Clause size and transparency in Ndebele
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1 Introduction

• Crosslinguistic evidence supports the hypothesis that subjunctive and indicative clauses differ in size:
  – Indicative clauses have a rich left periphery
  – Subjunctive clauses are structurally reduced/deficient

(1) Asymmetries between indicative and subjunctive clauses in Ndebele:

<table>
<thead>
<tr>
<th></th>
<th>Indicative</th>
<th>Subjunctive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negation</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Class 1 agreement</td>
<td>$u$-</td>
<td>$a$-</td>
</tr>
<tr>
<td>Subject in focus?</td>
<td>*</td>
<td>✓</td>
</tr>
<tr>
<td>Augmentless subject?</td>
<td>*</td>
<td>✓</td>
</tr>
</tbody>
</table>

• Ndebele provides evidence that the asymmetries between subjunctive and indicative clauses are a direct consequence of clause size, not clause type.

Proposal:

• Morphosyntactic asymmetries between indicative and subjunctive clauses are not selected properties, but the result of reduced periphery

• Reduced periphery is due to either:
  – base generation, or
  – derivational deletion

• Evidence: clause size variability (relative clauses)

(2) Indicative and subjunctive periphery in Ndebele

a. indicative: \[
[
\text{C}
\rightarrow
\text{\Sigma}
\rightarrow
\text{Top}_{\phi}
\rightarrow
\text{Neg}
\rightarrow
\text{[V \ldots]]}
\]

b. subjunctive: \[
[
\text{C}
\rightarrow
\text{[T}_{\phi}
\rightarrow
\text{Neg}
\rightarrow
\text{[V \ldots]]}
\]

PLAN:

1. Indicative and subjunctive CPs: four asymmetries

2. Analysis: reduced periphery of subjunctive clauses

3. Clause size variability: relative clauses

4. Remaining issue: high topic intervention

5. Conclusion

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2 Indicative and subjunctive CPs: four asymmetries

- The selection of subjunctive or indicative clausal complement is a property of the matrix predicate:
  - *think* selects indicative CPs
  - *wish* selects subjunctive CPs

- both clause types are finite, and are introduced by the complementizer *ukuthi*

2.1 Position of negation

- The two clause types employ different negation markers (see also Yuan (2016) for similar asymmetries in another Bantu language, Kikuyu)

(3) *indicative*: high negation

... *u-kuthi a-ngi-pheki.*
... ag-comp NEG-1sg-cook.IND
‘... that I don’t cook’

(4) *subjunctive*: low negation

... *u-kuthi ngi-nga-pheki.*
... ag-comp 1sg-NEG-cook.SBJ
‘... (so) that I don’t cook’

2.2 Possibility of subject focus

- Preverbal subject in Bantu are typically topical, and cannot be in narrow focus (Bresnan & Mchombo, 1987; Letsholo, 2002; Baker, 2003; Henderson, 2006; Schneider-Zioga, 2000, 2007).

- In Ndebele, this generalization is true in indicative, but not in subjunctive clauses.

(5) WH-phrases (necessarily in focus):

a. *Ucabanga ukuthi *ubani* u-za-buya. *indicative*: *wh-subject*
think.2sg COMP 1 1S-FUT-come.IND
(‘Who do you think will come?’)

b. Ufisa ukuthi *ubani* a-buye. *subjunctive*: ‘wh-subject
wish.2sg COMP 1who 1S-come.SBJV
‘Who do you hope comes?’

(6) DPs associated with the focus particle *kuphela* ‘only’:

a. *Ngicabanga ukuthi *uZodwa kuphela* u-za-buya. *indicative*: *ONLY-DP*
think.1sg COMP 1Zodwa only 1S-FUT-come.IND
(‘I think only Zodwa will come’)

b. Ngifisa ukuthi *uZodwa kuphela* a-buye. *subjunctive*: ‘ONLY-DP
wish.1sg COMP 1Zodwa only 1S-come.SBJV
‘I hope only Zodwa comes’
2.3 Agreement morphology

- Agreement prefix with class 1 subjects shows allomorphy depending on mood:
  - Indicative clauses: \( u- \)
  - Subjunctive clauses: \( a- \)

(7) a. Ngicabanga ukuthi \( u-za-buya. \)  
   think.1sg COMP 1S-FUT-come.IND  
   'I think she will come.'

b. Ngifisa ukuthi \( a-buye. \)  
   wish.1sg COMP 1S-come.SBJV  
   'I hope she comes.'

2.4 Augmentless subjects

- Assumption: the absence of an augment vowel \( \rightarrow \) structural case (Halpert, 2012)
  - Indicative causes: subjects must have an augment (no structural case)
  - Subjunctive clauses: subjects can be augmentless (✓ structural case)

(8) Augment drop: \( (u)-mama \) ‘mother’:

a. Angifisi kuthi \( mama \) a-suke.  
   wish.1sg.NEG COMP 1mother 1S-leave.SBJ  
   'I don’t wish for mom to leave'

b. Angicabangi kuthi \( *(u)-mama \) u-za-suka.  
   think.1sg.NEG COMP aug-1mother 1-FUT-leave.IND  
   'I don’t think mom will leave'

3 Analysis: reduced periphery of subjunctive clauses

(9) Proposal:

a. Indicative clause periphery: \([CP \ [\Sigma P \ [TP_{\phi} \ [TP_{\phi}]]]]\]

b. Subjunctive clause periphery: \([CP \ [TP_{\phi}]]\)

3.1 Position of negation

- Indicative clauses project a polarity phrase: \( \Sigma P \), which hosts the high-negation prefix \( a- \).
- Subjunctive clauses lack this layer – negation must me low (NegP)

(10) Ngifisa ukuthi \( \neg ba-[\text{nga}] \) buyi/*[a]-ba-buyi.  
   wish.1sg COMP 2pl-NEG-come/*/NEG-2sg-come  
   'I hope they are not coming'

\[ \text{subjunctive: } [C \ [T \ [Neg \ neg \ [v \ ...]]]] \]
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(11) Ngicabanga ukuthi "[\text{a}]\text{-ba-buyi/#ba-\text{nga}}\text{-buyi.} \quad \text{indicative: high negation}

\begin{itemize}
\item think.1sg\text{ COMP NEG-2pl-come/#2pl-NEG-come}
\end{itemize}

\begin{quote}
‘I think they are not coming’
\end{quote}

\begin{quote}
\text{indicative: } [C \ [\Sigma a \ [-T_{\text{op}} [T [\neg [v ... ]]]]]]
\end{quote}

3.2 Possibility of subject focus

FACTS: Subjects of subjunctive clauses can be in focus; subjects of indicative clauses cannot.

- Subjunctive clauses: only one agreeing head – $T_{\varphi}$
- Indicative clauses: two agreeing heads – $T_{\varphi}$ and $\text{Top}_{\varphi}$

(12) Subjunctive: subject movement to Spec,TP

\begin{center}
\begin{tikzpicture}
  \node (cp) {CP};
  \node (c0) [below=of cp] {C$^0$};
  \node (tp) [right=of c0] {TP};
  \node (subject) [below=of tp] {subject$_{\varphi}$};
  \node (t) [right=of subject] {$T'$};
  \node (t0) [below=of t] {$T^0$};
  \node (vp) [right=of t0] {vP};
  \node (epp) [above=of t0] {$\varphi_{\text{EPP}}$};
  \node (subject2) [below=of epp] {... <subject$_{\varphi}$> ...};

  \draw (cp) -- (c0);
  \draw (c0) -- (tp);
  \draw (tp) -- (subject);
  \draw (subject) -- (t);
  \draw (t) -- (t0);
  \draw (t0) -- (vp);
  \draw (epp) -- (subject2);

\end{tikzpicture}
\end{center}

$\varphi_{\text{EPP}}$: $\varphi$-agreement requires movement in Bantu: (Carstens, 2005)

(13) Indicative: subject movement to Spec,TP and Spec,TopP

\begin{center}
\begin{tikzpicture}
  \node (cp) {CP};
  \node (c0) [below=of cp] {C$^0$};
  \node (sigma) [right=of c0] {$\Sigma P$};
  \node (topp) [right=of sigma] {TopP};
  \node (subject) [below=of topp] {subject$_{\varphi}$};
  \node (top) [right=of subject] {Top'};
  \node (top0) [below=of top] {Top$^0$};
  \node (t) [right=of top0] {$T'$};
  \node (t0) [below=of t] {$T^0$};
  \node (vp) [right=of t0] {vP};
  \node (epp) [above=of t0] {$\varphi_{\text{EPP}}$};
  \node (subject2) [below=of epp] {... <subject$_{\varphi}$> ...};

  \draw (cp) -- (c0);
  \draw (c0) -- (sigma);
  \draw (sigma) -- (topp);
  \draw (topp) -- (subject);
  \draw (subject) -- (top);
  \draw (top) -- (top0);
  \draw (top0) -- (t);
  \draw (t) -- (t0);
  \draw (t0) -- (vp);
  \draw (epp) -- (subject2);

\end{tikzpicture}
\end{center}
• TopP probes for the closest $\varphi$-goal $\Rightarrow$ it will always attract the subject (Bliss & Storoshenko, 2009)

• Thus, subjects are always topical in indicative clauses, and cannot be in narrow focus.

• Subjunctive clauses lack an agreeing $\text{Top}^0$ head $\rightarrow$ subjects are not necessarily topical in subjunctive clauses.

3.3 Agreement morphology

• The allomorphy in class 1 agreement prefix, namely
  
  – Subjunctive: $a$-
  – Indicative: $u$-

is a consequence of the difference in agreement probes:\footnote{1}

  – Agreement with $\text{T}^0$: $[\varphi:1] \leftrightarrow a$-
  – Agreement with $\text{T}^0$ and $\text{Top}^0$: $[\varphi:1] \leftrightarrow u$-

(14) a. Indicative  
  
  \begin{center}
  \begin{tikzpicture}
    \node (CP) {CP};
    \node (C) [below of=CP] {$C^0$};
    \node (TopP) [below of=C] {TopP};
    \node (Top0) [below of=TopP] {$\text{Top}^0$};
    \node (TP) [below of=Top0] {TP};
    \node (vP) [below of=TP] {vP};
    \node (a-) [left of=Top0] {a-};
    \node (u-) [left of=vP] {u-};
    \node (phi1) [above of=TopP] {$\varphi:1$};
    \node (phi1') [above of=TP] {$\varphi:1$};
    \draw (CP) -- (C);
    \draw (C) -- (TopP);
    \draw (TopP) -- (Top0);
    \draw (Top0) -- (TP);
    \draw (TP) -- (vP);
    \draw (a-) -- (Top0);
    \draw (u-) -- (TP);
  \end{tikzpicture}
  \end{center}

  b. Subjunctive
  
  \begin{center}
  \begin{tikzpicture}
    \node (CP) {CP};
    \node (C) [below of=CP] {$C^0$};
    \node (TP) [below of=C] {TP};
    \node (vP) [below of=TP] {vP};
    \node (phi1) [above of=CP] {$\varphi:1$};
    \node (a-) [left of=TP] {a-};
    \draw (CP) -- (C);
    \draw (C) -- (TP);
    \draw (TP) -- (vP);
    \draw (a-) -- (TP);
  \end{tikzpicture}
  \end{center}

3.4 Case licensing

• The distribution of augmentless nominals in Ndebele matches the distribution found in Zulu. Namely, augmentless nouns appear:
  
  – in scope of negation, and
  – in a post-verbal argument position

• Thus, objects can be augmentless, but preverbal subjects cannot (15). This is true in both indicative (15-a) and subjunctive clauses (15-b).

\footnote{1}{For a similar analysis of subject agreement in Bemba see Henderson (2013), where agreement with two heads (for him $T$ and $C$) results in a single agreement prefix (anti-agreement). I leave it open how the two probes end up spelled-out as a single affix (the possibilities include contextual allomorphy, fusion/spanning, lowering and impoverishment).}
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(15) a. Angicabangi ukuthi *(u)-mama wabona (u)-lutho. 
think.1sg.NEG COMP *(aug)-mom 1saw.IND (aug)-thing
‘I don’t think mom saw anything’

b. Angifisi ukuthi *(u)-mama abone (u)-lutho. 
wish.1sg.NEG COMP *(aug)-mom 1see.SBJV (aug)-thing
‘I don’t wish for mom to see anything’

- Following Halpert (2012), I assume that the lack of augment indicates structural case: augment-

less nouns must be structurally licensed

- Halpert (2012): here is only one licensor (L⁰) per clause, and it’s below T

- In (15), the embedded object is licensed by the embedded licensor, but licensing embedded subject

is impossible because of a clausal boundary (16).

(16) \[
\begin{array}{c}
\text{[CP \text{TP \text{LP \text{L⁰ \text{VP \text{CP comp \text{TP subject \text{LP \text{L⁰ \text{VP subject[Case]}}}}}}}}]]]}
\end{array}
\]

There is one exception: The embedded subject can be augmentless if the complementizer is!

- The complementizer ukuthi shows nominal properties: it has an augment, which can be dropped

if the clause is postverbal and below negation.

- An augmentless complementizer (kuthi) is allowed both in subjunctive and indicative clauses (17).

(17) An augmentless complementizer allows for an augmentless subject: but only in subjunctive clauses

a. Angifisi kuthi *(u)-mama a-suke. 
wish.1sg.NEG COMP 1mother 1s-leave.SBJ
‘I don’t wish for mom to leave’

b. Angicabangi kuthi *(u)-mama u-za-suka. 
think.1sg.NEG COMP aug-1mother 1-FUT-leave.IND
‘I don’t think mom will leave’

(18) Analysis:

a. C⁰ in Ndebele has nominal features (augment, ϕ-features) and is subject to case licensing

b. Sub-licensing: a C⁰ bearing structural case is a structural case licensor ²

c. Phase-bound locality is required

(19) Case licensing in subjunctive clauses (17-a)

\[
[\text{CP \text{TP \text{LP \text{L⁰ \text{VP \text{CP comp[Case] \text{TP subject[Case] \text{LP \text{L⁰ \text{VP}}}}}}}}]]}
\]

- In an indicative clause, ΣP intervenes between C⁰ and the subject (in Spec,TopP)

² Similar facts have been observed in Basque nominalizations: the subject can be cased-marked if the entire nominalization

is bears structural case (San Martin, 2004).
• By assumption, all left-peripheral XPs are phases (Müller, 2010)

(20) Case licensing in indicative clauses (17-b)

\[
\text{[CP [TP [LP}_{L0} [\text{VP [CP comp}_{\text{Case}}] \SigmaP \text{TopP subject}_i \text{TP t}_i [LP}_{L0} \text{VP }]]]]
\]

IN SUM:
– C\(^0\) can get case in either clause type
– but embedded subject licensing relies on a reduced periphery (a property of subjunctive, but not indicative clauses)

4 Clause size variability: relative clauses

• previous sections have shown differences between indicative and subjunctive clauses, summarized in (21), and were argued to stem from a different make-up of their periphery.

(21)

\[
\begin{array}{c|cc}
\text{Indicative} & \text{Subjunctive} \\
\hline
\text{1. Position of negation} & \text{High} & \text{Low} \\
\text{2. Class 1 agreement} & u- & a- \\
\text{3. Subjects in narrow focus} & * & ✓ \\
\text{4. Subjects with structural case} & * & ✓ \\
\end{array}
\]

• Proposal: The properties of subjunctive clauses are reduced-periphery effects

• Alternative: the asymmetries are directly related to clause type (e.g. [\varphi:1] \leftrightarrow a-/ __ SBJV)

• Evidence that these asymmetries are specific to clause size, not clause type, comes from relative clauses:
  – they are indicative but show some properties of subjunctive clauses
  – clause size variability within a single clause type (SBJ vs OBJ relatives) results in mixed properties.

(22) Mixed properties of relative clauses

\[
\begin{array}{c|cc}
\text{Local subject} & \text{Other} \\
\text{extraction} & \text{extraction} \\
\hline
\text{1. Position of negation} & \text{Low} & \text{Low} \\
\text{2. Class 1 agreement} & u- & a- \\
\text{3. Subjects in narrow focus} & \text{NA} & ✓ \\
\text{4. Subjects with structural case} & * & ✓ \\
\end{array}
\]

4.1 Analysis: movement-triggered deletion

• Relative clauses in Ndebele are indicative

• Thus, they project the full indicative CP: \text{[CP [\SigmaP \text{TopP}_\varphi \text{TP}_\varphi }]]]
• One difference is that the complementizer is null and has no ϕ-features (Pietraszko, 2016)

• Assumption (from above): all left-peripheral XPs are phases (TopP, ΣP, CP).

• Phasal XPs in the left periphery are barriers for A-bar movement involved in relativization

• **Movement-triggered Structure Deletion** (Pesetsky’s (2016) "Exfoliation"):
  
  – *Structural Description:* $[WP \ldots \beta \ldots [YP \ldots [\gamma P \ldots \alpha \ldots]]]$, where YP is a phase, and $\gamma P$ is not a phase.
  
  – *Structural Change:* Replace YP with $\gamma P$
  
  – *Last Resort Property:* Applies only if necessary to enable Merge($\beta, \alpha$) without violating Phase Impenetrability
    
    $\Rightarrow$ In other words: phasal XPs are deleted to enable movement.

(23) Subject extraction: $\Sigma P$ deletion

\[\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{C}^0 \\
\text{[+wh]} \\
\Sigma^0 \\
\text{TopP} \\
\text{subject}_\phi \\
\text{[+wh]} \\
\text{Top'} \\
\text{Top}^0 \\
\varphi_{EPP} \\
\text{<subject}_\phi> \\
\text{[+wh]} \\
\text{T'} \\
\text{T}^0 \\
\varphi_{EPP} \\
\text{vP} \\
\text{... <subject}_\phi > ...} \\
\text{[+wh]} \\
\end{array}\]
(24) Object extraction: TopP and \( \Sigma P \) deletion

\[
\begin{align*}
&\text{CP} \\
&\text{\( C' \)} \\
&\text{\( C^0 \)} \quad \text{\([+\text{wh}]\)} \\
&\text{\( \Sigma P \)} \\
&\text{\( \Sigma^0 \) \( \text{subject}_\varphi \)} \\
&\text{\( \text{TopP} \)} \\
&\text{\( \text{Top}^0 \)} \quad \varphi_{\text{EPP}} \quad \text{\(<\text{subject}_\varphi>\)} \\
&\text{\( \text{T'} \) \( \varphi_{\text{EPP}} \)} \\
&\text{\( \text{TP} \)} \\
&\text{\( \text{TP'} \)} \\
&\text{\( \text{vP} \)} \\
&\text{\( \text{T}^0 \)} \quad \text{\([+\text{wh}]\)} \\
\end{align*}
\]

\[\emptyset\]

4.2 Deriving reduced-periphery effects in RCs

Due to deletion of different chunks of structure, subject and object relatives show mixed properties, as discussed below.

4.2.1 Negation

\( \Sigma P \) is deleted in both object and subject extraction \( \rightarrow \) neither type of RC allows high negation (25)

(25) Low negation in relative clauses

a. umfana a- [\text{nga} si- dliyo isinkwa]
   1boy ASSOC 1S- neg- 7o- ate 7bread
   ‘the boy who didn’t the bread’

b. isinkwa a- [\text{nga} si- dliyo]
   7bread ASSOC 1S- neg- 7o- ate
   ‘the bread that he didn’t eat’
4.2.2 Agreement morphology

- As we see in (25), class 1 agreement prefix shows allomorphy in relative clauses, depending on what is extracted:
  - subject movement to TopP (triggering the \textit{u}- agreement) is possible in subject relatives
  - in object relatives, TopP is deleted, in which case only the lower agreement probe (on T) is pronounced
  - overt subjects in object relatives are pronunciations on the lower copy (in Spec, TP).

- Thus, deletion of different chunks of structure lead to the following correlations, as far as agreement morphology:
  - subject relatives pattern with indicative clauses (\textit{u}-)
  - object relatives pattern with subjunctive clauses (\textit{a}-)

- It is worth noting that the agreement asymmetry in relative clauses has the distribution of anti-agreement (or that-trace) effects, namely
  - local subject extraction: exponent \textit{X}
  - any other extraction: exponent \textit{Y}

- Interestingly, simple indicative clauses employ exponent \textit{X} in Ndebele (\textit{u}-). That is: what we think of as the regular class 1 prefix, is actually the anti-agreement prefix.

4.2.3 Subject focus

- In object relatives, the overt subject of the RCs is the lower copy in Spec,TP (TopP is deleted).

- As expected, RCs internal subjects behave like subjunctive subjects: being in Spec,TP, they are not restricted to topic interpretations and may be in focus (26).

\begin{itemize}
  \item (26) Leyo y-inyama [rel-clause \textit{umama} \textit{kuphela} a- a- yi- phekileyo. ]
     9DEM COP-9meat 1mother only ASSOC- 1s- 9o- cook.PST.REL
     ‘This is the meat that only mom cooked.’
\end{itemize}

- Thus, the possibility of focused subjects does not diagnose indicative vs subjunctive clause types, but rather clause size (presence or absence of TopP). The absence of TopP happens to be a property of subjunctive clauses and object relatives (which are otherwise indicative).

4.2.4 Case licensing

Neither type of relative clause allows licensing of augmentless subjects. This is likely an independent property of the relative C, which does not show nominal behavior and is perhaps not a potential target for structural case.

5 Remaining issue: high topic intervention

- In addition to the low, agreeing Top head, Ndebele periphery may optionally contain high topics, which, by assumption, are base-generated right below C.

- High topics may appear freely in indicative clauses
• However, they are restricted in subjunctive and relative clauses
  
  – In subjunctive clauses: they are allowed but they block case licensing to a subject by C (27).
  
  – In relative clauses: they are impossible (28)

(27) Angifisi [CP\_obj, kuthi \textbf{kusasa} *(u)-mama a-suke]. \textit{subjunctive}
    wish.1sg.NEG COMP tomorrow 1aug-1mother 1s-leave.SBJ
    ‘I don’t wish for mom to leave tomorrow’

(28) umfana [\textit{RC} (*kusasa) o-za-suka]. \textit{relative clause}
    1boy tomorrow 1rel-FUT-leave
    (‘the boy who is leaving tomorrow’)

• These facts are perhaps not surprising under the analysis proposed here
  
  – Subjunctive clauses: As a left-peripheral XP, a high topic is a phase, and creates the same
    opacity for case licensing as we find in indicative clauses.
  
  – Relative clauses: Since RCs involve movement, high topics will always be deleted, whatever
    is extracted.

6 Conclusion

• According to the proposal made here, the morphosyntactic asymmetries between indicative and
  subjunctive clauses do not diagnose clause type;

• they diagnose the presence or absence of particular chunks of structure,

• which may vary \textit{across and within} clause types.

• Evidence for the reduced-periphery view of those asymmetries come from relative clauses:
  – they are indicative, and yet they share some properties with subjunctive clauses
  – they show that those properties may vary \textit{within} a single clause type, depending how much
    structure undergoes deletion.

• An interesting conclusion emerges about the presence of anti-agreement effects in Ndebele
  – Since local subject extraction triggers the same agreement prefix as indicative clauses, Ndebele
    is not usually described as having anti-agreement (as opposed to some other Bantu languages,
    such as Kinande (Schneider-Zioga, 2007)), Bemba (Cheng, 2006; Henderson, 2013) or Lubukusu
    (Diercks, 2009).
  – In the analysis developed here, the anti-agreement prefix occurs whenever Top_{\varphi} is present,
    – which is a common property of local-subject relatives and indicative clauses.

References


