

# Direct and Dependent Valuation in Ndebele light-verb constructions

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## 1 Introduction

- Ndebele (Bantu, Zimbabwe) employs *light verbs* (LVs) to encode meanings typical of adverbs in IE languages (e.g. already, still, first, again).
- LVs come in two types: **PART(iciple)-selecting** and **SUBJ(unctive)-selecting**

(1) PART-selecting LVs:

- U-**lokhe** e-bala.  
 1-still 1-read.PART  
 ‘He is still reading’
- U-**hlezi** e-bala.  
 1-always 1-read.PART  
 ‘He always reads’

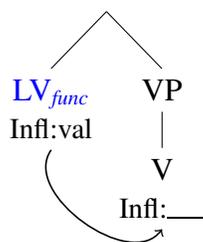
(2) SUBJ-selecting LVs:

- U-**qala** a-bale.  
 1-first 1-read.SUBJ  
 ‘He first reads’
- U-**mane** a-bale.  
 1-just 1-read.SUBJ  
 ‘He just reads’

I argue that

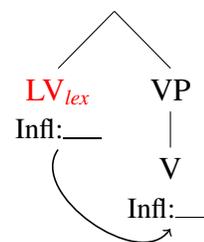
- The form of the main verb correlates with a systematic difference between the LVs:
  - SUBJ-selecting LVs** are **lexical verbs** ( $V^0$ )
  - PART-selecting LVs** are **functional verbs** (e.g.  $Asp^0$ )
- The form of the main verb is determined by the way in which Infl-feature of the main V is valued:
  - participles** arise via *Direct Valuation* (a relation with a valued feature).
  - subjunctive** forms result from *Dependent Valuation* (a relation with an unvalued feature).

(3) Functional Light Verbs:



*Direct Valuation* ⇒ participle

(4) Lexical Light Verbs:



*Dependent Valuation* ⇒ subjunctive

- Subjunctive morphology is a reflex of the **inflectional deficiency of its immediate syntactic context**:
  - in LV-constructions: the LV’s unvalued Infl
  - in subjunctive CPs: T’s unvalued Infl

## 2 Two types of Light Verbs

### 2.1 Three asymmetries

- **PART-selecting** and **SUBJ-selecting** LVs show systematic differences.

#### I. Ordering restrictions

PART-selecting LV > SBJV-selecting LV; but not vice versa

- |  |   |
|--|---|
| (5) ✓ PART-selecting LV > SUBJ-selecting LV  | (6) *SBJV-selecting LV > PART-selecting LV  |
| <p>a. U-<b>hlezi</b> e-<b>mane</b> a-bale<br/>1-always 1-just.PART 1-read.SUBJ<br/>'He always just reads'</p> <p>b. U-<b>hlezi</b> e-<b>phose</b> a-bale<br/>1-always 1-almost.PART 1-read.SUBJ<br/>'He always almost reads'</p> <p>c. U-<b>lokhe</b> e-<b>qala</b> a-bale<br/>1-still 1-first.PART 1-read.SUBJ<br/>'He still reads first'</p> | <p>a. *U-<b>mane</b> a-<b>hlezi</b> e-bala<br/>1-just 1-always.SUBJ 1-read.PART<br/>( 'He just always reads' )</p> <p>b. *U-<b>phose</b> a-<b>hlezi</b> e-bala<br/>1-almost 1-always.SUBJ 1-read.PART<br/>( 'He almost always reads' )</p> <p>c. *U-<b>qala</b> a-<b>lokhe</b> e-bala<br/>1-almost 1-always.SUBJ 1-read.PART<br/>( 'He still reads first' )</p> |

#### II. Position of negation

NEG < **SBJV-selecting LV** ✓

NEG < **PART-selecting LV** \*

- Lexical verbs in Ndebele can host a negation prefix (7); auxiliary verbs cannot (9).
- SBJV-selecting LVs pattern with lexical verbs (8); PART-selecting LVs pattern with auxiliaries (10).

- |   |  |   |
|---|--|---|
| (7) LEXICAL V   | (9) AUXILIARY  |   |
| <p>A-ka-bali.<br/><b>neg</b>-1-read<br/>He doesn't read</p>   | <p>a. *A-ka-be e-bala.<br/>1-<b>neg</b>-AUX 1-read<br/>( 'He wasn't reading' )</p>   | <p>b. U-be e-nga-bali.<br/>1-AUX 1-<b>neg</b>-read<br/>'He wasn't reading'</p>  |
| (8) <b>SUBJ-selecting</b>   | (10) <b>PART-selecting</b>   |   |
| <p>a. A-ka-<b>qali</b> abale.<br/><b>neg</b>-1-first read.SUBJ<br/>He doesn't first read</p> <p>b. A-ka-<b>mane</b> abale.<br/><b>neg</b>-1-just read.SUBJ<br/>He doesn't just read</p> | <p>a. *A-ka-<b>lokhe</b> e-bala.<br/><b>neg</b>-1-still 1-read<br/>( 'He is still not reading' )</p> <p>c. *A-ka-<b>hlezi</b> e-bala.<br/><b>neg</b>-1-always 1-read<br/>( 'He isn't always reading' )</p> | <p>b. U-<b>lokhe</b> e-nga-bali.<br/>1-still 1-<b>neg</b>-read<br/>'He is still not reading'</p> <p>d. U-<b>hlezi</b> e-nga-bali.<br/>1-always 1-<b>neg</b>-read<br/>'He is always not reading'</p> |

#### III. Ability to inflect for tense

T+**SBJV-selecting LV** ✓

T+**PART-selecting LV** \*

- PART-selecting LVs are inflectionally deficient – they cannot combine with tense (11)
- SUBJ-selecting LVs can be fully inflected, like any lexical verb (12)

- |      |                               |                                |                               |
|------|-------------------------------|--------------------------------|-------------------------------|
| (11) | a. *u-a-lokhe<br>1-PST-still  | c. *u-a-hlezi<br>1-PST-always  | e. *u-a-se<br>1-PST-already   |
|      | b. *u-za-lokhe<br>1-FUT-still | d. *u-za-hlezi<br>1-FUT-always | f. *u-za-se<br>1-FUT-already  |
| (12) | a. u-a-mane<br>1-PST-just     | c. u-a-qala<br>1-PST-first     | e. u-a-phose<br>1-PST-almost  |
|      | b. u-za-mane<br>1-FUT-just    | d. u-za-qala<br>1-FUT-first    | f. u-za-phose<br>1-FUT-almost |

## INTERIM CONCLUSION:

- Given the systematic syntactic asymmetries between PART-selecting and SUBJ-selecting LVs, the PART/SUBJ alternation has syntactic, not idiosyncratic, grounds.
- The facts above suggest that the syntactic difference between the two kind of LVs is lexical vs functional.

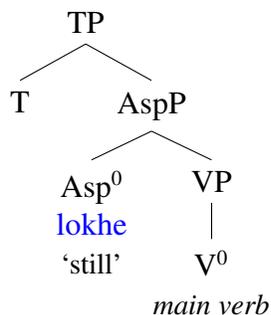
## 2.2 The syntactic difference between lexical and functional LVs

## PROPOSAL

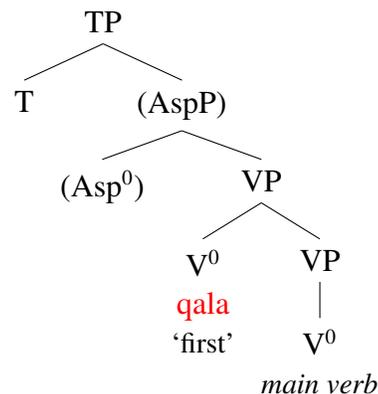
**PART-selecting** LVs are **functional** verbs (e.g. Asp<sup>0</sup>; they spellout functional heads in the clausal spine)

**SUBJ-selecting** LVs are **lexical** verbs (V<sup>0</sup>; they project like any lexical verb )

- (13) U-lokhe e-bala.  
1-still 1-read.PART  
'He is still reading'



- (14) U-qala a-bale.  
1-first 1-read.SUBJ  
'He first reads'



Going back to the asymmetries...

I. Ordering restrictions: **Functional LV** > **Lexical LV**; but not vice versa

⇒ Lexical LVs have a full extended projection, including functional heads realized as functional LVs.

⇒ Lexical LV's complement is small (VP), it doesn't contain functional clausal structure

II. Position of negation: ✓Neg > **Lexical LV**; \*Neg > **Functional LV**

⇒ As evidenced by compound tenses, negation in Ndebele is low – always on the lexical verb:

[<sub>T</sub> [<sub>Asp</sub> LV<sub>func</sub> [<sub>Neg</sub> NEG [<sub>v</sub> LV<sub>lex</sub> [<sub>v</sub> ]]]]]

⇒ The position of negation in LV-constructions follows from the LV’s status as functional (above NegP) or lexical (below NegP)

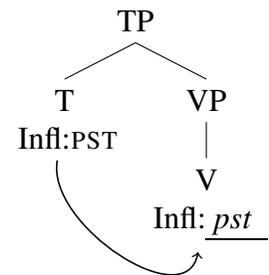
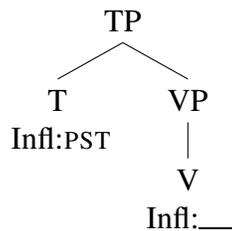
**III. Ability to inflect for tense: T+Lexical LV ✓; T+Functional LV\***

BASIC ASSUMPTIONS ABOUT INFLECTION:

- every verb has an unvalued Infl feature
- every functional head (e.g. T, Asp) has a valued Infl feature
- Agreement between Infl-features results in downward valuation

(Adger, 2003; Bjorkman, 2011; Merchant, 2011; Wurmbrand, 2011)

(15) U- ∅- bal -ile.  
1- PST- read -PST  
‘He read’

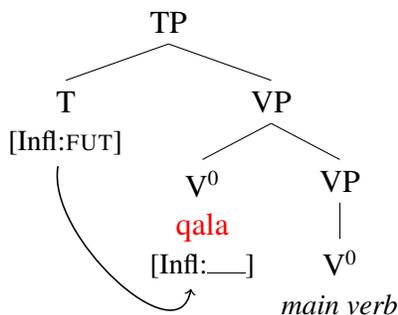


**SUBJ-selecting** LVs are lexical ⇒ **they have [Infl:\_\_\_]**

**PART-selecting** LVs are functional heads ⇒ **they have [Infl:val]**

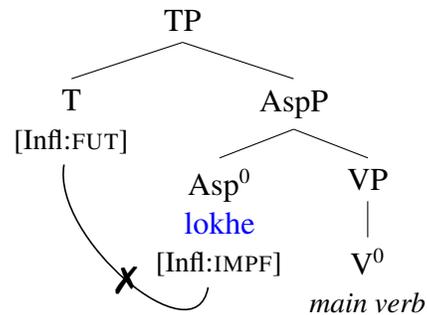
- In order to inflect for tense, the verb must have an unvalued Infl-feature.

(16) Lexical LV:  
U-**za-qala** a-bale.  
1-FUT-first 1-read.SUBJ  
‘He will first read’



unvalued Infl → can agree with T

(17) Functional LV:  
\*U-**za-lokhe** e-bala.  
1-FUT-still 1-read.PART  
‘He will still be reading’



valued Infl → cannot agree with T<sup>1</sup>

<sup>1</sup> This structure is not ineffable – in the grammatical counterpart, the future tense inflection is realized on a default auxiliary (*be*), as in compound tenses.

### 3 Direct vs Dependent Valuation

#### 3.1 Deriving main verb morphology

- We now have a systematic correlation between the syntactic type of LV and the morphology of its complement.
  - Functional LVs  $\Leftrightarrow$  PARTICIPLE
  - Lexical LVs  $\Leftrightarrow$  SUBJUNCTIVE
- The feature differentiating functional and lexical heads (in the verbal domain) is [Infl]
  - Functional: [Infl:val]
  - Lexical: [Infl:\_\_\_]

ANALYSIS:

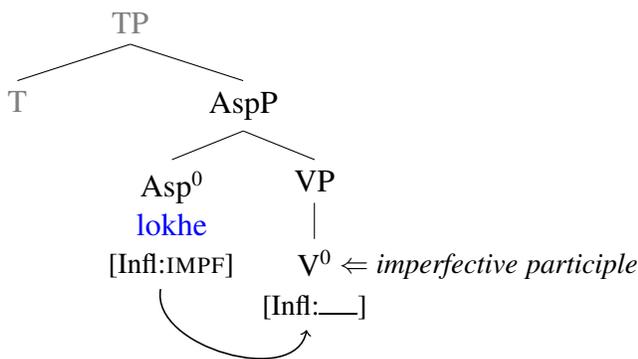
- I assume that an agree link can be established between two unvalued features (Pesetsky&Torrego, 2007)
- I argue that, in such a relation, valuation is not vacuous, but rather it is an instance of *Dependent Valuation*

**PARTICIPIAL MORPHOLOGY** arises when Infl is valued directly by a higher Infl – **Direct Valuation**

**SUBJUNCTIVE MORPHOLOGY** arises when the higher Infl is also unvalued – **Dependent Valuation**

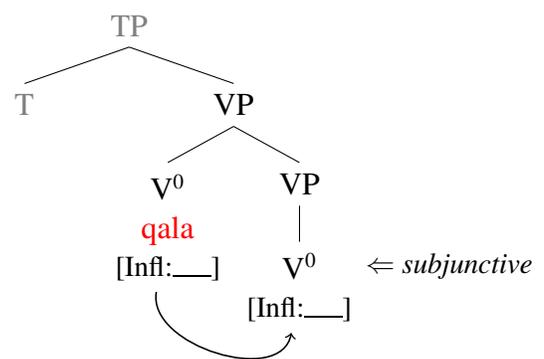
(18) Functional LV:

U-**lokhe** e-bala.  
 1-still 1-read.PART  
 ‘He is still reading’



(19) Lexical LV:

U-**qala** a-bale.  
 1-first 1-read.SUBJ  
 ‘He first reads’



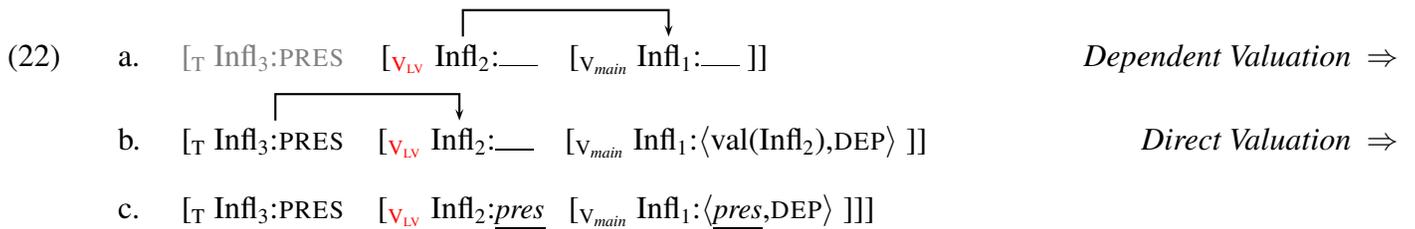
(20) **Direct Valuation:**

- a.  $\alpha$  c-commands  $\beta$
- b. F on  $\alpha$  is valued; F on  $\beta$  is unvalued
- c.  $\Rightarrow \text{val}(F_\beta) = \text{val}(F_\alpha)$

(21) **Dependent Valuation:**

- a.  $\alpha$  c-commands  $\beta$
- b. F on  $\alpha$  and F on  $\beta$  are unvalued
- c.  $\Rightarrow \text{val}(F_\beta) = \langle \text{val}(F_\alpha), \text{DEP} \rangle$

- Direct Valuation simply assigns the value of  $F_\alpha$  to  $F_\beta$ .
- Dependent Valuation is a pair of a value variable ( $\text{val}(F_\alpha)$ ) and the feature DEP. The value variable is subject to change depending on subsequent changes in the value of  $F_\alpha$ .
- In **functional LV-constructions** (18), the main verb is subject to Direct Valuation since it directly agrees with a valued Infl. Its participial form is not assigned or selected by the LV, but stems from the property of the [ $\text{Asp}^0:\text{IMPF}$ ] head hosting the LV – its complement is an imperfective participle.
- In **lexical LV-constructions** (19), the main verb is subject to Dependent Valuation since the LV, being lexical, has an unvalued Infl (22-a). [ $\text{Infl}_2$ ] on the LV is subsequently valued by the Infl-feature on T via Direct Valuation (22-b). In the present tense, the LV receives the value [PRES] from T, which in turn changes the value variable on the main verb to [PRES] (22-c).

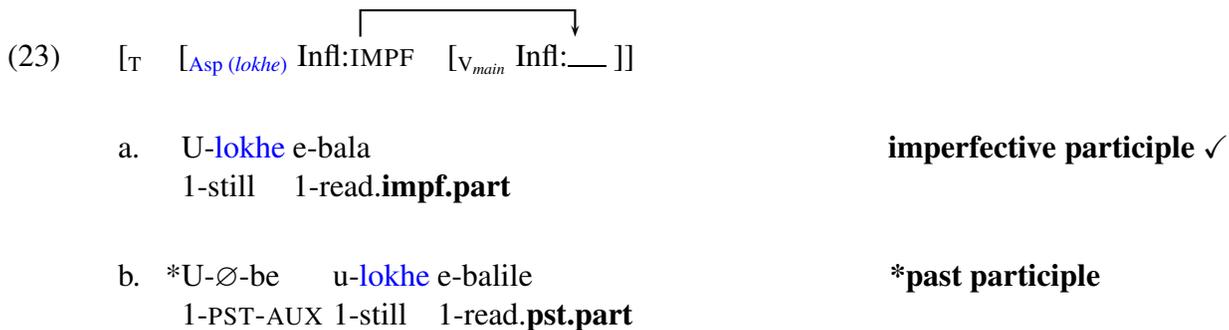


- Unlike the LV,  $V_{\text{main}}$  additionally contains DEP, a feature spelled out as dependent/subjunctive mood.
- The lexical LV surfaces in the present indicative form
- The main verb surfaces in the *present subjunctive form*.

### 3.2 Further evidence: tense agreement

Additional evidence for direct vs dependent valuation: **inflectional variability of the main verb**

- complements of functional LVs have fixed morphology
- complements of lexical LVs co-vary with T



- Functional LVs have their own Infl-value, hence inflection on their complement is fixed (doesn't covary with a higher inflectional head).
- Lexical LVs don't have a fixed Infl value, their inflection depends on a higher functional head

- (24) 
$$\left[ \begin{array}{c} \text{[}_T \text{ Infl: PRES/PST/FUT} \\ \text{[}_V \text{ (qala) Infl: } \_\_\_ \text{ [}_{V_{main}} \text{ Infl: } \_\_\_ \text{ ]}] \end{array} \right]$$
- a. U-**qala** a-bale **Present T: present subjunctive**  
1-first 1-read.**pres.subj**
- b. U-∅-**qalé** wa-bala **Past T: past subjunctive**  
1-PST-first 1-read.**pst.subj**
- c. U-za-**qala** a-bale **Future T: present subjunctive**  
1-FUT-first 1-read.**pres.subj**

- Since Ndebele has only two subjunctive forms: past and present/unmarked subjunctive, the lexicon makes the distinctions in (25).

- (25) a. [PST, DEP] ↔ *past subjunctive*                      b. [DEP] ↔ *(unmarked) subjunctive*

INTERIM CONCLUSION: The morphology "selected" by LVs follows from the functional–lexical distinction and its consequence for the type of valuation involved.

#### 4 Extension to subjunctive CPs

- Subjunctive mood morphology is often viewed as corresponding to a morphosyntactic mood feature/head in the clausal periphery (Giorgi, 2009; Giannakidou, 2009; Damonte, 2010; Lakakou & Quer, 2016: a.o.)
  - such a feature is a property of certain clause types – subjunctive clauses.
  - Under the analysis proposed here, no such feature/head is involved in licensing subjunctive mood morphology; rather it's the "dependent form", the reflex of Dependent Valuation.
  - The Dependent Valuation view can account for lexical LV-constructions, where subjunctive morphology appears in the absence of a subjunctive periphery (the subjunctive complement is small, roughly a VP).
  - Ndebele does have subjunctive CPs (26); there, the subjunctive V does not covary with the matrix T (27)
- (26) Ngi-funa ukuthi a-bale.  
1sg-want COMP 1-come.**subj**  
'I want him to read.'
- (27) Ng-afuna ukuthi abale/\*wabala.  
1sg-want.**pst** COMP 1-read.**subj**/\*1-read.**pst.subj**  
'I wanted him to read.'
- I propose that subjunctive morphology in subjunctive CPs arises via Dependent Valuation, as well.
  - A familiar property of subjunctive clauses: absence of independent temporal specification (Picallo, 1984; Giorgi & Pianesi, 1997; Landau, 2004; Giannakidou, 2009: a.o.).

PROPOSAL: the deficiency of T is syntactically encoded as an unvalued (rather than valued) Infl-feature.

- (28) Subjunctive clauses: 
$$\left[ \text{Matrix-clause } V \left[ \text{SUBJ-Clause} \left[ \text{}_T \text{ Infl: } \_\_\_ \left[ \text{Dependent Valuation} \right] \left[ \text{}_V \text{ Infl: } \_\_\_ \right] \right] \right] \right]$$

- In Ndebele, the subjunctive clause boundary is a barrier for Infl-agreement: the matrix tense is not transmitted onto the embedded T, whose [Infl] remains unvalued and spells out as the unmarked subjunctive.
- Independent evidence for [Infl:\_\_\_] on the subjunctive T comes from languages in which cross-clausal Infl-valuation is possible, e.g. Italian (29).

- (29) a. Gianni crede che Maria sia incinta. *Italian* (Giorgi, 2009:7)  
 Gianni believe.**pres** that Maria be.**pres.subj** pregnant.  
 ‘Gianni believes that Maria is pregnant’
- b. Gianni credeva che Maria fosse incinta.  
 Gianni believe.**pst** that Maria be.**pst.subj** pregnant.  
 ‘Gianni believed that Maria was pregnant’

(30) Italian Subjunctive CP:

- a. [Matrix-clause V<sub>PST</sub> [SUBJ-Clause [T Infl:\_\_\_ [v Infl:\_\_\_, DEP ]]]] *Dependent Valuation*
- b. [Matrix-clause V<sub>PST</sub> [SUBJ-Clause [T Infl: pst [v Infl: pst, DEP ]]]]

## 5 Conclusion

THE PARTICIPLE/SUBJUNCTIVE ALTERNATION:

- The morphology "selected" by LVs is not a lexical selectional property of a particular LV
- rather, it follows from the **functional–lexical distinction** and its consequence for **the type of valuation involved**.

THE NATURE OF SUBJUNCTIVE MORPHOLOGY:

- Subjunctive morphology is not a consequence of the verb’s relation (licensing/agreement) with a left-peripheral functional head, such as Mood<sup>0</sup> (no subjunctive periphery or meaning in LV-constructions).
- Rather, it is triggered by the **inflectional deficiency of its immediate syntactic context**.

## References

- Adger, D. (2003). *Core syntax: A minimalist approach*. Oxford University Press.
- Bjorkman, B. A. M. (2011). *BE-ing default: The morphosyntax of auxiliaries*. PhD thesis, Massachusetts Institute of Technology.
- Damonte, F. (2010). Matching moods: mood concord between cp and ip in salentino and southern calabrian subjunctive complements. *Mapping the left periphery*. Oxford: OUP, (pp. 228–256).
- Giannakidou, A. (2009). The dependency of the subjunctive revisited: temporal semantics and polarity. *Lingua*, 119(1883–1908).
- Giorgi, A. (2009). Toward a syntax of the subjunctive mood. *Lingua*, 119(12), 1837–1858.
- Giorgi, A. & Pianesi, F. (1997). *Tense and Aspect: From Semantics to Morphosyntax*. Oxford University Press.
- Lakakou, M. & Quer, J. (2016). Subjunctive mood in griko: A micro-comparative approach. *Lingua*, 174, 65–85.
- Landau, I. (2004). The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory*, 22(4), 811–877.
- Merchant, J. (2011). Aleut case matters. In E. Yuasa, T. Bagchi, & K. Beals (Eds.), *Pragmatics and autolexical grammar: in honor of Jerry Sadock*, number 176 in Linguistic Today (pp. 193–210). John Benjamins.
- Picallo, C. (1984). The infl node and the null subject parameter. *Linguistic Inquiry*, 15(75–102).
- Wurmbrand, S. (2011). The syntax of valuation in auxiliary-participle constructions. In *Proceedings of the 29th West Coast Conference on Formal Linguistics 29*.