Decomposing partial wh-movement in Shona

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Wh-questions
**Wh-questions**

(1) You think I found my phone yesterday.
Wh-questions

(1) You think I found what yesterday?
Wh-questions

(1) **What** do you think I found ______ yesterday?
Wh-questions

(1) **What** do you think I found ______ yesterday?

The *what* is interpreted in **two positions**:
**Wh-questions**

(1) **What** do you think I found yesterday?

The *what* is interpreted in **two positions**:

- It fulfills the **thematic** role of the “findee.”
**Wh-questions**

The *what* is interpreted in **two positions**:

- It fulfills the **thematic** role of the “findee.”
- It takes **scope** over the whole sentence, turning it into a question.
Wh-question formation strategies
Wh-question formation strategies

(2) **Full wh-movement in English**

*What do you think* [\( \text{cp we found ___} \)]?
Wh-question formation strategies

(2) **Full wh-movement in English**
What do you think \([_{\text{cp}} \text{ we found } \_\_\_]\)?

(3) **Wh-in-situ in Mandarin Chinese**
Huangrong xiāngxìn \([_{\text{cp}} \text{ Guójìng mǎile } \text{ shěnme}]\)?
Huangrong believe Guojing bought what
‘What does Huangrong believe that Guojing bought?’
(Cheng 2009: 770 (9))
Wh-question formation strategies

(2) **Full wh-movement in English**

What do you think \([_{\text{cp}} \text{we found } \_\_\_}\)?

(3) **Wh-in-situ in Mandarin Chinese**

Huāngróng xiāngxìn \([_{\text{cp}} \text{Guójìng mǎile } \text{shěnme}]\)?

Huangrong believe Guojing bought what

‘What does Huangrong believe that Guojing bought?’ (Cheng 2009: 770 (9))

(4) **Right-peripheral wh-phrase in American Sign Language**

\(\text{IX}_2 \text{ BUY } \_\_\_ \text{ YESTERDAY WHAT} \)

you buy yesterday what

‘What did you buy yesterday?’ (Abner 2011: 25 (5a))
Wh-question formation strategies

(5) **Wh-copying in Romani**

\begin{align*}
\text{Kas } &\quad \text{o Demìri mislinola } \text{[cp kas i Arìfa dikhla ___]?} \\
\text{who } &\quad \text{the Demir think} \quad \text{who} \quad \text{the Arifa saw} \\
\text{‘Who(m) does Demir think Arifa saw?’} &\quad \text{(McDaniel 1989: 569 n.5 (ii))}
\end{align*}
**Wh-question formation strategies**

(5) **Wh-copying in Romani**

Kas o Demìri mislinola \( [_{cp} \text{kas} \ i \ \text{Arifa} \ \text{dikhla} \ \text{___}] \)?

who the Demir think who the Arifa saw

‘Who(m) does Demir think Arifa saw?’

(McDaniel 1989: 569 n.5 (ii))

(6) **Partial wh-movement in Singaporean Malay**

Kamu percaya \( [_{cp} \text{ke} \ \text{mana} \ \text{Mary} \ \text{pergi} \ \text{___}] \)?

you believe to where Mary go

‘Where do you believe Mary went?’

(Cole & Hermon 1998: 225 (3b))
Main idea

**Question:** In a language that has several *wh*-question strategies, are they all derived in different ways, or can we reduce the number of independent mechanisms needed to explain them?
Main idea

**Question:** In a language that has several *wh*-question strategies, are they all derived in different ways, or can we reduce the number of independent mechanisms needed to explain them?

**Claim:** In Shona, a Bantu language spoken by about 14 million people in Zimbabwe and Mozambique, *partial wh-movement is a composite* of *wh*-in-situ and full *wh*-movement.
Roadmap

Bantu \textit{wh}-questions
Roadmap

Bantu *wh*-questions

Island effects as a diagnostic for movement
Roadmap

Bantu $wh$-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona
Roadmap

Bantu *wh*-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial *wh*-movement
Roadmap

Bantu wh-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial wh-movement

Conclusion
Outline

Bantu *wh*-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial *wh*-movement

Conclusion
The languages of Africa.
The languages of Africa.

The Bantu language area.
Shona elicitation with Thabani Dhlakama.
Wh-in-situ in Bantu
Wh-in-situ in Bantu

(7) Shona wh-in-situ

a. In-situ wh-indirect object
   Vakatengera ani rokwe?
   they.bought.for who dress
   ‘Who(m) did they buy a dress (for)’
**Wh-in-situ in Bantu**

(7) **Shona wh-in-situ**

a. *In-situ wh-indirect object*

Vakatengera **ani** rokwe?

they.bought.for **who** dress

‘Who(m) did they buy a dress (for)’

b. *Long-distance in-situ wh-indirect object*

Waifunga [cp kuti vakatengera **ani**

you.thought that they.bought.for **who**

rokwe]?

dress

‘Who(m) did you think they bought a dress (for)?’
**Wh-in-situ in Bantu**

(7) **Shona wh-in-situ**

a. *In-situ wh-indirect object*

Vakatengera **ani** rokwe?
they.bought.for **who** dress
‘Who(m) did they buy a dress (for)?’

b. *Long-distance in-situ wh-indirect object*

Waifunga [*cp* kuti vakatengera **ani**
you.thought that they.bought.for **who**
rokwe?]
dress
‘Who(m) did you think they bought a dress (for)?’
Full *wh*-movement in Bantu
Full *wh*-movement in Bantu

(8) **Shona full *wh*-movement**

a. *Full movement of a wh-indirect object*

\[ \text{Ndi-ani wavakatengera } \_ \_ \_ \text{ rokwe?} \]
\[ \text{be-who that.they.bought.for } \_ \_ \text{ dress} \]

‘Who(m) did they buy a dress (for)?’
Full *wh*-movement in Bantu

(8) **Shona full *wh*-movement**

a. *Full movement of a wh-indirect object*

\[
\text{Ndi-ani} \, \text{wavakatengera} \quad \_ \quad \text{rokwe}?
\]

\[
\text{be-who} \quad \text{that.} \, \text{they.} \, \text{bought.} \, \text{for} \quad \_ \quad \text{dress}
\]

‘Who(m) did they buy a dress (for)?’

b. *Long-distance full movement of a wh-indirect object*

\[
\text{Ndi-ani} \, \text{wawaifung} \quad [_{\text{CP}} \, \text{kuti} \, \text{vakatengera}
\]

\[
\text{be-who} \quad \text{that.} \, \text{you.} \, \text{thought} \quad \text{that} \, \text{they.} \, \text{bought.} \, \text{for}
\]

\[
\_ \quad \text{rokwe]? \quad \_ \quad \text{dress}
\]

‘Who(m) did you think they bought a dress (for)?’
Full \textit{wh}-movement in Bantu

(8) **Shona full \textit{wh}-movement**

a. \textit{Full movement of a \textit{wh}-indirect object}

\textit{Ndi-ani} wavakatengera \underline{who} rokwe?
\textit{be-who} that.they.bought.for \underline{dress}
‘Who(m) did they buy a dress (for)?’

b. \textit{Long-distance full movement of a \textit{wh}-indirect object}

\textit{Ndi-ani} wawaifunga \underline{who} vakatengera
\textit{be-who} that.you.thought \underline{that} they.bought.for
\underline{dress}
‘Who(m) did you think they bought a dress (for)?’
Partial *wh*-movement in Bantu
Partial *wh*-movement in Bantu

(9) **Shona partial *wh*-movement**

a. *Partial movement of a *wh*-indirect object*

Waifunga \([_{CP} \text{kuti } \text{ndi-ani} ]\)
you.thought that *be-*\(\text{who}\)

wavakatengera \(\__\) rokwe]
that.they.bought.for dress
‘Who(m) did you think they bought a dress (for)?’
Partial *wh*-movement in Bantu

(9) **Shona partial *wh*-movement**

a. *Partial movement of a *wh*-indirect object*

Waifunga  \[_{cp}\ kuti\ ndi-ani\]
you.thought  that  be-who

wavakatengera  ___  rokwe]?

that.they.bought.for  dress

‘Who(m) did you think they bought a dress (for)?’

b. *Partial movement of a *wh*-indirect object*

Waifunga  \[_{cp}\ kuti\ ndi-ani\ watakafembera\  \[_{cp}\ kuti\]
you.thought  that  be-who  that.we.guessed  that

vakatengera  ___  rokwe]??

they.bought.for  dress

‘Who(m) did you think we guessed they bought a dress (for)?’
Partial *wh*-movement in Bantu

9) **Shona partial *wh*-movement**

a. *Partial movement of a *wh*-indirect object*

\[ \text{Waifunga} \ [cp \ \text{kuti} \ \text{ndi-ani}] \]
\[ \text{you.thought that be-who} \]
\[ \text{wvavatengerera} \ \_ \ \_ \ \text{rokwe}? \]
\[ \text{that.thyey.bought.for} \ \_ \ \_ \ \text{dress} \]

‘Who(m) did you think they bought a dress (for)?’

b. *Partial movement of a *wh*-indirect object*

\[ \text{Waifunga} \ [cp \ \text{kuti} \ \text{ndi-ani} \ \text{watakafembera} \ [cp \ \text{kuti}] \]
\[ \text{you.thought that be-who that.we.guessed that} \]
\[ \text{vakatengerera} \ \_ \ \_ \ \text{rokwe}? \]
\[ \text{they.bought.for} \ \_ \ \_ \ \text{dress} \]

‘Who(m) did you think we guessed they bought a dress (for)?’
Summary

Shona wh-question formation strategies
Summary

Shona *wh*-question formation strategies

(10)

‘Who(m) do you think they bought a dress (for)’
Summary

Shona *wh*-question formation strategies

(10) a. In Situ: $[[\text{cp} \text{ Waifunga} \ [\text{cp} \text{ kuti} \text{ vakatengera} \text{ ani} \text{ rokke}]]]$?

‘Who(m) do you think they bought a dress (for)?’
Summary
Shona $wh$-question formation strategies

(10) a. In Situ: $[^{cp} Waifunga \ [^{cp} kuti vakatengera \ ani \ rokwe]]$?

b. Full: $[^{cp} Ndiani \ wawaifunga \ [^{cp} kuti vakatengera \ \_\_ \ rokwe]]$?

‘Who(m) do you think they bought a dress (for)?’
Summary

Shona \textit{wh}-question formation strategies

\begin{itemize}
  \item \textbf{scopal}
  \begin{enumerate}
    \item \textbf{In Situ}: \([_{\text{CP}} \text{ Waifunga } [_{\text{CP}} \text{ kuti } \text{ vakatengera } \text{ ani } \text{ rokwe}]]?)
    \item \textbf{Full}: \([_{\text{CP}} \text{ Ndiani wawaifunga } [_{\text{CP}} \text{ kuti } \text{ vakatengera } ____ \text{ rokwe}]]?)
    \item \textbf{Partial}: \([_{\text{CP}} \text{ Waifunga } [_{\text{CP}} \text{ kuti ndiani wvakatengera ____ rokwe}]]?)
  \end{enumerate}
  \item \textbf{thematic}
\end{itemize}

‘Who(m) do you think they bought a dress (for)’
Summary
Shona \(wh\)-question formation strategies

(10) a. In Situ: \([_{cp} Waifunga \ [_{cp} kuti vakatengera \ ani \ rokwe]\]?  

   b. Full: \([_{cp} Ndiani \ wawaifunga \ [_{cp} kuti \ vakatengera \ ___ \ rokwe]\]?  

   c. Partial: \([_{cp} Waifunga \ [_{cp} kuti \ ndiani \ wavakatengera \ ___ \ rokwe]\]?

   ‘Who(m) do you think they bought a dress (for)?’
Summary

Shona *wh*-question formation strategies

(10) a. In Situ: \([_{\text{cp}} \text{Waifunga} \quad _{\text{cp}} \text{kuti vakatengera ani rokwe}]\)??

b. Full: \([_{\text{cp}} \text{Ndiani wawaifunga} \quad _{\text{cp}} \text{kuti vakatengera ___ rokwe}]\), like the lower relation

c. Partial: \([_{\text{cp}} \text{Waifunga} \quad _{\text{cp}} \text{kuti ndiani wavakatengera ___ rokwe}]\), lower

‘Who(m) do you think they bought a dress (for)?’
Summary

Shona $wh$-question formation strategies

(10) a. In Situ: $[_{cp}\text{ Waifunga } [_{cp}\text{ kuti vakatengera } \text{ ani rokwe}]]$?

b. Full: $[_{cp}\text{ Ndiani wawaifunga } [_{cp}\text{ kuti vakatengera } \text{ rokwe}]]$?

like the lower relation

c. Partial: $[_{cp}\text{ Waifunga } [_{cp}\text{ kuti ndiani wavakatengera } \text{ rokwe}]]$?

higher lower

‘Who(m) do you think they bought a dress (for)?’
Summary

Shona *wh*-question formation strategies

(10) a. In Situ: 

\[
\text{Waifunga} \quad \text{cp} \quad \text{kuti} \quad \text{vakatengera} \quad \text{ani} \quad \text{rokwe} \]

like the higher relation

b. Full: 

\[
\text{Ndiani} \quad \text{wawaifunga} \quad \text{cp} \quad \text{kuti} \quad \text{vakatengera} \quad \text{rokwe} \]

like the lower relation

c. Partial: 

\[
\text{Waifunga} \quad \text{cp} \quad \text{kuti} \quad \text{ndiani} \quad \text{wvakatengera} \quad \text{rokwe} \]

higher \quad lower

‘Who(m) do you think they bought a dress (for)?’
Outline

Bantu *wh*-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial *wh*-movement

Conclusion
Islands in English
Ross 1967
Islands in English
Ross 1967

(11)  a.  No island

You think [\textit{cp} I found my phone yesterday].
Islands in English

Ross 1967

(11)  a. **No island**

   You think \([_{cp} \text{I found} \text{ what} \text{ yesterday}]\)?
Islands in English
Ross 1967

(11) a. No island

\[\text{What do you think}\left[\text{I found}\ _\right]\ \text{yesterday}\]?
Islands in English
Ross 1967

(11)  a. **No island**

    What do you think $\text{[C} \backslash \text{P} \text{I found } \underline{\text{___.}} \text{ yesterday]}$?

    \[\text{OK}\]

    b. **Adjunct island**

    You called Emily $\text{[C} \backslash \text{P} \text{after you saw } \underline{\text{Aaron}} \text{].}$
Islands in English

Ross 1967

(11) a. **No island**

What do you think [\(\text{cp} \) I found ___ yesterday]?

b. **Adjunct island**

You called Emily [\(\text{cp} \) after you saw who(m)]?
Islands in English

Ross 1967

(11) a. **No island**

What do you think [cp I found ___ yesterday]?

b. **Adjunct island**

*Who(m) did you call Emily [island after you saw ___]?
Islands in English
Ross 1967

(11) a. No island
   What do you think \([_{cp} I\ found ___ \) yesterday]?
   \[\overset{\text{OK}}{\uparrow}\]

b. Adjunct island
   *Who(m) did you call Emily \([_{island} after\ you\ saw ___ ]\)?
   \[\overset{\times}{\uparrow}\]

c. Complex NP island
   Mateo chose \([_{np} \text{the T-shirt that said I } \heartsuit \text{NY}]\).
Islands in English
Ross 1967

(11) a. **No island**

\[
\text{What do you think } [_{cp} \text{ I found } \underline{\text{ok}} \text{ yesterday}]? \\
\]

b. **Adjunct island**

\[
*\text{Who(m) did you call Emily } [_{island} \text{ after you saw } \underline{x} \text{ }]? \\
\]

c. **Complex NP island**

\[
\text{Mateo chose } [_{np} \text{ the T-shirt that said } \underline{\text{what}} \text{ }]?
\]
Islands in English

Ross 1967

(11) a. No island

\[
\text{What do you think } [_{\text{cp}} \text{ I found } \_ \_ \_ \text{ yesterday}]? \\
\text{OK}
\]

b. Adjunct island

\[
*\text{Who(m) did you call Emily } [_{\text{island}} \text{ after you saw } \_ \_ \_ ]? \\
\times
\]

c. Complex NP island

\[
*\text{What did Mateo choose } [_{\text{island}} \text{ the T-shirt that said } \_ \_ \_ ]? \\
\times
\]
Islands in English

Ross 1967

(11) a. **No island**

   What do you think \( \text{cp I found __ yesterday]}. \)

   \[ \text{OK} \]

b. **Adjunct island**

   *Who(m) did you call Emily \( \text{island after you saw __ }]. \)

   \[ \times \]

c. **Complex NP island**

   *What did Mateo choose \( \text{island the T-shirt that said __ }]. \)

   \[ \times \]

d. **Coordinate structure island**

   They went to \( \text{np the pet store and the grocery store].} \)
Islands in English
Ross 1967

(11) a. **No island**

What do you think \[_{\text{cp}} \text{ I found } \underline{\quad} \text{ yesterday}\]?

\[
\begin{array}{c}
\text{OK}
\end{array}
\]

b. **Adjunct island**

*Who(m) did you call Emily \[_{\text{island}} \text{ after you saw } \underline{\quad}\]?

\[
\begin{array}{c}
\times
\end{array}
\]

c. **Complex NP island**

*What did Mateo choose \[_{\text{island}} \text{ the T-shirt that said } \underline{\quad}\]?

\[
\begin{array}{c}
\times
\end{array}
\]

d. **Coordinate structure island**

They went to \[_{\text{NP}} \text{ the pet store and } \underline{\quad} \text{ where}\]?
Islands in English

Ross 1967

(11) a. No island

\[
\text{What do you think}\ [\text{cp I found } \underline{\text{ok}} \text{ yesterday}]?
\]

b. Adjunct island

*Who(m) did you call Emily [\text{island after you saw } \underline{\times} ]?

\[\text{You called}\ [\text{cp after you saw Aaron}]?\]

c. Complex NP island

*What did Mateo choose [\text{island the T-shirt that said } \underline{\times} ]?

\[\text{Mateo chose}\ [\text{np the T-shirt that said}]?\]

d. Coordinate structure island

*Where did they go to [\text{island the pet store and } \underline{\times} ]?

\[\text{They went to}\ [\text{np the pet store and}]?\]
Island sensitivity of Vietnamese *wh*-in-situ

Tran 2009
Island sensitivity of Vietnamese wh-in-situ

Tran 2009

(12)  a.  

Adjunct island
Island sensitivity of Vietnamese \textit{wh}-in-situ

Tran 2009

(a) \textbf{Adjunct island}

\begin{center}
\begin{tabular}{l}
Tân sẽ thua cuộc \textit{[island vì ai làm hư xe của anh.ta]}? \\
Tan will lose event \hspace{2cm} because \textit{who} make damage vehicle belong he
\end{tabular}
\end{center}

‘Who will Tan lose the race because ___ will damage his car?’ \hspace{2cm} (Tran 2009: 175 (10a))
Island sensitivity of Vietnamese \textit{wh}-in-situ

Tran 2009

(12) a. \textbf{Adjunct island}

\begin{center}
\begin{tabular}{l}
\textit{Tán sẽ thua cuộc} \textcolor{red}{[island vì ai làm hư xe của anh.ta]}? \\
\textit{Tan will lose event because \textbf{who} make damage vehicle belong he}
\end{tabular}
\end{center}

\begin{center}
\text{‘Who will Tan lose the race because \textbf{____} will damage his car?’} \quad \text{(Tran 2009: 175 (10a))}
\end{center}
Island sensitivity of Vietnamese wh-in-situ
Tran 2009

(12) a. **Adjunct island**

* Tăn sẽ thua cuộc [island vì ai làm hư xe của anh.ta]? 
  Tan will lose event because who make damage vehicle belong he

‘Who will Tan lose the race because ___ will damage his car?’ (Tran 2009: 175 (10a))

b. **Complex NP island**

* Tăn sẽ chụp hình [island con hổ đã dọa ai]? 
  Tan will catch picture CLF tiger ASP scare who

‘Who(m) will Tan take a picture of the tiger that scared ___?’ (Tran 2009: 174 (8a))
Island sensitivity of Vietnamese \textit{wh}-in-situ

Tran 2009

\begin{itemize}
\item[(12)] \textbf{a. Adjunct island}
\begin{itemize}
\item * Tân sẽ thua cuộc \text{[island vì ai làm hư xe của anh.ta]}?
\item Tan will lose event because \textbf{who} make damage vehicle belong he
\end{itemize}
\end{itemize}

\begin{quote}
‘Who will Tan lose the race because ____ will damage his car?’ \quad (Tran 2009: 175 (10a))
\end{quote}

\begin{itemize}
\item[(b)] \textbf{Complex NP island}
\begin{itemize}
\item * Tân sẽ chụp hình \text{[island con hổ đã dọa ai]}?
\item Tan will catch picture \textbf{CLF tiger ASP scare who}
\end{itemize}
\end{itemize}

\begin{quote}
‘Who(m) will Tan take a picture of the tiger that scared ____?’ \quad (Tran 2009: 174 (8a))
\end{quote}

Islands can diagnose \textit{silent movement}. 
Island sensitivity in Singaporean Malay

Cole & Hermon 1998

(13) **Complex NP island**

a. *Wh-*in-situ within a complex NP

Kamu sayang [island perempuan yang Ali you love woman that Ali fikir [cp yang telah makan apa]]?

thinks that already eat what

‘What do you love the woman who Ali thinks ate ___?’

(Cole & Hermon 1998: 235 (34b))
Island sensitivity in Singaporean Malay
Cole & Hermon 1998

(13) **Complex NP island**

b. *Full wh-movement out of a complex NP*

```
*Di mana kamu fikir [CP Ali suka
at where you think Ali like

[island perempuan yang tinggal ___]]?
woman that live

‘Where do you think Ali likes the woman
who lives ___?’
```

(Cole & Hermon 1998: 227 (7a))
Island sensitivity in Singaporean Malay
Cole & Hermon 1998

(13) **Complex NP island**

c. *Partial wh-movement out of a complex NP*

*Ali memberitahu kamu [*\[\text{cp} \ \text{apa} \ \text{yang} \ \text{that}\] Ali told you what that
Mari fikir [*\[\text{cp} \ \text{dia} \ \text{suka} \ \text{he} \ \text{likes}\] Mari think he likes

\[\text{[island perempuan yang beli ___]}\]?
woman that buy

‘What did Ali tell you that Mary thinks that he likes a woman who bought ___?’
(Cole & Hermon 1998: 235 (33))
Island sensitivity in Singaporean Malay
Cole & Hermon 1998

(13) **Complex NP island**

d. *Partial wh-movement within a complex NP*

   *Kamu sayang [island perempuan yang you love woman that*

   Ali fikir [cp apa yang telah Ali thinks what that already makan ___]? eat

   ‘What do you love the woman who Ali thinks ate ___?’

   (Cole & Hermon 1998: 235 (35b))
Attested patterns vs. theoretical predictions
Attested patterns vs. theoretical predictions

(14) Fanselow’s (2006) Generalization S4:
A \textit{wh}-phrase that has undergone (partial) \textit{wh}-movement must not be separated from its scope position by an island for movement.
Attested patterns vs. theoretical predictions

(14) Fanselow’s (2006) Generalization S4:
A *wh*-phrase that has undergone (partial) *wh*-movement must not be separated from its scope position by an island for movement.

But...
Attested patterns vs. theoretical predictions

(14) **Fanselow’s (2006) Generalization S4:**
A *wh*-phrase that has undergone (partial) *wh*-movement must not be separated from its scope position by an island for movement.

But...

Theoretical analyses proposed by Sabel (2000: 441), Sabel & Zeller (2006: 280), and Abels (2012: 155–156) predict there to be languages that falsify this empirical generalization.
Attested patterns vs. theoretical predictions

(14) Fanselow’s (2006) Generalization S4:
A *wh*-phrase that has undergone (partial) *wh*-movement must not be separated from its scope position by an island for movement.

But...

Theoretical analyses proposed by Sabel (2000: 441), Sabel & Zeller (2006: 280), and Abels (2012: 155–156) predict there to be languages that falsify this empirical generalization.

Shona is one such language.
Outline

Bantu *wh*-questions

Island effects as a diagnostic for movement

*Island sensitivity in Shona*

Composite derivation of Shona partial *wh*-movement

Conclusion
Island sensitivity

The Shona pattern

(15) **Adjunct island**

a. *Wh-in-situ within an adverbial clause*

```
Waifunga [cp kuti vakafonera mapurisa you.thought that they.called police
          [island nokuti vakaona ani]? because they.saw who

‘Who(m) did you think they called the police because they saw ___?’
```
Island sensitivity

The Shona pattern

(15) **Adjunct island**

b. *Full wh-movement out of an adverbial clause*

*Ndi-ani* wawaifunga [$_{\text{CP}}$ kuti vakafonera]

*be-who* that.you.thought that they.called

mapurisa [$_{\text{island}}$ nokuti vakaona ___]? police

because they.saw

‘Who(m) did you think they called the police because they saw ___?’

a. In Situ: [$_{\text{CP}}$ ... [$_{\text{CP}}$ ... [$_{\text{island}}$ ... wh ... ]]]

scopal

[ ... [ ... [ ... ]]]

thematic

[ ... [ ... [ ... ]]]

ok

*b. Full: * [$_{\text{CP}}$ wh ... [$_{\text{CP}}$ ... [$_{\text{island}}$ ... ___ ... ]]]

[ ... [ ... [ ... ]]]

×
Island sensitivity

The Shona pattern

(15) **Adjunct island**

c. *Partial wh*-movement out of an adverbial clause

a. In Situ: \[
\text{In Situ: } \text{[cp } \ldots \text{[cp } \ldots \text{[island } \ldots \text{wh } \ldots \text{]]}
\]

b. Full: \[
\text{Full: } \ast \text{[cp wh } \ldots \text{[cp } \ldots \text{[island } \ldots \text{ ___ } \text{]]}
\]

c. Partial: \[
\text{Partial: } \ast \text{[cp } \ldots \text{[cp wh } \ldots \text{[island } \ldots \text{ ___ } \text{]]}
\]

‘Who(m) did you think they called the police because they saw ___?’
Island sensitivity

The Shona pattern

(15) **Adjunct island**

d. Partial wh-movement within an adverbial clause

Waifunga \([_{cp} kuti vakafonera mapurisa you.thought that they.called police \]

\([_{island} nokuti ndi-ani because be-who \]

wavakaona \([\_\_\_]?)\]

that.they.saw

‘Who(m) did you think they called the police because they saw \([\_\_\_]?’\]
Island sensitivity

The Shona pattern

(16) **Complex NP island**

a. **Wh-in-situ within a complex NP**

> Wakanzwa [\[ \text{cp} \text{ kuti} \text{ vakaramba} \text{ [island nyaya story] } \text{ island } \text{ nyaya } \text{ story} \]

> you.heard that they.denied

> yekuti yakaruma \text{ ani } \text{ pagumbo}]?

> of.that \text{ it.bit } \text{ who } \text{ on.leg}

‘Who(m) did you hear that they denied the story

that it (their dog) bit ___ on the leg?’
Island sensitivity

The Shona pattern

(16)  **Complex NP island**

b.  *Full* wh-movement out of a complex NP

\[
\text{Ndi-ani wawakanzwa} \quad \text{[cp kuti vakaramba} \\
\text{be-who that.you.heard that they.denied} \\
\text{[island nyaya yekuti yakaruma ___} \\
\text{story of.that it.bit pagumbo]}? \\
on.leg
\]

‘Who(m) did you hear that they denied the story that it (their dog) bit ___ on the leg?’
Island sensitivity

The Shona pattern

(16) **Complex NP island**

c. *Partial wh-movement out of a complex NP*

*Wakanzwa* [c_p kuti *ndi-ani* wavakaramba
you.heard that *be-who* that.they.denied

[island nyaya yekuti yakaruma ___
story of.that it.bit

pagumbo]?
on.leg

‘Who(m) did you hear that they denied the story
that it (their dog) bit ___ on the leg?’
Island sensitivity

The Shona pattern

(16) **Complex NP island**

d. *Partial wh-movement within a complex NP*

Wakanzwa \[\text{cp}\] kuti vakaramba
you.heard that they.denied

\[\text{island}\] nyaya yekuti \text{ndi-ani}\] wayakaruma
story of.that be-who that.it.bit

___ pagumo]\)?
on.leg

‘Who(m) did you hear that they denied the story that it (their dog) bit ___ on the leg?’
Outline

Bantu wh-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial $wh$-movement

Conclusion
Composite derivation of partial \textit{wh}-movement

- Lower relation:
  like full \textit{wh}-movement

(17)  \textbf{Proposal for Shona}

\begin{itemize}
\item[b.] Full:  \[\ast [_{\text{CP}} \textbf{\textit{wh} \ldots} [_{\text{CP}} \ldots [_{\text{island}} \ldots \ldots]]]\]
\item[c.] Partial:  \[\ast [_{\text{CP}} \ldots [_{\text{CP}} \textbf{\textit{wh} \ldots} [_{\text{island}} \ldots \ldots]]]\]
\end{itemize}
Composite derivation of partial *wh*-movement

- **Lower relation:**
  like full *wh*-movement

  (17) Proposal for Shona

  a. In Situ: \[
  \begin{array}{c}
  \text{scopal} \\
  \text{thematic}
  \end{array}
  \]

  \[
  \text{[}_\text{CP}\ \cdots\ \text{[}_\text{CP}\ \cdots\ \text{[}_\text{island}\ \cdots\ \text{wh}\ \cdots\ ]}\text{]}\]

  OK

- **Higher relation:**
  like *wh*-in-situ

  d. Partial: \[
  \begin{array}{c}
  \text{scopal}
  \end{array}
  \]

  \[
  \text{[}_\text{CP}\ \cdots\ \text{[}_\text{CP}\ \cdots\ \text{[}_\text{island}\ \text{wh}\ \cdots\ ]}\text{]}\]

  OK
Composite derivation of partial *wh*-movement

- **Lower relation:**
  like full *wh*-movement

- **Higher relation:**
  like *wh*-in-situ

**Proposal for Shona**

(17) *scopal* thematic

a. In Situ: \[[\text{CP}} \ldots \text{[CP}} \ldots \text{[island}} \ldots \text{*wh} \ldots ]]\]
   \[\text{OK}\]

b. Full: \*[[\text{CP}} \text{wh} \ldots \text{[CP}} \ldots \text{[island}} \ldots \ldots]]\]
   \[\times\]

c. Partial: \*[[\text{CP}} \ldots \text{[CP}} \text{wh} \ldots \text{[island}} \ldots \ldots]]\]
   \[\times\]

d. Partial: \[[\text{CP}} \ldots \text{[CP}} \ldots \text{[island} \text{wh} \ldots \ldots]]\]
   \[\text{OK}\]
Composite derivation of partial *wh*-movement

- **Lower relation:**
  like full *wh*-movement
  
  - syntactic movement

- **Higher relation:**
  like *wh*-in-situ

(17) Proposal for Shona

\[
\begin{array}{c}
\text{scopal movement} \\
\text{thematic}
\end{array}
\]

b. Full:  
*[[CP \textit{wh} \ldots [CP \ldots [\text{island} \ldots \ldots]]] ]

ok non-movement

ok non-movement

scopal thematic

thematic

thematic

movement
Composite derivation of partial \(wh\)-movement

- **Lower relation:**
  like full \(wh\)-movement
  - syntactic movement

- **Higher relation:**
  like \(wh\)-in-situ

(17) **Proposal for Shona**

b. Full: \(*_{cp}^{cp} ~wh~ \ldots \}_{cp}^{cp} \ldots \left[island \ldots \right]\)

\[\begin{array}{c}
\text{scopal} \\
\text{movement} \\
\text{thematic}
\end{array}\]

c. Partial: \(*_{cp}^{cp} \ldots \}_{cp}^{cp} ~wh~ \left[island \ldots \right]\)

\[\begin{array}{c}
\text{movement} \\
\end{array}\]
Composite derivation of partial *wh*-movement

- **Lower relation:**
  - like full *wh*-movement
    - syntactic movement

- **Higher relation:**
  - like *wh*-in-situ
    - semantic non-movement relation
      (Sabel 2000, Sabel & Zeller 2006)

(17) **Proposal for Shona**

a. In Situ: \[
\begin{array}{c}
\text{scopal} \\
\text{thematic} \\
\end{array}
\]
\[
\begin{array}{c}
\text{non-movement} \\
\end{array}
\]
\[
\begin{array}{c}
\text{[} \text{cp} \text{Op} \ldots \text{[} \text{cp} \ldots \text{[} \text{island} \ldots \text{wh} \ldots \text{]}} \text{\]} \text{]} \text{]} \text{]} \]
\]
Composite derivation of partial *wh*-movement

- **Lower relation:**
  - like full *wh*-movement
    - **syntactic movement**

- **Higher relation:**
  - like *wh*-in-situ
    - **semantic non-movement relation**
      (Sabel 2000, Sabel & Zeller 2006)

**Proposal for Shona**

(17)

a. In Situ: \[ \text{[} \text{Op} \ldots \text{[} \text{island} \ldots \text{wh} \ldots \text{]} \text{]} \]

b. Full: \[ \text{[} \text{cp} \text{wh} \ldots \text{[} \text{island} \ldots \text{]} \text{]} \]

c. Partial: \[ \text{[} \text{cp} \text{Op} \ldots \text{[} \text{island} \text{wh} \ldots \text{]} \text{]} \]

d. Partial: \[ \text{[} \text{cp} \text{Op} \ldots \text{[} \text{island} \text{wh} \ldots \text{]} \text{]} \]
Composite derivation of partial wh-movement

▶ Lower relation: like full wh-movement
  ▶ syntactic movement

▶ Higher relation: like wh-in-situ
  ▶ semantic non-movement relation
    (Sabel 2000, Sabel & Zeller 2006)

(17) Proposal for Shona

a. In Situ: $[\text{CP Op} \ldots [\text{CP} \ldots [\text{island} \ldots \text{wh} \ldots ]]]$

b. Full: $*[\text{CP} \text{wh} \ldots [\text{CP} \ldots [\text{island} \ldots ]]]$

c. Partial: $*[\text{CP} \text{Op} \ldots [\text{CP} \text{wh} \ldots [\text{island} \ldots ]]]$

d. Partial: $[\text{CP} \text{Op} \ldots [\text{CP} \ldots [\text{island} \text{wh} \ldots ]]]$

scopal

non-movement

thematic

movement

movement

non-movement
Lower relation assimilated to full *wh*-movement

**Evidence:**
Lower relation assimilated to full *wh*-movement

Evidence:

- Island sensitivity
Lower relation assimilated to full *wh*-movement

**Evidence:**
- Island sensitivity
- Cleft structure
Lower relation assimilated to full $wh$-movement

**Evidence:**
- Island sensitivity
- Cleft structure
- Extraction marking
Lower relation assimilated to full $wh$-movement

**Evidence:**
- Island sensitivity
- Cleft structure
- Extraction marking
- Reconstruction effects
Lower relation assimilated to full *wh*-movement

Island sensitivity
Lower relation assimilated to full *wh*-movement

Island sensitivity

(18) Wh-phrases cannot be extracted from islands

b. Full: \*\[\text{scopal} \quad [\text{cp} \quad \text{wh} \quad \ldots \quad [\text{cp} \quad \ldots \quad [\text{island} \quad \ldots \quad \ldots \quad \ldots \quad \ldots]]] \]

\[\times\]

c. Partial: \*\[\text{scopal} \quad [\text{cp} \quad \ldots \quad [\text{cp} \quad \text{wh} \quad \ldots \quad [\text{island} \quad \ldots \quad \ldots \quad \ldots \quad \ldots]]] \]

\[\times\]
Lower relation assimilated to full *wh*-movement

Cleft structure
Lower relation assimilated to full *wh*-movement

Cleft structure

\[(19)\quad \text{Wh-phrases marked with } ndi-\]

a. *Full wh-movement requires ndi-*

\*[Ndi]-ani wawaifunga \(\text{[cp kuti takatengera } \underline{\text{___}} \text{ rokwe]}?\)

be-who that.you.thought that we.bought.for dress

‘Who(m) did you think we bought a dress (for)?’
Lower relation assimilated to full *wh*-movement

Cleft structure

(19) **Wh-phrases marked with ndi-**

a. *Full wh-movement requires ndi-

\[(Ndi)\)-ani wawaifunga \([c_P \text{kuti takatengera } \_ \_ \_ \text{ rokwe}]?\]

*be-who* that.you.thought that we.bought.for dress

‘Who(m) did you think we bought a dress (for)’

b. *Partial wh-movement requires ndi-

\[\text{Waifunga } \[c_P \text{kuti } *(ndi)-\text{ani watakatengera } \_ \_ \_ \text{ rokwe}]?\]

you.thought that *be-who* that.we.bought.for dress

‘Who(m) did you think we bought a dress (for)’
Lower relation assimilated to full $wh$-movement

Extraction marking (Zentz in press)
Lower relation assimilated to full *wh*-movement

Extraction marking (Zentz in press)

(20) **Extraction marking**

a. *Full *wh*-movement requires extraction marking in the pronunciation clause*

\[
\text{Ndi-ani*(wa)-waifunga [cp kuti takatengera \_ \_ rokwe]?
be-1a.who 1a.EXM-you.thought that we.bought.for \_ \_ dress}
\]

‘Who(m) did you think we bought a dress (for)?’
Lower relation assimilated to full \( wh \)-movement

Extraction marking (Zentz in press)

(20) **Extraction marking**

a. *Full \( wh \)-movement requires extraction marking in the pronunciation clause*

\[
\text{Ndi-ani \ *(wa)-waifunga \ [_{cp} \ kuti \ takatengera \ ____ \ rokwe]}? \\
\text{be-1a.who \ 1a.EXM-you.thought \ that \ we.bought.for \ dress}
\]

‘Who(m) did you think we bought a dress (for)?’

b. *Partial \( wh \)-movement requires extraction marking in the pronunciation clause*

\[
\text{Waifunga \ [_{cp} \ kuti \ ndi-ani \ *(wa)-takatengera \ ____ \ rokwe]}? \\
\text{you.thought \ that \ be-1a.who \ 1a.EXM-we.bought.for \ dress}
\]

‘Who(m) did you think we bought a dress (for)?’
Higher relation assimilated to wh-in-situ

Evidence:
Higher relation assimilated to *wh*-in-situ

Evidence:
- Lack of island sensitivity
Higher relation assimilated to *wh*-in-situ

Evidence:
- Lack of island sensitivity
- Lack of extraction marking
Lower relation assimilated to full *wh*-movement

Lack of island sensitivity
Lower relation assimilated to full *wh*-movement

Lack of island sensitivity

(21)  *Wh*-phrases can remain within islands

a. In Situ: \[ \text{scopal} \ldots [_{CP} \ldots [_{CP} \ldots [_{island} \ldots \text{wh} \ldots ]] ] \]

\[ \text{thematic} \]

\[ \text{OK} \]

d. Partial: \[ \text{scopal} \ldots [_{CP} \ldots [_{CP} \ldots [_{island} \text{wh} \ldots \_ \ldots ]] ] \]

\[ \text{thematic} \]

\[ \text{OK} \]
Higher relation assimilated to \textit{wh}-in-situ

Lack of extraction marking (Zentz in press)
Higher relation assimilated to \textit{wh-in-situ}

Lack of extraction marking (Zentz in press)

(22) **Extraction marking**

a. \textit{Wh-in-situ cannot have extraction marking}

\begin{align*}
(*Wa)-\text{waifunga} & \quad [_{\text{cp}} \text{kuti} (*wa)-\text{takatengera} \quad \text{ani} \quad \text{rokwe}]? \\
\text{1a.EXM-you.thought} & \quad \text{that} \quad \text{1a.EXM-we.bought.for} \quad \text{1a.who} \quad \text{dress} \\
\text{‘Who(m) did you think we bought a dress (for)?’}
\end{align*}
Higher relation assimilated to wh-in-situ

Lack of extraction marking (Zentz in press)

(22) Extraction marking

a. Wh-in-situ cannot have extraction marking

\[ (*\text{Wa})-\text{waifunga} \quad [c_p \text{kuti} \quad (*\text{wa})-\text{takatengera} \quad \text{ani} \quad \text{rokwe}]? \]

\[ 1a.\text{EXM-you.thought} \quad \text{that} \quad 1a.\text{EXM-we.bought.for} \quad 1a.\text{who} \quad \text{dress} \]

‘Who(m) did you think we bought a dress (for)?’

b. Partial wh-movement cannot have extraction marking above the pronunciation site

\[ (*\text{Wa})-\text{waifunga} \quad [c_p \text{kuti} \quad \text{ndi-ani} \quad (*\text{wa})-\text{takatengera} \quad \_ \_ \quad \text{rokwe}]? \]

\[ 1a.\text{EXM-you.thought} \quad \text{that} \quad \text{be-1a.who} \quad 1a.\text{EXM-we.bought.for} \quad \text{dress} \]

‘Who(m) did you think we bought a dress (for)?’
Outline

Bantu wh-questions

Island effects as a diagnostic for movement

Island sensitivity in Shona

Composite derivation of Shona partial wh-movement

Conclusion
Conclusion

Open questions:
Conclusion

Open questions:

▶ Why do some languages have more than one strategy for forming \textit{wh}-questions?
Conclusion

Open questions:

- Why do some languages have more than one strategy for forming \textit{wh}-questions?
- What governs the choice to use one strategy instead of another?
Conclusion

Open questions:

- Why do some languages have more than one strategy for forming *wh*-questions?
- What governs the choice to use one strategy instead of another?
- Can we predict whether a language will allow partial *wh*-movement within islands?
Old news:

Languages vary considerably in how they construct wh-questions. Islands can be used as a diagnostic for movement. New news: Shona allows partial wh-movement within islands, as predicted by several analyses. This provides support for a composite derivation of partial wh-movement, where the higher relation can be assimilated to wh-in-situ and the lower relation to full wh-movement.
Conclusion

Old news:

- Languages vary considerably in how they construct $wh$-questions.
Conclusion

Old news:
- Languages vary considerably in how they construct *wh*-questions.
- Islands can be used as a diagnostic for movement.
Conclusion

Old news:
- Languages vary considerably in how they construct \(wh\)-questions.
- Islands can be used as a diagnostic for movement.

New news:
Conclusion

Old news:
- Languages vary considerably in how they construct *wh*-questions.
- Islands can be used as a diagnostic for movement.

New news:
- Shona allows partial *wh*-movement within islands, as predicted by several analyses.
Conclusion

Old news:

- Languages vary considerably in how they construct \textit{wh}-questions.
- Islands can be used as a diagnostic for movement.

New news:

- Shona allows partial \textit{wh}-movement within islands, as predicted by several analyses.
- This provides support for a composite derivation of partial \textit{wh}-movement, where the higher relation can be assimilated to \textit{wh}-in-situ and the lower relation to full \textit{wh}-movement.
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References I


References II


Island sensitivity
The Shona pattern

(23) **Complex NP island (relative clause)**

a. *Wh-in-situ within a relative clause*

Unofunga \( [_{\text{cp}} \text{kuti} \text{ anofarira}] \) you.think that s/he.likes

\( [_{\text{island}} \text{chikwata} \text{ chinobva} \text{ kupi}] \)?

team that.is.from *where*

‘Where do you think s/he likes the team that is from ___?’
Island sensitivity
The Shona pattern

(23) **Complex NP island (relative clause)**

b. *Full wh-movement out of a relative clause*

*Nde-kupi* kwaunofunga

*be-where* that.you.think

\[ \text{[cp kuti anofarira [island chikwata team]}}? \]

*that.s/he.likes chinobva that.is.from*

‘Where do you think s/he likes the team that is from ___?’
Island sensitivity
The Shona pattern

(23) Complex NP island (relative clause)

c.  
Partial wh-movement out of a relative clause

*Unofunga \[
\text{cp} \text{ kuti} \ \text{nde-kupi} \ \text{kwaanofarira} \\\n\text{you.think} \quad \text{that} \ \text{be-where} \ \text{that.s/he.likes} \\\n[\text{island} \ \text{chikwata} \ \text{chinobva} \ \text{___}]? \\\n\text{team} \quad \text{that.is.from} \\\n\]

‘Where do you think s/he likes the team that is from ___?’

\[\text{In Situ: } \begin{array}{l}
\text{scopal} \\
\text{a. } \begin{array}{l}
[\text{cp} \ldots [\text{cp} \ldots [\text{island} \ldots \text{wh} \ldots]]] \\
\text{OK}
\end{array}
\end{array}
\]

\[\text{Full: } \begin{array}{l}
\text{b. } \begin{array}{l}
[\text{cp} \text{wh} \ldots [\text{cp} \ldots [\text{island} \ldots \text{___} \ldots]]] \\
\times
\end{array}
\end{array}
\]

\[\text{Partial: } \begin{array}{l}
\text{c. } \begin{array}{l}
[\text{cp} \ldots [\text{cp} \text{wh} \ldots [\text{island} \ldots \text{___} \ldots]]] \\
\times
\end{array}
\end{array}
\]
Island sensitivity

The Shona pattern

(24) **Complex NP island (relative clause)**

a. *Wh-in-situ within a relative clause*

Anofarira: 

\[
\text{wh-in-situ within a relative clause}
\]

\[
\text{Anofarira \ [island chikwata chaunofunga s/he.likes team that.you.think [cp kuti chinobva kupi]? that it.is.from where ‘Where does s/he like the team that you think is from ___?’]
}\]
Island sensitivity
The Shona pattern

(24) Complex NP island (relative clause)

b. Full wh-movement out of a relative clause

*Nde-kupi  kwaanofarira  [island  chikwata
be-where  that.s/he.likes  team
chaunofunga  [cp  kuti  chinobva  ____]?  
that.you.think  that  it.is.from
‘Where does s/he like the team that you think is from ____?’
Island sensitivity
The Shona pattern

(24)  **Complex NP island (relative clause)**

d.  *Partial wh-movement within a relative clause*

?Anofarira \( [[\text{island} \ \text{chikwata} \ \text{chaunofunga} \ \text{team} \ \text{that.you.think}]] \)
\( [\text{cp} \ \text{kuti} \ \text{nde-kupi} \ \text{kwachinobva} \ \text{___}]] \)
that be-where that.it.is.from

‘Where does s/he like the team that you think is from ___?’