a phasal domain. Furthermore, we suggest that in Ndebele (and, possibly, Zulu and/or Bantu, more generally) phasal status is a property of Aspect, not v . There are two reasons for taking this step: (i), the short/long alternation is lexicalized as a property of I, not v , and (ii), the alternation affects A-related post-verbal subjects, so cannot be a property of v given that subjects are merged in vP . Note too that whether lexicalization of the alternation occurs in T (as for present tense) or Aspect (as for recent past) is a post-syntactic issue we are not concerned with here. All the heads within IP interact morpho-syntactically for feature matching purposes, so the exact spell-out locus of the asymmetry is less relevant. Crucially, the phase has to be outside of vP (in order to accomodate subjects) and cannot be a property of C (the next phase head), as in that case it would be incapable of interacting with VP-internal arguments.

Why would Aspect and not v be phasal in Ndebele? Taking speculation one step further, we suggest the answer lies in their quasi-non-distinct nature. Permit us to elaborate. What we are proposing is that Aspect and v constitute Merged heads (in the sense of

Culicover, 1999, Giorgi and Pianesi 1997, Haider 1988) that do not project independently unless there is material intervening between them. Note that what is crucial to merged projections is feature-sharing (i.e. in this case, verbal functional properties) and the absence of an intervening specifier (i.e. Spec,AspP is not distinct from Spec,vP).

Let us also assume the hierarchy of projections in (35).

- (35) HP: C > T > Asp > (Foc) > v > (Tr) > (Appl_{HIGH}) > V

‘Foc’ in (35) is an optional head present when the subject is not part of the presuppositional domain (i.e. non-topical), whose role is to provide a landing site for the rhematic subject before remnant vP movement (proposed by Buell 2005); specifically, it stands for some low Focus domain (see Belletti 2001, 2002).¹¹ If it is present in the derivation, Asp and v will project independently, as the prerequisite for merged projections is no longer met. Lastly, Tr(ansitive) stands for the locus of vP-internal Case checking for transitive predicates (see Bowers 2002). Semantically, it is an ‘inner aspect’ position, as discussed in 5.1. The following two sections provide analyses for phasal and non-phasal Asp(*)P.

5.1 Phasal domains

With phasal Asp*P (i.e. short forms) and in the absence of Foc, A-features are inherited by Tr, as in (36).

- (36)
-

In (36), the relevant items are bolded and moved items (i.e. lower copies) are shown in angled brackets. For simplicity's sake, verb movement, while assumed, is not shown in any of the structures. The Theme role is satisfied by a DP argument which moves to Spec,TrP to check the inherited phasal EPP of Tr. In doing so, it satisfies its own syntactic licensing requirement (i.e. it gets Case).¹² Recall that in the short form, simple transitives disallow the Theme to be realized as an OM, see also (37). If agreement represents ϕ P, this suggests that ϕ P cannot satisfy the syntactic requirements of the short form (i.e. ϕ P cannot raise to Spec,TrP), a fact corroborated by the Appl_{HIGH} facts discussed in 3 and analysed further in this section.

- (37) *u-Phita u-Ø-yi-khab-é.
 1a-Peter 1S-TNS-9OM-kick-ASP
 ‘Peter kicked it (the dog).’

¹¹ It is unlikely that this low Focus domain is exclusive to subjects. In fact, it probably hosts other types of focal elements too. Buell (2007) proposes that such a domain hosts wh-phrases in Zulu.

¹² Following Chomsky (2006, 2008), we do not assume an independent Case Probe.

At first sight this is puzzling, especially given that uninterpretable phi-features are potentially also transmitted as part of the phasal A-package. In addition, it has been argued that in Bantu there is an intimate relationship between agreement and the EPP: Baker (2003), for instance claims that, agreement is packaged with the EPP feature, Baker (2008:172) further specifies that “whenever there is ϕ -feature checking between a head and a nominal, there must also be EPP checking.” However, while the claim is that phi-feature Probes have EPP features in Bantu (see also Carstens 2005), pending evidence to the contrary nothing forces the conditional into a bi-conditional. Specifically, there could be some other property requiring the EPP (i.e. projection of Spec,TrP) in (37). This is what we suggest below to be the case. Furthermore, given the lack of agreement between v and the argument it Case-marks, cross-linguistic evidence that the v domain has u ϕ seems lacking (as also pointed out by Baker et al. 2005).

A brief inspection of the semantic readings associated with short/long alternations indicates some interesting telicity oppositions. Consider (38).

- (38) a. u-Phita u-Ø-dubul-é/*ile z-onke in-yoni.
 1a-Peter 1S-TNS-shoot-ASP 10-all 9/10-bird
 ‘Peter shot all the birds.’ (**telic**)
- b. u-Kuthula u-Ø-nath-ile ama-nzi.
 1a-Kuthula 1S-TNS-drink-ASP 6-water
 ‘Kuthula drank water.’ (**atelic**)
- c. u-Kuthula u-Ø-nath-é ama-nzi.
 1a-Kuthula 1S-TNS-drink-ASP 6-water
 ‘Kuthula drank a specific bottle of water.’ (**telic**)
- d. 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.’ (**telic**)
- e. u-Ø-hamb-é/*ile esifuleni
 1S-TNS-walk-ASP 7-lake-LOC
 ‘She walked to the lake.’ (**telic**)
- f. ngi-Ø-hamb-*é/ile ekuseni
 1P.S-TNS-walk-ASP morning
 ‘I walked this morning.’ (**atelic**)

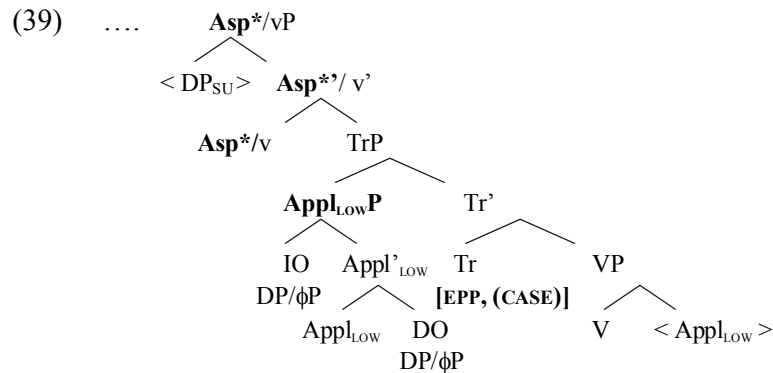
The data in (38) show that telic readings obligatorily require the short forms, while the long forms can only trigger atelic interpretations.

It has long been argued that situation aspect / aktionsart / inner aspect is syntactically represented (see Borer 1994, 2005, van Hout 2000, MacDonald 2008, Ritter and Rosen 2000, Travis 2000, to mention but a few). Crucially, what these studies show is that a syntactic argument must raise to the specifier of some vP-internal projection linked to aspectual properties in order to receive an event role or act as an event measurer. This specifier is the locus of telicity checking and also of Accusative Case, should the raised argument require it.

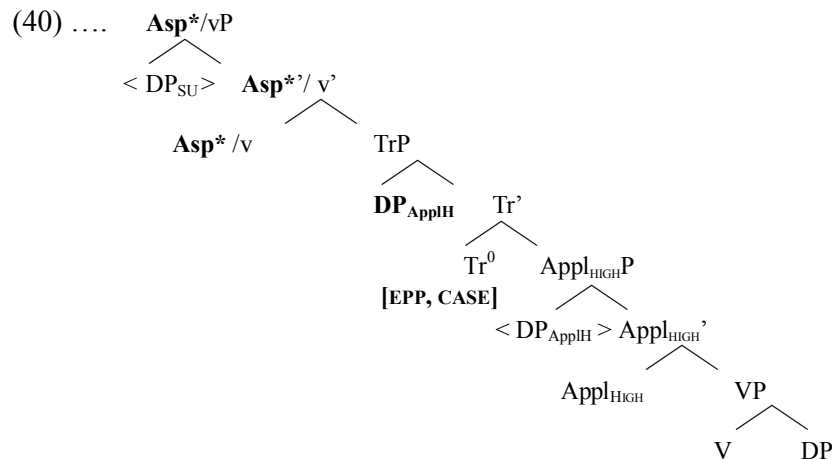
Our proposal then is that the ‘syntactic argument requirement’ of the short forms is essentially an EPP property (i.e. the need to project a specifier). However, the EPP need in (36) is intimately linked to aspectual features and not Case or phi-features. Presumably, ϕ P is an inadequate event measurer, so cannot project a Spec,TrP. However, semantically salient predicate-internal material, such as manner adverbs, seen in (7c), can.

Let us next return to Asp*P and other predicate types.

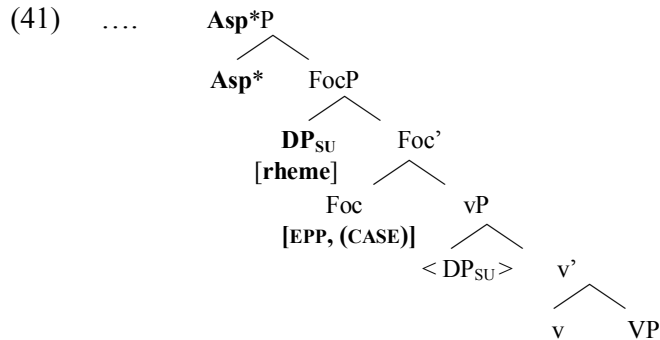
With respect to complex transitives, we have looked at predicates selecting both a direct and an indirect object and at applicative constructions. Considering first DOC, in this case the $\text{Appl}_{\text{LOW}}\text{P}$ serves as the syntactic argument satisfying the features of TrP . Consequently, the IO and DO can surface as either DP or ϕP arguments as these are not directly involved in checking the aspectually derived EPP feature. The syntactic licensing requirements (i.e. Case needs) of these arguments are met by virtue of the A-related properties discharged by the phasal domain. A partial tree is shown in (39).



Conversely, with High applicatives, the applicative argument is the one to satisfy the EPP feature of Tr , see (40), but if and only if it is a DP. When realized as ϕP , it cannot act as event measurer and a lower DP (e.g. a Theme) will dislocate instead. This analysis captures the data in (23)–(26). Do ϕP s dislocate at all? Given the pre-verbal positioning of OM one needs to assume they do. Presumably, they move to an IP-internal, clitic related position, but we do not pursue this here.



For post-verbal A-related subjects, see (41), which shows realization of a low Focus projection, FocP , hosting A-properties discharged by phasal Asp^* . In this case, the ‘EPP need’ is not linked to any ‘aktionsart’ properties. Rather, this specifier has focus-related semantics, that is, new information, contrastive focus, and possibly interrogative readings (see footnote 11). Note too that A-related properties for predicate-adjacent Focus domains are not uncommon cross-linguistically (Alboiu 1999, for Romanian, Ordóñez 1998, for Spanish), so should not be surprising for Ndebele.



While we do not assume any [Focus] feature checking with presentational/rhematic focus, we do not exclude it if an operator feature is at stake.¹³ For us, the subject's new information flavour is acquired by virtue of being maximally embedded within the IP. Furthermore, the absence of subject agreement in these derivations provides additional support for assuming that ϕ -features are absent from the properties transferred to Foc. Lastly, while the subject 'gets Case' from within the Focus domain, this is a feature Focus inherits from the phase head, rather than an intrinsic one.

5.2 Non-Phasal domains

With non-phasal aspectual domains, AspP, there are no A-related features such as EPP (and Case) to be transferred to any proxy head. Recall that these are the instances with the long forms. If the mechanisms of argument licensing are not in place, there can be no syntactic arguments. However, with transitive predication, both simple and complex, the relevant theta-roles are still present. How to reconcile this apparent contradiction?

Our proposal is that, in the absence of a phasal domain, the theta-role undergoes semantic incorporation (in the sense of de Hoop 1996, van Geenhoven 1998, Chung and Ladusaw 2003, Farkas and de Swart 2004, Mathieu forthcoming, inter alia). To be more specific, the theta-role is satisfied via an adjunct, which is a semantic but not a syntactic argument (see Chung and Ladusaw 2003). As Mathieu (forthcoming) points out, this type of incorporation represents a partial detransitivization process, with the verb-noun compound (in our case, the V- ϕ P unit) functioning as an intransitive. The associated nominal is simply a predicate modifier which restricts its denotation (see de Hoop 1996).¹⁴

While noun incorporation typically involves a lexical V-N(P) compound, the Ndebele facts perhaps most closely resemble German split-topics discussed by van Geenhoven (1998), once we discount movement. In (42), *Katzen* 'cats' is in a topicalised position, while its modifier *fünf* 'five' remains vP internal. The topic cannot receive wide scope as noun

¹³ If the interpretation is of contrastive focus, there presumably is feature-checking of a contrastive operator nature. Space limitations do not permit us to elaborate. In addition, (41) represents an unergative structure. Given that the exact initial merge locus of the DP subject (i.e. VP or vP internal) does not affect the analysis, we do not repeat with unaccusatives.

¹⁴ It is important to note is that the long form *-ile* is also used with predicates more generally: a restrictive relative clause in (ia), and an AP predicate in (ib).

(i) a. um-fazi o-ling-**ile**-yo.
1a-woman 1S.REL-good-ASP-REL
'a good woman'
b. um-fazi u-Ø-lung-**ile**.
1a-woman 1S-TNS-good-ASP
'The woman is good.'

incorporation does not introduce a variable or a discourse referent, but just a property that restricts the argument variable of the verb. This variable is of type $\langle e, t \rangle$ (i.e. a property), not of type $\langle e \rangle$ (i.e. an individual), such that (42) can only mean ‘as for cats each child has seen five’, and not ‘as for cats, there are five such that each child has seen them’ (see also Mathieu forthcoming).

- (42) Katzen_i hat jedes Kind fünf t_i gesehen.
 cats has each child five seen
 ‘Every child has seen five cats.’ (van Geenhoven 1998: 125)

Somewhat similar asymmetries are observed in Ndebele, reinforcing the $\langle e, t \rangle$ nature of ϕP in such cases. Compare (43a) to (43b).¹⁵

- (43) a. um-fazi w-onke u-Ø-bon- **ϕP_i** -ile [in-yoni ezi-ntathu]_i.
 1-woman 1-all 1S-TNS-see- ϕP -ASP 9/10-bird 10-three
 ‘Every woman saw three birds.’
 b. um-fazi w-onke u-Ø-bon-é in-yoni ezi-ntathu.
 1-woman 1-all 1S-TNS-see-ASP 9/10-bird 10-three
 ‘Every woman saw **the** three birds.’

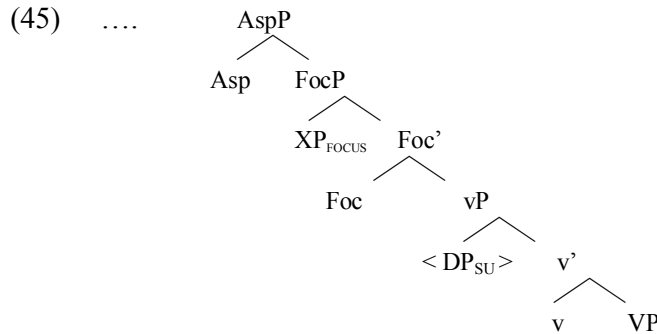
Consequently, a partial tree structure for a monotransitive would look something like (44). The optional coindexed DP_i is outside of the IP domain, its exact locus being irrelevant. Note too that in the absence of TrP, there is no event measurer domain, so no possible telic readings. The ϕP inserted in the predicate domain to match the DP adjunct does not need Case-licensing, because it is a syntactic modifier/predicate and not a syntactic argument.

- (44) Asp/vP (DP_i)
 / \
 < DP_{SU} > Asp’/ v’
 / \ / \
 Asp/v VP V ϕP_i

Furthermore, while nothing would *a priori* prevent a low Focus domain from projecting with non-phasal AspP, this domain would not be able to cater to the syntactic requirements of the DP subject argument, as there are no inherited Case features. Consequently, the subject would have to establish an A-relationship with the I domain and dislocate to Spec,IP, trigger agreement, and generally comply with properties in that domain. See (45) which shows the FocP projecting but no A-related properties on the Focus head.

¹⁵ Note, however, that the topic can receive wide scope when clitic doubled, see (i). Consequently, the D/referential potential of the clitic needs further investigation. One possibility is that the clitic is indeed merged as an argument in these cases. Following Buell (2005), its Case requirements are presumably satisfied by dislocation to an IP-internal, AgrOP domain.

- (i) aba-ntu b-onke ba-Ø-zi-khab-ile izin-ja ezi-mbili.
 2-person 2-all 2S-TNS-10OM-kick-ASP 10-dog 10-two
 a. ‘Every person kicked two dogs (but not the same two dogs).’
 b. ‘There were two dogs and each/every person kicked them.’



Note that this analysis can capture the data in (46), which shows exclusion of the long, non-phasal form with rhematic subjects. However, under assumptions that Focus itself assigns Case (Ndayiragije 1999), it would be difficult to explain these facts.

- (46) a. *ku-Ø-hamb-ile u-Gabriela.
 EXPL-TNS-go-ASP 1a-Gabriela
 'Gabriela left.'
- b. *ku-Ø-hamb-ile.
 EXPL-TNS-go-ASP
 'Someone left.'

(46b), with a null subject, on the other hand, might be syntactically licit, as DP subjects are typically optional, but is at least pragmatically infelicitous as focus-related properties cannot be satisfied by null syntactic objects.

6. Conclusions

This paper has argued for a phasal account of the short/long tense splits in Ndebele. Short forms are linked to an aspectual phasal domain with Case, EPP and telicity properties, while long forms are associated with a non-phasal domain, with semantic incorporation and pseudo-detransitivization. Such an account not only captures vP internal argument-adjunct asymmetries in Ndebele but, in addition, offers some insight into well-known agreement asymmetries between Bantu and Indo-European (IE) more generally. While preverbal subjects agree in phi-features in both language families (Baker 2008, Zeller 2008), postverbal subjects agree in IE but not in Bantu. Under our account this asymmetry follows in a straightforward manner. In IE, the lower phasal domain is established at the vP level, such that the subject in Spec,vP can only be syntactically licensed by A-properties at the next phasal level (i.e. CP domain, with C transferring its A-related properties to its proxy I head). In Bantu, on the other hand, the lower phasal domain is in Asp*, which only projects as an independent head in the presence of low Focus. In such cases, Focus inherits the phasal A-properties and syntactically licenses the rhematic subject, which is consequently blocked from further establishing A-relationships with higher domains, such as I. A-related properties on I are satisfied by the expletive *ku-* and no subject-verb agreement ensues.

In the absence of a split Asp*P/vP domain, A-related properties are transferred to a predicate-internal proxy head, thus explaining relevant telicity effects. Overall, these 'A-properties' are in effect equivalent to the need of projecting a specifier. The semantic properties of the syntactic object hosted by that specifier must, of course, match the semantics of the associated head.

Lastly, the interesting thing to note is that our analysis is quite compatible with prosodic approaches too. Crucially, Spell Out is driven by phasal domains, supposedly because these are the chunks relevant to the semantic and phonological interface levels (Chomsky 1999). It should be unsurprising then that syntactic phases are in fact correlated to prosodic domains. This has, in fact, been argued for by McGinnis (2002) for some Bantu languages, and by Legate (2003) for English.

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