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(icle)-selecting and SUBJ(unctive)-selecting

(1) PART-selecting LVs:
   a. U-lokhe e-bala.
      1-still 1-read.PART
      ‘He is still reading’
   b. U-hlezi e-bala.
      1-always 1-read.PART
      ‘He always reads’

(2) SUBJ-selecting LVs:
   a. U-qala a-bale.
      1-first 1-read.SUBJ
      ‘He first reads’
   b. U-mane a-bale.
      1-just 1-read.SUBJ
      ‘He just reads’

I argue that

1. The form of the main verb correlates with a systematic difference between the LVs:
   i. SUBJ-selecting LVs are lexical verbs ($V^0$)
   ii. PART-selecting LVs are functional verbs (e.g. Asp$^0$)

2. The form of the main verb is determined by the way in which Infl-feature of the main V is valued:
   i. participles arise via Direct Valuation (a relation with a valued feature).
   ii. subjunctive forms result from Dependent Valuation (a relation with an unvalued feature).

(3) Functional Light Verbs:
\[
\text{LV}_{\text{func}} \quad \text{VP} \\
\text{Infl:val} \quad \text{V} \\
\text{Infl:} \quad \text{V} \\
\]

(4) Lexical Light Verbs:
\[
\text{LV}_{\text{lex}} \quad \text{VP} \\
\text{Infl:} \quad \text{V} \\
\text{Infl:} \quad \text{V} \\
\]

Direct Valuation $\Rightarrow$ participle

Dependent Valuation $\Rightarrow$ subjunctive

3. Subjunctive morphology is a reflex of the inflectional deficiency of its immediate syntactic context:
   i. in LV-constructions: the LV’s unvalued Infl
   ii. 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 > SUBJ-selecting LV; but not vice versa

\[(5) \quad \checkmark \text{PART-selecting LV} > \text{SUBJ-selecting LV} \]

\[\text{a. U-hlezi e-mane a-bale} \]
\[1\text{-always} 1\text{-just.PART} 1\text{-read.SUBJ} \]
\[\text{He always just reads} \]

\[\text{b. U-hlezi e-phose a-bale} \]
\[1\text{-always} 1\text{-almost.PART} 1\text{-read.SUBJ} \]
\[\text{He almost always reads} \]

\[\text{c. U-lokhe e-qala a-bale} \]
\[1\text{-still} 1\text{-first.PART} 1\text{-read.SUBJ} \]
\[\text{He still reads first} \]

\[(6) \quad \ast \text{SUBJ-selecting LV} > \text{PART-selecting LV} \]

\[\text{a. U-mane a-hlezi e-bala} \]
\[1\text{-just} 1\text{-always.SUBJ} 1\text{-read.PART} \]
\[\text{('He just always reads')} \]

\[\text{b. U-phose a-hlezi e-bala} \]
\[1\text{-almost} 1\text{-always.SUBJ} 1\text{-read.PART} \]
\[\text{('He almost always reads')} \]

\[\text{c. U-qala a-lokhe e-bala} \]
\[1\text{-almost} 1\text{-always.SUBJ} 1\text{-read.PART} \]
\[\text{('He still reads first')} \]

II. Position of negation

NEG < SUBJ-selecting LV \(\checkmark\)

NEG < PART-selecting LV \(\ast\)

- Lexical verbs in Ndebele can host a negation prefix (7); auxiliary verbs cannot (9).

- SUBJ-selecting LVs pattern with lexical verbs (8); PART-selecting LVs pattern with auxiliaries (10).

\[(7) \quad \text{LEXICAL LV} \quad \text{AUXILIARY} \]
\[\text{A-ka-bali. neg-1-read} \]
\[\text{He doesn’t read} \]

\[(9) \quad \text{AUXILIARY} \quad \text{AUXILIARY} \]
\[\text{A-ka-be e-bala. neg-1-read} \]
\[\text{('He wasn’t reading')} \]

\[(10) \quad \text{PART-selecting} \quad \text{PART-selecting} \]
\[\text{U-lokhe e-bala. neg-1-still 1-read} \]
\[\text{('He is still not reading')} \]

III. Ability to inflect for tense

T+SUBJ-selecting LV \(\checkmark\)

T+PART-selecting LV \(\ast\)

- PART-selecting LVs are inflectionally deficient – they cannot combine with tense (11)

- SUBJ-selecting LVs can be fully inflected, like any lexical verb (12)
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(11) a. *u-a-lokhe  
1-PST-still  
'b. *u-za-lokhe  
1-FUT-still
c. *u-a-hlezi  
1-PST-always  
d. *u-za-hlezi  
1-FUT-always  
e. *u-a-se  
1-PST-already  
f. *u-za-se  
1-FUT-almost

(12) a. u-a-mane  
1-PST-just  
b. u-za-mane  
1-FUT-just  
c. u-a-qala  
1-PST-first  
d. u-za-qala  
1-FUT-first  
e. u-a-phose  
1-PST-almost  
f. u-za-phose  
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. Asp⁰; they spellout functional heads in the clausal spine)

SUBJ-selecting LVs are lexical verbs (V⁰; 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:

\[
\text{Neg [SV l_v lex [V]]]}
\]
⇒ 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’

  \[ \begin{align*}
    &TP & &TP \\
    &T & &T \\
    &VP & &VP \\
    &Infl:PST & | & Infl:pst \\
    &V & & \_ \\
    &Infl:___ & & \_ \\
  \end{align*} \]

**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-zaqala a-bale.  
  1-FUT-first 1-read.SUBJ  
  ‘He will first read’

  \[ \begin{align*}
    &TP \\
    &T \\
    &[Infl:FUT] \\
    &V^0 \\
    &qala \\
    &[Infl:___] \\
    &main verb \\
  \end{align*} \]

  \[^{1}\text{unvalued Infl} \rightarrow \text{can agree with } T\]

(17) Functional LV:

  *U-za-lokhe e-bala.  
  1-FUT-still 1-read.PART  
  ‘He will still be reading’

  \[ \begin{align*}
    &TP & &TP \\
    &T & &T \\
    &AspP & &AspP \\
    &Asp^0 & &Asp^0 \\
    &lokhe & &lokhe \\
    &[Infl:IMPF] & &[Infl:IMPF] \\
    &V^0 & &V^0 \\
  \end{align*} \]

  \[^{1}\text{valued Infl} \rightarrow \text{cannot agree with } T^1\]

\[^{1}\text{This structure is not ineffable – in the grammatical counterpart, the future tense inflection is realized on a default auxiliary (be), as in compound tenses.}\]
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 ⇔ PARTICIPLE
  - Lexical LVs ⇔ 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 (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 [Asp$^{0}$.IMPF] head hosting the LV – its complement is an imperfective participle.

• In lexical LV-constructions (19), the main verbs is subject to Dependent Valuation since the LV, being lexical, has an unvalued Infl (22-a). [Infl_] 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).

\begin{align*}
\text{(22) a.} & \quad [T \text{Infl}_3: \text{PRES}] [V_{\text{LV}} \text{Infl}_2;] [V_{\text{main}} \text{Infl}_1;] & \text{Dependent Valuation} \Rightarrow \\
\text{b.} & \quad [T \text{Infl}_3: \text{PRES}] [V_{\text{LV}} \text{Infl}_2;] [V_{\text{main}} \text{Infl}_1; \langle \text{val(Infl}_2),\text{DEP} \rangle] & \text{Direct Valuation} \Rightarrow \\
\text{c.} & \quad [T \text{Infl}_3: \text{PRES}] [V_{\text{LV}} \text{Infl}_2; \text{pres}] [V_{\text{main}} \text{Infl}_1; \langle \text{pres},\text{DEP} \rangle] \]
\end{align*}

• 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

i. complements of functional LVs have fixed morphology

ii. complements of lexical LVs co-vary with T

\begin{align*}
\text{(23) } & \quad [T \text{ [Asp (lokhe) Infl:IMPF} [V_{\text{main}} \text{Infl;}] \\
\text{a.} & \quad \text{U-} \text{lokhe e-bala} & \text{imperfective participle} \checkmark \\
& \quad \text{1-still 1-read.impf.part} \\
\text{b.} & \quad \text{*U-} \emptyset \text{-be } \text{u-} \text{lokhe e-balile} & * \text{past participle} \\
& \quad \text{1-PST-AUX 1-still 1-read.pst.part}
\end{align*}

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

\[ (25) \]
\begin{align*}
\text{a.} & \quad \text{[PST, DEP]} \leftrightarrow \text{past subjunctive} \\
\text{b.} & \quad \text{[DEP]} \leftrightarrow \text{(unmarked) subjunctive}
\end{align*}

**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)

\[ (26) \]
\begin{align*}
\text{Ng-i-funa ukuthi a-bale.} \\
\text{1sg-want COMP 1-come.subj} \\
\text{‘I want him to read.’}
\end{align*}

\[ (27) \]
\begin{align*}
\text{Ng-afuna ukuthi abale/*wabala.} \\
\text{1sg-want.pst COMP 1-read.subj/*1-read.pst.subj} \\
\text{‘I wanted him to read.’}
\end{align*}

- I propose that subjunctive morphology in subjunctive CPs arises via Dependent Valuation, as well.

**PROPOSAL:** the deficiency of T is syntactically encoded as an unvalued (rather than valued) Infl-feature.
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.
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.pstsubj pregnant.
‘Gianni believed that Maria was pregnant’

(30) Italian Subjunctive CP:

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\(^0\) (no subjunctive periphery or meaning in LV-constructions).

• Rather, it is triggered by the inflectional deficiency of its immediate syntactic context.

References