Abstract

Forming Wh-Questions in Shona:  
A Comparative Bantu Perspective

Jason Arik Zentz
2016

Bantu languages, which are spoken throughout most of sub-Saharan Africa, permit wh-questions to be constructed in multiple ways, including wh-in-situ, full wh-movement, and partial wh-movement. Shona, a Bantu language spoken by about 13 million people in Zimbabwe and Mozambique, allows all three of these types. In this dissertation, I conduct the first in-depth examination of Shona wh-questions, drawing on fifty hours of elicitation with a native speaker consultant to explore the derivational relationships among these strategies.

Wh-in-situ questions have received a wide variety of treatments in the syntactic literature, ranging from covert or disguised movement to postsyntactic binding of the wh-phrase by a silent question operator. In Bantu languages, wh-in-situ questions are often taken to be derived via a non-movement relation (e.g., Carstens 2005 for Kilega, Diercks 2010 for Lubukusu, Muriungi 2003 for Kiitharaka, Sabel 2000 for Kikuyu and Duala, Sabel & Zeller 2006 for Zulu, Schneider-Zioga 2007 for Kinande), but alternatives have rarely been considered. I demonstrate how movement-based analyses that have been proposed for wh-in-situ in non-Bantu languages make the wrong predictions for Shona wh-in-situ, which lacks word order permutation, extraction marking, island effects, and intervention effects. These properties provide support for the traditional Bantuist view that the relation between the pronunciation site of an in-situ wh-phrase and its scopal position in the left periphery is not movement; I claim that in Shona it is unselective binding.

Many Bantu languages, including Shona, prohibit wh-phrases from appearing in the canonical preverbal subject position. Wasike (2007) demonstrates that this restriction ap-
plies to topicalized non-subjects as well as preverbal subjects. I replicate these results for Shona and argue that they cast doubt on Sabel & Zeller’s (2006) attempt to characterize the ban with an appeal to improper movement. I argue instead that restrictions on the distribution of *wh*-in-situ in Bantu are tied to restrictions on the domain for focus licensing. This claim is further bolstered by an examination of crosslinguistic variation within Bantu with respect to whether the ban on in-situ preverbal *wh*-subjects applies in embedded clauses. I observe a previously unnoticed generalization: languages that universally ban in-situ preverbal *wh*-subjects (like Zulu) have immediately after the verb (IAV) focus effects; languages that do allow in-situ preverbal *wh*-subjects in embedded clauses (like Shona, Lubukusu, and Kîîtharaka) also lack IAV effects.

Full *wh*-movement in Shona gives rise to questions that bear a certain similarity to English *wh*-questions. However, using a range of diagnostics including extraction marking, island effects, reconstruction effects, and the distribution of temporal modifiers, I argue that what appears to be full *wh*-movement in Shona actually has a cleft structure: the *wh*-phrase moves to become the head of a relative clause, which is selected by a copula in the matrix clause. Just as in *wh*-in-situ, an ex-situ *wh*-phrase is pronounced lower than its scopal position, and the relation between these two positions is established via unselective binding. Additional evidence for this proposal comes from the sensitivity of partial *wh*-movement to island boundaries below but not above the pronunciation site of the *wh*-phrase, a pattern that has been predicted by previous analyses (e.g., Abels 2012a, Sabel 2000, Sabel & Zeller 2006) but for which empirical support has been lacking until now. I therefore unify full and partial *wh*-movement under a single analysis for cleft-based *wh*-ex-situ that involves a step of relativization (independently needed for relative clauses) and a step of unselective binding (independently needed for *wh*-in-situ).
Forming Wh-Questions in Shona:
A Comparative Bantu Perspective

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Jason Arik Zentz

Dissertation Directors: Robert Frank & Raffaella Zanuttini

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# Contents

List of Figures x

List of Tables xi

List of Abbreviations xii

List of Bantu Languages xv

Acknowledgments xviii

1 Introduction 1

1.1 *Wh*-question formation strategies 2

1.2 The Bantu language family 4

1.3 An introduction to Shona 6

1.3.1 General background 6

1.3.2 Source of data 8

1.3.3 Phonology 10

1.3.4 Orthography 13

1.3.5 Morphosyntax 13

1.3.5.1 Noun classes 13

1.3.5.2 The verbal complex 15

1.3.5.3 Sentence structure 17
2 Wh-in-situ

2.1 Introduction ......................................................... 25
   2.1.1 What is wh-in-situ? ........................................... 25
   2.1.2 The basic picture of Bantu wh-in-situ ......................... 26
   2.1.3 Theoretical issues at stake .................................. 31
   2.1.4 Roadmap ..................................................... 32

2.2 Relating the scopal and pronunciation positions .................... 32
   2.2.1 Unselective binding ........................................... 33
   2.2.2 Disguised movement ........................................... 36
      2.2.2.1 Explanation and predictions ............................ 36
      2.2.2.2 Evaluation: Postverbal word order ................. 39
   2.2.3 Lower copy spell-out ......................................... 45
      2.2.3.1 Explanation and predictions ............................ 45
      2.2.3.2 Evaluation: Extraction marking ....................... 46
   2.2.4 Covert movement ............................................. 48
      2.2.4.1 Explanation and predictions ............................ 48
      2.2.4.2 Evaluation: Island sensitivity ....................... 51
   2.2.5 Computation of alternatives .................................. 62
      2.2.5.1 Explanation and predictions ............................ 62
      2.2.5.2 Evaluation: Intervention effects ..................... 63
   2.2.6 Summary ..................................................... 70

2.3 Accounting for restrictions on the distribution of in-situ wh-phrases . 71
4 Partial \textit{wh}-movement

4.1 Introduction ................................. 207
    4.1.1 What is partial \textit{wh}-movement? .......... 207
    4.1.2 The basic picture of Bantu partial \textit{wh}-movement .......... 207
    4.1.3 Theoretical issues at stake ................. 212
    4.1.4 Roadmap ................................. 213
4.2 The basics of Shona partial \textit{wh}-movement ................. 213
4.3 Previous approaches to partial \textit{wh}-movement ................. 215
    4.3.1 Island sensitivity and partial \textit{wh}-movement .......... 215
        4.3.1.1 Singaporean Malay ...................... 215
        4.3.1.2 Kītharaka ............................. 217
    4.3.2 Partial \textit{wh}-movement is an independent construction ........ 218
        4.3.2.1 Covert (LF) movement .................. 218
        4.3.2.2 Overt movement of a null operator .......... 219
    4.3.3 Partial \textit{wh}-movement is not an independent construction .......... 220
        4.3.3.1 Partial \textit{wh}-movement assimilated to full \textit{wh}-movement .......... 220
4.3.3.2 Partial *wh*-movement is a hybrid of *wh*-in-situ and full *wh*-movement ........................................ 221

4.4 Shona island data .............................................. 222

4.5 A composite derivation ........................................ 226

4.5.1 Lower relation assimilated to apparent full *wh*-movement ................................. 226

4.5.1.1 Island sensitivity ............................................. 227

4.5.1.2 Presence of the copula ........................................ 227

4.5.1.3 Extraction marking .......................................... 228

4.5.1.4 Reconstruction effects ..................................... 229

4.5.1.5 Summary .................................................. 232

4.5.2 Higher relation assimilated to *wh*-in-situ ............................................... 233

4.5.2.1 Lack of island sensitivity ..................................... 233

4.5.2.2 Lack of extraction marking .................................. 233

4.5.2.3 Lack of intervention effects ................................ 233

4.5.2.4 Summary .................................................. 235

4.5.3 A unified analysis for *wh*-ex-situ .................................. 236

4.6 Outstanding issues ................................................ 237

4.6.1 Predicting the possibility of partial *wh*-movement ........................................ 237

4.6.2 Determining when partial *wh*-movement would be felicitous .................. 238

4.7 Conclusion .................................................... 240

5 Conclusion ...................................................... 242

5.1 Contributions .................................................. 242

5.2 Future research ................................................ 243

5.2.1 Open questions about Shona *wh*-questions ............................................. 243

5.2.1.1 Enclitic *wh*-questions ....................................... 243

5.2.1.2 How ‘why’ is different ....................................... 244

5.2.1.3 Multiple *wh*-questions and *wh*-islands .................................. 246
5.2.1.4 Semantic and discourse effects .......................... 247
5.2.2 Crosslinguistic investigation ................................. 247
5.3 Final remarks ....................................................... 248

References .............................................................. 249
List of Figures

2.1  Map of Bantu languages with \textit{wh}-in-situ  

4.1  Map of Bantu languages with partial \textit{wh}-movement
List of Tables

1.1 Shona vowel inventory .................................................. 10
1.2 Shona consonant inventory ........................................... 12
1.3 Shona orthography ......................................................... 14
1.4 Shona noun class prefixes and agreement markers .................. 15
1.5 Shona noun classes paired into genders .............................. 16
1.6 Shona genders and meanings ........................................... 16
1.7 Shona \textit{wh}-words, excluding those based on \textit{-pi} ‘which’ ............... 18

2.1 Properties and analyses of Bantu true \textit{wh}-in-situ (interim) .............. 44
2.2 Properties and analyses of Bantu \textit{wh}-in-situ (interim) ....................... 48
2.3 Properties and analyses of Bantu \textit{wh}-in-situ (interim) ....................... 61
2.4 Properties and analyses of Shona \textit{wh}-in-situ (final) ......................... 70

3.1 Prior analyses of Bantu focus-ex-situ ................................. 157
3.2 Properties of Shona and Kūtharaka focus-ex-situ (interim) .......... 159
3.3 Properties of Shona and Kūtharaka focus-ex-situ (interim) .......... 163
3.4 Properties of Shona and Kūtharaka focus-ex-situ (final) ............... 169
# List of Abbreviations

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Bare numerals (and also 1a, 2a, and 2b) in glosses indicate noun class, encoding both number and gender features.

I have occasionally adjusted glosses and translations in data cited from other sources in order to maintain clarity and consistency, following the Leipzig Glossing Rules wherever possible. However, I include an example number in each citation so that interested readers can easily find the original version.
List of Bantu Languages

In the table below, ISO 639-3 codes, countries, and numbers of first language speakers come from Lewis et al. 2016. I have included secondary countries when they have at least 20,000 L1 speakers. Guthrie codes come from Maho 2009. Language names used here and throughout the dissertation are what I judge to be the most commonly used names in the syntactic literature; sometimes this includes the noun class prefix (e.g., Akɔɔse, Ikalanga, Kinande, Lubukusu) and sometimes it excludes it (e.g., Bemba, Shona, Swahili, Zulu). These names are not necessarily identical to the names used for these languages in either Lewis et al. 2016 or Maho 2009.

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</table>
Acknowledgments

I still remember the first time I laid my eyes on a linguistics dissertation. It was the fall of 2005, and a hard copy of Letsholo 2002 had arrived for me via interlibrary loan at the University of Rochester’s Rush Rhees Library. As I flipped through the pages, I encountered syntactic trees and Bantu example sentences for the first time. But I was only a freshman in an introductory linguistics class (okay, three of them!), and all this syntax was way over my head. The only section I could really understand was the acknowledgments.

So it’s very surreal to find myself writing my own acknowledgments section now, almost eleven years later. I have dreamed of this moment and sometimes doubted I would ever get here. But here I am, and that’s only because of the support, guidance, encouragement, and love of so many people.

This dissertation would not exist as it is without Thabani Dhlakama, my Shona-speaking consultant. Back in June 2014 when she gave me the context of shopping as something she liked to do, I’m not sure she realized she would end up providing acceptability judgments on over 800 sentences about buying dresses, all just slightly different from one another! Through all of this, she has been gracious and attentive, never once conveying boredom or impatience. She has been extremely consistent in her judgments, which has made my life so much easier and given me confidence in my findings. She has promptly replied to my last-minute emails before deadlines, and of course, she has given up 50 hours of her evenings and weekends (plus travel time!) to share her language with me, for which I’m incredibly grateful. Masviita!
The seeds of this dissertation originated in a term paper on Akɔɔse extraction marking that I wrote for Bob Frank’s Syntax II class in spring 2010. As I revised it for a portfolio paper later that year, he saw its potential and encouraged me to submit an abstract for the Chicago Linguistic Society annual meeting. Much to my surprise, that was accepted (Zentz 2011), and so began my journey from phonetics/phonology to morphosyntax!

In the weekly advising meetings we have had since fall 2011, Bob has encouraged me to think creatively and critically, questioning even the most trendy theoretical ideas. He has always pushed me to get my head out of the details of complicated morphological paradigms or messy crosslinguistic comparisons, to zoom out and see the bigger picture of what is really relevant. This is not to say that he doesn’t appreciate the nitty gritty—I have learned so much from him about the value of doing linguistics with technical and mathematical rigor. And though quality typesetting has always mattered to me, it was Bob’s course requirement during my first semester at Yale that was the impetus for me to learn LATEX, without which I would have been deprived of many of the joys (and frustrations) of my grad school experience.

Raffaella Zanuttini joined our meetings as my co-advisor in spring 2012, but before that she had already taken a vested interest in my life both in and out of school, even planning departmental baby showers before my three children were born. Raffaella has a way of asking the question that everyone is thinking but is too afraid to ask, and doing so in a non-threatening manner. Through this, she has challenged me to refine and clarify my ideas and explanations to make them accessible to my audience. She has pointed me to the classic literature without making me feel like I should have already known where to look. One of the things I most appreciate about Raffaella is that she doesn’t assume that she knows the best way to help; instead, she has frequently asked me what I think would be most helpful, empowering me to own the process of dissertation writing and to think about how to be a good mentor myself.

Both Bob and Raffaella have taken time to get to know my wife and children and my
life outside of school, which has resulted in a very open mentoring relationship. They have championed my research, celebrating my successes and helping me to see the value of my work even when I didn’t. They have ensured that I never went a semester without funding, and they have helped me explore my professional development and future career path holistically, introducing me to colleagues at conferences and speaking on my behalf through countless recommendation letters. They are truly the consummate advisors, and I already miss our weekly meetings.

Richie Kayne was the first linguist to show interest in my work after discovering it on his own—in the spring of 2011, he emailed to ask for the handout for my upcoming CLS talk, and since then has provided incisive feedback on everything I have sent him, making him a natural choice for an external member of my committee. Richie doesn’t mince words (his first comments on my CLS handout were “Very interesting! But I don’t think you are right to...”), which has prepared me well for anonymous reviewer criticism. He is notorious for asking questions that may initially seem to come out of left field but later prove to be incredibly trenchant. This dissertation has benefited from my having worked through some of these Kaynean puzzles, although some of them remain open for future thought and investigation. Before talking with Richie, I thought that Bantu \textit{wh}-in-situ was relatively boring, with not much to say about it—he pushed me to seriously consider the possibility that it involves movement, and the result of this consideration is chapter 2.

I knew that I would need a Bantuist on my committee, and Vicki Carstens could not have been a better one to pick. Much of my work would not be possible without her careful investigation of Bantu morphosyntax from a generative perspective since the early 1990s, particularly with respect to agreement and movement. Vicki has really invested in my progress and has frequently taken the initiative to make herself available to me, even in the midst of changing institutions and taking on new administrative responsibilities. In the two opportunities we’ve had to meet in person, at ACAL 46 in March 2015 and at Yale
in April 2015, plus several Skype meetings, we have spent hours talking about problematic data for my analyses and her perspectives on the Bantu syntax literature. She too has sent many recommendation letters on my behalf, for which I am very grateful.

I am indebted to my linguistics professors and instructors not only for imparting course content but also for showing me by word and example what it means to be a linguist. At the University of Rochester, I was privileged to study in the brain and cognitive sciences department with Dick Aslin, Ben Faber, Dan Grodner, Elissa Newport, and Michael Tanenhaus, and in the linguistics department with Greg Carlson, Christine Gunlogson, Joyce McDonough, the late Scott Paauw, Jeff Runner, and Becca Webb. Joyce was the first linguist I ever met, and she invited me to join her and Harold Danko in my first real research project in linguistics (McDonough et al. 2007). It was in Becca’s intro class that I was tasked with finding out what I could about Ikalanga (hence my early attempt to read Letsholo 2002)—little did I know that my own dissertation would be on Shona, Ikalanga’s closest relative! Greg taught me not to fear semantics, and Jeff and Christine made appreciate both syntax and the Santa Cruz method of teaching it. I am especially grateful for the role of Scott Paauw in advising my senior project and my grad school application process—he is already missed by so many.

At Yale, my understanding of linguistics has been shaped through courses I took with Claire Bowern, Ashwini Deo, Bob Frank, Gaja Jarosz, Dasha Kavitskaya, Jelena Krivokapić, Erich Round, Matt Wolf, Jim Wood, and Raffaella Zanuttini. I was also able to sit in on classes taught by Steve Anderson, Larry Horn, and Dennis Storoshenko. All of the faculty have made themselves readily available to me, whether for formal meetings or informal conversations in LingSem or the hallway. In particular I would like to thank Claire Bowern, my advisor for my first two and half years, and Gaja Jarosz, both of whom I met with regularly to discuss my phonology qualifying paper.

As a teaching fellow I have worked with Ryan Bennett, Gaja Jarosz, Jelena Krivokapić, Jim Wood, and Raffaella Zanuttini, and also Christine Gunlogson at Rochester, who all
took time to show me the ropes of teaching at the college level. I am grateful to Claire Bowern and Gaja Jarosz for the opportunity to collaborate with them on their research (Bowern, Epps, et al. 2011, Bowern & Zentz 2012, Epps et al. 2012, Jarosz et al. forthcoming) and to Raffaella Zanuttini and Larry Horn for inviting me to write the index for Zanuttini & Horn 2014, experiences from which I have learned so much.

We are fortunate at Yale to have had several syntax postdocs working in the department while I’ve been here: Tom Leu, Tim Hunter, Dennis Storoshenko, Jim Wood, and Matt Barros. Tom, Tim, and Dennis enthusiastically supported my earliest work in syntax and ultimately encouraged me to switch subfields for my dissertation. Jim has modeled for me how to be a productive, empirically driven theoretician, and he has become a great friend as we’ve chatted about our research, teaching, families, and careers. Matt arrived recently, but his input about clefts has been very helpful during my final stages of writing.

During the dissertation writing process I have benefited greatly from meeting with several linguists during their visits to our department (and I am thankful for the opportunity to invite them in the first place): Mark Baker, Seth Cable, Vicki Carstens, Sandy Chung, Jessica Coon, Dave Embick, Jason Kandybowicz, Shigeru Miyagawa, and David Pesetsky. I am especially grateful to Sandy Chung for encouraging me to really look at the range of features involved in A’-movement and the extraction marking that often goes with it, to David Pesetsky for pushing me to look at the behavior of partial wh-movement with respect to islands and clefts and for suggesting the idea of a hybrid derivation, and to Jason Kandybowicz for providing insight from his work on wh-questions in Niger-Congo languages outside of Bantu.

I consider Michael Diercks to be my academic big brother—we share a lot of similar life experiences, including having written dissertations on Bantu morphosyntax advised by Raffaella. Mike wasn’t able to serve on my dissertation committee for logistical reasons, but he was the one who encouraged me in March 2013 to find a native speaker of a Bantu language who lived locally so that I could gather my own data—I wish it hadn’t
taken me a year to take his advice! I greatly value the conversations we have had at conferences and online about dissertating, career choices, faith, family, and of course, Bantu morphosyntax.

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Aspects of the research presented in this dissertation were previously presented at CLS 47 at the University of Chicago, GIST 5 at Ghent University, ACAL 44 at Georgetown University, LSA 88 in Minneapolis (actually, my poster and I never made it there due to flight cancelations!), LSA 89 in Portland, ACAL 46 at the University of Oregon, and LSA 90 in Washington, DC. The comments I received from audience members at these conferences (and also from abstract reviewers at the conferences I didn’t get into) have driven me to clarify my arguments and to pursue new analytical angles. In particular, I would like to thank the following people whose conversations during and after conferences have enriched my thinking: Nico Baier, Michael Yoshitaka Erlewine (mitcho), Doreen Georgi, Liliane Haegeman, Hadas Kotek, Teresa O’Neill, and Jason Ostrove.

I would like to acknowledge my fellow travelers, the grad students in the Yale linguis-
Acknowledgments

tics department, especially my cohort-mates Emily Gasser and Sabina Matyíku. If the walls of the grad room could talk, it would tell of the times we have wrestled with tricky problem sets, coached each other on \LaTeX{} or Python, commiserated about our workloads, counseled each other through relational and existential crises, teased apart tiny differences in pronunciation or grammaticality judgments, brainstormed ways to improve the department, debated social and political issues, and just plain joked around. It’s no wonder I’ve had to hole myself up in my basement at home to be able to finish writing this thesis!

My time on campus at Yale was not exclusively spent in the linguistics department. For two years I worked on the Yale Law School’s *Pronouncing Dictionary of the Supreme Court of the United States* (Pei et al. 2012) with Gene Fidell, Jason Eiseman, and a group of law students (and eventually some other linguists too). This was such an enjoyable crossdisciplinary project, and it challenged me to think about the ways linguistics can be used to help people in their everyday lives. In the four years that I worked behind-the-scenes in the access services department of Sterling Memorial Library, I made many friends, but I would especially like to thank my supervisors Lauren Brown, Tom Bruno, Chris Killheffer, and Viviana McHugh. They gave me freedom to experiment with new workflows and help develop some really cool projects like ShelfScan (Brown et al. 2014).

For all the administrative details I have needed to handle in my graduate program, I would like to thank Maria Piñango, Steve Anderson, Claire Bowern, and Gaja Jarosz, who have all served as Director of Graduate Studies during my time in the department, and to Deans Sleight and Harper-Mangels. Thanks also go to Chris McDaniel for processing a lot of paperwork on my behalf.

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of these sponsors or any of the other people I have mentioned above. All responsibility for errors remains my own.

Outside of Yale and my professional life, I have been blessed with many friends at Trinity Evangelical Free Church. Many of them have assisted us financially and with hand-me-downs and meals. They have reminded me that my identity is not found in the length of my CV and that there is more to life than linguistics. In particular, my weekly meetings with Pastor Miles Ahrens over the past few months have given me time to reflect on how God is using this rite of passage to strengthen my character.

By this point, Sharon Pierpont belongs more in the family category than the church category. Since early 2012 when our twins were just a few months old, she has come two mornings a week to help with the kids, and she has provided many more nights and overnights of free babysitting so Kim and I could get away. We can’t imagine what this journey would have been like without her presence in our lives, and we don’t want to either!

As I have navigated the dissertation and job search stage of grad school, I have sent out email newsletters to a group of far-flung friends and family, and recently I have begun posting about my writing progress on Facebook too. The responses I have received have been overwhelming—it has spurred me on to know that there are people who are praying for me, cheering for me, and even some who are anxious to read my work! #donewriting #finishedthedissertation

Last spring, my parents-in-law Jeff & Fray gave me an invaluable gift of taking my children to stay with them in Rochester for six weeks so that I could focus on writing. I know my sisters- and brothers-in-law Karen, Allison & John, and Ellen & Nick were a great help during that time, too. Thank you all so much for your generosity and encouragement in so many ways. I look forward to making a trip to see you when I don’t have to spend each day working in the library!

Heidi, Heather, and Andrew, I love that we’re so close—even though we live so far
from each other. You guys have been such an encouragement to me, and I’m excited to be finishing my 24 years of school to finally join you in the real world!

Grandma & Grandpa, I cannot thank you enough for earnestly praying for me each day and taking such a keen interest in my life as a husband, father, linguist, and man of God. I am grateful that even after your move to Florida, you have managed to spend lots of time up north so we can still see you!

Dad, I still remember you drilling phonics flashcards with me when I was little, actively encouraging me to read all the books I could get my hands on, and even teaching me a little French. You and Mom fed my curiosity for language and learning, and look where that led!

Marlin, thanks for being an example to me of how to work hard as an academic while still taking time to really listen to and engage with your family.

Mom, if you can see through your tears by now, I would like to tell you that you have inspired me to persevere through the hard times and to rejoice in God’s daily provision. Thank you for actively praying for me and encouraging me to press on, hurry up, and finish, just like you did all those late nights as I worked on middle school and high school projects.

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My dearest Kim, my words here can never fully express my gratitude for keeping our household and family afloat through these rough waters of grad school. There have been so many times when we’ve said to each other, “I miss you!” I am so looking forward to spending more time with you and the kids now that I am finally, finally finished.
To my grandparents Jesse & Joyce Eaton —

your decision to leave your comfort zone to pursue global ministry has impacted each of your children and grandchildren, inspiring us to love and engage with the world, its people, and their languages and cultures. I consider this dissertation to be part of your legacy as well as mine.

S. D. G.
Chapter 1

Introduction

Bantu languages, which are spoken throughout most of sub-Saharan Africa, permit *wh*-questions to be constructed in multiple ways, including *wh*-in-situ, full *wh*-movement, and partial *wh*-movement. Shona, a Bantu language spoken by about 14 million people in Zimbabwe and Mozambique, allows all three of these types. In this dissertation, I conduct the first in-depth examination of Shona *wh*-questions, exploring the derivational relationships among these strategies and situating the Shona facts within the broader picture of *wh*-questions in Bantu.

This chapter begins in section 1.1 with an overview of *wh*-question formation strategies and a brief introduction to the main theoretical issues they raise. Section 1.2 provides some background on the Bantu language family. In section 1.3, I discuss Shona in particular, citing prior work on the language, explaining the methodology for collecting my data, and sketching some of the grammatical properties of Shona that will be relevant throughout the dissertation. I briefly introduce some of my analytical assumptions in section 1.4 before previewing the major arguments and contributions of the dissertation in section 1.5.
1.1 Wh-question formation strategies

Wh-questions, occasionally called constituent questions or content questions, are formed in a number of ways across (and sometimes within) the world’s languages. As schematized in (1.1), these strategies can be categorized according to whether the wh-phrase is pronounced in its scopal position, its canonical position, or in between. In this diagram and throughout the dissertation, I use **bold** to mark the wh-phrase in its pronunciation site, and I use ___ as a theory-neutral indication of the gap that appears in the canonical position when the wh-phrase is not pronounced there.

![Diagram of wh-question formation strategies](image)

I define the *scopal position* to be where the wh-phrase takes interrogative scope. Therefore, in a direct question the scopal position will be in the left periphery of the matrix clause whereas the scopal position of an indirect question will be in the left periphery of an embedded clause. The vast majority of examples discussed in this dissertation are direct questions, as shown in (1.1).

I use the term *canonical position* to refer to the place where the answer to the wh-phrase would appear in the corresponding declarative sentence. As discussed in section 2.1, this may often be the same as the wh-phrase’s *base position* (i.e., where it is first merged), but these are not always identical. For example, given the internal subject hypothesis (Koopman & Sportiche 1991), the base position of an English subject wh-phrase would be SpecvP, but its canonical position would be SpecTP.

Examples of each of the strategies depicted in (1.1) are illustrated in (1.2). In Mandarin Chinese, wh-phrases appear in their canonical position (in situ), whereas in English, they
appear in their scopal position. Singapuran Malay allows *wh*-in-situ and full *wh*-movement, but it also permits *wh*-phrases to appear at an intermediate clause boundary in a strategy known as partial *wh*-movement.

(1.2) *Wh*-question formation strategies discussed in this dissertation

a. Wh-in-situ

Huangrong believe what Guojing bought [Mandarin Chinese]

'Mwhat does Huangrong believe that Guojing bought?' (Cheng 2009: 770 (9))

b. Full wh-movement

What do you think [English]

'Might we think?'

(1.3a)

EX.

a. Wh-in-situ

Huangrong believe what Guojing bought [Mandarin Chinese]

'Mwhat does Huangrong believe that Guojing bought?' (Cheng 2009: 770 (9))

b. Full wh-movement

What do you think [English]

'Might we think?'

(1.3a)

EX.

One central theoretical issue that this dissertation will consider is the nature of the relations that are depicted by the lines in (1.1). Are they established via movement, and if so, what moves when and for what reason? If a relation is not movement-based, what is the mechanism involved?

As mentioned above, Shona and Singaporean Malay allow all three strategies, and we will see some other Bantu languages that do too. For these languages, another question arises: whether any of these strategies can be assimilated to another. Is there any way to collapse them in terms of their underlying syntactic derivations? Cole & Hermon (1998) argue that these have to be considered three separate constructions in Malay, but do the facts in Bantu force us to the same conclusion?

It is worth mentioning here that there are a few more *wh*-question formation strategies that occur in the world’s languages. *Wh*-scope marking, shown for German in (1.3a), is similar to the partial *wh*-movement example in (1.2c) except that in each clause bound-

1. English does allow *wh*-phrases to appear in situ, but only in a limited set of environments such as echo or quiz questions. In Mandarin (and Shona, as we will see), the in-situ strategy in (1.2a) is the most natural way to ask that question out of the blue, which is not true in English. See section 2.1.2 for further discussion of this distinction.
ary between the scopal position and pronunciation position of the *wh*-phrase *wen* ‘when’ appears a semantically bleached *wh*-phrase *was*. In *wh*-copying, shown for Romani in (1.3b), it is the *wh*-phrase itself that appears at each clause boundary. Whether these two strategies may be assimilated to partial *wh*-movement has been the matter of some debate; see McDaniel 1989, Sabel 2000, and Fanselow 2006 for further discussion. I will set these strategies aside at this point because to my knowledge they do not appear in the Bantu language family, the empirical domain of this dissertation. Why they are absent in Bantu remains an open question.

(1.3) Wh-question formation strategies not discussed in this dissertation

a. Wh-scope marking

[German]

\[
\begin{align*}
\text{Was} & \ \text{meinst} \ \text{du} & \ [\text{CP} \ \text{was} \ \text{Peter} & \ \text{glaubt} & \ [\text{CP} \ \text{wen} & \ \text{who. acc} \\
\text{wh} & \ \text{think} & \ \text{you. nom} & \ \text{wh} & \ \text{Peter. nom} & \ \text{believes} & \ \text{who. acc} \\
\text{Maria} & \ \text{lief t]}? & & & & & \\
\text{Maria. nom} & \ \text{loves} & & & & &
\end{align*}
\]

‘Who(m) do you think Peter believes Maria loves?’ (Sabel 2000: 415 (19a))

b. Wh-copying

[Romani]

\[
\begin{align*}
\text{Kas} & \ 0 \ \text{Demiri mislinola} & \ [\text{CP} \ \text{kas} & \ \text{i Arifa dikhla } & \text{ }]? & \ [\text{Romani} \\
\text{who} & \ \text{the Demir} & \ \text{think} & \text{who} & \ \text{the Arifa saw} \\
\text{‘Who(m) does Demir think Arifa saw?’} & & & & & (\text{McDaniel 1989: 569 n.5 (ii)})
\end{align*}
\]

1.2 The Bantu language family

This dissertation focuses primarily on *wh*-questions in Shona, but where possible I frame the investigation with an eye toward how *wh*-questions are formed within the Bantu family more generally. What follows in this section is not meant to be a comprehensive introduction to Bantu languages (see Nurse & Philippson 2003b for a handbook on the family) but rather to contextualize the dissertation and provide enough background to make it accessible to non-Bantuist readers.

As Nurse & Philippson (2003a: 2–3) discuss, published estimates of the number of Bantu languages range from 300 to 680. This variation is largely attributable to the noto-
riously tricky question of what counts as a language as opposed to a dialect. A variety of factors including widespread multilingualism and the challenges of doing survey work in Africa make it difficult to confidently say how many speakers of Bantu languages there are; first-language speaker counts vary from 50 million (Marten, Kula & Thwala 2007: 255) to 240 million (Nurse & Philippson 2003a: 1).

Bantu languages have a wide geographic distribution within sub-Saharan Africa: they are spoken from southern Cameroon eastward to southern Kenya and southward to the tip of the continent, with the exception of the areas in the southwest where the Khoisan families are. Bantu is itself a subgroup of the Niger-Congo family, which has roughly 1,500 languages and 437 million speakers (Lewis et al. 2016) and includes the languages of West Africa. As is common practice, I use the term “Bantu” to refer to “Narrow Bantu,” which excludes the Grassfields Bantu languages spoken in Cameroon. Subgrouping within Niger-Congo is somewhat controversial, but the lineage provided by Lewis et al. (2016) for Narrow Bantu is Niger-Congo, Atlantic-Congo, Volta-Congo, Benue-Congo, Bantoid, Southern Bantoid. Bantu-internal subgrouping within Bantu is also a matter of debate (Nurse & Philippson 2003c), but often the alphabetical zones and numeric groups created by Guthrie (1971) and updated by Maho (2003, 2009) are used as a shorthand for subgrouping.

Almost all Bantu languages have both lexical and grammatical tone (usually two level tones plus contour tones based on those level tones), which will become relevant at some points in this dissertation. Phonemic inventories typically have five to seven vowels and many consonants. Prenasalized and labialized obstruents are common, and so is vowel height harmony.

Bantu languages also have a number of characteristic morphosyntactic properties. They have noun class systems that encode both number and non-sex-based gender, and they tend to have robust ϕ-agreement on verbs and several categories within the DP. As is common in the world’s languages, this robust agreement allows for null subjects. The
canonical word order is subject–verb–object (SVO) with some discourse-driven displacement. Finally, Bantu languages tend to have multiple strategies for forming \textit{wh}-questions, something that is immediately obvious from the literature but is not usually stated along with these other characteristic properties.

A fair amount of comparative syntactic work has been done at the level of the whole Bantu family. This includes research on relative clauses \cite{Cheng2006, DemuthHarford1999, NsukaNkutsi1982, Henderson2006b}, subject inversion \cite{DemuthHarford1999, Henderson2006b, Henderson2011b, MartenVanderWal2014}, object marking \cite{BeaudoinLietz2004, Henderson2006b, Marlo2015, MartenKula2012, Riedel2009}, and double object constructions \cite{BresnanMoshi1990, Simango1995}. In prior work \cite{Zentz2013, Zentz2015}, I have surveyed Bantu extraction marking, morphological alternations that occur along the path of movement, but more remains to be done in that area. Despite all this comparative syntactic work, and the somewhat large literature dealing with Bantu \textit{wh}-questions in particular languages or a small sampling of languages, this dissertation is the first work to take a look at the morphosyntax of \textit{wh}-questions in the Bantu language family as a whole. The main focus here is on Shona, but I hope to make some inroads into this wide open field.

Given this comparative approach, I will be discussing examples from a wide variety of Bantu languages. Instead of providing geographic, demographic, and classificatory information about each one as it is mentioned in the text, I have compiled this information in the table on pp. xv–xviii.

\section*{1.3 An introduction to Shona}

\subsection*{1.3.1 General background}

In terms of Guthrie zones, the Shona language falls within the Shona group (S10) of Zone S \cite{Gowlett2003}, and it has the ISO 639-3 code [sna]. As indicated in the list of Bantu
languages on pp. xv–xviii, Shona has roughly 13 million first-language speakers in Zimbabwe and Mozambique (and to a lesser extent in Botswana and Zambia). This number would make it the Bantu language that is second most widely spoken as a first language, after Swahili. However, this claim is somewhat controversial, as there is no consensus as to which varieties or dialects count as “Shona.” In his 1931 Report on the unification of the Shona dialects, Clement Doke proposed an orthography intended to unify the dialect clusters of Korekore (S11), Zezuru (S12), Manyika (S13), Karanga (S14), and Ndau (S15) as “Shona,” a term that had not been widely used until this report. Doke considered the Ikalanga cluster (S16) to comprise a separate language. Following this division, Maho (2009) uses the label Shona for S11–15, and this is what I have done as well. The Ethnologue (Lewis et al. 2016) provides a different breakdown, treating Manyika [mxc], Tewe [twx] (often considered part of Manyika), and Ndau [ndc] as languages separate from Shona [sna]. The number of L1 speakers I report for Shona in the list of Bantu languages is the sum of what Lewis et al. (2016) provide for Shona (10,763,100), Manyika (961,000), Tewe (250,000), and Ndau (1,300,000). See Chimhundu (1992, 2005) for commentary on these issues and whether there is a “standard” variety of Shona.


Carter & Kahari 1986 is a learner’s guide to Shona that includes a reader and a grammatical sketch. Fortune (1984, 1985) is the most comprehensive grammar of the language, but unfortunately it is somewhat poorly organized and uses fairly obscure terminology, rendering it not quite as useful as it might otherwise be. I have found Brauner’s (1995) sketch grammar to be the most useful for quickly checking grammatical properties of the language.

Hannan 1984 is an excellent Shona–English dictionary of over 1000 page. Each entry has dialectal designations and tone indications, and there is a brief grammatical sketch.
in the introduction. I have also found Ndambakuwa 2015, an online Shona–English dictionary with a simple search-based interface, to be helpful in some instances despite that its entries are very minimal. Chimhundu 1996, 2001 are recent monolingual Shona dictionaries. Shona’s ideophones, “marked words that depict sensory imagery” (Dingemanse 2011: 25 (1)) and are common in African languages, have been studied by Fortune (1962, 1984, 1985), Franck (2014), and Mudzingwa, Déchaine, et al. (2015).

For historical and comparative work (both among Shona dialects and situating them within the rest of Bantu), see Doke 1931a,b, Ehret & Kinsman 1981, Fortune 2004, Gowlett 2003, Mkanganwi 1972, Mudzingwa 2010, and Zivenge et al. 2010.


1.3.2 Source of data

Almost all of the Shona example sentences and grammaticality judgments presented in this dissertation are the result of interviews that I conducted with Thabani Dhlakama, a native speaker of both English and Shona. Thabani was born in 1990 to parents who were from Chipinge in eastern Zimbabwe, but she was raised in Harare, the capital city. In their home, they regularly spoke both English and Shona, and Thabani studied both languages in school. During her secondary education in Harare, she completed an advanced Shona grammar course in which she learned the Meinhof numbering system for noun classes.

In 2009, Thabani moved to New Haven, Connecticut, to attend Yale University. While an undergraduate at Yale, she worked as a linguistic consultant for Dennis Storoshenko, a postdoctoral associate who was investigating Shona reflexives. She graduated in 2013 with a BS in biomedical engineering and currently works for a biotech startup.
Thabani is reluctant to label her Shona speech with one of the traditional dialect names. She considers herself to be a speaker of “generic” or “standard” Shona but does acknowledge that this variety is closest to Zezuru, which is traditionally spoken in the area around Harare. She would say that her speech has some phonological and lexical influence from Ndau, the variety spoken in Chipinge, where her parents lived prior to moving to Harare. The Ndau-speaking area extends eastward into Mozambique, and that is where Thabani’s paternal grandfather was born. Although she now lives in the United States and primarily uses English here, Thabani does still speak Shona with friends and family back home and occasionally in person with other Yale students and alumni from Zimbabwe.

For our elicitation sessions, Thabani and I met in a small room in Dow Hall at Yale University in New Haven, Connecticut, for one to two hours at a time. These interviews totaled 50 hours between June 25, 2014, and March 8, 2016, and they were funded by the Yale linguistics department. The Yale Human Subjects Committee ruled on June 25, 2014, that they were exempt from review (IRB protocol #1406014210). With Thabani’s written and oral consent, all sessions were recorded on a Zoom H4n audio recorder. The resulting WAV files and my electronic notes (stored in raw text files) were managed using SIL’s SayMore software. During the sessions, my elicitation prompts and notes were projected to a monitor where they were visible to Thabani for her feedback and correction. When examples from these sessions are cited in this dissertation, they appear with the session date, session number, and Thabani’s initials. For example, 2014-12-06-02-TD refers to the second hour with Thabani on December 6, 2014.
1.3.3 Phonology

Shona has a five-vowel inventory with no contrastive length\(^2\) or any other feature, as shown in Table 1.1.

<table>
<thead>
<tr>
<th>Vowel</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>high front unrounded</td>
</tr>
<tr>
<td>e</td>
<td>mid front unrounded</td>
</tr>
<tr>
<td>a</td>
<td>low central unrounded</td>
</tr>
<tr>
<td>u</td>
<td>high back rounded</td>
</tr>
<tr>
<td>o</td>
<td>mid back rounded</td>
</tr>
</tbody>
</table>

Table 1.1: Shona vowel inventory. Adapted from Fortune (1985: 8) and Brauner (1995: 8–9).

The consonant inventory is quite large, as shown in Table 1.2, with contrastive prenasalization of obstruents and pervasive contrastive labiovelarization, illustrated in (1.4–1.5). In some phonological environments and dialects, the labiovelarization tends toward an epenthetic velar stop, so /sʷ/ may be [sʰʷ] and /mʷ/ may be [mʰ], etc.

(1.4)  *Contrastive prenasalization*

a. /v̤ûr̥á/  <-vhura>  ‘open’  \(\text{(Kadenge 2010a: 399 (6))}\)

b. /m̤ûr̥á/  <-mvura>  ‘water’ \(\text{(Kadenge 2010a: 399 (6))}\)

(1.5)  *Contrastive labiovelarization*

a. /k̅ûsèɾ̥à/  <-kusera>  ‘to rotate’ \(\text{(Hannan 1984: 597)}\)

b. /k̅ûs ᵀèɾ̥à/  <-kuswera>  ‘to pass time’ \(\text{(Hannan 1984: 628)}\)

c. /k̅ûʃàɾ̥à/  <-kuchata>  ‘to marry’ \(\text{(Hannan 1984: 52–53)}\)

An unusual feature of Shona’s inventory is its series of labiodentalized alveolar sibilants (Bladon et al. 1987), sometimes called “whistled” sibilants. These contrast with both alveolar and palatoalveolar sibilants, as shown for the voiceless affricates in (1.6).

(1.6)  *Contrastive labiodentalization*

a. /k̅ûʃàɾà/  <-kutsata>  ‘to stalk’ \(\text{(Hannan 1984: 662)}\)

b. /k̅ûʃǐɾà/  <-kutsvata>  ‘to harm’ \(\text{(Hannan 1984: 678)}\)

c. /k̅ûʃʃàɾà/  <-kuchata>  ‘to marry’ \(\text{(Hannan 1984: 52–53)}\)

Breathy voice is contrastive, sometimes with voiceless sounds and in other classes with voiced sounds. The examples in (1.7) show the voiced–breathy-voiced contrast in nasals.

---

2. Two identical vowels may appear adjacent to one another, creating a long vowel, but these cases are clearly bisyllabic.
Chapter 1. Introduction

1.3. An introduction to Shona

(1.7) Contrastive breathy voice
a. /mándá/  <manda> ‘animal fat’ (Hannan 1984: 322)
b. /mándá/  <mhanda> ‘fork in tree branch’ (Hannan 1984: 348)

Shona has two level tones: high and low. These can be combined to produce rising and falling contour tones. Tone is used to mark both lexical and grammatical distinctions, as will become relevant particularly in chapter 3.

(1.8) Contrastive lexical tone
a. /gúrú/  <guru> ‘hole’ (Kadenge 2010a: 395)
b. /gúrú/  <guru> ‘tripe’ (Kadenge 2010a: 395)
c. /gúrú/  <guru> ‘polygamy’ (Kadenge 2010a: 395)

(1.9) Contrastive grammatical tone
a. /múʃá/  <musha> ‘land’ (Brauner 1995: 17)
b. /múʃá/  <musha> ‘it’s the land’ (Brauner 1995: 17)

There are a number of phonological processes in Shona, but two that may be noticeable in the examples in this dissertation are vowel height harmony (Beckman 1997, Hyman 1999) and vowel deletion and coalescence as hiatus resolution strategies (Harford 1997b, Kadenge 2010b, Mudzingwa 2010, 2013).

### Table 1.2: Shona Consonant Inventory

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labiodental</th>
<th>Alveolar</th>
<th>Labiodental-ized Alveolar</th>
<th>Palato-alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implosive</td>
<td>ɓ</td>
<td>ɗ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plosive</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>n̂d</td>
<td>k̂</td>
<td>ĝ</td>
<td>n̂g</td>
</tr>
<tr>
<td></td>
<td>m̃b</td>
<td>m̃b</td>
<td>t̂w</td>
<td>d̂w</td>
<td>n̂d̂w</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal</td>
<td>m</td>
<td>m</td>
<td>n̂</td>
<td>n̂w</td>
<td></td>
<td>ĵn̂</td>
<td>ĵ</td>
<td>ĵw</td>
</tr>
<tr>
<td></td>
<td>m̃w</td>
<td>m̃w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tap</td>
<td>f</td>
<td>v</td>
<td>ŝ</td>
<td>ẑ</td>
<td>ŝw</td>
<td>ĵ</td>
<td>ŋ̂</td>
<td>ŋ̂w</td>
</tr>
<tr>
<td></td>
<td>f̃w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricative</td>
<td>f̃</td>
<td>ṽ</td>
<td>s̃</td>
<td>z̃</td>
<td>s̃w</td>
<td>j̃w</td>
<td>ŋ̃</td>
<td>ŋ̃w</td>
</tr>
<tr>
<td></td>
<td>m̃ṽ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricate</td>
<td>p̃f</td>
<td>b̃v</td>
<td>t̃s</td>
<td>d̃z</td>
<td>t̃s̃w</td>
<td>t̃j̃</td>
<td>d̃̃j̃</td>
<td>d̃̃j̃w</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>w</td>
<td>v</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1.2: Shona consonant inventory. Adapted from Fortune (1985: 7–8) and Mudzingwa (2010: 41, 43), with modifications following Bladon et al. (1987), Brauner (1995), Hannan (1984), and Kadenge (2010a).
1.3.4 Orthography

The standard orthography for Shona was put in place in 1967 by the Rhodesian Ministry of Education, and this is what will be used for all Shona example sentences in this dissertation. The correspondences between graphemes and phonemes are shown in Table 1.3. The orthography does not mark tone, but I will add tone diacritics where they alone mark a relevant contrast (an acute accent for high tone and a grave accent for low tone). For more information on the development of the Shona orthography and ongoing concerns about its suitability, see Chimhundu & Grønvik 2006, Chimhundu 2005, Doke 1931b, Fortune 1969, 1972, Muringani 2008, and Zivenge et al. 2010.

1.3.5 Morphosyntax


1.3.5.1 Noun classes

First of all, Shona has a robust system of noun classes, which are traditionally numbered using the Meinhof (1899) system. Table 1.4 illustrates the prefixes that appear on the nouns of each class as well as the corresponding verbal agreement markers. These Meinhof classes generally conflate number and gender, and in some cases they mark categories that are neither singular nor plural, such as infinitives (class 15) and locatives (classes 16–
<table>
<thead>
<tr>
<th>Orthography</th>
<th>IPA</th>
<th>Orthography</th>
<th>IPA</th>
<th>Orthography</th>
<th>IPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>/a/</td>
<td>m</td>
<td>/m/</td>
<td>r</td>
<td>/t/</td>
</tr>
<tr>
<td>b</td>
<td>/ɓ/</td>
<td>mb</td>
<td>/mb/</td>
<td>rw</td>
<td>/ʃ/</td>
</tr>
<tr>
<td>bh</td>
<td>/b/</td>
<td>mbw</td>
<td>/mbw/</td>
<td>s</td>
<td>/s/</td>
</tr>
<tr>
<td>bv</td>
<td>/ɓv/</td>
<td>mh</td>
<td>/m/</td>
<td>sh</td>
<td>/ʃ/</td>
</tr>
<tr>
<td>bw</td>
<td>/bʷ/</td>
<td>mhw</td>
<td>/mʷ/</td>
<td>shw</td>
<td>/ʃʷ/</td>
</tr>
<tr>
<td>ch</td>
<td>/ʃ/</td>
<td>mv</td>
<td>/m̤/</td>
<td>sv</td>
<td>/s'w/</td>
</tr>
<tr>
<td>chw</td>
<td>/t̥ʃ/</td>
<td>n</td>
<td>/n/</td>
<td>svw</td>
<td>/s'w'</td>
</tr>
<tr>
<td>d</td>
<td>/d/</td>
<td>n'</td>
<td>/ŋ/</td>
<td>sw</td>
<td>/s'w/</td>
</tr>
<tr>
<td>dh</td>
<td>/d/</td>
<td>n'w</td>
<td>/ŋ'w/</td>
<td>t</td>
<td>/t/</td>
</tr>
<tr>
<td>dw</td>
<td>/d'w/</td>
<td>nd</td>
<td>/n'=</td>
<td>ts</td>
<td>/t̥s/</td>
</tr>
<tr>
<td>dz</td>
<td>/dʒ/</td>
<td>ndw</td>
<td>/n'dw/</td>
<td>tsv</td>
<td>/t̥s'w/</td>
</tr>
<tr>
<td>dzv</td>
<td>/dʒ̈/</td>
<td>nh</td>
<td>/n/</td>
<td>tsw</td>
<td>/t̥s'w/</td>
</tr>
<tr>
<td>dzw</td>
<td>/dʒ̈w/</td>
<td>ng</td>
<td>/ŋg/</td>
<td>tw</td>
<td>/t'w/</td>
</tr>
<tr>
<td>dy</td>
<td>/dʒ̈g/</td>
<td>ngw</td>
<td>/ŋg'w/</td>
<td>ty</td>
<td>/t̥k/</td>
</tr>
<tr>
<td>e</td>
<td>/e/</td>
<td>nj</td>
<td>/ŋj/</td>
<td>u</td>
<td>/u/</td>
</tr>
<tr>
<td>f</td>
<td>/f/</td>
<td>njw</td>
<td>/ŋjw/</td>
<td>v</td>
<td>/v/</td>
</tr>
<tr>
<td>g</td>
<td>/g/</td>
<td>nw</td>
<td>/n̤w/</td>
<td>vh</td>
<td>/v'/</td>
</tr>
<tr>
<td>gw</td>
<td>/kʷ/</td>
<td>ny</td>
<td>/n/</td>
<td>w</td>
<td>/w'/</td>
</tr>
<tr>
<td>h</td>
<td>/h/</td>
<td>nz</td>
<td>/n̤z/</td>
<td>y</td>
<td>/j'/</td>
</tr>
<tr>
<td>hw</td>
<td>/h̤/</td>
<td>nzv</td>
<td>/n̤z'v/</td>
<td>z</td>
<td>/ʒ'/</td>
</tr>
<tr>
<td>i</td>
<td>/i/</td>
<td>nzw</td>
<td>/n̤z'w/</td>
<td>zh</td>
<td>/ʒ̈/</td>
</tr>
<tr>
<td>j</td>
<td>/dʒ̈/</td>
<td>o</td>
<td>/o/</td>
<td>zhw</td>
<td>/ʒ̈/</td>
</tr>
<tr>
<td>jw</td>
<td>/dʒ̈w/</td>
<td>p</td>
<td>/p/</td>
<td>zv</td>
<td>/ʒ̈/</td>
</tr>
<tr>
<td>k</td>
<td>/k/</td>
<td>pf</td>
<td>/p̥f/</td>
<td>zvw</td>
<td>/ʒ̈'w'/</td>
</tr>
<tr>
<td>kw</td>
<td>/kʷ/</td>
<td>pw</td>
<td>/p̤w/</td>
<td>zw</td>
<td>/ʒ̈'w'/</td>
</tr>
</tbody>
</table>

Table 1.3: Shona orthography

18). The pairings of these noun classes into genders are shown in Table 1.5, and some semantic descriptors of these genders are listed in Table 1.6. For more information on Shona noun classes, see Brauner 1995, Déchaine et al. 2014, and Fortune 1970, 1985.
Table 1.4: Shona noun class prefixes and agreement markers. Adapted from Brauner 1995: 21, 65, Fortune 1985: 16, and Hannan 1984: x–xi.

1.3.5.2 The verbal complex

Shona verbs are highly agglutinative, and as argued by Myers (1987, 1990) and Julien (2002), they have a hierarchical structure. The verb root obligatorily takes a suffix called the final vowel, but in between, it may take one or more suffixes (traditionally called extensions in the Bantuist literature) that often change the valency of the root. The root plus

<table>
<thead>
<tr>
<th>Gender</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>humans</td>
</tr>
<tr>
<td>1a/2a</td>
<td>humans: names, titles, kinship terms, honorifics</td>
</tr>
<tr>
<td>3/4</td>
<td>trees, plants, wooden things, body parts</td>
</tr>
<tr>
<td>5/6</td>
<td>fruits, liquids, paired things, animals, big things, borrowings</td>
</tr>
<tr>
<td>7/8</td>
<td>things, tools, languages, small things</td>
</tr>
<tr>
<td>9/10</td>
<td>animals, miscellaneous, borrowings</td>
</tr>
<tr>
<td>11/6</td>
<td>long, thin things</td>
</tr>
<tr>
<td>11/10</td>
<td>long, thin things</td>
</tr>
<tr>
<td>12/13</td>
<td>diminutive</td>
</tr>
<tr>
<td>14/6</td>
<td>other</td>
</tr>
<tr>
<td>14/14</td>
<td>other</td>
</tr>
<tr>
<td>21/6</td>
<td>augmentative, pejorative</td>
</tr>
<tr>
<td>14</td>
<td>abstract/mass nouns</td>
</tr>
<tr>
<td>15</td>
<td>infinitive</td>
</tr>
<tr>
<td>16</td>
<td>locative: ‘at’, ‘on’, ‘near’</td>
</tr>
<tr>
<td>17</td>
<td>locative: ‘at’ (far away), directional (‘to’, ‘toward’, ‘from’)</td>
</tr>
<tr>
<td>18</td>
<td>locative: ‘inside’, ‘in the middle of’, ‘within’</td>
</tr>
</tbody>
</table>


the extensions and the final vowel make up the verbal stem, and in some cases the stem may be reduplicated for a variety of semantic effects, suggesting that it is a constituent.

The stem is required to take a subject marker prefix (the infinitive prefix may be considered to be the class 15 subject marker). If there is an object marker, that is closest to
the stem, then tense/aspect prefixes, then the subject marker prefix, and then negation or the relative marker (glossed through the dissertation as nse for non-subject extraction).

1.3.5.3 Sentence structure

As is typical for Bantu languages, Shona’s canonical word order is subject–verb (SV) in intransitive clauses (1.10a) and subject–verb–object (SVO) in transitive clauses (1.10b–c). Most adjuncts appear after the internal arguments (1.10c–d). In Shona, locative prefixes do not replace the noun class prefix of the noun they attach to, so the locative phrases in (1.10c–d) have prefix stacking (recall that 17 is a locative noun class). When an applicative suffix is added to the verb, it introduces an applied (indirect) object, which is often a recipient or beneficiary and appears between the verb and the direct object (1.10d). Finally, subjects may be null (1.10d).

(1.10) Basic sentences

a. **Intransitive**

Chi-pembere chi-cha-tiz-a. [Shona]
7-black.rhinoceros 7.sm-FUT-run.away-fv
‘The rhino will run away.’ (2018-03-08-02-TD)

b. **Transitive**

Mw-ana aka-teng-a ma-bhanana. [Shona]
1-child 1.sm.ta-buy-fv 6-banana

c. **Transitive**

Mu-kadzi a-no-unz-a v-ana ku-chi-koro. [Shona]
1-woman 1.sm.ta-bring-fv 2-child 17-7-school
‘The woman brings the children to school.’ (2015-08-29-01-TD)

d. **Transitive with null subject, applied object, and locative adjunct**

V-aka-teng-er-a Ø-Thandi Ø-rowke ku-chi-toro. [Shona]
2.sm-ta-buy-fv 1a-Thandi 5-rowke 17-7-store
‘They bought Thandi a dress at the store.’ (2016-02-13-01-TD)
1.3.5.4 Wh-questions

The structure of *wh*-questions in Shona is a largely unexplored empirical domain. Preliminary investigations of the topic include Mukaro 2012, a brief article by a native speaker of Shona, and Posegate 2010, a term paper written for an undergraduate field methods class. The grammars by Fortune (1984, 1985) and Brauner (1995) include a few examples of *wh*-questions but have no section dedicated to them.

The set of Shona *wh*-words is given in Table 1.7. Not shown there are the forms of ‘which’, which is formed by adding the prefixes in the middle column of Table 1.4 to -pi. In order to ask ‘where’, one of the locative prefixes (classes 16–18) is added to -pi. The most generic one is class 17, to produce ku-pi ‘where (lit., 17-which)’, although 16 or 18 can be used when the semantic context warrants (see Table 1.6 for the semantic differences between the locative classes). The form -ngani ‘how many’ distributes like a cardinal numeral both syntactically and morphologically, agreeing with the noun it is quantifying over.

<table>
<thead>
<tr>
<th>Noun Class</th>
<th>Wh-Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>Ø-ani</td>
<td>who.sg</td>
</tr>
<tr>
<td>2a</td>
<td>vana-ani</td>
<td>who.pl</td>
</tr>
<tr>
<td>7</td>
<td>chi-i</td>
<td>what.sg</td>
</tr>
<tr>
<td>8</td>
<td>zvi-i</td>
<td>what.pl</td>
</tr>
<tr>
<td>rinhi</td>
<td></td>
<td>when</td>
</tr>
<tr>
<td>sei</td>
<td></td>
<td>how, why</td>
</tr>
<tr>
<td>ne-i</td>
<td></td>
<td>with-what</td>
</tr>
<tr>
<td>-ngani</td>
<td></td>
<td>how many</td>
</tr>
</tbody>
</table>

Table 1.7: Shona *wh*-words, excluding those based on -pi ‘which’

If the field of syntax were less English-centric, perhaps we might call Shona *wh*-words “*i*-words” because they all end in -i, and it is possible that -i is a discrete [+wh] morpheme. It certainly can have noun class prefixes like 7 and 8 added directly to it, and if the context is sufficiently specified such that the asker of the question knows what class the potential answer must be, it is possible to use other noun class prefixes with -i.
Shona allows all three of the strategies in (1.1), or at least so it appears at first glance. The indirect object in a double object construction may be questioned in situ, as shown in (1.11), and this in-situ wh-phrase may take long-distance scope (i.e., across a clause boundary).

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

a. *In-situ* wh-*indirect object*

\[
\text{V-aka-teng-er-a} \quad \text{Ø-ani} \quad \text{Ø-rokwe?} \\
\text{2.sm-ta-buy-appl-fv} \quad \text{1a-who} \quad 5\text{-dress}
\]

‘Who(m) did they buy a dress (for)?’ (lit., ‘They bought who(m) a dress?’)  
(2015-08-29-02-TD)

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

\[
\text{W-ai-fung-a} \quad \text{[CP kuti v-aka-teng-er-a} \quad \text{Ø-ani} \quad \text{Ø-rokwe]}? \\
\text{2sg.sm-ta-think-fv} \quad \text{that 2.sm-ta-buy-appl-fv} \quad \text{1a-who}
\]

‘Who(m) did you think they bought a dress (for)?’ (lit., ‘You thought they bought who(m) a dress?’)  
(2015-01-17-01-TD)

Unlike English questions with in-situ wh-phrases, Shona wh-*in*-situ is not restricted to multiple wh-questions or to echo/quiz question contexts. *Wh*-in-situ is the most un-marked way to ask about a non-subject in Shona.

The same question may be asked with what appears to be full *wh*-movement, with word order similar to English:

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

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

\[
\text{Ndi-Ø-ani wa-v-aka-teng-er-a} \quad \text{Ø-rokwe?} \\
\text{1a.nse-2.sm-ta-buy-appl-fv} \quad \text{5-dress}
\]

‘Who(m) did they buy a dress (for)?’ (lit., ‘It’s who that they bought a dress (for)?’)  
(2016-02-13-01-TD)

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

\[
\text{Ndi-Ø-ani wa-w-ai-fung-a} \quad \text{[CP kuti v-aka-teng-er-a} \quad \text{Ø-ani} \quad \text{Ø-rokwe]}? \\
\text{1a.nse-2sg.sm-ta-think-fv} \quad \text{that 2.sm-ta-buy-appl-fv} \quad \text{1a-who}
\]

‘Who(m) did you think (lit., It’s who that you thought) they bought a dress (for)?’  
(2015-01-17-01-TD)
In addition to these options, the \textit{wh}-phrase may appear at an intermediate clause boundary, and this partial \textit{wh}-movement can be either local (movement within a clause) or long-distance (movement across a clause boundary but still to an embedded clause boundary rather than the left periphery of the matrix clause). These possibilities are shown in (1.13).

(1.13) \textbf{Shona partial \textit{wh}-movement}

\textit{a. Partial movement of a \textit{wh}–indirect object}

\texttt{W-ai-fung-a \textit{[cp kuti ndi-Ø-ani wa-v-aka-teng-er-a]} [Shona] 2sg.sm-ta-think-fv that \textbf{ni-1a-who} 1a.nse-2.sm-ta-buy-appl-fv ___ Ø-rokwe]?}

‘Who(m) did you think they bought a dress (for)?’ (lit., ‘They thought that it’s who that they bought a dress (for)?’) (2015-01-17-01-TD)

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

\texttt{W-ai-fung-a \textit{[cp kuti ndi-Ø-ani wa-t-aka-fember-a]} [Shona] 2sg.sm-ta-think-fv that \textbf{ni-1a-who} 1a.nse-1pl.sm-guess-fv [cp kuti v-aka-teng-er-a ___ Ø-rokwe]]?}

\texttt{that 2.sm-ta-buy-appl-fv 5-dress}

‘Who(m) did you think we guessed they bought a dress (for)?’ (lit., ‘They thought that it’s who that we guessed that they bought a dress (for)?’) (2015-01-17-01-TD)

So for a \textit{wh}-question that involves multiple levels of embedding, it is possible for the \textit{wh}-phrase to be pronounced at several places in the structure:

(1.14) \textbf{\textit{Wh}-questions with two bridge verbs}

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

\texttt{[\textbf{Chi-i} \textbf{cha-w-ai-fung-a} \texttt{[kuti t-aka-fember-a]} [Shona] \textbf{ni.7-what} 7.nse-2sg.sm-ta-think-fv that 1pl.sm-ta-guess-fv [kuti v-aka-teng-er-a ___ Ø-Thandi ___ ku-chi-toro nezuro]]?}

\texttt{that 2.sm-ta-buy-appl-fv 1a-Thandi 17-7-store yesterday}

\textit{b. Long-distance partial \textit{wh}-movement of a direct object}

\texttt{[W-ai-fung-a \texttt{[kuti \textbf{chi-i} \textbf{cha-t-aka-fember-a}]} [Shona] 2sg.sm-ta-think-fv that \textbf{ni.7-what} 7.nse-1pl.sm-ta-guess-fv [kuti v-aka-teng-er-a ___ Ø-Thandi ___ ku-chi-toro nezuro]]?}

\texttt{that 2.sm-ta-buy-appl-fv 1a-Thandi 17-7-store yesterday}
c. **Local partial wh-movement of a direct object**

\[
\text{[W-ai-fung-a} \quad \text{kuti t-aka-fember-a} \quad \text{[kuti chi-i} \quad \text{[Shona]} \\
\text{2SG.SM-TA-think-FV} \quad \text{that 1PL.SM-TA-guess-FV} \quad \text{that N1.7-what} \\
\text{cha-v-aka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{ku-chi-toro nezuro]]]? \\
\text{7.NSE-2.SM-TA-buy-APPL-FV} \quad \text{1a-Thandi} \quad \text{17-7-store yesterday}
\]

\[\text{What did you think that we guessed that they bought Thandi at the store yesterday?}\]

(2014-09-16-01-TD)

d. **Long-distance in-situ wh-direct object**

\[
\text{[W-ai-fung-a} \quad \text{kuti t-aka-fember-a} \quad \text{kuti v-aka-teng-er-a[Shona]} \\
\text{2SG.SM-TA-think-FV} \quad \text{that 1PL.SM-TA-guess-FV} \quad \text{that 2.SM-TA-buy-APPL-FV} \\
\text{Ø-Thandi chi-i} \quad \text{ku-chi-toro nezuro]]? \\
\text{1a-Thandi 7-what} \quad \text{17-7-store yesterday}
\]

‘What did you think that we guessed that they bought Thandi at the store yesterday?’

In this dissertation, I will be primarily focused on the question of how these strategies are derived and whether it is possible that they are derivationally related.

## 1.4 Analytical preliminaries

### 1.4.1 The morphosyntax of the verbal complex

I follow the approach to the Shona verbal complex that originated in Julien 2002 (based on Myers 1987, 1990) and has been taken up by others for other Bantu languages (Buell 2005, Carstens 2005, Muriungi 2008, Zentz 2012). The main idea is that the verbal complex does not form a syntactic constituent.

Instead, the stem is a constituent, a complex head derived via head movement of the verb root through a series of functional heads. It stops in the Mood head where the final vowel will be inserted, and along the way it may pick up extensions like the causative, applicative, stative, reciprocal, and passive. Because of how head movement works (Kayne 1994), the order of morphemes in the stem will be a mirror image of their syntactic structural relations (Baker 1985).

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3. I assume a late-insertion model of the syntax–morphology interface such as Distributed Morphology (Halle & Marantz 1993, Harley & Noyer 1999, Embick & Noyer 2007), but nothing in my analysis hinges on this.
The verb stem does not move beyond the Mood head; in fact, no head movement takes place on the spine above this head. The functional heads like Asp, T, and C are simply pronounced where they were generated, resulting in morpheme order within the prefixes that maps directly on to the syntactic structure (there is no mirror effect). I assume that the subject marker and tense prefixes are both inserted on the T head, but these could easily be split into separate functional projections.

1.4.2 Derivational operations

I follow Chomsky (2015) in returning to a more traditional stance on the timing of movement: both External Merge and Internal Merge (i.e., movement) apply freely throughout the syntactic derivation. This is in contrast to the position taken by Chomsky (2008, 2013), in which all operations take place in parallel at once a phase head is externally merged.

Chomsky (2015) still assumes that uninterpretable $\phi$-features are inherited from the phase head onto the next lower head (Chomsky 2008, Ouali 2008, Richards 2007), and so Agree does not take place until the phase head merged. However, because the nature of this feature inheritance is very much still being worked out (especially with respect to an articulated spine of the cartographic approach), I will not adopt it in my analyses here. Instead, I assume that as soon as a probe is merged, it begins probing its c-command domain to establish an Agree relation with a goal (Chomsky 2000).

Following Preminger 2011, I take feature valuation under Agree not to involve uninterpretable features that must be valued by interpretable features. Instead, heads are composed of hierarchically organized features, and feature valuation involves copying snippets of that structure into the corresponding empty slots in the probe’s feature structure. For the purposes of this dissertation, the details of this hierarchy will not be crucial, but I will make use of the idea that probes are relativized to a particular feature.
1.5 Preview of the dissertation

Wh-in-situ questions, the subject of investigation in chapter 2, have received a wide variety of treatments in the syntactic literature, ranging from covert or disguised movement to postsyntactic binding of the wh-phrase by a silent question operator. In Bantu languages, wh-in-situ questions are often taken to be derived via a non-movement relation (e.g., Carstens 2005 for Kilega, Diercks 2010 for Lubukusu, Muriungi 2003 for Kiitharaka, Sabel 2000 for Kikuyu and Duala, Sabel & Zeller 2006 for Zulu, Schneider-Zioga 2007 for Kinande), but alternatives have rarely been considered. I demonstrate how movement-based analyses that have been proposed for wh-in-situ in non-Bantu languages make the wrong predictions for Shona wh-in-situ, which lacks word order permutation, extraction marking, island effects, and intervention effects. These properties provide support for the traditional Bantuist view that the relation between the pronunciation site of an in-situ wh-phrase and its scopal position in the left periphery is not movement; I claim that in Shona it is unselective binding.

Many Bantu languages, including Shona, prohibit wh-phrases from appearing in the canonical preverbal subject position. Wasike (2007) demonstrates that this restriction applies to topicalized non-subjects as well as preverbal subjects. I replicate these results for Shona and argue that they cast doubt on Sabel & Zeller’s (2006) attempt to characterize the ban with an appeal to improper movement. I argue instead that restrictions on the distribution of wh-in-situ in Bantu are tied to restrictions on the domain for focus licensing. This claim is further bolstered by an examination of crosslinguistic variation within Bantu with respect to whether the ban on in-situ preverbal wh-subjects applies in embedded clauses. I observe a previously unnoticed generalization: languages that universally ban in-situ preverbal wh-subjects (like Zulu) have immediately after the verb (IAV) focus effects; languages that do allow in-situ preverbal wh-subjects in embedded clauses (like Shona, Lubukusu, and Kiitharaka) also lack IAV effects.

Full wh-movement in Shona gives rise to questions that bear a certain similarity to En-
English \(wh\)-questions. However, using a range of diagnostics including extraction marking, island effects, reconstruction effects, and the distribution of temporal modifiers, I argue in chapter 3 that what appears to be full \(wh\)-movement in Shona actually has a cleft structure: the \(wh\)-phrase moves to become the head of a relative clause, which is selected by a copula in the matrix clause. Just as in \(wh\)-in-situ, an ex-situ \(wh\)-phrase is pronounced lower than its scopal position, and the relation between these two positions is established via unselective binding.

Additional evidence for this proposal comes from the sensitivity of partial \(wh\)-movement (the topic of chapter 4) to island boundaries below but not above the pronunciation site of the \(wh\)-phrase, a pattern that has been predicted by previous analyses (e.g., Abels 2012a, Sabel 2000, Sabel & Zeller 2006) but for which empirical support has been lacking until now. I therefore unify full and partial \(wh\)-movement under a single analysis for cleft-based \(wh\)-ex-situ that involves a step of relativization (independently needed for relative clauses) and a step of unselective binding (independently needed for \(wh\)-in-situ).
Chapter 2

Wh-in-situ

2.1 Introduction

2.1.1 What is wh-in-situ?

In wh-in-situ, a wh-phrase appears in the position where its answer would appear in the corresponding declarative sentence (what I will call its canonical position), rather than appearing in the position where it takes scope. That is, instead of being pronounced in the left periphery, in-situ wh-direct objects are pronounced in canonical direct object position, in-situ wh-indirect objects are pronounced in canonical indirect object position, in-situ wh-adjuncts are pronounced in canonical adjunct position, etc.

Importantly, the term in situ does not entail that the wh-phrase is pronounced in its base position (where it is initially merged). In particular, if we assume that subjects are merged in SpecvP, their base position and canonical position would not coincide for languages in which subjects undergo A-movement to a higher position like SpecTP in ordinary declaratives. In those languages, a wh-subject appearing in SpecTP would be considered in situ because that is the canonical subject position.
2.1.2 The basic picture of Bantu wh-in-situ

No Bantu language I have found requires wh-phrases to appear sentence-initially; all allow at least apparent wh-in-situ for non-echo/quiz questions, as shown in Figure 2.1.¹ Examples of wh-in-situ in a few geographically and genetically diverse languages (within Bantu) are shown below. Geographical and demographic information for each language is provided on pp. xv–xviii.

(2.1) Wh-in-situ in Akɔɔse

a. In-situ wh–direct object

\[ A-n-nyěn \text{ nzé?} \]

1-pst-see 1.who

‘Who(m) did s/he see?’

(Hedinger 2008: 195 (475))

b. In-situ wh–complex direct object

\[ A-n-chǎn \text{ kúb \textbf{étə́n}?} \]

1-pst-buy 10.fowl 10.how.many

‘How many fowls did s/he buy?’

(Hedinger 2008: 197 (484))

c. In-situ wh–locative adjunct

\[ A-kag \text{ héé?} \]

1-go.ipfv where

‘Where is s/he going?’

(Hedinger 2008: 195 (477))


(2.2) Wh-in-situ in Kîîtharaka

a. In-situ wh–direct object

\[ \text{Maria} \text{ a-gûr-ir-e mbi?} \]

1.Maria 1.sm-buy-pfv-fv 7.what

‘What did Maria buy?’

(Abels & Muriungi 2008: 695 (17a))

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¹ The distinction between true and apparent wh-in-situ that is represented in Figure 2.1 will be discussed in section 2.2.2.
Figure 2.1: Map of Bantu languages with wh-in-situ.*

*Languages whose attested examples are all ambiguous between true and apparent wh-in-situ are represented in the true category here.
b. *In-situ* wh–direct object in an embedded declarative clause

John a-ug-ir-e [CP Pat a-ug-ir-e [CP Maria [Kĩtharaka]
a-gûr-ir-e mbi]]? 1.sm-buy-pfv-fv what
‘What did John say Pat said Maria bought?’

(Abels & Muriungi 2008: 716 (89a))

c. *In-situ* wh–direct object in an embedded interrogative clause

N-ti-iji [CP Munene a-gûr-ir-e mbi]? [Kĩtharaka]
1sg.sm-NEG-know 1.Munene 1.sm-buy-pfv-fv what
‘I don’t know what Munene bought.’

(Muriungi 2005: 49 (16a))

d. *In-situ* wh–temporal adjunct in an embedded interrogative clause

Tu-ri-ama [CP Munene a-ka-aja ri]? [Kĩtharaka]
1pl.sm-NEG-know 1.Munene 1.sm-buy-pfv-fv when
‘We don’t know when Munene will come.’

(Muriungi 2005: 49 (17a))

(2.3) *Wh-in-situ* in Zulu

a. *In-situ* wh–direct object

U-bona ini? [Zulu]
2sg.sm-see 9.what
‘What do you see?’

(Sabel & Zeller 2006: 271 (1a))

b. *In-situ* wh–direct object

U-bona ubani? [Zulu]
2sg.sm-see 1a.who
‘Who(m) do you see?’

(Sabel & Zeller 2006: 272 (1b))

c. *In-situ* wh–direct object in an embedded clause

U-cabanga [CP ukuthi uBev u-thenge ini]? [Zulu]
2sg.sm-think that 1a.BeV 1a.sm-bought 9.what
‘What do you think Bev bought?’

(Sabel & Zeller 2006: 275 (12a))

As shown in (2.4) for Lubukusu, Bantu languages permit *wh*-adjuncts to appear in situ, like *wh*-arguments can.

(2.4) *Wh-in-situ* in Lubukusu

a. *In-situ* wh–direct object

Wafula a-la-kul-a si(ina)? [Lubukusu]
1.Wafula 1.sm-fut-buy-fv 7.what
‘What will Wafula buy?’

(Wasike 2007: 12 (7a))
b. **In-situ wh–direct object**
   Nafula a-a-siim-a náánu?
   1.Nafula 1.SMPRS-love-FV 1.who
   ‘Who(m) does Nafula love?’  
   (Wasike 2007: 224 (1b))

c. **In-situ wh–direct object with adverb**
   Maayi a-a-tekh-a (bwaangu) si(ina) (bwaangu)?
   1.mother 1.SMPST-cook-FV quickly 7.what quickly
   ‘What did Mother cook quickly?’  
   (Wasike 2007: 227 (7))

d. **In-situ wh–direct object in an embedded clause**
   Nafula a-subil-a [CP a-li Wafula e-eb-a 1-that 1.Wafula 1-steal-FV
   si(ina)]?
   7.what
   ‘What does Nafula believe [Wafula stole ____]?’  
   (Wasike 2007: 250 (33b))

e. **In-situ wh–temporal adjunct in an embedded clause**
   Nafula a-subil-a [CP a-li Wafula e-e-eb-a liina]
   1.Nafula 1.SMPRS-believe-FV 1-that 1.Wafula 1-PST-steal-FV
   sii-tabu liina]
   7-book 5.what
   ‘When does Nafula believe [Wafula stole the book ____]?’  
   (Wasike 2007: 250 (33c))

f. **In-situ wh–locative adjunct in an embedded clause**
   Nafula a-subil-a [CP a-li Wafula e-eb-a waee(na)]
   1.Nafula 1.SMPRS-believe-FV 1-that 1.Wafula 1-steal-FV
   sii-tabu waee(na)]
   7-book where
   ‘Where does Nafula believe [Wafula stole the book ____]?’  
   (Wasike 2007: 250 (33e))

g. **In-situ wh–manner adjunct in an embedded clause**
   Nafula a-subil-a [CP a-li ba-ba-ana be-eb-a ba-rie(ena)]
   1.Nafula 1.SMPRS-believe-FV 1-that 2-2-child 2-steal-FV
   sii-tabu ba-rie(ena)]
   7-book 2-how
   ‘How does Nafula believe [Wafula stole the book ____]?’  
   (Wasike 2007: 250 (33f))

One important note is that in Bantu languages, wh-in-situ can be used for legitimate

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3. In Lubukusu, class 5 of -ina ‘what’ is interpreted as ‘when’.  

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29
requests for information, out of the blue (i.e., with no discourse context), and without the presence of an ex-situ wh-phrase. In fact, for some languages (e.g., Shona), wh-in-situ is the most natural and discourse-neutral way to ask a non-subject wh-question. This contrasts with English wh-in-situ, which has a much more limited distribution.

In English, an in-situ wh-phrase may be part of a legitimate request for information (i.e., where the speaker does not already know the answer and expects the addressee to be able to provide one) in a multiple wh-question, as in (2.5):

(2.5) Multiple wh-question as a request for information
Who brought what to the potluck?

There are several contexts in which (2.5) can be felicitously uttered, but crucially one is where the speaker does not know the set of pairs of potluck attendees and the dishes they brought and further presumes that the addressee does know this set and can provide it. For example, two friends live far apart but stay in close contact about each other’s lives. If one friend knew from prior conversation (or through social media, etc.) that the other had planned to attend a potluck since they last talked, she could felicitously ask (2.5) as a legitimate request for information.

English allows in-situ wh-phrases without the presence of a fronted wh-phrase in a limited set of discourse contexts. These come in several varieties, as shown in (2.6), but they are often grouped together as echo and quiz questions. Notably, in-situ wh-phrases within these contexts are immune to island effects.

(2.6) English wh-in-situ
a. Echo: Incredulity/surprise
A: I bought you an elephant.
B: You bought me a WHAT?!

b. Echo: Anger
A: Dad, I just drove through the garage door.
B: You drove my car through WHAT?!

c. Echo: Requests for repetition/clarification
A: I’ll be arriving at [mumble/static].
B: Sorry, you’ll be arriving when?
d. *Echo: Expression of doubt, correction*
   A: Then Jesus rose from the den.
   B: He rose from the **what**?

e. *Interrogation: Quiz*
   World War I began after Archduke Franz Ferdinand of Austria was assassinated in **which city**?

f. *Interrogation: Courtroom*
   You returned home after stopping by **which bar** for a few drinks?

As will be shown below, these kinds of questions are exempt from restrictions that otherwise constrain *wh*-in-situ in Bantu. But crucially, Bantu *wh*-in-situ is not limited to occurring in these contexts.

### 2.1.3 Theoretical issues at stake

The primary theoretical question raised by *wh*-in-situ is the nature of the relation between the scopal position and the pronunciation site. Some languages like Chinese and Japanese require *wh*-questions to be formed using *wh*-in-situ, whereas others like the Bantu languages allow it as one possible *wh*-question formation strategy alongside *wh*-ex-situ. Given that at least in some languages *wh*-in-situ is used instead of *wh*-movement, and both strategies allow a *wh*-phrase to take scope over the entire sentence, it is natural to consider the possibility that *wh*-in-situ involves *wh*-movement to the scopal position.

As discussed in overview articles by Bayer (2006) and Cheng (2009), various proposals exist to explain how the *wh*-phrase is still pronounced in situ even if there is *wh*-movement, including covert (LF) movement of the *wh*-phrase (Huang 1982), overt movement of a null operator (Watanabe 1992), overt movement of a *wh*-feature (Pesetsky 2000, Watanabe 2001), overt movement of the *wh*-phrase followed by pronunciation of a lower copy (Fanselow & Ćavar 2001, Reintges et al. 2006, Reintges 2007b), and overt movement of the *wh*-phrase followed by remnant movement that obscures the *wh*-movement (Munaro et al. 2001, Poletto & Pollock 2004b, 2015).

However, I will argue in this chapter that movement-based analyses make predictions
Chapter 2. Wh-in-situ 2.2. Relating the scopal and pronunciation positions

that are not borne out by the facts of wh-in-situ in Bantu. I do not claim that this invalidates these accounts for the languages they were originally proposed for, but rather that wh-in-situ is not a uniform phenomenon, and we should not expect it to be derived uniformly across languages (Cheng & Rooryck 2002, Reintges et al. 2006).

A second line of inquiry has to do with asymmetries in the distribution of wh-in-situ. While in-situ wh–non-subjects appear quite freely in Bantu languages, preverbal in-situ wh-subjects are significantly more restricted. I will consider movement-based approaches to this asymmetry but ultimately conclude that a wider range of facts can be accounted for if the restriction on preverbal in-situ wh-subjects derives from an information structure conflict (Bresnan & Mchombo 1987, Demuth & Harford 1999, Wasike 2007, Zerbian 2006b).

2.1.4 Roadmap

In section 2.2, I present four properties of Shona wh-in-situ and evaluate them with respect to five potential analyses that have been proposed for other languages. Three of these analyses involve a movement relation between the scopal and pronunciation positions of the wh-phrase and two do not. I show that unselective binding, a non-movement relation, emerges as the winner for Shona, but I also highlight that Bantu languages show diversity with respect to wh-in-situ. Next, I turn in section 2.3 to the issue of restrictions on the distribution of wh-in-situ. I argue that these restrictions have nothing to do with the relation between the scopal and pronunciation site (which is about interrogative scope) but rather follow from restrictions on the licensing domain for narrow focus. Finally, section 2.4 discusses outstanding issues for my analysis and section 2.5 concludes.

2.2 Relating the scopal and pronunciation positions

In this section, I examine several possible analyses for the relation between the pronunciation site of an in-situ wh-phrase and the position where it takes scope. The prevailing
view within the Bantu literature is that this is derived via a non-movement relation. For example, see Carstens (2005) for Kilega, Diercks (2010) for Lubukusu, Muriungi (2003) for Kîîtharaka, Sabel (2000) for Kikuyu and Duala, Sabel & Zeller (2006) for Zulu, and Schneider-Zioga (2007) for Kinande. Other than Wasike (2007), who argues for a feature movement account of Lubukusu wh-in-situ, alternatives that have been proposed for non-Bantu languages have rarely been considered.

I demonstrate that true wh-in-situ in Bantu is not sensitive to islands and does not trigger extraction marking. On the basis of these diagnostics, I claim that there is no movement relation between the wh-phrase and its scopal position in Bantu true wh-in-situ. Furthermore, I show that Shona’s lack of intervention effects is best explained by unselective binding, while the intervention effects in Kîîtharaka suggests that it could be analyzed with computation of alternatives. Both of these are semantic relations not involving movement, so they are consistent with the island and extraction marking facts.

### 2.2.1 Unselective binding

The first analysis I consider is unselective binding, which finds its roots in Baker’s (1970) claim that there is a null Q operator that binds in-situ wh-phrases in English multiple wh-questions. This idea was further developed by Pesetsky (1987), whose starting assumption was that in-situ wh-phrases are similar to indefinites. An influential analysis of indefinites is that they are quantifiers that covertly move (i.e., after Spell-out, at LF) to their scopal position and bind their trace as a variable (May 1977), but Pesetsky shows that a lack of island effects militates against this view. If indefinites covertly move as shown in (2.7a) (and covert movement is island-sensitive), we would expect them to show the same island sensitivity that wh-questions (2.7b) and topicalization (2.7c) do. This is not the case. Note, too, that true quantifiers like every are sensitive to islands, which leads Pesetsky to conclude that these do covertly move to their scopal position even if indefinites do not.
Chapter 2. Wh-in-situ  2.2. Relating the scopal and pronunciation positions

(2.7) Indefinites’ lack of island sensitivity

a. If John comes upon a donkey, Mary tries to hide it.
   \[LF: \text{a donkey}_i \text{[if John comes upon } e_i, \text{Mary tries to hide } \text{it}_i]\]  
   (Pesetsky 1987: 102 (14–15a))

b. *What donkey\_i, if John comes upon \( e_i \), does Mary try to hide \( \text{it}_i \)?  
   (Pesetsky 1987: 102 (15b))

c. *This donkey\_i if John comes upon \( e_i \), Mary tries to hide it\_i.  
   (Pesetsky 1987: 102 (15c))

d. *If John comes upon every donkey, Mary tries to hide it.  
   *LF: every donkey\_i [if John comes upon \( e_i \), Mary tries to hide it\_i]  
   (Pesetsky 1987: 103 (16–17))

Instead of pursuing the covert movement approach to indefinites, Pesetsky (1987) argues, following Heim (1982), that indefinites are variables that may be bound by a nearby quantifier. For example, it seems that the indefinites a man and a donkey in (2.8) do not contribute their own quantificational force but instead are bound by the quantifier always. Because always can bind both of these indefinites, it is unselective (Lewis 1975).

(2.8) Unselective binding of indefinites by a quantifier

a. If a man owns a donkey, he always beats it.  
   (Heim 1982: 123 (1))

b. Logical Form:
   \[\text{always}_{i,j} [\text{if a man}_i \text{owns a donkey}_j, \text{he}_i \text{beats it}_j]\]  
   (Pesetsky 1987: 101 (12))

Pesetsky (1987) proposes that just as the relation between an indefinite’s pronunciation site and its scopal position involves unselective binding but the relation between a quantifier’s pronunciation site and its scopal position involves covert movement, some kinds of in-situ wh-phrases are unselectively bound while others move at LF. Specifically, he notes that English multiple wh-questions show Superiority effects except when the in-situ wh-phrase is D(iscourse)-linked:

(2.9) Superiority and D-linking in English multiple wh-questions

a. No Superiority violation
   \textbf{Who}_i did you promise \( e_i \) to read \textbf{what}?  
   (Pesetsky 1987: 104 (20a))

b. Superiority violation with non-D-linked wh-phrases yields ungrammaticality
   ?? \textbf{What}_j did you promise \textbf{who} to read \( e_j \)?  
   (Pesetsky 1987: 104 (20b))
Chapter 2. *Wh*-in-situ  

2.2. Relating the scopal and pronunciation positions

(c. *No Superiority violation*

*Which man*\(_i\) did you promise *which book* to read?

(Pesetsky 1987: 106 (28a))

d. *Superiority violation with D-linked wh-phrases does not yield ungrammaticality*

*Which book*\(_j\) did you promise *which man* to read *e*\(_j\)?

(Pesetsky 1987: 106 (28b))

Pesetsky (1987) argues that Superiority effects are a diagnostic for movement, which leads to the conclusion that D-linked in-situ *wh*-phrases are unselectively bound while non-D-linked in-situ *wh*-phrases must move at LF to their scopal position.\(^4\)

This mechanism of unselective binding (sometimes called (Q-)indexing, following Baker 1970) has been adopted in analyses of *wh*-in-situ in Mandarin Chinese (Aoun & Li 1993), Ancash Quechua (Cole & Hermon 1994), Singaporean Malay (Cole & Hermon 1998), Palauan (Reintges et al. 2006), and Zulu (Sabel & Zeller 2006), among others. It predicts that in-situ questions should show identical morphosyntax to their declarative counterparts because the relation is established semantically rather than syntactically. The following sections will reveal that this prediction is borne out for Bantu true *wh*-in-situ.

---

\(^4\) Richie Kayne (pers. comm.) has pointed out to me that in indirect questions even D-linked *wh*-phrases show Superiority effects:

(i) *Superiority and D-linking in English indirect multiple wh-questions*

a. *No Superiority violation*

I finally figured out *which linguist* got into *which taxi*. (Richard Kayne, pers. comm.)

b. *Superiority violation with D-linked wh-phrases yields ungrammaticality*

??I finally figured out *which taxi, which linguist* got into *e*\(_i\). (Richard Kayne, pers. comm.)

I agree with these judgments and acknowledge the problem that they raise for Pesetsky’s (1987) claim that English D-linked in-situ *wh*-phrases do not involve covert movement. However, this does not necessarily mean that unselective binding is ruled out universally; just that it may not apply for English multiple *wh*-questions. As I see it, even if the initial data set falls through, other research on other languages has provided independent support for the mechanism in general.
2.2.2 Disguised movement

2.2.2.1 Explanation and predictions

Whereas unselective binding is a non-movement dependency that is established after Transfer/Spell-out in (or on the way to) LF, another possibility is that the relation between the pronunciation site of the wh-phrase and its scopal position is established by movement in the narrow syntax.

Several Romance languages have wh-question formation strategies that have played a significant role in the literature on wh-in-situ, so it is worthwhile to consider whether the movement-based analyses proposed for these languages can be extended to the Bantu pattern as well. Perhaps the most well-known of these Romance cases is colloquial French (Adli 2006, Aoun, Hornstein, et al. 1981, Bošković 1998, Chang 1997, Cheng & Rooryck 2000, Déprez et al. 2013, Mathieu 1999, 2002, 2004, Munaro et al. 2001, Obenauer 1994, Poletto & Pollock 2004a,b, 2009, 2015, Shlonsky 2012, Tailleur 2013):

(2.10) a. *Postverbal in-situ wh–locative adjunct*

Tu vas où?

`Where are you going?'

[French] (Poletto & Pollock 2015: 138 (6a))

b. *Postverbal in-situ wh–direct object*

Pierre a fait quoi?

`What has Pierre done?'

[French] (Poletto & Pollock 2015: 142 (15a))

c. *Postverbal in-situ wh–direct object*

Marie a embrassé qui?

`Who(m) has Marily kissed?’

[French] (Poletto & Pollock 2015: 142 (15b))

d. *Postverbal in-situ wh–direct object*

Marie a engagé quel linguiste?

`Which linguist has Marily hired?’

[French] (Poletto & Pollock 2015: 142 (15c))

However, the distribution of French wh-in-situ is restricted in ways that strain that analogy with the Bantu pattern: the wh-word *que* ‘what’ cannot appear in situ, and for some
speakers a \textit{wh}-phrase in an embedded clause cannot have matrix scope (though see the discussion in Poletto & Pollock 2015: 142–144). For this reason, I will turn to Bellunese, a Romance variety spoken in the Veneto region of Italy whose pattern of \textit{wh}-in-situ bears closer resemblance to the Bantu profile.

Bellunese single-word \textit{wh}-non-subjects appear postverbally in a construction that appears to be \textit{wh}-in-situ (Munaro et al. 2001, Poletto & Pollock 2004b).

\begin{enumerate}
\item \textit{Bellunese non-subject} \textit{wh}-in-situ
\begin{enumerate}
\item \textit{Postverbal in-situ} \textit{wh}–\textit{direct object}
\begin{itemize}
\item \textit{A-tu} \textit{magnà che?} \textit{have-2sg.NASCL} \textit{eaten what}
\item \textit{‘What have you eaten?’ (Munaro et al. 2001: 149 (4a))}
\end{itemize}
\item \textit{Postverbal in-situ} \textit{wh}–\textit{locative adjunct}
\begin{itemize}
\item \textit{Sé-tu ‘ndat \textit{andè?} 2sg.NASCL} \textit{gone where}
\item \textit{‘Where have you gone?’ (Munaro et al. 2001: 149 (4c))}
\end{itemize}
\end{enumerate}
\end{enumerate}

\textit{Munaro (1999), Munaro et al. (2001), and Poletto & Pollock (2004a,b, 2009, 2015) argue that the Bellunese strategy is only “apparent” \textit{wh}-in-situ (and they further extend this analysis to French as well). As sketched in (2.12), the \textit{wh}-phrase undergoes \textit{wh}-movement to the left periphery, and then the rest of the sentence moves around it to a higher position in the left periphery, leaving the \textit{wh}-phrase sentence-final. This type of analysis is sometimes called disguised or masked movement (Cheng 2009, Simpson & Bhattacharya 2003, Uribe-Etxebarria 2002) because the second (remnant) movement step obscures the fact that \textit{wh}-movement has occurred, in the spirit of Kayne 1998.}

\begin{enumerate}
\item \textit{Derivation of (2.11a), adapted from Poletto & Pollock 2015: 138 (8)}
\begin{enumerate}
\item Move \textit{che ‘what’} to the left periphery
\end{enumerate}
\end{enumerate}
b. Move IP to a higher position in the left periphery⁵

A consequence of the disguised movement analysis is that apparently in-situ wh–non-subjects in Bellunese are not actually pronounced in their canonical position (i.e., where their answer would appear in the corresponding declarative). Instead, a more accurate generalization is that they appear sentence-finally. This predicts that if a sentence-medial non-subject is questioned, the vP cannot have the same word order it would have in the declarative.

This prediction is borne out, as shown in (2.13). The sentence-medial che ‘what’ cannot intervene between the verb and the recipient PP as its answer does in the corresponding declarative. Instead, the recipient PP must be right-dislocated following a strong prosodic boundary, suggesting that che is indeed sentence-final (modulo right-dislocation), not in situ.

(2.13) **Bellunese wh-phrases are sentence-final (modulo right-dislocation), not in situ**

a. **Declarative word order**

   Al ghe a dat al libro a so fradel. [Bellunese]
   3SG.M.ASCL to.him has given the book to his brother
   ‘He gave the book to his brother.’ (Poletto & Pollock 2015: 139 (9d))

b. **Questioning the direct object with declarative word order in the vP**

   *Ghe ha-lo dat che a so fradel? [Bellunese]
   to.him has-3SG.M.NASCL given what to his brother
   ‘What did he give to his brother?’ (Poletto & Pollock 2015: 139 (9e))

---

⁵ Under this analysis, the subject clitic inversion in the moved remnant IP is due to several additional movement steps not shown here. See the discussion in Poletto & Pollock 2015: 139n6.
c. "In-situ" sentence-final wh–direct object

Ghe ha-lo dat che, a so fradel?  
[Bellunese]
to.him has-3SG.M.NASC hat given what to his brother
‘What did he give to his brother?’  
(Poletto & Pollock 2015: 140 (9f))

2.2.2 Evaluation: Postverbal word order

A few Bantu languages have word order patterns that align with the Romance facts discussed above. For example, in the Dzamba double object construction, the goal DP precedes the theme DP, as shown in the declarative sentence in (2.14).

(2.14) Canonical word order in a declarative

o-Nkɔkɔ a-eza-áki o-ndaola yei mbano lɔɔme.  
[Dzamba]
1-grandfather 1.sm-give-IMPF 1-grandson his bow today
‘The grandfather gave his grandson a bow today.’  
(Bokamba 1976: 155 (34a))

In an ordinary question, it is not possible to simply question the non-subjects in the position where their answer appears in (2.14); this is only acceptable in echoic contexts:

(2.15) Lack of true wh-in-situ in Dzamba

a. In-situ wh–direct object

o-Nkɔkɔ a-eza-áki o-ndaola yei (embaka) nde  
[Dzamba]
1-grandfather 1.sm-give-IMPF 1-grandson his thing what
lɔɔme?
today
‘What (thing) did the grandfather give his grandson today?’
*(out of the blue)
(echo)  
(Bokamba 1976: 155 (34d))

b. In-situ wh–direct object

o-Nkɔkɔ a-eza-áki o-ndaola yei binde lɔɔme?  
[Dzamba]
1-grandfather 1.sm-give-IMPF 1-grandson his what today
‘What did the grandfather give his grandson today?’
*(out of the blue)
(echo)  
(Bokamba 1976: 155 (34e))

c. In-situ wh–indirect object

o-Nkɔkɔ a-eza-áki (moto) nzanyi mbano lɔɔme?  
[Dzamba]
1-grandfather 1.sm-give-IMPF person who bow today
‘Who(m) did the grandfather give a bow (to) today?’
*(out of the blue)
(echo)  
(Bokamba 1976: 156 (34i))
Instead, the *wh*-phrase must appear sentence-finally, even after the temporal adjunct, as illustrated in (2.16).

(2.16) *Wh*-in-situ in Dzamba is only apparent

a. **Sentence-final wh-direct object**
   
   o-Nkôkô a-eza-áki o-ndaola yeî lôome *(embaka)* [Dzamba]  
   1-grandfather 1.sm-give-impf 1-grandson his today **thing**  
   nde? **what**  
   ‘What (thing) did the grandfather give his grandson today?’  
   (out of the blue)  
   *(Bokamba 1976: 155 (34b))*

b. **Sentence-final wh-direct object**
   
   o-Nkôkô a-eza-áki o-ndaola yeî lôome **binde**? [Dzamba]  
   1-grandfather 1.sm-give-impf 1-grandson his today **what**  
   ‘What did the grandfather give his grandson today?’  
   (out of the blue)  
   *(Bokamba 1976: 155 (34c))*

c. **Sentence-final wh-indirect object**
   
   o-Nkôkô a-eza-áki mbano lôome *(moto) nzanyi*? [Dzamba]  
   1-grandfather 1.sm-give-impf bow today **person who**  
   ‘Who(m) did the grandfather give a bow (to) today?’  
   (out of the blue)  
   *(Bokamba 1976: 156 (34h))*

*Bokamba (1976)* notes that the same generalization holds in Lingala and Likila, two other languages in the same C30 group *(Maho 2009)*. He argues that the sentence-final *wh*-phrases move rightwards to get there, but the facts would be equally compatible with a disguised movement analysis.⁶

As shown in Figure 2.1, Dzamba, Lingala, and Likila are the only Bantu languages I have surveyed that show clear evidence for their *wh*-in-situ being only apparent. For the other languages, in-situ *wh*-phrases need not be sentence-final; instead, they simply appear in exactly the same position as their answer in the corresponding declarative. This militates against a disguised movement analysis, which would require many additional potentially unmotivated movement steps just to restore the original word order.

The Kilega examples in (2.17) demonstrate that the *wh*-phrases are truly in situ⁷ rather

---

⁶ *Bokamba (1976: 193 (66f))* provides one example suggesting that this pattern in Dzamba is not sensitive to islands, unlike in Romance. I leave this puzzle open for future research.

⁷ That is, in the same position as their answer in the corresponding declarative, which again may not
than simply sentence-final: in the double object constructions in (2.17a–b) the indirect object precedes the direct object regardless of which one is a *wh*-phrase, and in (2.17b–c) the *wh*-phrase (whether direct object or object of a preposition) precedes an adjunct PP. This is the canonical word order for a declarative Kilega sentence, so although it might be possible to construct a derivation involving *wh*-movement to the scopal position and then a series of remnant movement steps to resurrect the original word order, there is nothing here that suggests that kind of disguised movement.

(2.17) *Wh*-in-situ in Kilega (D51)

a. *In-situ* *wh*-indirect object

Mú-ku-bák-íl-á názi nyumbá? [Kilega]
2pl.sm-prog-build-appl-fv 1.who 9.house
‘Who(m) are you building a house for?’ (Kinyalolo 1991: 22 (14b))

b. *In-situ* *wh*-direct object

Bábo bikulu b-á-kás-íl-é mwámí bikí mu-mwílo? [Kilega]
2.that 2.woman 2.sm-asp-give-pfv-fv 1.chief 8.what 18-3.village
‘What did those women give the chief in the village?’ (Kinyalolo 1991: 21 (13a))

c. *In-situ* *wh*-object of a preposition

Mú-énd-il-é na názi ku Mulambula? [Kilega]
2pl.sm.asp-go-pfv-fv with 1.who 17 Mulambula
‘Who(m) did you go with to Mulambula?’ (Kinyalolo 1991: 22 (15a))

Kinande is a symmetrical object language in the sense of Bresnan & Moshi 1990; that is, the internal arguments in a double object construction may appear in either order (Baker & Collins 2006, Schneider-Zioga & Mutaka 2014, Schneider-Zioga 2015a,b). We thus expect to be able to have a *wh*-direct object precede an internal object, which is what we find in (2.18b). This example illustrates that while in-situ *wh*-phrases often end up being sentence-final, as in (2.18a), over and over we see that most Bantu languages do not require sentence-finality for *wh*-in-situ. ⑨

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⑧ Symmetry also has implications for which internal argument(s) may be passivized and be marked on the verb, but linear order of the two arguments is what is relevant here.

⑨ Even if symmetry is illusory and all applicative constructions are asymmetrical, as suggested by Ngonyani & Githinji (2006), the point here is that the in-situ *wh*-phrase appears in the canonical position,
(2.18) Wh-in-situ in Kinande (JD42)

a. In-situ wh–direct object
   Kambale a-alangira ndi?
   1.Kambale 1.sm-saw 1.who
   ‘Who(m) did Kambale see?’
   (Schneider-Zioga 2007: 408 (15))

b. In-situ wh–direct object
   Yosefu a-kaha ki ky-o Marya?
   ‘What did Joseph give Mary?’
   (Schneider-Zioga 1995: 87 (24))

The word order for a Shona declarative double object sentence with adjuncts is shown in (2.19a). The order of the internal arguments may be reversed only if the indirect object is marked on the verb, as in (2.19b), so in the examples that follow I will keep canonical order where the indirect object precedes the direct object.

(2.19) Canonical word order for non-subjects

a. Declarative with indirect object preceding direct object
   V-aka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro nezuro. [Shona]
   2.sm-ta-buy-appl-fv 1a-Thandi 5-dress 17-7-store yesterday
   ‘They bought Thandi a dress at the store yesterday.’
   (2015-04-14-01-TD)

b. Declarative with direct object preceding indirect object requires object marking
   V-aka-*mu)-teng-er-a Ø-rokwe Ø-Thandi ku-chi-toro [Shona]
   2.sm-ta-1a.om-buy-appl-fv 5-dress 1a-Thandi 17-7-store
   nezuro.
   yesterday
   ‘They bought a dress for Thandi at the store yesterday.’
   (2015-04-14-01-TD)

For this sentence, the non-subjects may be questioned in situ as in (1.11). Each wh-phrase appears exactly where its answer appears in (2.19a), not necessarily sentence-finally, suggesting that the wh-phrase is truly in situ.

---

where its answer would appear in the corresponding declarative. So even if short movement is involved in getting the object from its base position to its canonical position, that does not entail that there is movement to the scopal position, which is what is at issue here.
(2.20) Wh-in-situ non-subjects

a. **In-situ wh–indirect object**

V-aka-teng-er-a Ø-ani Ø-rokwe ku-chi-toro nezuro?  [Shona]
2.sm-ta-buy-appl-fv 1a-who 5-dress 17-7-store yesterday
‘Who(m) did they buy a dress (for) at the store yesterday?’

(2014-09-09-01-TD)

b. **In-situ wh–direct object**

V-aka-teng-er-a Ø-Thandi chi-i ku-chi-toro nezuro?  [Shona]
2.sm-ta-buy-appl-fv 1a-Thandi 7-what 17-7-store yesterday
‘What did they buy Thandi at the store yesterday?’

(2014-09-09-01-TD)

c. **In-situ wh–locative adjunct**

V-aka-teng-er-a Ø-Thandi Ø-rokwe ku-pi nezuro?  [Shona]
2.sm-ta-buy-appl-fv 1a-Thandi 5-dress 17-which yesterday
‘Where did they buy Thandi a dress yesterday?’

(2014-09-09-01-TD)

d. **In-situ wh–temporal adjunct**

V-aka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro rinhi?  [Shona]
2.sm-ta-buy-appl-fv 1a-Thandi 5-dress 17-7-store when
‘When did they buy Thandi a dress at the store?’

(2014-09-09-01-TD)

Furthermore, in-situ wh-phrases may take scope outside their clause, illustrated in

(2.21), and in these long-distance cases the wh-phrase still appears in its canonical position.

(2.21) Embedded wh-in-situ non-subjects

a. **Long-distance in-situ wh–indirect object**

W-ai-fung-a kuti v-aka-teng-er-a Ø-ani Ø-rokwe [Shona]
2sg.sm-ta-think-fv that 2.sm-ta-buy-appl-fv 1a-who 5-dress
ku-chi-toro nezuro?
17-7-store yesterday
‘Who(m) did you think they bought a dress (for) at the store yesterday?’

(2014-09-09-01-TD)

b. **Embedded in-sITU wh–direct object**

W-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi chi-i [Shona]
2sg.sm-ta-think-fv that 2.sm-ta-buy-appl-fv 1a-Thandi 7-what
ku-chi-toro nezuro?
17-7-store yesterday
‘What did you think they bought Thandi at the store yesterday?’

(2014-09-09-01-TD)
Chapter 2. *Wh*-in-situ

2.2. Relating the scopal and pronunciation positions

c. **Embedded in-situ wh–locative adjunct**

\[
\text{W-ai-fung-a} \quad \text{kuti} \quad \text{v-aka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{Ø-rokwe} \quad [\text{Shona}]
\]
\[
\text{2SG.SM-TA-think-FV} \quad \text{that} \quad \text{2.SM-TA-buy-APPL-FV} \quad \text{1a-Thandi} \quad \text{5-dress}
\]

\[
\text{ku-pi} \quad \text{nezuro?}
\]

17-*which* yesterday

‘Where did you think they bought Thandi a dress yesterday?’

(2014-09-09-01-TD)

d. **Embedded in-situ wh–temporal adjunct**

\[
\text{W-ai-fung-a} \quad \text{kuti} \quad \text{v-aka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{Ø-rokwe} \quad [\text{Shona}]
\]
\[
\text{2SG.SM-TA-think-FV} \quad \text{that} \quad \text{2.SM-TA-buy-APPL-FV} \quad \text{1a-Thandi} \quad \text{5-dress}
\]

\[
\text{ku-chi-toro} \quad \text{rinhi?}
\]

17-7-store *when*

‘When did you think they bought Thandi a dress at the store?’

(2014-09-09-01-TD)

The disguised movement approach to *wh*-in-situ relies crucially on the fact that Bellunese and French “in-situ” *wh*-phrases are really sentence-final (modulo right-dislocation). That generalization does not hold for Bantu true *wh*-in-situ, where in-situ *wh*-non-subjects appear in their canonical position, even if that is sentence-medial. Therefore, the merits of the disguised movement analysis do not carry over for Bantu, at least for the true in-situ strategy. This is shown in Table 2.1.

<table>
<thead>
<tr>
<th>Unselective Binding</th>
<th>Disguised Movement</th>
</tr>
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<tbody>
<tr>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

Table 2.1: Properties and analyses of Bantu true *wh*-in-situ (interim)

As noted above, disguised movement would accommodate the facts for Dzamba, Likila, and Lingala, because those require their *wh*-phrases to sentence-final. In addition, I will show in section 3.2.6.4 that some Bantu languages like Ikalanga and Shona do have a strategy in which clefted *wh*-phrases may be sentence-final, and for that strategy I follow Letsholo (2007) in arguing that disguised movement is indeed involved.
Chapter 2. *Wh*-in-situ  

2.2. Relating the scopal and pronunciation positions

2.2.3 Lower copy spell-out

2.2.3.1 Explanation and predictions

As we saw above, the fact that the linear order of postverbal elements is not disturbed in Bantu true *wh*-in-situ casts doubt on the disguised movement approach for the data at hand. An alternative that avoids this problem but still uses overt movement to relate the pronunciation site and scopal position of the *wh*-phrase is found in Fanselow & Čavar 2001, Reintges et al. 2006, Reintges 2007a,b.

Coptic Egyptian and Passamaquoddy show extraction marking (i.e., morphological alternations that mark the path of syntactic movement) in *wh*-in-situ and head-internal relative clauses, respectively. In the Coptic examples in (2.22), the *wh*-phrase appears in situ, but there is relative marking (an instance of extraction marking) above it. This leads Reintges et al. (2006) and Reintges (2007a,b) to argue that these constructions involve overt movement just as in *wh*-ex-situ and headed relative clauses. The only difference is that a lower copy of the moved element is pronounced rather than the highest one.

(2.22) Extraction marking with Coptic *wh*-in-situ

a. *In-situ* *wh*-subject

\[
\text{nt-a} \quad \text{nim} \quad t\text{špo} \quad \text{na-f} \quad \text{n-tee-hypomone...?} \quad \text{[Coptic]}
\]

*REL-PRF* *who* acquire for-3SG.M OBL-DEM.SG.F-endurance

‘Who has acquired such an endurance ...?’ (Hilaria 12, 29; ed. Drescher, cited in Reintges et al. 2006: 179 (26a))

b. *In-situ* *wh*-direct object

\[
\text{e-i-na-tše} \quad \text{u} \quad \text{na-k?} \quad \text{[Coptic]}
\]

*REL-FUT-1SG-AUX-say* *what* to-2SG.M

‘What shall I say to you?’ (Apophth. Patrum no. 28, 5, 25; ed. Chaîne, cited in Reintges et al. 2006: 179 (26b))

c. *In-situ* *wh*-object of a preposition

\[
\text{e-tetən-šine} \quad \text{ənsa} \quad \text{nim?} \quad \text{[Coptic]}
\]

*REL.PRS-2PL-search for* *who*

‘Who(m) are you looking for?’ (John 18:4, cited in Reintges et al. 2006: 179 (26c))
2.2. Relating the scopal and pronunciation positions

d. **In-situ wh–locative adjunct**

\[
\text{awɔ nt-a-u-ei } eβol \ tɔn? \quad \text{[Coptic]}
\]
and \[
\text{REL-PRF-3PL-COME PCL where}
\]
‘Where did they come from?’

(Apocalypse 7, 14; ed. Budge, cited in Reintges et al. 2006: 179 (26d))

e. **In-situ wh–manner adjunct**

\[
\text{ant-a-k-ei } e-pei-ma \ ən-ās \ n-he? \quad \text{[Coptic]}
\]
\[
\text{REL-PRF-2SG.M-COME TO-DEM.SG.M in-which of-manner}
\]
‘How did you get here?’

(Coptic Martyrd. 206, 29; ed. Budge, cited in Reintges et al. 2006: 179 (26e))

Both unselective binding and overt movement followed by spell-out of a lower copy correctly predict that the wh-phrase may be pronounced in the position where its answer would appear in a declarative sentence, which was shown in section 2.2.2.2 for Bantu wh-in-situ. However, only the lower copy spell-out analysis predicts that wh-in-situ sentences should show the same extraction marking as wh-ex-situ. Because unselective binding takes place after Transfer, it should have no effect on morphology. The next section examines which of these predictions is borne out for Bantu wh-in-situ.

### 2.2.3.2 Evaluation: Extraction marking

In Bantu, A’-movement often results in morphological alternations along the path of movement, which I call extraction marking. In contrast to Passamaquoddy and Coptic Egyptian, this extraction marking does not appear with wh-in-situ. This generalization is illustrated below for Shona, but it holds across all Bantu languages for which I have data. See section 3.2.5 and Zentz (2015) for further discussion of Bantu extraction marking.

(2.23) **Lack of extraction marking with in-situ wh–non-subjects**

a. **In-situ wh–indirect object**

\[
(*\text{Wa})-v-aka-teng-er-a \ Ø-ani \ Ø-rokwe \ ku-chi-toro \quad \text{[Shona]}
\]
\[
\text{1a.NSE-2.SM-TA-BUY-APPL-FV 1a-who 5-dress 17-7-store}
\]
\[
\text{nezuro? yesterday}
\]
‘Who(m) did they buy a dress (for) at the store yesterday?’

(2014-11-01-01-TD)
b. **In-situ wh–direct object**

(*Cha*) v-aka-teng-er-a Ø-Thandi chi-i ku-chi-toro nezuro? [Shona]

7. **NSE**-2.sm-ta-buy-appl-fv 1a-Thandi 7-what 17-7-store yesterday

‘What did they buy Thandi at the store yesterday?’  

(2014-11-01-01-TD)

c. **In-situ wh– locative adjunct**

(*Kwa*) v-aka-teng-er-a Ø-Thandi Ø-rokwe ku-pi [Shona]

17. **NSE**-2.sm-ta-buy-appl-fv 1a-Thandi 5-dress 17-which nezuro? yesterday

‘Where did they buy Thandi a dress yesterday?’  

(2014-11-01-01-TD)

d. **In-situ wh–temporal adjunct**

(*Pa*) v-aka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]

16. **NSE**-2.sm-ta-buy-appl-fv 1a-Thandi 5-dress 17-7-store rinhi? when

‘When did they buy Thandi a dress at the store?’  

(2014-11-01-01-TD)

In long-distance wh-in-situ questions, none of the verbs intervening between the pronunciation site of the wh-phrase and its scopal position may bear extraction marking. The asterisk and parenthesis notation here is meant to indicate that extraction marking is independently unavailable on all of the verbs in the sentence. I have tested each of the eight possibilities (three verbs with two parameters: unmarked and marked) and the only one that is acceptable is the one with no extraction marking.

(2.24) *Lack of extraction marking in all clauses in a triclausal wh-in-situ question*

[( Cha) w-ai-fung-a [kuti *(Cha) t-aka-fember-a [kuti [Shona]

7. **NSE**-2sg.sm-ta-think-fv that 7. **NSE**-1pl.sm-ta-guess-fv that

(*cha*) v-aka-teng-er-a Ø-Thandi chi-i ku-chi-toro nezuro]?)

7. **NSE**-2.sm-ta-buy-appl-fv 1a-Thandi 7-what 17-7-store yesterday

‘What did you think that we guessed that they bought Thandi at the store yesterday?’  

(2014-11-01-01-TD)

Long-distance wh-movement of a subject in Shona triggers non-subject (φ-agreeing) extraction marking on the verb in the clause in which the moving element is pronounced (see section 3.2.5.3). Thus, if the in-situ wh-subject in the embedded clause in (2.25) were moving overtly to its scopal position (SpecCP of the matrix clause), we would expect to
see this non-subject extraction marking on the matrix verb, but this is impossible.

(2.25) **Lack of extraction marking with embedded wh-in-situ subject**

\[
\begin{align*}
\text{(*Wa)} & \wedge \text{-ai-fung-a} \quad \text{kuti} \quad \checkmark \text{-ani} \quad \text{\{\text{*\-a-\-a}\}} \text{-ka-teng-er-a} \quad \text{[Shona]} \\
\text{1a.nse-2sg.sm-ta-think-fv} & \quad \text{that} \quad \text{1a-who} \quad \text{\{\text{*se}\}.1a.sm.ta-buy-appl-fv} \\
\checkmark & \quad \text{\text{-Thandi} \checkmark \text{-rokwe ku-chi-toro nezuro?} \\
\checkmark & \quad \text{\text{-Thandi} 5\text{-dress} 17-7\text{-store yesterday} \\
\text{\text{\text{\text{\text{-Who did you think bought Thandi a dress at the store yesterday? (out of the blue)\text{)}} (2014-09-09-01-TD)}}} \\
\end{align*}
\]

Furthermore, clause-bounded wh-movement of a subject in Shona results in a low tone on the subject agreement marker on the verb (see section 3.2.5.3). If we wanted to say that the wh-subject in (2.25) has moved overtly but only as far as the embedded SpecCP, we would expect this subject extraction marking to appear on the embedded verb. However, the subject marker retains its high tone (see the embedded verb in (2.25)), which is consistent with the in-situ wh-subject being in canonical preverbal subject position.

The lack of extraction marking in Bantu wh-in-situ is predicted by unselective binding. However, overt movement approaches incorrectly predict that extraction marking should appear in wh-in-situ, regardless of whether the wh-movement is followed by remnant movement or spell-out of a lower copy of the wh-phrase. This is shown in Table 2.2.

<table>
<thead>
<tr>
<th></th>
<th>Unselective Binding</th>
<th>Disguised Movement</th>
<th>Lower Copy Spell-out</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Word order same as declarative</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>2. Lack of non-subject extraction marking above in-situ wh-phrases</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

Table 2.2: Properties and analyses of Bantu wh-in-situ (interim)

### 2.2.4 Covert movement

#### 2.2.4.1 Explanation and predictions

If the problem with the overt movement analyses discussed above is that they incorrectly predict extraction marking to occur with Bantu wh-in-situ, then a reasonable al-
ternative to consider is covert (LF) movement. Because this movement takes place after Transfer/Spell-out, it is like unselective binding in predicting a lack of extraction marking with \textit{wh}-in-situ.

Huang \cite{Huang82} noted that Mandarin Chinese \textit{wh}-in-situ is sensitive to islands, but only when the \textit{wh}-phrase is an adjunct, as shown in (2.26).

\begin{enumerate}
\item \textit{In-situ wh-subject within a relative clause island}
\begin{verbatim}
[island shei xie de shu] zui youqu?
who write DE book most interesting
\end{verbatim}
\textit{‘Who are [books that ___ wrote] the most interesting?’}
\hfill (Huang 1982: 526 (8))
\item \textit{In-situ wh-direct object within a relative clause island}
\begin{verbatim}
[island Ta taolun shenme de shu] zui youqu?
he discuss what DE book most interesting
\end{verbatim}
\textit{‘What are [books in which he discusses ___] the most interesting?’}
\hfill (Huang 1982: 526 (9))
\item \textit{In-situ wh-reason adjunct within a relative clause island}
\begin{verbatim}
*[island Ta weishenme xie de shu] zui youqu?
he why write DE book most interesting
\end{verbatim}
\textit{‘Why are [books that he wrote ___] the most interesting?’}
\hfill (Huang 1982: 527 (10))
\item \textit{In-situ wh-manner adjunct within a relative clause island}
\begin{verbatim}
*[island Ta zenme xie de shu] zui youqu?
he how write DE book most interesting
\end{verbatim}
\textit{‘How are [books that he wrote ___] the most interesting?’}
\hfill (Huang 1982: 527 (11))
\end{enumerate}

On the basis of these facts, he proposed that Mandarin \textit{wh}-in-situ does involve \textit{wh-}movement, but only at LF, after Spell-out. He argued that in contrast to overt (i.e., prior to Spell-out) movement, this covert movement is not subject to Subjacency, hence the grammaticality of (2.26a–2.26b). However, the Empty Category Principle \cite{Chomsky81} does still hold at LF, so because the ‘why’ in (2.26c) and the ‘how’ in (2.26d) are not properly governed, the trace that results when it moves at LF violates the ECP, and this is the source of the ungrammaticality of (2.26c–2.26d).
However, Huang’s (1982) claim that Subjacency does not constrain covert movement has proved controversial. In particular, Pesetsky (1987, 2000), Cole & Hermon (1994, 1998), and Richards (2001) have provided evidence that covert movement does indeed show sensitivity to Subjacency, and the argument–adjunct asymmetry found in Chinese and Japanese must be explained another way, such as pied-piping of the entire clause before moving it to the scopal position. Tran (2009) shows that in Vietnamese even in-situ arguments are sensitive to islands between their scopal position and pronunciation site, so if we assume LF wh-movement is responsible for establishing the relation between these two positions (as he does), then this constitutes further evidence for Subjacency (or its Minimalist equivalent) to hold at LF.

(2.27) Island sensitivity in Vietnamese wh-in-situ

a. In-situ argument wh-phrase within an adjunct island

*Tan sẽ thua cuộc [island vì ai làm hư xe] [Vietnamese]
   Tan fut lose event because who make damage vehicle
   của anh.ta]
   ‘Who will Tan lose the race because ___ will damage his car?’
   (Tran 2009: 175 (10a))

b. In-situ argument wh-phrase within a relative clause island

*Tan sẽ chụp hình [island con hổ đã đọa ai] [Vietnamese]
   Tan fut catch picture CLF tiger ASP scare who
   ‘Who(m) will Tan take a picture of the tiger that scared ___?’
   (Tran 2009: 174 (8a))

Here I assume, following this more recent line of thinking, that if covert movement exists,¹⁰ it should display sensitivity to islands. The next section shows that Bantu wh-in-situ is not sensitive to islands, casting doubt on the possibility of deriving it via covert movement.

---

¹⁰. See Kayne 1998 and much later work arguing against covert movement, although Kayne does not specifically address the issue of island sensitivity.
2.2.4.2 Evaluation: Island sensitivity

Since Ross 1967, the inability to be extracted from an island has widely been used as a diagnostic for movement. Various syntactic and semantic accounts for islands abound; my concern here is not to adjudicate between these proposals but rather to use sensitivity to islands as a diagnostic for movement, both in a positive and negative sense. That is, I assume that if a sentence containing an island is grammatical, nothing has moved overtly or covertly from within the island to a position outside it. If the sentence is ungrammatical, one possible source of its ungrammaticality is movement of some element across the island boundary.

Relative clause islands. Relative clauses are islands for extraction in Shona (see section 3.2.2.1), but wh-in-situ is permitted within them, as shown below for Shona, Lubukusu, Swahili, Runyoro, and Ikalanga.

(2.28) In-situ wh-subject within an object relative clause modifying an object

a. U-no-ziv-a 2sg.sm-ta-know-fv
   [island mu-sikana wa-v-ai-fung-a 1-girl 1.nse-2.sm-ta-think-fv
   [CP kuti Ø-ani aka-vhakachir-a]]?
   that 1a-who 1a.sm.ta-visit-fv
   ‘Who do you know the girl that they thought ___ visited?’
   (2016-03-08-01-TD)

b. Joni a-a-bon-a 1.John 1.sm-pst-see-fv
   [island si-i-tabu ni-syo naanu 1.sm-pst-read-fv
   7-7-book ni-7.nse 1.who a-a-som-a]
   ‘Who did John see the book that ___ read?’
   (Diercks 2010: 173 (137))

   [island ki-tabuamba-chonani 1.sm-pst-sell-fv
   7-book pred-7.nse 1.who a-li-uz-a]
   ‘Who is Juma looking for the book that ___ sold?’
   (Wasike 2007: 267 (54b))
In the examples involving *wh*-adjuncts that follow, there are some crosslinguistic differences in the position of adjuncts with respect to arguments. In each language, the *wh*-phrase appears in the position where a non-*wh*-phrase that could serve as its answer would appear in a normal declarative, so this variation is not related to *wh*-question formation. See *Wasike 2007: 224–235* for further discussion.
2.2. Relating the scopal and pronunciation positions

(2.30) In-situ wh–locative adjunct within a subject relative clause modifying an object

   1.SM-TA-like-fv 7-team SE.7.SM-TA-be.from-fv 17-which
   ‘Where does s/he like [the team that is from ___]?’
   (2014-11-01-01-TD)

b. Va-ri ku-tsvag-a [island] mu-rume åka-b-a [Shona]
   2.SM-be 15-look.for-fv 1-man SE.1.SM.TA-steal-fv
   Ø-mhete ku-pi?
   10-jewelry 17-which
   ‘Where are they looking for [the man who stole the earrings ___]?’
   (2014-12-06-02-TD)

c. Wafula a-kha-enj-a [island] o-mu-du o-w-a-kul-a [Lubukusu]
   1.Wafula 1.SM-PRS-look.for-fv 1-person 1.SE.1.SM.PST-buy-fv
   sii-tabu waae(na)]?
   7-book where
   ‘Where is Wafula looking for [the person who bought the book ___]?’
   (Wasike 2007: 269 (57a))

d. Juma a-na-m-tafut-a [island] mw-anafunzi amba-ye [Swahili]
   1.Juma 1.SM-PRS-1.OM-look.for-fv 1-student PRED.1.SE
   a-li-uz-a wapi ki-tabu]?
   1.SM-PST-sell-fv where 7-book
   ‘Where is Juma looking for [the student who sold the book ___]?’
   (Wasike 2007: 270 (57b))

e. Paul a-ku-serr-a [island] o-mu-nu a-y-a-guz-ir-e [Runyoro]
   1.Paul 1.SM-PRS-look.for-fv 1-person 1.SE.1.SM.PST-buy-fv
   e-ki-tabo nkaha]?
   7-7-book where
   ‘Where is Paul looking for [the person who bought the book ___]?’
   (Wasike 2007: 270 (57c))

(2.31) In-situ wh–temporal adjunct within a subject relative clause modifying an object

a. Va-ri ku-tsvag-a [island] mu-rume åka-b-a [Shona]
   2.SM-be 15-look.for-fv 1-man SE.1.SM.TA-steal-fv
   Ø-mhete rinhi]?
   10-jewelry when
   ‘When are they looking for [the man who stole the earrings ___]?’
   (2014-12-06-02-TD)
Chapter 2. Wh-in-situ 2.2. Relating the scopal and pronunciation positions

b. Wafula a-kha-enj-a [island o-mu-ndu o-o-kha-kul-e [Lubukusu]
   sii-tabu liina]?
   7-book when
   'When is Wafula looking for [the person who bought the book ___]?'
   (Wasike 2007: 270 (58a))

c. Juma a-na-m-tafut-a [island mw-anafunzi amba-ye [Swahili]
   1.Juma 1.SM-PRS-1.OM-look.for-fv 1-student PRED-1.SE
   a-li-uz-a lini ki-tabu]?
   1.SM-PST-sell-fv when 7-book
   'When is Juma looking for [the student who sold the book ___]?'
   (Wasike 2007: 270 (58b))

d. Paul a-ku-serr-a [island o-mu-ntu a-y-a-guz-ir-e [Runyoro]
   e-ki-tabo di]?
   7-7-book where
   'When is Paul looking for [the person who bought the book ___]?'
   (Wasike 2007: 270 (58c))

(2.32) In-situ wh–manner adjunct within a subject relative clause modifying an object

a. Va-ri ku-tsvag-a [island mu-rume åka-b-a [Shona]
   2.SM-be 15-look.for-fv 1-man SE.1.SM.TA-steal-fv
   Ø-mhete sei / nei]?
   10-jewelry how with what
   'How are they looking for [the man who stole the earrings ___]?'
   (2014-12-06-02-TD)

b. ?E-m-bwa ya-a-lum-a [island o-mw-aana o-w-a-fun-a [Lubukusu]
   e-n-debe a-rie(ena)]?
   9-9-chair how
   'How did the dog bite [the child who broke the chair ___]?'
   (Wasike 2007: 269 (56a))

c. ?Juma a-na-m-tafut-a [island mw-anafunzi amba-ye [Swahili]
   1.Juma 1.SM-PRS-1.OM-look.for-fv 1-student PRED-1.SE
   a-li-uz-a vipi ki-tabu]?
   1.SM-PST-sell-fv how 7-book
   'How is Juma looking for [the student who sold the book ___]?'
   (Wasike 2007: 269 (56b.i))
Chapter 2. *Wh*-in-situ 2.2. Relating the scopal and pronunciation positions

d.  ¿Paul  a-ku-serr-a  [island  o-mu-ntu  a-y-a-guz-ir-e]  [Runyoro]
   1.Paul  1.SM-PRT-look.for-FV  1-1-person  1.SE-1.SM-PST-buy-FV
   e-ki-tabo  a-ta]?
   7-7-book  1-how
   ‘How is Paul looking for [the person who bought the book ___]?’
   
   (Wasike 2007: 269 (56c))

(2.33)  *In-situ* *wh*-locative adjunct within an object relative clause modifying an object

U-no-ziv-a  [island  mu-sikana  wa-v-ai-fung-a]  [Shona]
   2SG.SM-TA-know-FV  1-girl  1.NSE-2.SM-TA-think-FV
   [CP  kuti  Ø-Taurai  aka-vhakachir-a  ku-pi]]?
   that  1a-Taurai  1a.SM.TA-visit-FV  17-which
   ‘Where do you know the girl that they thought [Taurai visited ___]?’
   
   (2016-03-08-01-TD)

(2.34)  *In-situ* *wh*-temporal adjunct within an object relative clause modifying an object

U-no-ziv-a  [island  mu-sikana  wa-v-ai-fung-a]  [Shona]
   2SG.SM-TA-know-FV  1-girl  1.NSE-2.SM-TA-think-FV
   [CP  kuti  Ø-Taurai  aka-vhakachir-a  rinhi]]?
   that  1a-Taurai  1a.SM.TA-visit-FV  when
   ‘When do you know the girl that they thought [Taurai visited ___]?’
   
   (2016-03-08-01-TD)

**DP with complement clause islands.**  Clausal complements of DPs are islands for extraction in Shona (see section 3.2.2.2), but *wh*-in-situ is permitted within them, as is the case for Lubukusu, Swahili, and Runyoro.

(2.35)  *In-situ* *wh*-subject within the clausal complement of an object DP

a.  V-aka-ramb-a  [island  ny-aya  ye-kuti  chi-i  ch-aka-rum-a]  [Shona]
   Ø-Taurai]?
   1a-Taurai
   ‘What did they deny the story that ___ bit Taurai?’
   
   (2016-03-08-01-TD)

b.  Wa-toto  wa-me-enez-a  [island  uvumi  kwamba  nani]  [Swahili]
   2-child  2.SM-ASP-spread-FV  rumors  that  1.WHO
   a-na-pend-a  peremende]?
   1.SM-PRT-like-FV  candy
   ‘Who have the children spread rumors that ___ likes candy?’
   
   (Wasike 2007: 252 (35b))
2.2. Relating the scopal and pronunciation positions

(2.36) *In-situ wh–direct object within the clausal complement of an object DP*

a. V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a Ø-ani [Shona]
pa-Ø-gumbo]? 16-5-leg

‘Who(m) did they deny the story that it (their dog) bit ___ on the leg?’
(2016-03-08-01-TD)

b. Maayi a-li ne [island lii-suubila a-li papa [Lubukusu]
1.mother 1.SM-COP with 5-faith 1-that 1.father
a-la-kul-a si(ina)]?
1.SM-FUT-buy-FV 7.what

‘What does Mother have faith/belief that Father will buy ___?’
(Wasike 2007: 252 (36a))

c. Wa-toto wa-me-enez-a [island uvumi kwamba Juma [Swahili]
2-child 2.SM-ASP-spread-FV rumors that 1.Juma
a-na-pend-a nini]?
1.SM-PRS-like-FV what

‘What have the children spread rumors that Juma likes ___?’
(Wasike 2007: 252 (36b))

d. ?Peter a-ikiriz-a [island e-ki-gambibwa nti Mary [Runyoro]
1.Peter 1.SM-believe-FV 7-7-claim that 1.Mary
a-ka-gur-a ki]?
1.SM-PST-buy-FV what

‘What does Peter believe the claim that Mary bought ___?’
(Wasike 2007: 252 (36c))

(2.37) *In-situ wh–locative adjunct within the clausal complement of an object DP*

a. V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]
Ø-Taurai pa-pi]?
1a-Taurai 16-which

‘Where did they deny [the story that it (their dog) bit Taurai ___]?’
(2016-03-08-01-TD)

b. Maayi a-li ne [island li-suubila a-li papa [Lubukusu]
1.mother 1.SM-COP with 5-faith 1-that 1.father
a-la-kul-a sii-tabu wa ae(na)]?
1.SM-FUT-buy-FV 7-book where

‘Where does Mother have faith/belief [that Father will buy a book ___]?’
(Wasike 2007: 255 (39a))
2.2. Relating the scopal and pronunciation positions


D. Peter a-ikiriz-a \[island\] e-ki-gambibwa nti Mary [Runyoro] 1.Peter 1.sm-believe-fv 7-7-claim that 1.Mary a-ka-gur-a e-ki-tabu nkaka]? 1.sm-pst-buy-fv 7-7-book where ‘Where does Peter believe the claim [that Mary bought the book ___]?’ (Wasike 2007: 255 (39c))

(2.38) \textit{In-situ wh–temporal adjunct within the clausal complement of an object DP}

A. V-aka-ramb-a \[island\] ny-a ya ye-kuti y-aka-rum-a [Shona] 2.sm-ta-deny-fv 9-story 9.of-that 9.sm-ta-bite-fv Ø-Taurai rinhi]? 1a-Taurai when ‘When did they deny [the story that it (their dog) bit Taurai ___]?’ (2016-03-08-01-TD)

B. Maayi a-li ne \[island\] li-suubila a-li papa [Lubukusu] 1.mother 1.sm-cop with 5-faith 1-that 1.father a-kha-kul-e sii-tabu liina]? 1.sm-fut-buy-fv 7-book when ‘When does Mother have faith/belief [that Father will buy a book ___]?’ (Wasike 2007: 253 (37a))


D. Peter a-ikiriz-a \[island\] e-ki-gambibwa nti Mary [Runyoro] 1.Peter 1.sm-believe-fv 7-7-claim that 1.Mary a-ka-gur-a e-ki-tabu di]? 1.sm-pst-buy-fv 7-7-book when ‘When does Peter believe the claim [that Mary bought the book ___]?’ (Wasike 2007: 253 (37c))
2.2. Relating the scopal and pronunciation positions

(2.39) In-situ wh–manner adjunct within the clausal complement of an object DP

a. V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a] [Shona]
   Ø-Taurai sei]
   1a-Taurai how
   ‘How did they deny [the story that it (their dog) bit Taurai ___]?’
   (2016-03-08-01-TD)

b. Ba-ba-ana ba-li ne [island li-suubila ba-li papa] [Lubukusu]
   2-2-child 2.SM-COP with 5-faith 2-that 1.father
   a-la-kul-a sii-tabu a-rie(ena)]?
   1.SM-FUT-buy-fv 7-book 1-how
   ‘How do the children have faith/belief [that Father will buy a book ___]?’
   (Wasike 2007: 256 (40a))

c. Wa-toto wa-me-enez-a [island uvumi kwamba Juma] [Swahili]
   2-child 2.SM-ASP-spread-fv 5-faith that 1.Juma
   a-na-pend-a vipi peremende]?
   1.SM-PRS-like-fv how candy
   ‘How have the children spread rumors [that Juma likes candy ___]?’
   (Wasike 2007: 256 (37b.1))

d. Peter a-ikiriz-a [island e-ki-gambibwa nti Mary] [Runyoro]
   1.Peter 1.SM-believe-fv 7-7-claim that 1.Mary
   a-ka-gur-a e-ki-tabu a-ta]?
   1.SM-PST-buy-fv 7-7-book 1-how
   ‘How does Peter believe the claim [that Mary bought the book ___]?’
   (Wasike 2007: 256 (40c))

Adjunct islands. Adverbial clauses are islands for extraction in Shona (section 3.2.2.3), but wh-in-situ is permitted within them. The same is true for Lubukusu and Ikalanga.

(2.40) In-situ wh-subject within an adverbial clause

a. V-aka- foner-a ma-purisa [island nokuti Ø-ani aka-on-a] [Shona]
   2.SM-TA-call-fv 6-police because 1a-who 1a.SM.TA-see-fv
   Ø-mbavha]?
   9-thief
   ‘Who did they call the police because ___ saw a thief?’ (2014-11-01-01-TD)
Chapter 2. *Wh*-in-situ 2.2. Relating the scopal and pronunciation positions

b. Nasike a-a-rekukha [island nga naanu a-a-ba] [Lubukusu]
   1.Nasike 1.sm-pst-leave while 1.who 1.sm-pst-be
   n-a-kula chi-ngubo?  
   ni-1.sm-pst-buy 10-clothes
   ‘Who did Nasike leave while ____ was buying clothes?’

   (Diercks 2010: 177 (144))

(2.41) *In-situ* wh—direct object within an adverbial clause

a. V-aka-foner-a ma-purisa [island nokuti v-aka-on-a] [Shona]
   2.sm-ta-call-fv 6-police because 2.sm-ta-see-fv
   Ø-ani]?
   1a-who
   ‘Who(m) did they call the police because they saw ____?’  
   (2014-11-01-01-TD)

b. Ø-Neo waka-bon-a Ø-Nchidzi [island a-sathu aka-lob-a] [Ikalanga]
   1a-Neo 1a.sm.ta-saw-fv 1a-Nchidzi 1a-before 1.sm.ta-hit-fv
   Ø-ani]?
   1a-who
   ‘Who(m) did Neo see Nchidzi before he hit ____?’

   (Letsholo 2002: 216 (113c))

Coordinate structure islands. *Wh*-phrases are permitted as either conjunct in a coordinate structure in Shona. Note, however, that Shona does not have a conjunction ‘and’ but rather uses a comitative construction to form coordinate structures. Therefore, extraction from these structures might not necessarily be expected to give rise to island effects that are as strong as are found with extraction from coordinate structures in English.

(2.42) *In-situ* wh-phrases as first conjunct in a coordinate structure island

a. Coordinate indirect object
   V-aka-teng-er-a [island Ø-ani na-Ø-Tendai] ma-rokwe? [Shona]
   2.sm-ta-buy-appl-fv 1a-who with-1a-Tendai 6-dress
   ‘Who(m) did they buy [____ and Tendai] dresses?’ (lit., ‘They bought who(m) with Tendai dresses?’)
   (2016-03-08-02-TD)

b. Coordinate direct object
   V-aka-teng-er-a Ø-Rumbi [island chi-i ne-Ø-rokwe]? [Shona]
   2.sm-ta-buy-appl-fv 1a-Rumbi 7-what with-5-dress
   ‘What did they buy Rumbi [____ and a dress]?’ (lit., ‘They bought Rumbi what with a dress?’)
   (2016-03-08-02-TD)
(2.43) In-situ wh-phrases as second conjunct in a coordinate structure island

a. Coordinate indirect object

\[
\text{V-aka-teng-er-a} \quad \text{[island} \, \text{Ø-Rumbi na-Ø-ani]} \quad \text{ma-rokwe? [Shona]}
\]
\[
\text{2.SM-ta-buy-appl-fv} \quad \text{Rumbi} \quad \text{with-1a-who} \quad \text{6-dress}
\]
‘Who(m) did they buy [Rumbi and ___] dresses?’ (lit., ‘They bought Rumbi with who(m) dresses?’) (2016-03-08-02-TD)

b. Coordinate direct object

\[
\text{V-aka-teng-er-a} \quad \text{Ø-Rumbi [island} \, \text{Ø-bhutsu ne-chi-i]}? \quad \text{[Shona]}
\]
\[
\text{2.SM-ta-buy-appl-fv} \quad 1a-Rumbi \quad \text{10-shoe} \quad \text{with-7-what}
\]
‘What did they buy Rumbi [shoes and ___]?’ (lit., ‘They bought Rumbi shoes with what?’) (2016-03-08-02-TD)

Summary. As shown above, wh-in-situ in Bantu is not sensitive to complex DP, adjunct, or coordinate structure islands. This is best explained by a non-movement-based analysis like unselective binding because movement, whether overt or covert, would predict that in-situ wh-phrases should not be able to take scope out of islands.

This is in fact a further reason to reject a disguised movement analysis for the Bantu true wh-in-situ strategy. As shown in (2.44), Bellunese wh-in-situ shows island effects. Munaro et al. (2001) rightly use these data support their disguised movement analysis, but the argument cannot be extended to true wh-in-situ in Bantu because it patterns differently with respect to island sensitivity.

(2.44) Island sensitivity of Bellunese “wh-in-situ”

a. “In-situ” wh-object of a preposition within a subject relative clause modifying an object

\[
\text{*Te a-li} \quad \text{dit che Piero l’à comprà [Bellunese]}
\]
\[
\text{2SG have-3PL.M.NASCL told that Piero 3SG.M.NASCL-has bought}
\]
\[
\text{[island} \, \text{an libro che parla de che]}?
\]
\[
\text{a book that speaks of \textit{che}}?
\]
‘What have they told you that Piero bought a book that talks about ____?’ (Munaro et al. 2001: 157 (24a))
Chapter 2. Wh-in-situ 2.2. Relating the scopal and pronunciation positions

b. “In-situ” wh–object of a preposition within a complex subject DP

*Te à-li dit che [island i parenti de chi] [Bellunese]
2sg have-3PL.NASCL told that the relatives of whom
no i-é vegnesti?
not 3PL.ASCL-have come
‘Who have they told you that the parents of ___ haven’t come?’
(Munaro et al. 2001: 157 (24b))

c. “In-situ” wh–temporal adjunct within a wh-island

*Te à-li domandà [island andé che te se [Bellunese]
2sg have-3PL.NASCL asked where that 2sg.ASCL are
’ndat quando]?
gone when
‘When did they ask you [where you went ___]?’
(Munaro et al. 2001: 157 (25a))

d. “In-situ” wh–locative adjunct within an adjunct island

*Ho-e da telefonar-te [island inveze de ’ndar andé]? [Bellunese]
have-1PL.NASCL to phone-2sg instead of going where
‘Where do I have to phone you [instead of going ___]?’
(Munaro et al. 2001: 157 (25b))

The updated table in Table 2.3 illustrates this asymmetry between movement-based versus non–movement-based analyses in terms of their ability to account for the lack of island sensitivity in Bantu wh-in-situ.

<table>
<thead>
<tr>
<th></th>
<th>Unselective Binding</th>
<th>Disguised Movement</th>
<th>Lower Copy Spell-out</th>
<th>Covert Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Word order same as declarative</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>2. Lack of non-subject extraction marking above in-situ wh-phrases</td>
<td>✓</td>
<td>×</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>3. Lack of island effects</td>
<td>✓</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

Table 2.3: Properties and analyses of Bantu wh-in-situ (interim)
2.2.5 Computation of alternatives

2.2.5.1 Explanation and predictions

Unselective binding accounts for the properties of Bantu wh-in-situ discussed so far because it takes place after Transfer and does not involve movement. Another semantic mechanism with those same properties is the computation of alternatives. This approach has been advocated in recent years by Beck (2006), Cable (2010), Kotek (2014a,b), and Kotek & Erlewine (forthcoming), building on work by Hamblin (1973) and Rooth (1985, 1992). In Rooth–Hamblin semantics, wh-phrases introduce alternatives, which project up the tree via pointwise composition until they are interpreted by an interrogative complementizer; the meaning of a question is thus a set of alternative propositions (possible answers). This is shown in (2.45), taken from Kotek & Erlewine (forthcoming: (9)), in which the alternatives {Bobby, Chris, Dana} introduced by who result in the question *Alex likes who?* being interpreted as the propositional alternatives {Alex likes Bobby, Alex likes Chris, Alex likes Dana}.

(2.45) Example of wh-in-situ interpretation with alternative computation (Kotek & Erlewine forthcoming: (9))

As pointed out by Beck (2006) and explored further by Cable (2010), Kotek (2014a,b),...
Kotek & Erlewine (forthcoming), and others, this approach to wh-in-situ makes the following prediction: interpretation of these alternatives by the interrogative C will be blocked by intervening focus-sensitive operators (Beck 1996, 2006, Pesetsky 2000), which will interpret the alternatives instead. In other words, the wh-phrase will not be able to take scope as high as it could without the interveners. Unselective binding should not show sensitivity to these interveners, so the next section discusses whether intervention effects exist for Bantu wh-in-situ in an attempt to adjudicate between these two non-movement analyses of wh-in-situ.

2.2.5.2 Evaluation: Intervention effects

Beck (1996, 2006) and Beck & Kim (1997) find that wh-in-situ may be subject to intervention effects as shown in (2.46–2.47) for Korean, an SOV language that permits wh-ex-situ via scrambling. In-situ wh–direct objects are acceptable, illustrated in (2.46a), but not when they are c-commanded by an intervener such as ‘only’ in (2.47a).

(2.46) No interveners

a. In-situ wh–direct object
   Suna-ka muós-úl sa-ss-ni?
   Suna-nom what-acc buy-pst-q
   ‘What did Suna buy?’
   [Korean] (Beck & Kim 1997: 339 (1a))

b. Ex-situ wh–direct object
   Muós-úl Suna-ka ___ sa-ss-ni?
   what-acc Suna-nom buy-pst-q
   ‘What did Suna buy?’
   [Korean] (Beck & Kim 1997: 339 (1b))
Chapter 2. Wh-in-situ 2.2. Relating the scopal and pronunciation positions

(2.47) Intervention effect with ‘only’

a. In-situ wh–direct object

* Minsu-man nuku-lul po-ass-ni?  
  Minsu-only who-acc see-pst-q  
  ‘Who(m) did only Minsu see?’  
  (Beck & Kim 1997: 370 (73a))

b. Ex-situ wh–direct object

nuku-lul Minsu-man ___ po-ass-ni?  
who-acc Minsu-only see-pst-q  
‘Who(m) did only Minsu see?’  
(Beck & Kim 1997: 370 (73b))

Muriungi (2011) reports that Kiitharaka also shows intervention effects: focus markers, ‘even’, negation, and factive verbs that c-command the wh-phrase prevent it from taking wide scope, as shown in (2.48).

(2.48) Intervention effects with Kiitharaka wh-in-situ

a. Focus marker

*I-tu-gwata-ni-ir-e  
  1pl.sm-agree-pfv-fv who 1sm-steal-pfv-fv  
  ‘Who did we agree stole?’  
  (Muriungi 2011: 828 (27))

b. Focus: ‘even’

*Kinya a-gwimi ba-gwata-ni-ir-a  
  2.sm-agree-pfv-fv who 1sm-steal-pfv-fv  
  ‘Who did even the hunters agree stole?’  
  (Muriungi 2011: 828 (31))

c. Negation

*Tu-ti-ra-gwata-ni-ir-a  
  1pl.sm-NEG-rec.pst-agree-pfv-fv who 1sm-steal-pfv-fv  
  ‘Who didn’t we agree stole?’  
  (Muriungi 2011: 828 (30))

d. Factive verb

*Tu-irir-ir-e  
  1pl.sm-regret-pfv-fv who 1sm-steal-pfv-fv  
  ‘Who did we regret stole?’  
  (Muriungi 2011: 828 (32))

According to Wasike (2007), Lubukusu wh-in-situ has a more limited set of interveners: ‘even’ and negation. The literature on intervention effects (Beck 2006, for example) does acknowledge some crosslinguistic variation with respect to the class of interveners, but this issue is not particularly well understood.
(2.49) Mixed bag of intervention effects with Lubukusu wh-in-situ

a. **Focus: ‘also’**
   
   Wafula ye-si a-a-kul-a si(ina)?
   
   ‘What did Wafula also buy?’  
   

b. **Focus: ‘only’**
   
   Wafula ye-eng’ene a-a-kul-a si(ina)?
   
   ‘What did only Wafula buy?’  
   

c. **Universal quantifier subject**
   
   Buli muu-ndu a-a-som-a si(ina)?
   
   ‘What did everyone read?’  
   

d. **Existential quantifier subject**
   
   Muu-ndu fulani a-a-som-a si(ina)?
   
   ‘What did someone read?’  
   

e. **Focus: ‘even’**
   
   ?? Ata Wafula a-a-som-a naanu?
   
   ‘Who(m) did even Wafula call?’  
   
   ([Lubukusu] even 1.Wafula 1.SM-PST-call-FV who (Wasike 2007: 242 (25g)))

f. **Negation**
   
   *Wekesa se-a-a-kul-a si(ina) ta?
   
   ‘What didn’t Wekesa buy?’  
   

g. **Negation**
   
   *Wekesa a-kha-a-kul-a si(ina) ta?
   
   ‘What didn’t Wekesa buy?’  
   

I have found no evidence for intervention effects in Shona. The focus words chete ‘only’, ega ‘alone’, =wo ‘also’, and chero ‘even’ do not prevent an in-situ wh-phrase from taking wide scope, nor does negation. This is true for both local and long-distance wh-in-situ, as shown in (2.50–2.51).
(2.50) **Lack of intervention effects with Shona local wh-in-situ**

a. *Focus: ‘only’*

? (Ndj)-Ø-Rumbi **chete** aka-vereng-a **Ø-bhuku ri-pi**?  
[Ndj]-1a-Rumbi only 1a.SM.TA-read-fv 5-book 5-which

‘Which book did only Rumbi read?’  
(2014-07-29-01-TD)

b. *Focus: ‘also’*

Ø-Tendai aka-vereng-a=[wo] **Ø-bhuku ri-pi**?  
1a-Tendai 1a.SM.TA-read-fv=also 5-book 5-which

‘Which book did Tendai also read?’  
(2014-07-29-01-TD)

c. *Focus: ‘even’*

Chero Ø-Tendai aka-vereng-a **Ø-bhuku ri-pi**?  
[even] 1a-Tendai 1a.SM.TA-read-fv 5-book 5-which

‘Which book did even Tendai read?’  
(2014-07-29-01-TD)

d. *Negation*

Ø-Taurai [ha-a-n-a] ku-tenga [chi-i]?  
1a-Taurai NEG-1a.SM.be.with-fv 15-buy-fv 7-what

‘What didn’t Taurai buy?’  
(2014-10-22-01-TD)

(2.51) **Lack of intervention effects with Shona long-distance wh-in-situ**

a. *Focus: ‘only’*

Ø-Taurai **chete** ai-fung-a  
[cp kuti v-aka-teng-er-a]  
1a-Taurai only 1a.SM.TA-think-fv 2.SM.TA-buy-APPL-fv

Ø-ani Ø-rokwe?

1a-who 5-dress

‘Who(m) did only Taurai think they bought a dress (for)?’  
(2015-01-17-01-TD)

b. *Focus: ‘alone’*

Ø-Taurai **ega** ai-fung-a  
[cp kuti v-aka-teng-er-a]  
1a-Taurai alone 1a.SM.TA-think-fv 2.SM.TA-buy-APPL-fv

Ø-ani Ø-rokwe?

1a-who 5-dress

‘Who(m) did Taurai alone think they bought a dress (for)?’  
(2015-01-17-01-TD)
c. **Focus: ‘even’**

\[ \text{Chero } \emptyset-\text{Taurai ai-fung-a} \quad [\_\_ \text{kuti v-aka-teng-er-a}] \quad [\_\_ \text{Shona}] \\
\text{even } 1\text{a-Taurai } 1\text{a.SM.TA-think-FV} \quad \text{that } 2\text{.SM-TA-buy-APPL-FV} \\
\emptyset-\text{ani } \emptyset-\text{rokwe} \?
\]

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

\[(2015-01-17-01-TD)\]

d. **Focus: ‘also’**

\[ \emptyset-\text{Taurai ai-fung-a=wo} \quad [\_\_ \text{kuti v-aka-teng-er-a}] \quad [\_\_ \text{Shona}] \\
1\text{a-Taurai } 1\text{a.SM.TA-think-FV=} \text{also} \quad \text{that } 2\text{.SM-TA-buy-APPL-FV} \\
\emptyset-\text{ani } \emptyset-\text{rokwe} \?
\]

‘Who(m) did [Taurai also] think they bought a dress (for)?’

\[(2015-01-17-01-TD)\]

e. **Negation**

\[ \emptyset-\text{Taurai ai-sa-fung-a} \quad [\_\_ \text{kuti v-aka-teng-er-a}] \quad [\_\_ \text{Shona}] \\
1\text{a-Taurai } 1\text{a.SM.TA-NEG-think-FV} \quad \text{that } 2\text{.SM-TA-buy-APPL-FV} \\
\emptyset-\text{ani } \emptyset-\text{rokwe} \?
\]

‘Who(m) didn’t Taurai think they bought a dress (for)?’

\[(2015-01-17-01-TD)\]

Furthermore, intervention effects do not arise when an island boundary separates the in-situ wh-phrase from the potential intervener, as shown in (2.52–2.53). This stands in contrast to what Kotek (2014a,b) finds for English multiple wh-questions.

\[(2.52) \text{ Intervener above adjunct island in Shona long-distance wh-in-situ}\]

a. **Focus: ‘only’**

\[ \emptyset-\text{Taurai chete aka-foner-a ma-purisa} \quad [\_\_ \text{island nokuti}] \quad [\_\_ \text{Shona}] \\
1\text{a-Taurai only } 1\text{a.SM.TA-call-FV 6-police} \quad \text{because} \\
aka-on-a \emptyset-\text{ani} \?
\]

‘Who(m) did only Taurai call the police because he saw ___?’

\[(2015-01-17-01-TD)\]
Chapter 2. Wh-in-situ

2.2. Relating the scopal and pronunciation positions

b. **Focus: ‘alone’**
   
   Ø-Taurai (ndi-ye) ega aka-foner-a ma-purisa  
   1a-Taurai (ni-1a) **alone** 1a.SM.TA-call-fv 6-police
   
   [island nokuti aka-on-a Ø-ani]?
   because 1a.SM.TA-see-fv **1a-who**

   ‘Who(m) did Taurai alone call the police because he saw ____?’
   
   (2015-01-17-01-TD)

c. **Focus: ‘even’**
   
   **Chero** Ø-Taurai aka-foner-a ma-purisa [island nokuti] [Shona]
   even 1a-Taurai 1a.SM.TA-call-fv 6-police because
   
   aka-on-a Ø-ani]?
   1a.SM.TA-see-fv **1a-who**

   ‘Who(m) did even Taurai call the police because he saw ____?’
   
   (2015-01-17-01-TD)

d. **Focus: ‘also’**
   
   Ø-Taurai aka-foner-a= wo ma-purisa [island nokuti aka-on-a[Shona]
   1a-Taurai 1a.SM.TA-call-fv=also 6-police because 1a.SM.TA-see-fv
   Ø-ani]?
   1a-who

   ‘Who(m) did [Taurai also] call the police because he saw ____?’
   
   (2015-01-17-01-TD)

e. **Negation**
   
   Ø-Taurai ha-a-n-a ku-foner-a ma-purisa [Shona]
   1a-Taurai **NEG**-1a.SM-be.with-fv 15-call-fv 6-police
   
   [island nokuti aka-on-a Ø-ani]?
   because 1a.SM.TA-see-fv **1a-who**

   ‘Who(m) didn’t Taurai call the police because he saw ____?’
   
   (2015-01-17-01-TD)

(2.53) **Intervener above complement clause island in Shona long-distance wh-in-situ**

a. **Focus: ‘only’**
   
   Ø-Taurai **chete** aka-ramb-a [island ny-aya ye-kuti [Shona]
   1a-Taurai **only** 1a.SM.TA-deny-fv 9-story 9.of-that
   
   aka-.tsvod-a Ø-ani]?
   1a.SM.TA-kiss-fv **1a-who**

   ‘Who(m) did only Taurai deny the story that he kissed ____?’
   
   (2015-01-17-01-TD)
2.2. Relating the scopal and pronunciation positions

b. **Focus: ‘alone’**

\[
\text{Ø-Taurai } \text{ega} \quad \text{aka-ramb-a} \quad [\text{island ny-a-ya ye-kuti}] \quad \text{[Shona]}
\]

\[
\text{1a- Taurai alone 1a.sm.ta-deny-fv 9-story 9.of-that}
\]

\[
\text{aka-tvod-a} \quad \text{Ø-ani]?
\]

\[
\text{1a.sm.ta-kiss-fv 1a-who}
\]

‘Who(m) did Taurai alone deny the story that he kissed ____ ?’

(2015-01-17-01-TD)

c. **Focus: ‘even’**

\[
\text{Chero Ø-Taurai aka-ramb-a} \quad [\text{island ny-a-ya ye-kuti} ] \quad \text{[Shona]}
\]

\[
\text{even 1a-Taurai 1a.sm.ta-deny-fv 9-story 9.of-that}
\]

\[
\text{aka-tvod-a} \quad \text{Ø-ani]?
\]

\[
\text{1a.sm.ta-kiss-fv 1a-who}
\]

‘Who(m) did even Taurai deny the story that he kissed ____ ?’

(2015-01-17-01-TD)

d. **Focus: ‘also’**

\[
\text{Ø-Taurai aka-ramb-a=wo } [\text{island ny-a-ya ye-kuti} ] \quad \text{[Shona]}
\]

\[
\text{1a-Taurai 1a.sm.ta-deny-fv=also 9-story 9.of-that}
\]

\[
\text{aka-tvod-a} \quad \text{Ø-ani]?
\]

\[
\text{1a.sm.ta-kiss-fv 1a-who}
\]

‘Who(m) did [Taurai also] deny the story that he kissed ____ ?’

(2015-01-17-01-TD)

e. **Negation**

\[
\text{Ø-Taurai ha-a-n-a ku-ramb-a } [\text{island ny-a-ya ye-kuti}] \quad \text{[Shona]}
\]

\[
\text{1a-Taurai NEG-1a.sm-be.with-fv 15-deny-fv 9-story 9.of-that}
\]

\[
\text{aka-tvod-a} \quad \text{Ø-ani]?
\]

\[
\text{1a.sm.ta-kiss-fv 1a-who}
\]

‘Who(m) didn’t Taurai deny the story that he kissed ____ ?’

(2015-01-17-01-TD)

To sum up, Kîîtharaka and Lubukusu show intervention effects, which is predicted if the mechanism relating the in-situ wh-phrase and its scopal position is computation of focus alternatives. However, Shona shows a different pattern, one where intervention effects do not occur. This is better explained by unselective binding, which is insensitive to interveners. Table 2.4 shows an updated list of properties for in-situ non-subjects, now for Shona specifically; it is clear that unselective binding is the approach that best characterizes the Shona data.
Chapter 2. Wh-in-situ

2.2. Relating the scopal and pronunciation positions

<table>
<thead>
<tr>
<th></th>
<th>Unselective Binding</th>
<th>Disguised Movement</th>
<th>Lower Copy Spell-out</th>
<th>Covert Movement</th>
<th>Alternative Computation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>✔</td>
<td>×</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2.</td>
<td>✔</td>
<td>×</td>
<td>×</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>3.</td>
<td>✔</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>✔</td>
</tr>
<tr>
<td>4.</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>×</td>
</tr>
</tbody>
</table>

Table 2.4: Properties and analyses of Shona wh-in-situ (final)

2.2.6 Summary

In this section I have shown that Bantu true wh-in-situ, including Shona’s wh-in-situ strategy, requires a non-movement analysis. These in-situ questions show no word order permutation (relative to the canonical declarative order), no extraction marking, and no island sensitivity.

There appears to be some crosslinguistic variation within Bantu, however, with respect to intervention effects: they are present at least to some extent in Kĩĩtharaka and Lubukusu, but not in Shona. I have argued that alternative computation would account for the Kĩĩtharaka and Lubukusu facts, whereas a semantic mechanism that is not sensitive to interveners, such as unselective binding, is required for Shona. This is shown in (2.54), a diagram that will be built up throughout the dissertation.

(2.54) Proposal for Shona (interim)

\[
\text{Wh-in-situ: } [\text{CP Op} \ldots \text{wh} \ldots ]
\]

I do find the alternative computation approach more theoretically appealing than unselective binding, which is a very powerful mechanism. However, the Shona facts I have elicited so far do not seem to be consistent with an approach that predicts intervention effects. It may be the case that Shona has some interveners that I did not find, which I
leave as an avenue for future research. Beck (2006: 312) acknowledges that some Korean speakers do not find the intervention effects she describes to be very strong, so it is possible that a similar situation obtains in Shona and a study with more speakers may find that some of them are indeed sensitive to intervention effects. In that case, then, alternative computation could be substituted for unselective binding in the proposals I present throughout this dissertation.

I have also highlighted another point of diversity within Bantu: at least one language, Dzamba, lacks true *wh*-in-situ and instead requires its non-clefted *wh*-phrases to be sentence-final. This is consistent with the Romance facts discussed above, and thus would be amenable to the disguised movement analysis proposed for those languages.

### 2.3 Accounting for restrictions on the distribution of *in-situ* *wh*-phrases

So far, Bantu *wh*-in-situ has been shown to be quite unrestricted, especially compared to true or apparent *wh*-in-situ strategies in other languages. As shown in section 2.2.2.2, most Bantu languages do not require that an in-situ *wh*-phrase be sentence-final, unlike the pattern found in Romance varieties such as Bellunese. Bantu *wh*-in-situ does not require any special morphological marking on any other elements in the sentence (section 2.2.3.2), in contrast to Coptic Egyptian. Unlike their counterparts in Mandarin Chinese, Vietnamese, and Bellunese, Bantu *wh*-phrases may scope out of an island, as demonstrated in section 2.2.4.2. Finally, while some Bantu languages like Lubukusu and Kîîtharaka do not allow a focus intervener between the scopal and pronunciation positions of an in-situ *wh*-phrase, Shona does not show this sensitivity to intervention effects section 2.2.5.2.

However, *wh*-in-situ in Shona and other Bantu languages is not completely unconstrained. A *wh*-question uttered in a neutral, out-of-the-blue context cannot have a *wh*-
subject in the preverbal subject position of the matrix clause where a non-\textit{wh}–subject would appear in a declarative clause. I will show how information structure restricts the distribution of in-situ \textit{wh}-subjects and subjects that contain in-situ \textit{wh}–non-subjects and then consider alternative approaches to these restrictions. In the end, I conclude that a non–movement-based analysis of Bantu \textit{wh}-in-situ is still tenable when combined with focus licensing requirements.

### 2.3.1 The ban on in-situ preverbal \textit{wh}-subjects

#### 2.3.1.1 The basic facts

A monoclausal \textit{wh}-question uttered in a neutral, out-of-the-blue context cannot have a \textit{wh}-subject in the preverbal subject position where a non-\textit{wh}–subject would appear in a declarative clause. This generalization, also noted by Demuth & Harford (1999: 59), is true for all Bantu languages I have data for.\footnote{Determining whether a subject is in its canonical preverbal position or is extracted further into the left periphery is not always simple, since this movement would generally be string-vacuous. In languages where \textit{wh-ex}-situ requires clefting, the extraction is obvious, but even in languages without cleft-based \textit{wh-ex}-situ, some form of extraction marking (Zentz 2015) is required for subject \textit{wh}-questions (e.g. Akɔɔse (Hedinger 2008, Zentz 2011, 2012)), suggesting that the subject does not remain in its canonical preverbal position.}

Zulu bans preverbal in-situ \textit{wh}-subjects in matrix clauses, as shown in (2.55). It is clear that these subjects are in situ (that is, in canonical subject position) because Zulu \textit{wh}-movement requires clefting and extraction marking (Sabel & Zeller 2006), which are not present here.

\begin{itemize}
  \item \textit{In-situ \textit{wh}-subject in a matrix clause with an active, transitive verb}
    \begin{itemize}
      \item \textit{U-Ø-bani} \textit{u-banga} \textit{lowo} \textit{msindo?} \[Zulu\]
      \begin{itemize}
        \item \textit{1a-1a-who} \textit{1a.sm-cause} \textit{3.dem} \textit{3.noise}
        \item ‘Who is making that noise?’ \(\text{(Sabel & Zeller 2006: 272 (3a))}\)
      \end{itemize}
    \end{itemize}
  \item \textit{In-situ \textit{wh}-subject in a matrix clause with an active, unaccusative verb}
    \begin{itemize}
      \item \textit{U-Ø-bani} \textit{u-fikile?} \[Zulu\]
      \begin{itemize}
        \item \textit{1a-1a-who} \textit{1a.sm-arrived}
        \item ‘Who arrived?’ \(\text{(Sabel & Zeller 2006: 273 (5a))}\)
      \end{itemize}
    \end{itemize}
\end{itemize}
2.3. Restrictions on the distribution of in-situ wh-phrases

c. *In-situ wh-subject in a matrix clause with a passive verb*

   *U-Ø-bani*  u-ya-shay-wa?  
   1a-1a-who  1a.SM-FOC-beat-PASS
   ‘Who is beaten?’  
   (Sabel & Zeller 2006: 272 (3b))

   While Zulu does not allow preverbal in-situ wh-subjects, it does allow postverbal in-situ wh-subjects in an expletive construction (Halpert 2012, Sabel & Zeller 2006, Van der Spuy 1993). Rather than raising to preverbal subject position, the subject of the intransitive stays within the vP and is licit there. When the wh-subject is postverbal, the verb cannot bear Φ-agreement with the subject (instead it agrees with a null locative expletive), and the subject does not have to bear the noun class augment/preprefix.

   (2.56) *Zulu postverbal in-situ wh-subjects*

   Ku-fike  Ø-bani?
   17.sm-arrive  1a-who
   ‘Who arrived?’  
   (Sabel & Zeller 2006: 273 (5b))

   Kîîtharaka also bans preverbal in-situ wh-subjects, as shown in (2.57a). However, Kîîtharaka does allow an in-situ postverbal wh-subject under locative inversion. Note that this is only the “logical” subject (the external argument of the unergative verb); the locative phrase has raised to a preverbal position and triggers subject agreement on the verb.

   (2.57) *Kîîtharaka preverbal vs. postverbal wh-subjects*

   a. *Preverbal wh-subject*

      *Ba-û*  ba-in-ag-a  mbaa î-no?
      2-who  2.SM-sing-HAB-FV  9.bar  9-this
      ‘Who sings in this bar?’  
      (Muriungi 2011: 830 (38a))

   b. *Postverbal wh-subject*

      Mbaa î-no  ji-in-ag-a  ba-û?
      9.bar  9-this  9.SM-sing-HAB-FV  2-who
      ‘Who sings in this bar?’  
      (Muriungi 2011: 830 (38b))

   In Shona and Sotho, matrix subjects may not be questioned in situ in a neutral context, but a wh-subject may appear in canonical preverbal subject position if there is an echo question interpretation:
Chapter 2. *Wh*-in-situ

2.3. Restrictions on the distribution of in-situ *wh*-phrases

(2.58) *In-situ wh*-subject in a matrix question

a. **Ø-ANI** aka-teng-er-a **Ø-Thandi** Ø-rokwe? [Shona]
   1a-*who* 1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress
   ‘Who bought Thandi a dress?’
   *(out of the blue)*
   *(asking for clarification or expressing surprise)*

b. **Mang** o-bon-e ntja? [Sotho]
   1.*who* 1.SM-see-PFV 9.dog
   ‘Who saw the dog?’ *(Demuth & Harford 1999: 59 (i–ii))
   *(out of the blue)*
   *(echo question, with the *wh*-phrase in all caps in Demuth & Harford 1999)*

Just like Zulu and Kiitharaka, Shona allows *wh*-subjects to appear in situ if they are postverbal, as in the locative inversion sentence in (2.59) and the expletive constructions in (2.60). In these constructions, the verb agrees with the locative in preverbal position (whether an overt locative phrase as in (2.59) or a null locative expletive as in (2.60)) instead of the postverbal logical subject. Recall that classes 16, 17, and 18 are all locative noun classes, and class 15 is the infinitive class.

(2.59) *Shona postverbal wh*-subject in locative inversion

Ku-mu-sha kw-aka-svik-a **Ø-ani**? [Shona]
17-3-village 17.SM.TA-arrive-FV 1a-*who*
‘Who arrived at the village?’ (lit., ‘At the village arrived who?’)

(2015-04-14-02-TD)

(2.60) *Shona postverbal wh*-subjects in (null) expletive constructions

a. **Postverbal wh*-subject of an unaccusative

Pa/Ku-ri ku-svik-a **Ø-ani**? [Shona]
16/17.SM-be 15-arrive-FV 1a-*who*
‘Who is arriving?’ (lit., ‘There is arriving who?’)

(2015-08-29-01-TD)

b. **Postverbal wh*-subject of an unergative

Pa/Ku-ri ku-tamb-a **vana-ani**? [Shona]
16/17.SM-be 15-dance-FV 2a-*who*
‘Who (plural) is dancing?’ (lit., ‘There is dancing who (plural)?’)

(2015-08-29-01-TD)
2.3.1.2 Apparent island sensitivity within preverbal subjects

As shown in section 2.2.4.2, in-situ non-subject wh-phrases may appear within islands, which I presented as the motivation for a non-movement-based analysis of wh-in-situ. However, in Shona, Lubukusu, Swahili, and Runyoro, this generalization appears not to hold when the island is within the preverbal subject position.

Relative clause islands. We see in (2.61) that sentences with an in-situ wh-direct object in a relative clause modifying a preverbal subject are unacceptable out of the blue; this contrasts with the acceptable sentences in (2.62), repeated from (2.29), in which the relative clause containing the in-situ wh-direct object modifies an object. My Shona consultant notes that (2.61a) works as a quiz question (where the speaker actually knows the answer and is quizzing the addressee) but is otherwise infelicitous, and Aggrey Wasi (pers. comm.) agrees that the same is true for the Lubukusu sentence in (2.61b).

(2.61) In-situ wh-direct object within a subject relative clause modifying a subject

a. *[island Mu-rume àka-b-a zvi-i] aka-zvi-teng-es-a? [Shona]
   ‘What did [the man who stole ___] sell them?’
   *(out of the blue) (quiz question) (2015-03-21-02-TD)

b. *[island O-mu-ndu o-w-a-fun-a si(ina)] a-a-p-a [Lubukusu]
   Nekesa?
   1.Nekesa
   ‘What did [the person who broke ___] beat Nekesa?’
   (Wasi 2007: 272 (60a))

c. *[island M-kulima amba-ye a-li-ib-a nini] a-me-nunu-a [Swahili]
   1-farmer PRED.1.SE 1.SM-PST-steal-FV what 1.SM-ASP-buy-FV
   motokaa? car
   ‘What has [the farmer who stole ___] bought a car?’
   (Wasi 2007: 272 (60b))
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

(2.62) *In-situ* *wh*-direct object within a subject relative clause modifying an object

a. *Va-ri ku-tsvag-a* [island mu-rume 'aka-b-a] [Shona]

*chi-i]?  7-*what*

‘What are they looking for the man who stole ___?’  (2014-12-06-02-TD)

b. *E-m-bwa ya-a-lum-a* [island o-mw-aana o-w-a-fun-a] [Lubukusu]

*si(ina)]?  *what*

‘What did the dog bite the child who broke ___?’  (Wasike 2007: 266 (53a))

c. *Juma a-na-m-tafut-a* [island mw-anafunzi amba-ye] [Swahili]

*a-li-uz-a *nini]? 1.SM-PST-sell-FV 1.student 1.PRED-1.SE

‘What is Juma looking for the student who sold ___?’  (Wasike 2007: 266 (53b))

d. *Paul ka-ror-a* [island o-mw-ana a-many-ir-e oha]? [Runyoro]

‘Who(m) did Paul see the child who knows ___?’  (Wasike 2007: 266 (53c.i))

The ungrammaticality of (2.61) is not due to an independent ban on relative clauses within a preverbal subject; their declarative counterparts are grammatical, as shown in (2.63):
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

(2.63) **Subject relative clause modifying a subject**

a. \[island\] Mu-rume \(\text{àka-b-a}\) \(Ø\)-mhetë \(\text{aka-dzi-teng-es-a}\). [Shona]
   1-man se.1 SM.TA-steal-fv 10-jewelry 1 SM.TA-10.Om-buy-caus-fv
   ‘[The man who stole the earrings] sold them.’ (2015-03-21-02-TD)

b. \[island\] O-mu-ndu \(\text{o-w-a-fun-a}\) e-n-debe \(\text{a-a-p-a}\). [Lubukusu]
   1-1-person 1 SE-1 SM.PST-break-fv 9-9-chair 1 SM.PST-beat-fv
   Nekesa.
   1.Nekesa
   ‘[The person who broke the chair] beat Nekesa.’ (Wasike 2007: 271 (59a))

c. \[island\] M-kulima amb-ye \(\text{a-li-ib-a}\) pesa. [Swahili]
   1-farmer pred-1 SE 1 SM.PST-steal-fv money
   a-me-nunu-a motokaa.
   1 SM-ASP-buy-fv car
   ‘[The farmer who stole money] has bought a car.’ (Wasike 2007: 271 (59b))

d. \[island\] O-mu-ntu a-y-a-cwir-e e-n-tebe \(\text{a-ka-teer-a}\). [Runyoro]
   1-1-person 1 SE-1 SM.PST-break-fv 9-9-chair 1 SM.PST-beat-fv
   Peter.
   1.Peter
   ‘[The person who broke the chair] beat Peter.’ (Wasike 2007: 271 (59c))

**DP with complement clause islands.** The same facts hold for the clausal complement of a subject DP. First of all, the examples in (2.64) show that a complement clause within a subject DP is acceptable when there is no *wh*-phrase, so the degradation in the examples that follow is not due to the impossibility of this structure.

(2.64) **Clausal complement of a subject DP**

a. \[island\] Chi-lomo mbo Wafula a-a-ib-a sii-tabu. [Lubukusu]
   10-report that 1 Wafula 1 SM.PST-steal-fv 7-book
   cha-a-chun-i-a Nafula ku-mw-oyo?
   10 SM-PST-hurt-caus-fv 1 Nafula 3-3-heart
   ‘[The information that Wafula stole a book] hurt Nafula.’ (Wasike 2007: 259 (42a))

b. \[island\] U-vumi kwamba Juma a-na-pend-a peremende. [Swahili]
   11-rumor that 1 Juma 1 SM-PST-buy-fv candy
   u-me-ene-a?
   11 SM-ASP-spread-fv
   ‘[The rumor that Juma bought candy] has spread.’ (Wasike 2007: 259 (42b))
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

c. \[[\text{island}] \text{E-ki-gambibwa} \text{ nti Mary a-ka-gur-a e-ki-tabu} \] [Runyoro] 
\[7\text{-}7\text{-claim} \text{ that 1.Mary 1.SM-PST-buy-FV 7\text{-}7-book} \]
\[\text{ki-ka-kang-a} \text{ Peter?} \]
\[7\text{.SM-PST-shock-FV 1.Peter} \]
‘[The claim that Mary bought the book] shocked Peter.’

(Wasike 2007: 259 (42c))

Trying to question a direct object, locative adjunct, temporal adjunct, or manner adjunct in situ within the clausal complement of a preverbal subject is ungrammatical in Lubukusu, Swahili, and Runyoro, as shown in the examples below. This contrasts with the grammaticality of questioning these elements in situ within the clausal complement of an object (see (2.36–2.39)). For the Shona counterparts of these sentences, see section 2.4.1.

(2.65) **In-situ wh–direct object within the clausal complement of a subject DP**

a. \[[\text{island}] \text{Chi-lomo mbo Wafula a-a-ib-a si(ina)} \] [Lubukusu] 
\[10\text{-}report \text{ that 1.Wafula 1.SM-PST-steal-FV 7.what} \]
\[\text{cha-a-chun-i-a} \text{ Nafula ku-mw-oyo?} \]
\[10\text{.SM-PST-hurt-CAUS-FV 1.Nafula 3-3-heart} \]
‘What did [the information that Wafula stole ___] hurt Nafula?’

(Wasike 2007: 259 (43a))

b. \[[\text{island}] \text{U-vumi kwamba Juma a-na-pend-a nini} \] [Swahili] 
\[11\text{-}rumor \text{ that 1.Juma 1.SM-PRS-like-FV what} \]
\[u-me-ene-a? \]
\[11\text{.SM-ASP-spread-FV} \]
‘What has [the rumor that Juma likes ___] spread?’

(Wasike 2007: 260 (43b))

(2.66) **In-situ wh–locative adjunct within the clausal complement of a subject DP**

a. \[[\text{island}] \text{Chi-lomo mbo Wafula a-a-ib-a sii-tabu} \] [Lubukusu] 
\[10\text{-}report \text{ that 1.Wafula 1.SM-PST-steal-FV 7-book} \]
\[\text{waae} \text{ cha-a-chun-i-a} \text{ Nafula ku-mw-oyo?} \]
\[\text{where 10.SM-PST-hurt-CAUS-FV 1.Nafula 3-3-heart} \]
‘Where did [the information that Wafula stole the book ___] hurt Nafula?’

(Wasike 2007: 262 (46a))
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

b. ??[^island] U-vumi kwamba Juma a-li-nunu-a wapi [Swahili]
   11-rumor that 1.Juma 1.SM-PST-buy-FV *where*
   peremende] u-me-ene-a?
   candy 11.SM-ASP-spread-FV
   ‘Where has [the rumor that Juma bought candy ___] spread?’
   (Wasike 2007: 262 (46b))

c. *[^island] E-ki-gambibwa nti Mary a-ka-gur-a e-ki-tabu [Runyoro]
   7-7-claim that 1.Mary 1.SM-PST-buy-Fv 7-7-book
   *nkaha* ki-ka-kang-a Peter?
   *where* 7.SM-PST-shock-Fv 1.Peter
   ‘Where did [the claim that Mary bought the book ___] shock Peter?’
   (Wasike 2007: 262 (46c))

(2.67) *In-situ wh–temporal adjunct within the clausal complement of a subject DP*

a. ??[^island] Chi-lomo mbo Wafula a-a-ib-a sii-tabu [Lubukusu]
   *liina* cha-a-chun-i-a Nafula ku-mw-oyo?
   *when* 10.SM-PST-hurt-CAUS-FV 1.Nafula 3-3-heart
   ‘When did [the information that Wafula stole the book ___] hurt Nafula?’
   (Wasike 2007: 263 (47a))

b. ??[^island] U-vumi kwamba Juma a-li-nunu-a peremende [Swahili]
   11-rumor that 1.Juma 1.SM-PST-buy-FV candy
   *lini* u-me-ene-a?
   *when* 11.SM-ASP-spread-FV
   ‘When has [the rumor that Juma bought candy ___] spread?’
   (Wasike 2007: 264 (48b))

c. *[^island] E-ki-gambibwa nti Mary a-ka-gur-a e-ki-tabu [Runyoro]
   7-7-claim that 1.Mary 1.SM-PST-buy-Fv 7-7-book
   *di* ki-ka-kang-a Peter?
   *when* 7.SM-PST-shock-Fv 1.Peter
   ‘When did [the claim that Mary bought the book ___] shock Peter?’
   (Wasike 2007: 264 (48c))

(2.68) *In-situ wh–manner adjunct within the clausal complement of a subject DP*

a. ??[^island] Chi-lomo mbo ba-ba-ana be-e-ib-a sii-tabu [Lubukusu]
   10-report that 2-2-child 2.SM-PST-steal-Fv 7-book
   ba-rie(na)] cha-a-chun-i-a Nafula ku-mw-oyo?
   2-how 10.SM-PST-hurt-CAUS-FV 1.Nafula 3-3-heart
   ‘How did [the information that Wafula stole the book ___] hurt Nafula?’
   (Wasike 2007: 263 (47a))
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

b. ??[island U-vumi kwamba Juma a-li-nunu-a peremende [Swahili]
11-rumor that 1.Juma 1.sm-pst-buy-fv candy

vipi] u-me-ene-a?

how 11.sm-asp-spread-fv
‘How has [the rumor that Juma likes candy ___] spread?’
(Wasike 2007: 263 (47b))

c. ??[island E-ki-gambibwa nti Mary a-ka-gur-a e-ki-tabu [Runyoro]
7-7-claim that 1.Mary 1.sm-pst-buy-fv 7-7-book

a-ta] ki-ka-kang-a Peter?
1-how 7.sm-pst-shock-fv 1.Peter
‘How did [the claim that Mary bought the book ___] shock Peter?’
(Wasike 2007: 263 (47c))

Summary. The subject–non-subject asymmetry shown above would be puzzling if preverbal subjects ordinarily could be wh-phrases. However, a straightforward analysis of the asymmetry is that it can be reduced to the more general ban on wh-phrases within preverbal subject position (Wasike 2007: 276–279). Under this view, the island sensitivity of in-situ wh-phrases in the subject examples is only apparent and does not need to be explained via movement. We are able to maintain the generalization that Bantu wh-in-situ is insensitive to islands and does not involve movement.

2.3.1.3 Variation in the availability of embedded preverbal wh-subjects.

Languages that permit in-situ wh-subjects if embedded. Unlike matrix clauses, embedded declarative clauses actually do allow in-situ preverbal wh-subjects in Shona (2.69a–c) and Kîîtharaka (2.69d), even out of the blue.¹²

¹². Muriungi (2011) examines whether Kîîtharaka allows in-situ preverbal subjects in embedded interrogative clauses as well as embedded declaratives. He concludes that embedded interrogative clauses do not allow preverbal in-situ wh-subjects. However, a preverbal in-situ wh-subject may be in a declarative clause embedded within an embedded interrogative clause, as in (ib). Thus, the relevant generalization is that a preverbal in-situ wh-subject is only possible in Kîîtharaka when the minimal clause containing it is declarative.

However, I find it difficult to interpret the English free translations Muriungi provides in the examples below, which form the basis for his arguments (I have left the free translations as they appear in the paper):
2.3. Restrictions on the distribution of in-situ *wh*-phrases

(2.69) *In-situ* *wh*-subjects in embedded declarative clauses\(^{13}\)


(i) *Kîîtharaka* embedded *in-situ* *wh*-subjects

a. *In-situ* *wh*-subject in an embedded interrogative clause


b. *In-situ* *wh*-subject in a declarative clause embedded within an embedded interrogative clause


I would expect that a *wh*-subject within an embedded interrogative should translate to something like ‘Who did we ask if (they) stole?’, literally ‘We asked if who stole?’ In that case, the original question represented by the embedded clause could have been ‘Did Mary steal?’ and then the function of (ib) would be to ask what the subject was in that original question. However, the translation provided for (ia) looks like an indirect question with a question mark. If it is supposed to be an indirect question (i.e., ‘We asked who stole.’), then the *wh*-subject should have scope only as high as the embedded C, and thus it could be considered to be analogous to being an *in-situ* *wh*-subject in the matrix clause of a direct question since it is immediately below its scopal position.

I tested for whether an *in-situ* preverbal *wh*-subject may appear in a Shona embedded interrogative, and it appears that this is impossible:

(ii) *In-situ* *wh*-subject in an embedded interrogative clause

V-aka-bvunz-a Ø-Rumbi [kuti Ø-ani aka-teng-a Ø-rokwe iro]? [Shona] 2.SM-TA-ask-FV 1a-Rumbi that 1a-who 1a.SM.TA-buy-FV 5-dress 5.that ‘Who did they ask Rumbi if ___ bought that dress?’ *(out of the blue)* *(clarifying)*

I would want to check this further before basing an analysis on it, though, because the discourse scenario was difficult to construct and my consultant was not very confident in the judgments she provided.

13. The complementizer *kuti* ‘that’ is historically derived from the verb *kuti* ‘to say’, so it sounds redundant to use it after the verb -ti. With all other embedding verbs, the complementizer is required.
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

c.  
\[ \text{W-aka-ti} \quad [\text{Ø-ani} \quad \text{aka-teng-er-a} \quad \text{Ø-Thanzi}] \quad [\text{Shona}] \\
\text{2SG.SM-TA-say} \quad \text{1a-who} \quad \text{1a.SM-TA-buy-APPL-FV} \quad \text{1a-Thanzi} \\
\text{Ø-rokwe}]? \]
5-dress
‘Who did you say bought Thandi a dress?’ (out of the blue)

(2014-10-22-01-TD)

d. *In-situ* *wh*-subject in an embedded declarative clause

\[ \text{Tù-gwatani-ir-e} \quad [\text{CP ūū} \quad \text{n-a-ij-ir-e}]? \quad [\text{Kiitharaka}] \\
\text{1PL.SM-agree-PPV-FV} \quad \text{1.who} \quad \text{NI-1.SM-steal-PPV-FV} \]
‘Who did we agree stole?’

(Muriungi 2011: 823 (8))

The island data presented in section 2.2.4.2 provide further examples of embedded 
*wh*-subjects in Shona, Ikalanga, Lubukusu, Swahili, and Runyoro. See (2.28) for relative
clauses, (2.35) for the clausal complement of a DP, and (2.40) for adverbial clauses.

Moreover, the same asymmetry discussed above in section 2.3.1.2 holds in these lan-
guages for *wh*-subjects embedded in islands within subjects versus embedded in islands
within non-subjects. Compare (2.70), which shows the unacceptability of an in-situ pre-
verbal *wh*-subject in a relative clause modifying the preverbal subject, with (2.71), which
is the same except that the relative clause modifies the object.

(2.70) *In-situ* *wh*-subject within an object relative clause modifying a subject

a. *[island] O-muu-nda ni-ye naanu a-a-rum-a [Lubukusu] \\
\text{1-1-person} \quad \text{NI-1.NSE} \quad \text{1.who} \quad \text{1.SM-PST-send-FV} \quad \text{1.SM-PST-beat-FV} \\
\text{Nekesa?} \\
\text{1.Nekesa} \\
‘Who did [the person that ___ sent] beat Nekesa?’

(Wasike 2007: 272 (61a))

b. *[island] M-kulima amba-ye nani a-li-mw-ib-i-a [Swahili] \\
\text{1-farmer} \quad \text{PRED-1.SE} \quad \text{1.who} \quad \text{1.SM-PST-1.OM-steal-APPL-FV} \\
\text{pesa} a-me-nunu-a motokaa? \\
\text{money 1.SM-ASP-buy-FV car} \\
‘Who has [the farmer that ___ stole money for] bought a car?’

(Wasike 2007: 273 (61b))

c. *[island] E-ki-naga oha a-ki-yayaisir-e ki-ri o-mu-nju? [Runyoro] \\
\text{7-7-pot} \quad \text{1.who} \quad \text{1.SM-7.OM-break-FV} \quad \text{7.SM-be} \quad \text{18-18-house} \\
‘Who is [the pot that ___ broke] in the house?’

(Wasike 2007: 273 (61c))
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

(2.71) *In-situ wh*-subject within an object relative clause modifying an object (repeated from (2.28))

   [CP kuti Ø-ani aka-vhakachir-a]]? 
   that 1a-*who* 1a.SM.TA-visit-FV
   ‘Who do you know the girl that they thought ___ visited?’

   a-a-som-a]?
   1.SM-PST-read-FV
   ‘Who did John see the book that ___ read?’
   (Diercks 2010: 173 (137))

   a-li-uz-a]?
   1.SM-PST-buy-ASP-FV
   ‘Who is Juma looking for the book that ___ sold?’
   (Wasike 2007: 267 (54b))

   e-ki-ya-guz-ir-e]?
   7.NSE-7.SM-PST-buy-ASP-FV
   ‘Who is Paul looking for the book that ___ bought?’
   (Wasike 2007: 267 (54c))

Similarly, a *wh*-subject in an island within a preverbal subject is out (shown in (2.72)), while the same island within an object is fine (shown in (2.73), repeated from (2.35)).

(2.72) *In-situ wh*-subject within the clausal complement of a subject DP

a. ??[island U-vumi kwamba naani a-na-pend-a peremende] [Swahili] 11-rumor that 1.*who* 1.SM-PRS-like-FV candy 
   u-me-ene-a?
   11.SM-ASP-spread-FV
   ‘Who has [the rumor that ___ likes candy] spread?’
   (Wasike 2007: 260 (43b))
Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

(2.73) **In-situ wh-subject within the clausal complement of an object DP**

a. Wa-toto wa-me-enez-a [island uvumi kwamba nani [Swahili]
   2-child 2.SM-ASP-spread-fv rumors that 1.who
   a-na-pend-a peremende]?
   1.SM-FRS-like-fv candy
   ‘Who have the children spread rumors that ___ likes candy?’
   (Wasike 2007: 252 (35b))

**Languages that ban even embedded in-situ wh-subjects.** Zulu, on the other hand, is more restrictive. Its ban on in-situ preverbal wh-subjects extends to embedded declarative clauses, as shown in (2.74a). Embedded clauses do allow the expletive construction with a postverbal wh-subject that we saw for matrix clauses above; this is illustrated in (2.74b).

(2.74) **Zulu in-situ wh-subjects in embedded clauses**

a. **Preverbal in-situ wh-subject in an embedded declarative clause**
   *U-cabanga [CP ukuthi u-Ø-bani u-sebenzile]? [Zulu]
   2sg.sm-think that 1a-1a-who 1a.SM-worked
   ‘Who do you think worked?’ (Sabel & Zeller 2006: 276 (13a))

b. **Postverbal in-situ wh-subject in an embedded declarative clause**
   U-cabanga [CP ukuthi ku-sebenze Ø-bani]? [Zulu]
   2sg.sm-think that 17.SM-work 1a-who
   ‘Who do you think worked?’ (Sabel & Zeller 2006: 276 (3b))

To my knowledge, this crosslinguistic variation with respect to the possibility of preverbal wh-subjects in embedded clauses has never been highlighted in any of the literature that examines the restricted distribution of wh-subjects in matrix clauses. Below, I will consider the hypothesis that the stricter pattern exemplified by Zulu correlates with the requirement that in-situ wh-phrases appear immediately after the verb.

### 2.3.1.4 Summary

To review, the key generalization is that Bantu subjects are disallowed in their canonical preverbal position when they are wh-phrases, unless they receive an echo or quiz interpretation. Some languages have been shown to extend this restriction to non-subject wh-phrases within a preverbal complex subject. Furthermore, there is cross-Bantu varia-
2.3. Restrictions on the distribution of in-situ wh-phrases

ation with respect to whether the ban on preverbal wh-subjects applies only in matrix clauses or across the board.

In the next section, I argue that wh-phrases in Shona and similar languages must be interpreted as focused if they are to be answered. This is inherently incompatible with the preverbal subject position, which cannot host focused material. Echo questions and quiz questions are different in that they are not focused (Jaeger 2004, Sudo 2010, contra Artstein 2002).

2.3.2 Focus licensing

2.3.2.1 Wh-in-situ as focus-in-situ

The starting observation for an information structure account of the ban on in-situ preverbal wh-subjects is that the distribution of in-situ wh-phrases is identical to the distribution of narrowly focused non-wh-phrases (Horvath 1986, Sabel 2000, Sabel & Zeller 2006, Zerbian 2006a). I assume that focus introduces a set of alternatives (Rooth 1985, 1992), and that the denotation of a question is the set of all possible answers to that question (Hamblin 1973). According to É. Kiss (1998), the contrast between narrow (or identificational) and wide (or information) focus has to do with whether the focused content is exhaustively identified (narrow) or new and non-presupposed information (wide). Zerbian (2006a: 10–11) provides a syntactic description of this contrast: single constituents like DPs may be narrowly focused, but wide focus is for larger constituents like VPs or CPs.

Postverbal focus-in-situ with non-subjects. Just as postverbal wh-phrases appear in canonical position, narrowly focused phrases may appear in canonical position (that is, where they would appear if they were not focused). No syntactic displacement is required for focus licensing, so this can be called focus-in-situ. Zerbian (2006a: ch. 2) argues this for Northern Sotho, and I repeat her diagnostics here for Shona, finding that the two languages pattern the same in these respects.
First, both the non-subject wh-phrases and their answers appear in their canonical postverbal position in the following question–answer pairs (cf. Zerbian 2006a: 66–67, 72–73). Note in particular that the focused phrase need not be in a designated focus position, such as sentence-final (2.75a–b) or immediately after the verb (2.75d).

(2.75) *Postverbal focus-in-situ in Shona question–answer pairs*

a. *In-situ narrowly focused indirect object*

A: Va-dzidzi v-aka-teng-er-a Ø-ani chi-po? [Shona]
2-student 2.SM-TA-buy-APPL-FV 1a-who 7-gift
‘Who(m) did the students buy a gift (for)?’

B: Va-dzidzi v-aka-teng-er-a mu-dzidzisi chi-po. [Shona]
2-student 2.SM-TA-buy-APPL-FV 1-teacher 7-gift
‘The students bought the teacher a gift.’ (2015-08-29-02-TD)

b. *In-situ narrowly focused direct object*

A: W-aka-sim-a chi-i mu-mu-nda? [Shona]
2sg.SM-TA-plant-FV 7-what 18-3-garden
‘What did you plant in the garden?’

B: Nd-aka-sim-a mu-ti mu-mu-nda? [Shona]
1sg.SM-TA-plant-FV 3-tree 18-3-garden
‘I planted a tree in the garden.’ (2015-08-29-02-TD)

c. *In-situ narrowly focused direct object*

A: Mu-chembere a-ri ku-tsvag-a Ø-ani? [Shona]
1-old.person 1.sm-be 15-look.for-FV 1a-who
‘Who is the old person looking for?’

B: Mu-chembere a-ri ku-tsvag-a Ø-chi-remba. [Shona]
1-old.person 1.sm-be 15-look.for-FV 1a-7-doctor
‘The old man is looking for the doctor.’ (2015-08-29-01-TD)

d. *In-situ narrowly focused locative adjunct*

A: Mu-chembere a-ri ku-tsvag-a Ø-chi-remba [Shona]
1-old.person 1.sm-be 15-look.for-FV 1a-7-doctor
ku-pi?
17-which
‘Where is the old person looking for the doctor?’

B: Mu-chembere a-ri ku-tsvag-a Ø-chi-remba [Shona]
1-old.person 1.sm-be 15-look.for-FV 1a-7-doctor
mu-Ø-dhorobha.
17-5-town
‘The old person is looking for the doctor IN TOWN.’ (2015-08-29-01-TD)
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

e. In-situ narrowly focused object of prepositional phrase
A: U-ri ku-tsvag-a Ø-chi-remba we-chi-i?  [Shona]
   2sg.sm-be 15-look.for-fv 1a-7-doctor 1a.of-7-what
   ‘What kind of doctor are you looking for?’
B: Ndi-ri ku-tsvag-a Ø-chi-remba we-ma-zino.  [Shona]
   1sg.sm-be 15-look.for-fv 1a-7-doctor 1a.of-6-tooth
   ‘I am looking for the dentist.’ (lit., ‘doctor of teeth’)

f. In-situ narrowly focused modifier of direct object
A: Nde-a-pi ma-ruva a-u-no-farir-a ___?  [Shona]
   ni-6-which 6-flower 6.nse-2sg.sm-ta-like-fv
   ‘Which flowers do you like?’
B: Ndi-no-farir-a ma-ruva ma-tsvuku.  [Shona]
   1sg.sm-ta-like-fv 6-flower 6-red
   ‘I like red flowers.’

Second, the focus-sensitive element chete ‘only’ may take scope over postverbal non-subjects in their canonical position (cf. Northern Sotho fela in Zerbian 2006a: 67, 73–74). Note that chete ‘only’ may associate with any constituent within its scope, so in (2.76b) the direct object vana ‘children’, the locative PP kuchikoro ‘to school’, or the entire predicate anounza vana kuchikoro ‘brings the children to school’ may be focused. By contrast, (2.76c) is unambiguous because chete ‘only’ is positioned inside the verb phrase and scopes over only the direct object vana ‘children’. These examples show that focused elements need not move from their canonical position to be narrowly focused, just as was shown above for wh-phrases.

(2.76) Postverbal focus-in-situ in Shona marked by ‘only’
a. Without focus-sensitive ‘only’
Mu-kadzi a-no-unz-a v-ana ku-chi-koro.  [Shona]
   1-woman 1.sm-ta-bring-fv 2-child 17-7-school
   ‘The woman brings the children to school.’
2.3. Restrictions on the distribution of in-situ wh-phrases

b. **Focus-sensitive ‘only’ sentence-finally**

[Shona]  
Mu-kadzi a-no-unz-a v-ana ku-chi-koro **chete**.  
1-woman 1.sm-ta-bring-fv 2-child only  
‘The woman only brings the children to school (not the teenagers).’

‘The woman only brings the children TO SCHOOL (not to church).’

‘The woman only brings the children TO SCHOOL (she doesn’t do anything else).’

(2015-08-29-01-TD)

c. **Focus-sensitive ‘only’ after the direct object**

[Shona]  
Mu-kadzi a-no-unz-a v-ana chete ku-chi-koro.  
1-woman 1.sm-ta-bring-fv 2-child only 17-7-school  
‘The woman only brings the children to school (not the teenagers).’

‘The woman only brings the children TO SCHOOL (not to church).’

‘The woman only brings the children TO SCHOOL (she doesn’t do anything else).’

(2015-08-29-01-TD)

Third, corrective focus sentences such as in (2.77) reveal again that there is no dedicated focus position, as focused phrases appear in their canonical position rather than consistently sentence-finally or consistently immediately after the verb (cf. Zerbian 2006a: 68–69, 73).

(2.77) **Focus-in-situ in Shona corrective focus**

a. **Corrective focus on the direct object**

[Shona]  
Mu-komana ha-a-n-a ku-teng-es-a **chi-ngwa**  
1-boy neg-1.sm-be.with-fv 15-buy-caus-fv 7-bread

nezero, aka-teng-es-a Ø-bota.  
yesterday 1.sm.ta-buy-caus-fv 5-porridge

‘The boy didn’t sell BREAD yesterday, he sold PORRIDGE.’

(2015-08-29-01-TD)

b. **Corrective focus on the temporal adjunct**

[Shona]  
Mu-komana ha-a-n-a ku-teng-es-a **chi-ngwa**  
1-boy neg-1.sm-be.with-fv 15-buy-caus-fv 7-bread

nezero, a-chi-teng-es-a nhasi.  
yesterday, 1.sm.ta-7.om-buy-caus-fv today

‘The boy didn’t sell bread YESTERDAY he sold it TODAY.’

(2015-08-29-01-TD)
c. **Corrective focus on the modifier of the direct object**

   Ha-ndi-si ku-tsvag-a Ø-chi-remba à-chember-a, [Shona]
   neg-1sg.sm-neg.be 15-look.for-fv 1a-7-doctor se.1a.sm-grow.old-fv
   ndi-ri ku-tsvag-a Ø-chi-remba we-chi-diki.
   1sg.sm-be 15-look.for-fv 1a-7-doctor 1a.of-7-small
   'I am not looking for an old doctor, I am looking for a young doctor.'

   (2015-08-29-01-TD)

   d. **Corrective focus on the modifier of the direct object**

   Ha-ndi-farir-i ma-ruva ma-tsvuku, ndi-no-farir-a [Shona]
   neg-1sg.sm-like-fv 6-flower 6-red 1sg.sm-ta-like-fv
   ma-ruva ma-chena.
   6-flower 6-white
   'I don’t like red flowers, I like white flowers.'

   (2015-08-29-01-TD)

**Ban on preverbal focus-in-situ.** Just as subjects in Shona cannot be *wh*-phrases if they are preverbal, they also cannot be narrowly focused in that position (Bliss & Storoshenko 2008). This is shown below with tests taken from Zerbian’s (2006a) investigation of Northern Sotho. For a question like (2.78) that questions the subject ex situ, the answer must involve some other focusing strategy besides focus-in-situ (2.79a), such as an *it*-cleft (2.79b) or a pronominally headed pseudocleft (2.79c) (cf. Zerbian 2006a: 69–71).

(2.78) **Subject wh-question (wh-ex-situ)**

   Ndi-Ø-ani  ____ ñ-ri  ku-tsvag-a Ø-chi-remba?  [Shona]
   N1-1a-who se.1a.sm-be 15-look.for-fv 1a-7-doctor
   'Who is looking for a doctor?'

   (2015-08-29-01-TD)

(2.79) **Answers to (2.78)**

a. **Narrowly focused subject in situ**

   *Mu-chembere a-ri ku-tsvag-a Ø-chi-remba.  [Shona]
   1-old.person 1.sm-be 15-look.for-fv 1a-7-doctor
   'The old person is looking for a doctor.'

   (2015-08-29-01-TD)

b. **Narrowly focused subject in an it-cleft**

   Mú-chembere  ____ ñ-ri ku-tsvag-a Ø-chi-remba.  [Shona]
   N1.1-old.person se.1a.sm-be 15-look.for-fv 1a-7-doctor
   'It’s the old person who is looking for a doctor.'

   (2015-08-29-01-TD)
Chapter 2. *Wh*-in-situ 2.3. Restrictions on the distribution of in-situ *wh*-phrases

c. *Narrowly focused subject in a pronominally headed pseudocleft*

   **Mu-chembere** ndi-ye  à-ri  kutsvag-a  Ø-chi-remba. [Shona]
   **1-old.person** ni-1  se.1a.sm-be 15-look.for-fv 1a-7-doctor
   ‘The OLD PERSON is the one who is looking for a doctor.’ (2015-08-29-01-TD)

The same pattern holds when only part of the subject is focused, as in (2.80–2.81) (cf. Zerbian 2006a: 74).

(2.80) *Subject wh-question*

   Ndi-Ø-chi-remba *u-pi*  à-ri  ku-rap-a  mu-sikana? [Shona]
   ni-1a-7-doctor  1a-which  se.1a.sm-be 15-treat-fv 1-girl
   ‘Which doctor is treating the girl?’ (2015-08-29-01-TD)

(2.81) *Answers to (2.80)*

a. *Narrowly focused subject in situ*

   *Ø-Chi-remba we-chi-Shona* a-ri  ku-rap-a  mu-sikana. [Shona]
   1a-7-doctor  1a.of-7-Shona 1a.sm-be 15-treat-fv 1-girl
   ‘The SHONA doctor is treating the girl.’ (2015-08-29-01-TD)

b. *Narrowly focused subject in an it-cleft*

   Ndi-Ø-chi-remba we-chi-Shona  à-ri  ku-rap-a  [Shona]
   ni-1a-7-doctor  1a.of-7-Shona  se.1a.sm-be 15-treat-fv
   mu-sikana?
   1-girl
   ‘It’s the SHONA doctor who is treating the girl.’ (2015-08-29-01-TD)

It is marginally possible to use the focus-sensitive particle *chete* ‘only’ in preverbal subject position, but my consultant emphasizes that the versions with an it-cleft or a pronominally headed pseudocleft are “much clearer” (cf. Zerbian 2006a: 71).

(2.82) *Subject focus and the focus-sensitive particle ‘only’*

a. *Focus-sensitive ‘only’ after the preverbal subject*

   ?Mu-kadzi *chete* a-no-unz-a  v-ana  ku-chi-koro. [Shona]
   1-woman only 1.sm-ta-bring-fv 2-child 17-7-school
   ‘Only THE WOMAN brings the children to school (not the man).’
   (2015-08-29-01-TD)

b. *Focus-sensitive ‘only’ in a subject it-cleft*

   Mú-kadzi *chete*  à-no-unz-a  v-ana  ku-chi-koro. [Shona]
   ni.1-woman only se.1.sm-ta-bring-fv 2-child 17-7-school
   ‘It’s only THE WOMAN who brings the children to school (not the man).’
   (2015-08-29-01-TD)
Chapter 2. *Wh*-in-situ  

2.3. Restrictions on the distribution of in-situ *wh-*phrases

c. *Focus-sensitive ‘only’ in a pronominally headed subject pseudocleft*

\[
\begin{align*}
\text{Mu-kadzi ndi-ye ega/chete} & \quad \text{è-no-unz-à} \quad \text{v-ana} \quad \text{[Shona]} \\
\text{1-woman ni-1} & \quad \text{only} \quad \text{se.1.sm-TA-bring-FV} \quad \text{2-child} \\
\text{ku-chi-koro.} & \\
\text{17-7-school} & \\
\end{align*}
\]

‘THE WOMAN is the only one who brings the children to school (not the man).’

(2015-08-29-01-TD)

Again, the same holds when using *chete* ‘only’ to restrict only part of the subject (cf. Zerbian 2006a: 75):

(2.83) *Subject modifier focus and the focus-sensitive particle ‘only’*

a. *Focus-sensitive ‘only’ after the preverbal subject*

\[
\begin{align*}
\text{*Ô-Chi-remba we-chi-Shona chete a-ri} & \quad \text{ku-rap-a} \quad \text{mu-sikana. [Shona]} \\
\text{1a-7-doctor} & \quad \text{1a.of-7-Shona chete} \quad \text{1a.sm-be} \quad \text{15-treat-FV} \quad \text{1-girl} \\
\text{‘Only the SHONA doctor is treating the girl.’} & \\
\end{align*}
\]

(2015-08-29-01-TD)

b. *Focus-sensitive ‘only’ in a subject it-cleft*

\[
\begin{align*}
\text{Ndi-Ô-chi-remba we-chi-Shona chete} & \quad \text{à-ri} \quad \text{ku-rap-a} \quad \text{[Shona]} \\
\text{ni-1a-7-doctor} & \quad \text{1a.of-7-Shona only} \quad \text{se.1a.sm-be} \quad \text{15-treat-FV} \\
\text{mu-sikana?} & \quad \text{1-girl} \\
\text{‘It’s only the SHONA doctor who is treating the girl.’} & \\
\end{align*}
\]

(2015-08-29-01-TD)

Finally, (2.77) illustrates that corrective focus is impossible with in-situ preverbal subjects, instead requiring a cleft (cf. Zerbian 2006a: 71–72).

(2.84) *Corrective focus with subjects*

a. *Corrective focus on the preverbal subject*

\[
\begin{align*}
\text{*Mu-komana ha-a-n-a} & \quad \text{ku-teng-es-a} \quad \text{chi-ngwa} \quad \text{[Shona]} \\
\text{1-boy} & \quad \text{NEG-1.SM-be.with-FV} \quad \text{15-buy-CAUS-FV} \quad \text{7-bread} \\
\text{nezuro,} & \quad \text{mu-chembere.} \\
\text{yesterday} & \quad \text{1-old.person} \\
\text{‘THE BOY didn’t sell bread yesterday, THE OLD PERSON did.’} & \\
\end{align*}
\]

(2015-08-29-01-TD)
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

b.  Corrective focus on the clefted subject

\[
\text{Ha-a-zi } \text{mu-komana } \text{àka-teng-es-a } \text{chi-ngwa [Shona]}
\]
\[
\text{neg-1.sm-be.said } \text{1-boy } \text{se.1.sm-buy-caus-fv } \text{7-bread}
\]
\[
\text{nezuro, } \text{mú-chembere.}
\]
\[
\text{yesterday } \text{NI.1-old.person}
\]

‘It wasn’t THE BOY who sold bread yesterday, it was THE OLD PERSON.’

(2015-08-29-01-TD)

Postverbal focus-in-situ with subjects. Just as in-situ wh-subjects may appear post-verbally, logical subjects can be narrowly focused in situ if they are postverbal, such as in a locative inversion (Harford 1990) or expletive construction. The expletive construction is shown here, in which the verb agrees with a null locative (class 17) expletive rather than the external argument, which appears in its base position following the verb.

\[(2.85) \quad \text{Postverbal focus-in-situ in Shona question-answer pairs} \]

A: \[
\text{Pa-ri } \text{ku-tamb-a vana-ani? [Shona]}
\]
\[
17.sm-be \quad 15-dance-fv \quad 2a-who
\]

‘Who (plural) is dancing?’ (lit., ‘There is dancing who (plural)?’)

B: \[
\text{Pa-ri } \text{ku-tamb-a va-kadzi? [Shona]}
\]
\[
17.sm-be \quad 15-dance-fv \quad 2-woman
\]

‘WOMEN are dancing.’ (lit., ‘There is dancing WOMEN.’)

(2015-08-29-01-TD) (2015-08-29-02-TD)

Summary. This section has shown that because of their identical distribution (blocked from preverbal subject position) and shared semantics (invoking a set of alternatives), Bantu wh-in-situ may be treated as a subcase of focus-in-situ. The next few sections consider information structure explanations for the distribution of both wh-in-situ and focus-in-situ.

2.3.2.2 The information structure status of the preverbal position

The preverbal position as topic. In a tradition dating at least as far back as Givón 1976, Bantuists have explored the idea that preverbal subjects function as topics (Baker 2003, Bliss & Storoshenko 2008, Bresnan & Mchombo 1987, Cheng & Downing 2009, Demuth
2.3. Restrictions on the distribution of in-situ \textit{wh}-phrases

\& Harford 1999, Downing \& Hyman 2015, Güldemann et al. 2015, Henderson 2006a, 2011b, Morimoto 2000, Schneider-Zioga 2007, Simango 2006, Van der Wal 2009, Yoneda 2011, Zerbian 2006a, among others). Commonly cited arguments include the prevalence of inversion structures (locative inversion, subject–object reversal, expletive constructions, etc.) in which the logical subject stays postverbal and the verb agrees with the fronted constituent, as well as restrictions on the semantic properties of preverbal subjects (no focused or \textit{wh}-phrases or non-specific indefinites).

For Shona specifically, Bliss \& Storoshenko (2008) have used the impossibility of the answers to \textit{wh}-phrases to appear in preverbal subject position (see (2.78–2.81)) to argue that preverbal subjects are obligatorily topics that appear in the specifier of TopicP rather than TP. They further claim that the fact that passivization can promote not just internal arguments but even adjuncts suggests that it is $\text{A}^\prime$-movement to SpecTopP; thus, an instance of topicalization.

There are several types of topics (Frascarelli 2007, Frascarelli \& Hinterhölzl 2007), but much of the Bantu literature conflates these. For the discussion here I will follow Zerbian (2006a) in distinguishing two core senses of the term \textit{topic}. A referent that has already been mentioned in the discourse (i.e., is discourse-old) or is otherwise salient to the participants is called a \textit{familiar topic}. The theme of the sentence (i.e., what the sentence as a whole is about) is called an \textit{aboutness topic}.

Non-specific indefinites cannot be aboutness topics (Cinque 1990, Ebert \& Endriss 2004, Endriss 2009), so one way to show the topicality of Bantu preverbal subjects is to test whether they can be non-specific. The indefinite subject ‘woman’ in (2.86a) cannot scope under the quantified object, which Baker (2003) and Schneider-Zioga (2007) take to mean that the subject cannot be non-specific, consistent with its topicality. The same effect holds in Shona, as shown in (2.86b). However, as Vicki Carstens (pers. comm.) brought to my attention, it is quite difficult to get the inverse scope reading in the English translations of these sentences, which calls into question whether we can really conclude
from these sentences that there is a topicality requirement on the preverbal subject.

\[(2.86) \text{ Impossibility of non-specific reading of preverbal indefinite subject}\]

\[\text{a. } \text{[Kinande]} \quad \text{O-mu-kali a-gul-a obuli ri-tunda.} \quad \text{[Kinande]} \]
\[1-1-\text{woman 1.SM.TA-buy-FV every 5-fruit} \]
\[\text{‘A woman bought every fruit.’ (∃ > ∀, *∀ > ∃)} \quad \text{(Baker 2003: 120 (29))}\]

\[\text{b. } \text{[Shona]} \quad \text{Mu-kadzi aka-teng-a ma-bhanana Ø-ese.} \quad \text{[Shona]} \]
\[1-\text{woman 1.SM.TA-buy-FV 6-banana 6-every} \]
\[\text{‘A woman bought every banana.’ (∃ > ∀, *∀ > ∃)} \quad \text{(2015-03-21-01-TD)}\]

By definition, familiar topics cannot be discourse-new. Under the assumption that Bantu preverbal subjects are (familiar) topics, preverbal subjects are predicted not to be able to present new information. In Shona, the most natural way to respond to a question like (2.87a) is to use a biclausal existential sentence as in (2.87b). Giving a reply like (2.87c), which has new information in its preverbal subject position, is possible but somewhat dispreferred.

\[(2.87) \text{ Discourse-new preverbal subjects}\]

\[\text{a. } \text{Context question}\]
\[\text{Chí-i } \_ \_ \text{ ch-àka-it-ik-a nezuro ma-nheru?} \quad \text{[Shona]} \]
\[\text{7.SM.SE.TA-do-STAT-FV yesterday 6-night} \]
\[\text{‘What happened last night?’} \quad \text{(2015-03-21-01-TD)}\]

\[\text{b. } \text{Existential construction}\]
\[\text{Pa-n-e mu-nhu } \_ \_ \text{ àka-gogodz-a pa-Ø-gonhi.} \quad \text{[Shona]} \]
\[\text{16-be.with-FV 1-person SE.1.SM.TA-knock-FV 16-5-door} \]
\[\text{‘Someone knocked on the door.’ (lit., ‘There is a person who knocked on the door.’)} \quad \text{(2015-03-21-01-TD)}\]

\[\text{c. } \text{Non-specific indefinite as preverbal subject}\]
\[\text{Mu-nhu aka-gogodz-a pa-Ø-gonhi.} \quad \text{[Shona]} \]
\[\text{1-person 1.SM.TA-knock-FV 16-5-door} \]
\[\text{‘Someone knocked on the door.’} \quad \text{(2015-03-21-01-TD)}\]

The preference for the existential construction in (2.87b) could be taken to indicate that preverbal subjects should be topics. However, the sentence in (2.87c) is not completely out. Zerbian (2006a) argues that sentences like this are acceptable in Northern Sotho despite the fact that in other respects preverbal subjects often show topic properties. She shows
that the range of Northern Sotho facts can better be explained if the relevant generalization is taken to be not that preverbal subjects must be topics but rather that preverbal subjects cannot be *narrowly focused*.¹⁴ Teasing apart this distinction is the topic of the next section.

**The preverbal position as anti-focus.** Zerbian (2006a: ch. 4) argues that while preverbal subjects in Northern Sotho are most often either familiarity topics (discourse-old) or aboutness topics (under discussion), there are contexts in which topics may not serve as preverbal subjects, and there are preverbal subjects that are demonstrably not topics. She concludes that the preverbal position is not obligatorily associated with topic (either familiarity or aboutness) but is instead anti-focus. This line of thought has been taken up by Carstens & Mletshe (2015, forthcoming) and Zeller (2008), especially for Zulu and Xhosa.

First, Zerbian (2006a) shows that the restricted nature of the preverbal subject position cannot be explained by saying that it can host only given information (familiar topics). There are contexts in which even given information (i.e., discourse-old or part of common world knowledge) cannot appear in preverbal position. For example, a forced-choice *wh*-question explicitly introduces the possible answers into the discourse, but Northern Sotho still does not allow one of these discourse-old answers to appear in preverbal subject position, as shown in (2.88–2.89).

(2.88)  *Forced choice subject wh*-question

\[ \text{Ké mang a bal-a-ng puku, Masilo goba Molatelo?} \] 
\[ \text{COP 1.who 1.AA read-FV-REL 9.book 1.Masilo or 1.Molatelo} \]

‘Who is reading the book (lit., It’s who that is reading the book), Masilo or Molatelo?’

(Zerbian 2006a: 180 (12a.i))

---

¹⁴ There is no narrow focus in (2.87) because the entire sentence is new information—what is called wide focus.
Chapter 2. \textit{Wh}-in-situ  

2.3. Restrictions on the distribution of in-situ \textit{wh}-phrases

(2.89) \textbf{Answers to (2.88)}

a. \textbf{Narrowly focused (but discourse-old) subject in situ}

\textit{*Masilo o bal-a puku.} \hfill \textit{[N. Sotho]}

1.\textit{Masilo} \hspace{1cm} 1.SM read-fv 9.book

\textit{MASILO is reading the book.} \hfill \textit{(Zerbian 2006a: 181 (13a))}

b. \textbf{Narrowly focused (but discourse-old) subject in an it-cleft}

\textit{Ké Masilo a bal-a-ng puku.} \hfill \textit{[N. Sotho]}

cop 1.\textit{Masilo} \hspace{1cm} 1.AA read-fv-rel 9.book

\textit{It’s MASILO who is reading the book.} \hfill \textit{(Zerbian 2006a: 180 (12a.ii))}

Similarly, even if an answer to a \textit{wh}-question happened to be explicitly mentioned in another part of the question, making it discourse-old, the preverbal position still cannot host the answer, illustrated in (2.90–2.91):

(2.90) \textbf{Subject \textit{wh}-question with mention of potential answer}

\textit{Ké mang a rat-a-ng mma wa Karabo?} \hfill \textit{[N. Sotho]}

cop 1.\textit{who} \hspace{1cm} 1.AA like-fv-rel 1.mother 1.of 1.Karabo

\textit{Who likes Karabo’s mother}’ (lit., ‘It’s who that likes Karabo’s mother?’) \hfill \textit{(Zerbian 2006a: 181 (12c.i))}

(2.91) \textbf{Answers to (2.90)}

a. \textbf{Narrowly focused (but discourse-old) subject in situ}

\textit{*Karabo o rat-a mma wa gagwe.} \hfill \textit{[N. Sotho]}

1.\textit{Karabo} \hspace{1cm} 1.SM like-fv 1.mother 1.of 1.POSS

\textit{KARABO likes his mother.} \hfill \textit{(Zerbian 2006a: 181 (13b))}

b. \textbf{Narrowly focused (but discourse-old) subject in an it-cleft}

\textit{Ké Karabo a rat-a-ng mma wa gagwe.} \hfill \textit{[N. Sotho]}

cop 1.\textit{Karabo} \hspace{1cm} 1.AA like-fv-rel 1.mother 1.of 1.POSS

\textit{It’s KARABO who likes his mother.} \hfill \textit{(Zerbian 2006a: 181 (12c.ii))}

\textbf{Zerbian (2006a)} also demonstrates that information that is understood to be part of common world knowledge (and thus counts as given despite not being explicitly part of the discourse) shows the same behavior in being blocked from the preverbal subject position when it is narrowly focused, shown in (2.92–2.93).
(2.92)  **Subject wh-question about world knowledge**

Ké manq a bop-il-e-ng le-fase le le-godimo?  [N. Sotho]  
COP 1.who 1.AA create-PFV-FV-REL 5-ground and 5-above  
‘Who created the heavens and the earth?’ (lit., ‘It’s who that made the earth and the heavens?’)  
*(Zerbian 2006a: 181 (12d.i))*

(2.93)  **Answers to (2.92)**

a.  **Narrowly focused (but common knowledge) subject in situ**

*Ké mo-dimo o bop-il-e le-fase le le-godimo?  [N. Sotho]*  
*COP 1-god 1.SM create-PFV-FV 5-ground and 5-above*  
‘God created the heavens and the earth.’  
*(Zerbian 2006a: 181 (13c))*

b.  **Narrowly focused (but common knowledge) subject in an it-cleft**

Ké mo-dimo yo a bop-il-e-ng le-fase le [N. Sotho]  
*COP 1-god 1.DEM 1.AA create-PFV-FV-REL 5-ground and*  
le-godimo?  
5-above  
‘It’s God who created the heavens and the earth.’  
*(Zerbian 2006a: 181 (12d.ii))*

I ran the same diagnostics for Shona and found some of the same effects, but the judgments were not as clear-cut as Zerbian (2006a) reports for Northern Sotho. My consultant judged both of the sentences in (2.95) to be acceptable, but (2.95b) “more directly answers the question.” I take this to mean that (2.95a) is somewhat infelicitous given the context, perhaps still (weakly) supporting the idea that the discourse-old Tinashe is nevertheless odd in preverbal position because it cannot receive the narrow focus that the context requires.

(2.94)  **Forced choice subject wh-question**

Ndí-Ø-ani à-ri ku-vereng-a Ø-bhuku, Ø-Rumbi kana  [Shona]  
NI-1a-who se.1a.SM-be 15-read-FV 5-book 1a-Rumbi or  
Ø-Tinashe?  
1a-Tinashe  
‘Who is reading the book (lit., It’s who that is reading the book), Rumbi or Tinashe?’  
*(2016-02-13-01-TD)*
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

(2.95) Answers to (2.94)

a. Narrowly focused (but discourse-old) subject in situ

#? Ő-Tinashe a-ri ku-vereng-a Ø-bhuku. [Shona]

1a-Tinashe 1a.sm-be 15-read-fv 5-book

‘Tinashe is reading the book.’

(2016-02-13-01-TD)

b. Narrowly focused (but discourse-old) subject in an it-cleft

Ndi-Ø-Tinashe à-ri ku-vereng-a Ø-bhuku. [Shona]

ni-1a-Tinashe se.1a.sm-be 15-read-fv 5-book

‘It’s Tinashe who is reading the book.’

(2016-02-13-01-TD)

The judgments that my consultant reported for the Shona counterparts of (2.90–2.91) and (2.92–2.93) were similar, showing a weaker effect. This may be due to the fact that these judgments were of a different sort than the vast majority of elicitation we had done. For these sentences, she was asked to judge felicity given context, but these judgments may have been more based on more general syntactic acceptability.

One might imagine that the reason for the infelicity of the focused given information appearing in the preverbal subject position in the sentences above is due to that fact that the original question was a cleft, and perhaps there is a tendency or requirement to pre-serve the question structure in the answer. However, non-subject cleft questions may be answered with focus-in-situ (e.g., see (2.75f)), suggesting that this structure preservation explanation cannot hold generally.

Second, Zerbian (2006a) argues that there are some cases of licit preverbal subjects that are neither familiar nor aboutness topics. This is particularly in presentational sentences, where all the information in the sentence is new to the discourse. An example of this in Shona is in (2.87c), which is at least marginally acceptable. Zerbian (2006a) provides several examples from Northern Sotho, elicited by asking speakers what was happening in a set of pictures (with no prior discourse context):

(2.96) Preverbal subjects in sentences with wide (presentation) focus

a. Le-sea le robetše. [N. Sotho]

5-baby 5.sm sleep.pst

‘A baby is sleeping.’

(Zerbian 2006a: 187 (20a.i))
The sentences in (2.96) have wide or presentation focus rather than narrow focus on a single constituent. They show that canonical SVO order can be used when the subject is neither discourse-old nor the theme of the sentence, casting doubt on the generalization that preverbal subjects are topics.

On the basis of data like these, Zerbian (2006a) argues that a better way to capture the facts is to say that content in the preverbal position cannot be narrowly focused. Zeller (2008) and Carstens & Mletshe (2015, forthcoming) call this an anti-focus position. In other words, preverbal subjects are not obligatorily topics, but they cannot be narrowly focused.

### 2.3.2.3 IAV and embedded preverbal wh-subjects

**The immediately after the verb (IAV) position.** As discussed above in section 2.2.2.2 and section 2.3.2.1, Shona does not have a dedicated position for wh-in-situ or focus-in-situ more generally, and the same has been shown to be true of Northern Sotho by Zerbian (2006a). This is in contrast to languages like Dzamba (Bokamba 1976), which requires wh-phrases to be sentence-final (see section 2.2.2.2). However, another possibility for such a position is found in many languages throughout narrow Bantu and even Bantoid more generally. In these languages, apart from cleft constructions, narrowly focused constituents must appear in the linear position immediately after the verb (often abbreviated IAV).

Investigation into the syntactic status of the IAV position dates back to work by Hyman (1979) and Watters (1979) on Aghem, a language of the Western Grassfields group (non-Bantu, but still within Southern Bantoid) spoken in Cameroon. In Aghem, narrowly
focused phrases, including wh-phrases, must appear immediately after the verb, so if a
temporal adjunct is focused, it will intervene between the verb and the object instead of
appearing in its canonical post-object position (Hyman & Polinsky 2010, Hyman & Wat-
ters 1984). Within narrow Bantu, several other languages have been shown to display
similar effects (see for example Downing 2006, 2011, 2012, Downing & Hyman 2015, Hy-
2011).

Zulu is perhaps the language whose IAV position has received the most attention
is SVO, with adverbial modifiers following the object, as shown in (2.97).

(2.97) Zulu canonical word order
U-theng-e ingubo entsha izolo
2sg.sm-buy-pfv 9.dress 9.new yesterday
‘You bought a new dress yesterday.’ (Buell 2009: 166 (1))

Unlike Shona, however, the temporal adjunct cannot be questioned in its canonical
position. Instead, it must appear immediately after the verb, which must agree with the
right-dislocated direct object:

(2.98) The immediately after the verb (IAV) effect
a. Wh–temporal adjunct in canonical position
*U-theng-e ingubo entsha nini?
2sg.sm-buy-pfv 9.dress 9.new when
‘When did you buy a new dress?’ (lit., ‘You bought a new dress when?’) (Buell 2009: 166 (2a))

b. Wh–temporal adjunct in IAV position
U-yi-theng-e nini, ingubo entsha?
‘When did you buy a new dress?’ (lit., ‘You bought it when, a new dress?’) (Buell 2009: 166 (2b))

Although Zulu does show some IAV effects as illustrated above, the facts are not entirely
straightforward. However, for the purposes of the discussion here we can abstract away from these details; the main point is that focus licensing in Zulu and other languages with IAV effects is more restricted than what we have seen in Shona, Northern Sotho, Kĩtharaka, Lubukusu, etc.

**Implications of the IAV for embedded wh-subjects.** Recall from section 2.3.1.3 that there is crosslinguistic variation within Bantu with respect to whether the preverbal subject position within embedded declarative clauses permits wh-phrases. Zulu does not allow wh-phrases in this position, but Shona, Lubukusu, and Kĩtharaka do. Because Zulu has IAV focus effects whereas Shona, Lubukusu, and Kĩtharaka have focus-in-situ, I propose the following generalization:

(2.99) **Correlation between IAV focus and the ban on embedded preverbal wh-subjects**

If a language has IAV effects for narrow focus (including wh-phrases), then embedded preverbal subjects cannot be narrowly focused in situ.

One way to implement this intuition is to say that languages may vary in the size of their licensing domain for focus. In the languages that allow embedded preverbal wh-subjects, the focus licensing domain includes the entire embedded clause. In the languages that ban wh-phrases and other narrowly focused phrases from embedded preverbal subject position, the focus licensing domain is restricted such that the IAV position is included in the domain but the embedded clause is not.

Thus for Shona, I propose that the licensing domain for narrow focus is the vP. This allows all postverbal constituents to be focused in situ, whether external arguments (in an inversion construction), internal arguments, adjuncts, or anything within a clausal complement of the verb.

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15. For example, Buell (2009) notes that some double object constructions (S V IO DO) allow the direct object to be focused in situ while others do not, and the IAV effect is much stronger for temporal adjuncts (as in (2.98)) than it is for locative adjuncts. Carstens & Mletshe (forthcoming) observe that all speakers reject wh-phrases as the second of the three postverbal arguments in a ditransitive expletive construction (V S IO DO), but for monotransitive expletive constructions (V S DO), some but not all speakers accept in-situ wh-direct objects.
Chapter 2. *Wh*-in-situ

2.3. Restrictions on the distribution of in-situ *wh*-phrases

For Zulu, there are several proposals that restrict focus licensing, but an influential one follows Belletti’s (2004) analysis of Italian in saying that the focused or *wh*-phrase moves to the specifier of a low FocP (i.e., below T). Because the verb lands just above this position (Zeller 2013), the result is that the focused constituent is linearly immediately after the verb. See Aboh 2007, Carstens & Mletshe 2015, forthcoming, Sabel & Zeller 2006, Van der Wal 2006, 2009 for analyses that utilize this low FocP in Bantu.¹⁶ Under this view, it is expected that the preverbal subject position within an embedded clause would not permit narrowly focused constituents, including *wh*-phrases.

The correlation in (2.99) is novel to this dissertation, and it should be tested further to examine how robustly it holds up. There are very few languages where the preverbal *wh*-subject ban has been investigated at the granularity of considering matrix versus embedded clauses. Given the messiness of the Zulu data, it would be ideal to look at Bantu languages that have more consistent IAV effects and check whether those also have the ban on embedded preverbal *wh*-subjects.

2.3.2.4 Integrating information structure with movement vs. non-movement analyses

An information structure account of the restricted distribution of *wh*-in-situ is in principle compatible with any of the analyses of the relation between the scopal position and the pronunciation site of the *wh*-phrase discussed in section 2.2. In fact, an example of a movement analysis of that relation coupled with an appeal to information structure to explain a subject–non-subject asymmetry comes from Munaro et al. (2001).

Just as in Bantu, Bellunese *wh*-subjects may not appear in the canonical preverbal subject position (Munaro et al. 2001: 161–162).

¹⁶. I will not concern myself here with the arguments against a low FocP for Zulu made by Buell (2009) and Cheng & Downing (2012). My claim is in principle compatible with any analysis of the IAV position that imposes stricter focus licensing requirements for Zulu than what is found for the Shona-type languages. The key is that the preverbal subject position is not in the right configuration to receive narrow focus, whether in the matrix clause or an embedded clause.
Chapter 2. Wh-in-situ  2.3. Restrictions on the distribution of in-situ wh-phrases

(2.100)  

Preverbal in-situ wh-subjects

a. *Che te disturbe-lo?  [Bellunese]
   who 2sg disturbs-3sg.m.nascl
   ‘Who disturb you?’  (Poletto & Pollock 2004b: 258 (27c))

b. *Chi laore-lo de pì?  [Bellunese]
   who works-3sg.m.nascl more
   ‘Who works more?’  (Poletto & Pollock 2004b: 259 (27d))

c. *Chi a-lo magnà la torta?  [Bellunese]
   who has-3sg.m.nascl eaten the pie
   ‘Who has eaten the pie?’  (Poletto & Pollock 2004b: 259 (27e))

Instead, a cleft construction must be used:

(2.101)  

Clefted wh-subject

E-lo che te disturba?  [Bellunese]
   is-3sg.m.nascl what that 2sg disturbs
   ‘What is it that disturbs you?’  (Munaro et al. 2001: 162 (36))

This pattern, in which only wh-subjects require clefting, is highly reminiscent of the Bantu facts discussed above. However, recall from section 2.2.2 that Bellunese has only apparent wh-in-situ, in which wh-phrases appear sentence-finally rather than sentence-initially or in their canonical position. Island diagnostics (see (2.44)) confirm that the relation between the pronunciation site and scopal position is derived via movement, which is then obscured by a further step of remnant movement.

For Munaro et al. (2001), the unavailability of this strategy for subject extraction boils down to information structure considerations rather than the locality-based explanation one might expect given the prominence of movement in the analysis. They propose that the non-assertive subject clitics that appear in Bellunese matrix wh-questions originate in Topic (because they agree with the subject in SpecTopP in φ-features) and then move up to Force (because they mark sentential force). This is not possible with subject wh-questions because there would be an information structure conflict if the wh-subject were to move through SpecTopP. Subject cleft questions avoid this problem because the cleft clause is an embedded clause rather than a matrix clause, so it does not require the non-assertive
subject clitic, the source of the information structure conflict.

As discussed in section 2.2, the Bantu facts are more amenable to an analysis that does not posit movement between the \textit{wh}-phrase’s pronunciation and scopal positions. The unselective binding of a variable by a question operator is independent of focus licensing, so the information structure account proposed here does not affect the conclusions reached in section 2.2.\footnote{That is at least true for Shona. It may be that there would be some interaction between focus licensing and computation of alternatives, but this would need to be worked out more fully to be able to determine that.}

\section*{2.3.2.5 Summary}

Because \textit{wh}-phrases have the same distribution as narrowly focused non-\textit{wh}–phrases, it makes sense to consider the restrictions on this distribution to be related to information structure. Specifically, I have shown that the matrix preverbal subject position is an anti-focus position. In all the languages under investigation, focus licensing is restricted to the \textit{vP}, but in some languages like Zulu, the focus licensing domain is restricted even further. The consequence of this variation in the size of the focus licensing domain is that the languages with IAV focus effects also do not permit \textit{wh}-phrases in preverbal subject position within embedded clauses, whereas \textit{wh}-phrases may appear there in the languages that permit narrow focus in any postverbal position. In echo or quiz questions, \textit{wh}-phrases do not need to have narrow focus (Jaeger 2004, Sudo 2010), so they are not subject to these restrictions and are able to appear in any position.

\section*{2.3.3 Improper movement}

This section considers a movement-based approach to the ban on \textit{wh}-phrases in preverbal subject position, ultimately concluding that it cannot account for the full range of facts that fall out straightforwardly from the focus licensing approach proposed above.
2.3.3.1 Explanation.

Sabel & Zeller (2006) derive the impossibility of preverbal in-situ wh-subjects in Zulu (see (2.58)) by appealing to the ban on improper movement, that is, movement from an A’-position to an A-position (Chomsky 1973). The source of the subject–non-subject asymmetry for them does not involve movement between the pronunciation site of a wh-phrase and its scopal position (they use unselective binding for that relation), but rather between the wh-phrase’s base position and where it is pronounced.

According to Sabel & Zeller (2006), Zulu [+wh] features are always weak, so they cannot drive movement. When A’-movement occurs in wh-cLEFTs, it is driven by a strong [+focus] feature on a low Focus head between VP and TP (Aboh 2007, Belletti 2004, Ndayiragije 1999, Van der Wal 2009), which selects for a copular VP (see chapter 3 for further discussion). Sabel & Zeller (2006) assume that all clauses in a wh-question include this low FocP, but in in-situ questions, the [+focus] feature in Foc is weak, so it does not select for a copular VP or need to be checked by a [+focus] element in SpecFocP. However, for a [+wh, +focus] subject to move from its base position to SpecTP, it would have to stop in SpecFocP to check the weak [+focus] feature as a free rider. Moving from SpecFocP, an A’-position, to SpecTP, an A-position, would result in improper movement.

2.3.3.2 Theoretical evaluation: Improper movement and free riders.

There are several potential problems with this analysis. The first concerns the role of improper movement. Many Bantu languages exhibit hyper-raising (Carstens & Diercks 2013, Diercks 2012, Harford 1985, Zeller 2006b), in which arguments raise out of a finite clause to matrix subject position, apparently violating the ban on improper movement. Obata & Epstein (2011) suggest that the ban on improper movement might be parametrized, with Bantu languages (specifically those that have φ-agreement on C, which would include Zulu) allowing it. Thus, the burden is on proponents of this approach to independently establish the impropriety of improper movement in the language so that it can be a viable
way to block \textit{wh}-subjects from appearing in preverbal subject position.

A second issue concerns the assumption that the \textit{wh}-subject “would have to stop in SpecFocP on its way to SpecTP in order to check [the weak [+focus] feature in Foc — JAZ] as a ‘free rider’” (Sabel \& Zeller 2006: 281n9). When Chomsky (1995: 268–70, 275) introduced the notion of a free rider, it did not involve checking features of a head intervening between the base and target positions of a moving constituent. Instead, when a feature F on a lexical item LI Moves to a target, F pied-pipes all the other features on LI, and these features (the free riders) may check features of the target. An example would be the checking of the \phi-features on T by the \phi-features of the subject that “rode along” with the Case feature (assuming that this unchecked Case feature is what drives A-movement). It is not clear what justification Sabel (2000) and Sabel \& Zeller (2006) have for extending this notion to become a requirement that free rider features must check features on intervening heads (particularly weak ones); even later implementations using Agree (e.g., Rezac 2004) do not make this change.

Sabel \& Zeller’s (2006) analysis of the ban on preverbal \textit{wh}-subjects depends on the \textit{wh}-subject being required to stop off in the low SpecFocP due to the free rider requirement, where it would get stuck because moving to SpecTP would involve improper movement. I have called into question whether such a context could force free rider feature checking and whether Zulu can be said to have improper movement, but even these difficulties could be surmounted, the improper movement approach makes some empirically incorrect predictions, which will be discussed next.

\textbf{2.3.3.3 Empirical evaluation: \textit{Wh}-phrases within topicalized non-subjects.}

First of all, the improper movement approach cannot account for pattern found in Shona, Lubukusu, and Kïtharaka, in which preverbal \textit{wh}-subjects are unacceptable in matrix clauses but acceptable when embedded (section 2.3.1.3). There is nothing in Sabel \& Zeller’s (2006) analysis that would suggest that preverbal \textit{wh}-subjects should be available
2.3. Restrictions on the distribution of in-situ *wh*-phrases

in any clause.¹⁸

But a more serious flaw of the analysis is that the only position it predicts will not be able to host in-situ *wh*-phrases is an A-position above the low FocP. However, there is an additional restriction on the distribution of *wh*-in-situ that contradicts this prediction: *wh*-non-subjects cannot be topicalized, and neither can non-subject phrases containing *wh*-phrases. These topicalized non-subjects thus behave exactly the same as preverbal subjects.

In Shona, for example, a direct object can be topicalized as in (2.102b), with concomitant object marking on the verb.

(2.102) *Shona non-subject topicalization*

<table>
<thead>
<tr>
<th>a. No topicalization</th>
<th>b. Topicalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø-Rumbi aka-vereng-a [DP bhuku iro].</td>
<td>[DP Bhuku iro], Ø-Rumbi aka-ri-vereng-a</td>
</tr>
<tr>
<td>'Rumbi read that book.'</td>
<td>'That book, Rumbi read it.'</td>
</tr>
</tbody>
</table>

When the direct object is a *wh*-phrase like *chiĩ* ‘what’, however, topicalization is impossible:

(2.103) *Wh*-phrase as (topicalized) non-subject

<table>
<thead>
<tr>
<th>a. Without topicalization</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø-Rumbi aka-vereng-a <em>chiĩ</em>?</td>
<td></td>
</tr>
<tr>
<td>1a-Rumbi 1.S.M.TA-read-fv 7-chapter</td>
<td></td>
</tr>
<tr>
<td>'What did Rumbi read?' (lit., 'Rumbi read what?')</td>
<td></td>
</tr>
<tr>
<td>(2015-04-14-01-TD)</td>
<td></td>
</tr>
</tbody>
</table>

¹⁸. If some languages allowed low FocP to occur only in matrix clauses, embedded clauses in those languages should allow in-situ *wh*-subjects, as we find in Shona and Kĩtharaka. However, Sabel & Zeller (2006) rely on the presence of the low FocP (with a strong [+focus] feature) in embedded clauses in their analysis of partial *wh*-movement. If a looser restriction on in-situ *wh*-subjects correlated with a lack of partial *wh*-movement, that would support the hypothesis that these languages lack embedded low FocP, but that correlation does not hold: both Shona and Kĩtharaka have partial *wh*-movement. This hypothesis could perhaps be rescued by claiming that it is only weak [+focus] Foc that cannot appear in embedded clauses in Shona and Kĩtharaka. Still, the key point here is that Sabel & Zeller’s (2006) analysis is designed to account for the Zulu scenario in which the ban on preverbal *wh*-subjects holds in all clauses; some work would need to be done to extend it to the more permissive pattern found in Shona and other languages, and that raises the question of whether the initial intuition of tying the ban to improper movement is on the right track.
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

b. *With topicalization

*Ch-i, Ø-Rumbi aka-chi-vereng-a ___? [Shona]

7-what 1a-Rumbi 1.SM.TA-7.OM-read-fv

‘What, did Rumbi read it?’

(2015-04-14-01-TD)

The same holds true for D-linked wh-phrases like bhuku ripi ‘which book’, as shown in (2.104).

(2.104) Wh-phrase within (topicalized) non-subject

a. *Without topicalization

Ø-Rumbi aka-vereng-a [DP Ø-bhuku ri-pi]? [Shona]

1a-Rumbi 1.SM.TA-read-fv 5-book 5-which

‘Which book did Rumbi read?’ (lit., ‘Rumbi read which book?’)

(2015-04-14-01-TD)

b. *With topicalization

*[DP Ø-bhuku ri-pi], Ø-Rumbi aka-ri-vereng-a ___? [Shona]

5-book 5-which 1a-Rumbi 1.SM.TA-5.OM-read-fv

‘The beginning chapter of which book, did Rumbi read it?’

(2015-04-14-01-TD)

The examples in (2.105–2.107) show that the same pattern holds true when the wh-
phrase is the complement of the direct object.

(2.105) Shona complex non-subject topicalization

a. *No topicalization

Ø-Rumbi aka-vereng-a [DP chi-kamu che-ku-tang-a] [Shona]

1a-Rumbi 1.SM.TA-read-fv 7-chapter 7.of-15-begin-fv

che-Ø-bhuku iro].

7.of-5-book 5.that

‘Rumbi read the beginning chapter of that book.’

(2015-04-14-01-TD)

b. *Topicalization

[DP Chi-kamu che-ku-tang-a che-Ø-bhuku iro], Ø-Rumbi [Shona]

7-chapter 7.of-15-begin-fv 7.of-5-book 5.that 1a-Rumbi

aka-chi-vereng-a ___.

1.SM.TA-7.OM-read-fv

‘The beginning chapter of that book, Rumbi read it.’

(2015-04-14-01-TD)
Chapter 2. \textit{Wh}-in-situ \hspace{1em} 2.3. Restrictions on the distribution of in-situ \textit{wh}-phrases

(2.106) \textit{Wh}-in-situ within (topicalized) non-subject

\hspace{1em} a. \textit{Without topicalization}
\hspace{1em} 'What did Rumbi read the beginning chapter of?' (lit., 'Rumbi read the beginning chapter of what?') \hspace{1em} (2015-04-14-01-TD)

\hspace{1em} b. \textit{With topicalization}
\hspace{1em} 'The beginning chapter of what, did Rumbi read it?' \hspace{1em} (2015-04-14-01-TD)

(2.107) \textit{Wh}-in-situ within (topicalized) non-subject

\hspace{1em} a. \textit{Without topicalization}
\hspace{1em} 'Which book did Rumbi read the beginning chapter of?' (lit., 'Rumbi read the beginning chapter of which book?') \hspace{1em} (2015-04-14-01-TD)

\hspace{1em} b. \textit{With topicalization}
\hspace{1em} 'The beginning chapter of which book, did Rumbi read it?' \hspace{1em} (2015-04-14-01-TD)

Finally, although \textit{wh}-phrases are acceptable within islands generally (section 2.2.4.2), topicalized non-subjects behave like preverbal subjects in that when they include an island that itself includes a \textit{wh}-phrase, the sentence is ungrammatical, as shown in (2.108–2.110) for Shona, Lubukusu, and Swahili. I argued in section 2.3.1.2 that this ungrammaticality is not due to island sensitivity but instead due to the \textit{wh}-phrase being embedded within the preverbal subject position. Here I follow Wasike (2007) in concluding that the same
is true for \textit{wh}-phrases within islands within topicalized non-subjects.

(2.108) \textit{Relative clause modifying direct object}

\begin{itemize}
\item a. \textit{Ø-Taurai aka-bik-a} \textit{[DP mi-riwo ya-v-aka-teng-er-a} [Shona]
\textit{1a-Taurai 1a.SM.TA-cook-FV 4-vegetable 4.NSE-2.SM-TA-buy-APPL-FV Ø-Tendai].}
\textit{1a-Tendai}
\textit{’Taurai cooked the vegetables that they bought (for) Tendai.’}
\textit{(2015-04-14-01-TD)}
\item b. \textit{Nasimiyu a-a-tekh-a} \textit{[DP chii-nyenyi ni-cho} [Lubukusu]
\textit{1.Nasimiyu 1.SM-pst-cook-FV 10-vegetable 110.NSE 1.Simiyu a-a-kul-il-a 1.Naakhaanu].}
\textit{Naakhaanu}
\textit{’Nasimiyu cooked the vegetables that Simiyu bought for Naakhaanu.’}
\textit{(Wasike 2007: 277 (67a))}
\item c. \textit{Hadija a-li-u-kat-a} \textit{[DP m-ti amb-o Juma} [Swahili]
\textit{a-li-m-pand-i-a 1.SM-pst-1.OM-plant-APPL-FV 1-farmer m-kulima].}
\textit{1-farmer}
\textit{’Hadija cut the tree that Juma planted for the farmer.’}
\textit{(Wasike 2007: 278 (68a))}
\end{itemize}

(2.109) \textit{Topicalization of direct object modified by a relative clause}

\begin{itemize}
\item a. \textit{[DP Mi-riwo ya-v-aka-teng-er-a Ø-Tendai], Ø-Taurai} [Shona]
\textit{4-vegetable 4.NSE-2.SM-TA-buy-APPL-FV 1a-Tendai 1a-Taurai aka-i-bik-a}
\textit{1a.SM.TA-4.OM-cook-FV}
\textit{’The vegetables that they bought (for) Tendai, Taurai cooked (them).’}
\textit{(2015-04-14-01-TD)}
\item b. \textit{[DP Chii-nyenyi ni-cho Simiyu a-a-kul-il-a} [Lubukusu]
\textit{10-vegetable 110.NSE 1.Simiyu 1.SM-pst-buy-APPL-FV}
\textit{Naakhaanu], Nasimiyu a-(chi)-tekh-a}
\textit{1.Naakhaanu 1.Simiyu 1.SM-pst-10.OM-cook-FV}
\textit{’The vegetables that Simiyu bought for Naakhaanu, Nasimiyu cooked.’}
\textit{(Wasike 2007: 277 (67b))}
\end{itemize}
Chapter 2. Wh-in-situ 2.3. Restrictions on the distribution of in-situ wh-phrases

(2.110) Wh-phrase in relative clause modifying a topicalized direct object

a. *[[DP Mi-riwo ya-v-aka-teng-er-a Ø-ani], Ø-Taurai [Shona]
   4-vegetable 4.NSE-2.SM-TA-buy-APPL-FV 1a-who 1a-Taurai
   aka-i-bik-a ____?
   1a.SM.TA-4.OM-COOK-FV
   'Who is the person such that the vegetables they bought for that person, Taurai cooked?' (lit., 'The vegetables they bought who(m), Taurai cooked them?') (2015-04-14-01-TD)

b. *[[DP Chii-nyenyi ni-cho Simiyu a-a-kul-il-a naanu], Nasimiyu a-a-(chi)-tekh-a ____?
   1.who 1.Nasimiyu 1.SM-PST-10.OM-COOK-FV
   'The vegetables that Simiyu bought for who(m), Nasimiyu cooked?'
   (Wasike 2007: 277 (67b))

c. *[[DP M-ti amba-o Juma a-li-m-pand-i-a nani], Hadija a-li-u-kat-a ____?
   1-who 1.Hadija 1.SM-PST-3.OM-CUT-FV
   'The tree that Juma planted for who(m), Hadija cut it?'
   (Wasike 2007: 278 (68b))

The destination for topicalization is in the left periphery, above the preverbal subject. Thus, this is A’-movement, and so there would be no improper movement if a non-subject moved to the A’-(low) FocP and then to the A’-TopP. Therefore, Sabel & Zeller’s (2006) improper movement account of the ban on wh-phrases in preverbal subject position cannot explain why wh-phrases are also banned from topicalized non-subjects.

However, an approach based on focus licensing is able to straightforwardly account for why wh-phrases are banned from both preverbal subjects and topicalized non-subjects. As discussed in section 2.3.2.3, the focus licensing domain for Shona is the vP, so both the preverbal subject position and the left-peripheral position for topicalization are anti-focus
Chapter 2. *Wh*-in-situ  

2.3. Restrictions on the distribution of in-situ *wh*-phrases positions.

### 2.3.4 Anti-locality

Given that both preverbal subjects and topicalized non-subjects are closer to a *wh*-phrase’s scopal position than postverbal subjects or non-subjects are, one could imagine trying to derive the asymmetrical distribution of *wh*-in-situ in terms of anti-locality. The concept of anti-locality is that some relations may be too short. Anti-locality restrictions on movement relations have taken various forms; for example, Grohmann (2003) divides the clausal spine into three domains and bans movement within a domain, whereas Erlewine (n.d.) proposes a constraint banning movement from the specifier of a phrase to the specifier of the next higher phrase. Aside from movement, Condition B of the Binding Theory (Chomsky 1981) may be considered to be an anti-locality requirement on the relation between a pronoun and its antecedent.

Muriungi (2011) examines the ban on *wh*-phrases in preverbal subject position in Kĩ-tharaka, showing that it applies in matrix interrogative clauses but not declarative clauses embedded within interrogative clauses. He also says that the ban applies in interrogative clauses embedded within declarative clauses, but see footnote 12 in section 2.3.1.3 for discussion of that claim. Muriungi (2011: 825–831) calls the relation between a *wh*-phrase and is scopal position “co-indexation with a *wh*-licensing operator in SpecFocP,” rejecting unselective binding and covert movement because of intervention effects (see section 2.2.5.2).

While the intuition that anti-locality plays a role in restricting the distribution of *wh*-in-situ has some appeal, it is not obvious to me how the co-indexation relation Muriungi proposes is actually different from unselective binding and why it should be subject to an anti-locality constraint. Further work is necessary to determine ways to test the relative merits of the focus licensing versus anti-locality approaches.
2.3.5 Summary

While Bantu wh-in-situ may occur within islands and without any special interrogative or extraction marking morphology, its distribution is not completely unrestricted. Wh-phrases may not appear as or within a preverbal subject or a topicalized non-subject. Because narrow focus is impossible in those same environments, I take the asymmetrical distribution of wh-in-situ to be due to constraints on the domain of focus licensing. This approach makes welcome predictions about crosslinguistic variation with respect to the possibility of embedded wh-subjects: the languages that ban all wh-subjects whether embedded or not are also the languages that require focused phrases to appear immediately after the verb (IAV). In addition to facing several theoretical problems, Sabel & Zeller’s (2006) alternative analysis of the ban on wh-phrases in preverbal subject position using improper movement cannot account for the full range of data found within and across Bantu languages, whereas the information structure approach can.

2.4 Outstanding issues

2.4.1 Wh-phrases in the complement of the preverbal subject

One outstanding puzzle is that in Shona, wh-phrases cannot be preverbal subjects (see (2.58)) or be within a relative clause island within a preverbal subject (see (2.61a)), but they are acceptable as the complement of a preverbal subject. For example, both the insitu and clefted of the following questions are acceptable:

(2.111)

a. Preverbal subject whose complement is a wh-phrase

[DP Mu-tyairi we-chi-i] aka-konzer-a Ø-bongozozo? [Shona]
1-driver 1.of-7-what 1.sm.ta-cause-fv 5-riot

‘What did the driver of cause a riot?’ (lit., ‘The driver of what caused the riot?’)  (2015-04-14-01-TD)
b. *Clefted subject whose complement is a wh-phrase*

\[
[\text{DP } \text{Mú-tyairi } \text{we-} \text{chi-i}] \quad \text{aka-konzer-a}
\]

[Shona]

\[
\text{ni.1-driver } \text{1.of-7-what } \text{se.1.sm.ta-cause-fv}
\]

\[
\text{Ø-bongozozo?}
\]

5-riot

‘What did the driver of cause a riot?’ (lit., ‘It’s the driver of what who caused the riot?’) (2015-04-14-01-TD)

c. *Postverbal direct object whose complement is a wh-phrase*

\[
\text{W-aka-on-a } [\text{DP } \text{mu-tyairi } \text{we-} \text{chi-i}]?
\]

[Shona]

\[
\text{2-ta-see-fv } \text{1-driver } \text{1.of-7-what}
\]

‘What did you see the driver of?’ (lit., ‘You saw the driver of what?’) (2015-04-14-01-TD)

(2.112) a. *Preverbal subject whose complement is a D-linked wh-phrase*

\[
[\text{DP } \text{Mu-tyairi } \text{we-Ø-mota } \text{i-pi}] \quad \text{aka-konzer-a}
\]

[Shona]

\[
\text{1-driver } \text{1.of-9-car } \text{9-which } \text{1.sm.ta-cause-fv}
\]

\[
\text{Ø-bongozozo?}
\]

5-riot

‘Which car did the driver of cause a riot?’ (lit., ‘The driver of which car caused the riot?’) (2015-04-14-01-TD)

b. *Clefted subject whose complement is a D-linked wh-phrase*

\[
[\text{DP } \text{Mú-tyairi } \text{we-Ø-mota } \text{i-pi}] \quad \text{aka-konzer-a}
\]

[Shona]

\[
\text{ni.1-driver } \text{1.of-9-car } \text{9-which } \text{se.1.sm.ta-cause-fv}
\]

\[
\text{Ø-bongozozo?}
\]

5-riot

‘Which car did the driver of cause a riot?’ (lit., ‘It’s the driver of which car who caused the riot?’) (2015-04-14-01-TD)

c. *Postverbal direct object whose complement is a D-linked wh-phrase*

\[
\text{W-aka-on-a } [\text{DP } \text{mu-tyairi } \text{we-Ø-mota } \text{i-pi}]?
\]

[Shona]

\[
\text{2-ta-see-fv } \text{1-driver } \text{1.of-9-car } \text{9-which}
\]

‘Which car did you see the driver of?’ (lit., ‘You saw the driver of which car?’) (2015-04-14-01-TD)

(2.113) a. *Preverbal subject whose complement is a wh-phrase*

\[
[\text{DP } \text{Mi-fananidzo } \text{ya-Ø-ani}] \quad \text{y-aka-konzer-a } \text{Ø-bongozozo?}
\]

[Shona]

\[
\text{4-picture } \text{4.of-1a-who } \text{4.sm.ta-cause-fv}
\]

5-riot

‘Who did the pictures of cause a riot?’ (lit., ‘The pictures of who(m) caused the riot?’) (2015-04-14-01-TD)
b. *Clefted subject whose complement is a wh-phrase*

\[
\begin{align*}
\text{DP} & \text{ Mi-fananidzo } \text{ ya-Ø-ani}\quad y-àka-konzer-a \quad \text{ [Shona]} \\
\text{n.1.4-picture} & \quad \text{4-of-1a-who} \quad \text{4.sm-se.ta-cause-fv} \\
\emptyset & \text{ bongozozo?} \\
5 & \text{ riot} \\
\end{align*}
\]

'Who did the pictures of cause a riot?' (lit., 'It’s the pictures of who(m) that caused the riot?')

(2.114) a. *Preverbal subject whose complement is a D-linked wh-phrase*

\[
\begin{align*}
\text{DP} & \text{ Mi-fananidzo } \text{ ye-mu-imbi u-pi}\quad y-àka-konzer-a \quad \text{ [Shona]} \\
\text{4-picture} & \quad \text{4.of-1-singer 1-which} \quad \text{4.sm-ta-cause-fv} \\
\emptyset & \text{ bongozozo?} \\
5 & \text{ riot} \\
\end{align*}
\]

'Which singer did the pictures of cause a riot?' (lit., ‘The pictures of which singer caused the riot?’)

Future research on this question should test this using a wider range of complement-taking nouns in the subject, particularly those in noun classes (such as 1a, 5, or 9) and
whose copula is segmental rather than purely tonal (the difference between the (a) and (b) sentences above is based solely on the tone of the subject noun’s prefix and the tone of the verb’s subject marker). It could also be enlightening to construct structured conversation scenarios in which multiple speakers could use sentences like these in a more naturalistic context.

Relatedly, *wh*-phrases are acceptable within the clausal complement of a preverbal subject, unlike the pattern Wasike (2007) observed for Lubukusu, Swahili, and Runyoro (see section 2.3.1.2).

(2.115) **Wh-in-situ within the clausal complement of a subject DP**

a. *In-situ wh-subject*

[DP Ny-aya ye-kuti **chi-i** ch-aka-rum-a Ø-Taurai] [Shona]

9-story 9.of-that **7-what** 7.SM-TA-bite-FV 1a-Taurai

y-aka-va-tsamw-is-a?


‘What did [the story that ____ bit Taurai] anger them?’ (lit., ‘[The story that what bit Taurai] angered them?’) (2016-03-08-01-TD)

b. *In-situ wh-direct object*

[DP Ny-aya ye-kuti y-aka-rum-a Ø-ani] [Shona]

9-story 9.of-that 7.SM-TA-bite-FV 1a-who

y-aka-va-tsamw-is-a?


‘Who(m) did [the story that it (their dog) bit ____] anger them?’ (lit., ‘[The story that it bit who(m)] angered them?’) (2016-03-08-01-TD)

c. *In-situ wh-locative adjunct*

[DP Ny-aya ye-kuti y-aka-rum-a Ø-Taurai **pa-pi**] [Shona]

9-story 9.of-that 7.SM-TA-bite-FV Ø-Taurai 16-which

y-aka-va-tsamw-is-a?


‘Where did [the story that it (their dog) bit Taurai ____] anger them?’ (lit., ‘[The story that it bit Taurai where] angered them?’) (2016-03-08-01-TD)
Chapter 2. *Wh*-in-situ

2.5 Conclusion

The facts in this section suggest that the complement of nouns is also a focus licensing domain in Shona, in addition to matrix vP. Why this would not be case in Lubukusu, Runyoro, Swahili is a question for future research.

2.4.2 Other analyses of *wh*-in-situ

I am aware of several more analyses of *wh*-in-situ but have not been able to include them in this chapter. These include overt movement of a null operator (Watanabe 1992), overt movement of a *wh*-feature (Cheng & Rooryck 2000, Pesetsky 2000, Wasike 2007, Watanabe 2001), downward Agree (Abels 2012a), clausal pied-piping (Choe 1987, Nishigauchi 1986), and a range of prosody-based analyses (Richards 2010, Kandybowicz 2014, Kandybowicz & Torrence 2012, 2014, 2015).

2.5 Conclusion

This chapter illustrates a set of properties common to Bantu *wh*-in-situ and also highlights a few areas where languages differ, such as whether *wh*-in-situ is subject to intervention effects and whether embedded clauses allow preverbal in-situ *wh*-subjects. Non-movement analyses such as unselective binding and alternative computation capture the
Bantu pattern much better than movement ones, as shown in Table 2.4. Furthermore, information structure plays a role in filtering out sentences where wh-phrases appear in the preverbal position, which excludes narrowly focused elements. This kind of focus licensing account can explain a newly posited correlation between a requirement that focus be immediately after verb (IAV) and the impossibility of wh-phrases in the preverbal subject position of embedded clauses.

Another difference between in-situ wh-subjects and in-situ wh–non-subjects that deserves mention is that while wh-in-situ is the preferred wh-question formation strategy for non-subject wh-phrases, wh-ex-situ seems more natural for subject wh-phrases, even for the embedded ones that may optionally remain in situ. The partial wh-movement counterparts of (2.69) are preferred over the full wh-movement counterparts; the wh-in-situ versions shown in (2.69) are reported to be the least natural, while still fully grammatical. These kinds of preferences between strategies are rarely, if ever, mentioned in print, but according to Jason Kandybowicz (pers. comm.), Krachi, a non-Bantu Niger-Congo language spoken in Ghana, has a different pattern of preference. There, full wh-movement is preferred, followed by partial wh-movement, and lastly wh-in-situ, regardless of whether the wh-phrase is a subject or non-subject. I leave as an open empirical question how widely these preferences vary across languages and whether they correlate with something deeper in the grammatical derivation of these strategies.
Chapter 3

Full wh-movement

3.1 Introduction

3.1.1 What is full wh-movement?

In full wh-movement, a wh-phrase appears in the position where it takes scope, as it does in normal wh-questions in English. Within generative syntax, this is taken to be the result of wh-movement of the wh-phrase from its base position to the scopal position, possibly with stops at intermediate landing sites along the way.

In many sentences with full wh-movement, the wh-phrase is linearly first, but this is neither a necessary nor a sufficient condition for full wh-movement. Section 2.2.2.2 in chapter 2 discusses Dzamba, whose wh-phrases must be sentence-final, but the analysis advocated there was that this is really a case of full wh-movement with remnant movement of the rest of the sentence to a position above the wh-phrase, leaving it at the end (disguised movement). This chapter will explore cases of what I will call apparent full wh-movement, in which silent structure intervenes between a wh-phrase’s scopal position and where it is pronounced. Because of these scenarios, it is critical to define full wh-movement in terms of the structural/scopal position of the wh-phrase instead of its linear position.
3.1.2 The basic picture of Bantu full wh-movement

With the exception of the languages discussed in section 2.2.2.2 (Dzamba, Lingala, and Likila), all Bantu languages that I have studied allow wh-phrases to appear sentence-initially. As discussed above, this often indicates that the wh-phrase is in its scopal position, but there are counterexamples on both sides of the correlation. Some examples from a diverse set of languages within Bantu are given below.

(3.1) Wh-ex-situ Akɔɔse
a. No extraction
Mw-ǎn 1-child ě-pim-ɛɛ́ 10-cocoyam Ø-mbaaŋgé. [Akɔɔse]
The child didn’t throw out the cocoyams. (Hedinger 2008: 105 (295))

b. Ex-situ wh–direct object
‘What didn’t the child throw out?’ (Hedinger 2008: 106 (297))

(3.2) Wh-ex-situ in Bakweri
a. No extraction
Na-zoz-ì. 1sg.sm-wash-prf [Bakweri]
‘I have washed.’ (Marlo & Odden 2007: 27 (29))

b. Ex-situ wh–direct object
Njé who 1-ná-zóz-ì ? [Bakweri]
‘Who(m) have I washed?’ (Marlo & Odden 2007: 27 (31b))

(3.3) Wh-ex-situ in Kikuyu
a. No extraction
‘Kamau told Kanake that Kariůki cut the tree.’ (Zaenen 1983: 473 (11))
3.1. Introduction

b. *Long-distance ex-situ wh-subject*

\[
\begin{align*}
\text{Nóo} & \quad \text{Kámaú è́r-íré} \quad \text{Ka:náké [CP áte ___ o-t\{Kikinyu\}]
\text{ni.1.who} & \quad 1.\text{Kamau} \quad 1.\text{SM-tell-pst} \quad 1.\text{Kanake} \quad \text{that} \quad 1.\text{AA-cut-pst} \quad \text{tree} \quad \text{mote}?
\end{align*}
\]

‘Who did Kamau tell Kanake cut the tree?’ (Zaenen 1983: 473 (13))

(3.4) *Wh-ex-situ in Kilega*

a. *No extraction: canonical subject agreement appears*

\[
\begin{align*}
\text{Mw-ána} & \quad \text{mu-sóga á-ku-kit-ag-a} \quad \text{bú-bo.} \quad [\text{Kilega}]
1.\text{child} & \quad 1.\text{nice} \quad 1.\text{SM-prog-do-hab-fv} \quad 14-\text{that}
\end{align*}
\]

‘A nice child always/usually does that.’ (Kinyalolo 1991: 15 (1a))

b. *Subject extraction: anti-agreement appears*

\[
\begin{align*}
\text{Mw-ána} & \quad \text{u-a} \quad \text{1-of who} \quad \text{AA.sg-prog-do-hab-fv} \quad 14-\text{that} \quad \text{bú-bo?} \quad [\text{Kilega}]
1.\text{child} & \quad \text{u-of} \quad \text{nází who} \quad \text{á-ku-kit-ag-a} \quad \text{bú-bo?}
\end{align*}
\]

‘Whose child (usually) does that?’ (Kinyalolo 1991: 20 (12b))

c. *Subject extraction: canonical subject agreement blocked*

\[
\begin{align*}
\ast \text{Mw-ána} & \quad \text{u-a} \quad \text{1-of who} \quad \text{AA.sg-prog-do-hab-fv} \quad 14-\text{that} \quad \text{bú-bo?} \quad [\text{Kilega}]
1.\text{child} & \quad \text{u-of} \quad \text{nází who} \quad \text{á-ku-kit-ag-a} \quad \text{bú-bo?}
\end{align*}
\]

‘Whose child (usually) does that?’ (Kinyalolo 1991: 20 (12c))

(3.5) *Wh-ex-situ in Lubukusu*

a. *No extraction*

\[
\begin{align*}
\text{Nafula} & \quad \text{a-a-siim-a} \quad \text{Wafula} \quad [\text{Lubukusu}]
1.\text{Nafula} & \quad 1.\text{SM-prs-love-fv} \quad 1.\text{Wafula}
\end{align*}
\]

‘Nafula loves Wafula.’ (Wasike 2007: 234)

b. *Ex-situ wh-direct object*

\[
\begin{align*}
\text{Naanu} & \quad \text{ni-ye Nafula} \quad \text{a-a-siim-a} \quad \text{?} \quad [\text{Lubukusu}]
1.\text{who} & \quad \text{N1-1} \quad 1.\text{Nafula} \quad 1.\text{SM-prs-love-fv}
\end{align*}
\]

‘Who is it that Nafula loves?’ (Wasike 2007: 234)

c. *Long-distance ex-situ wh-subject*

\[
\begin{align*}
\text{Naanu} & \quad \text{ni-ye ba-many-ile} \quad \text{ka-ma-tunda?} \quad [\text{Lubukusu}]
1.\text{who} & \quad \text{N1-1} \quad 2.\text{SM-know-pst} \quad 1.\text{SE-1.SM-pst-buy 6-6-fruit}
\end{align*}
\]

‘Who do they know bought fruit?’ (Diercks 2010: 188 (161))
3.1.3 Theoretical issues at stake

As discussed in chapter 2, the primary theoretical question raised by \textit{wh}-in-situ is the nature of the relation between the scopal position and the pronunciation site of the \textit{wh}-phrase. Similarly, the primary theoretical question raised by full \textit{wh}-movement is the nature of the relation between the scopal position (which by definition is also the pronunciation site) and the base position of the \textit{wh}-phrase. Is movement involved in establishing this relation? If so, is the moving element the \textit{wh}-phrase or a null operator? Finally, is this movement driven by the \textit{wh}-ness of the \textit{wh}-phrase or by focus?

A second question, already alluded to above, is whether full \textit{wh}-movement is the same thing as having a sentence-initial \textit{wh}-phrase. In other words, is the set of questions with full \textit{wh}-movement (i.e., with the \textit{wh}-phrase pronounced in scopal position) coextensive with the set of questions with the \textit{wh}-phrase pronounced linearly first? If not, what is the structure and derivation of the questions in the non-overlapping areas of those sets (that is, questions with sentence-initial \textit{wh}-phrases that are not in their scopal position and questions with non-sentence-initial \textit{wh}-phrases that are in their scopal position)?

This chapter centers around a case study of Shona \textit{wh}-ex-situ, with some discussion of true and apparent full \textit{wh}-movement in other Bantu languages. I will argue that in Shona, what appears at first glance to be full \textit{wh}-movement within a single clause is actually relativization of a \textit{wh}-phrase within a biclausal cleft construction. Thus, this is only \textit{apparent} full \textit{wh}-movement because there is silent structure that intervenes between the scopal position of the \textit{wh}-phrase and its pronunciation site. Still, the \textit{wh}-phrase itself moves to
this pronunciation site, as shown by island and reconstruction effects.

### 3.1.4 Roadmap

First, I introduce the basic properties of Shona wh-ex-situ in section 3.2.1. Next, I examine island effects in section 3.2.2 and reconstruction effects in section 3.2.3. In section 3.2.4, I establish my argument that Shona wh-ex-situ is a biclausal cleft construction. Section 3.2.5 examines the extraction marking that occurs with wh-ex-situ (and focus-ex-situ and relative clauses) and how it interacts with word order and normal subject agreement. In section 3.2.6, I propose detailed derivations for all the possible variations on wh-ex-situ in terms of word order and agreement. Finally, I discuss outstanding issues in section 3.3 and conclude the chapter in section 3.4.

### 3.2 Apparent full wh-movement: Shona wh-ex-situ via clefting

This section illustrates the properties of Shona wh-ex-situ and provides an analysis for them. In contrast to wh-in-situ, wh-ex-situ is sensitive to islands, so it involves movement. Furthermore, reconstruction effects reveal that the moving element may be the wh-phrase itself rather than a null operator. Shona wh-ex-situ requires extraction morphology: ex-situ wh-non-subjects trigger low-toned $\varphi$-agreement on the highest verb they have crossed (this is in addition to normal $\varphi$-agreement with the subject), while locally extracted wh-subjects trigger a floating low tone but no extra overt $\varphi$-agreement. In Shona, ex-situ wh-phrases must be marked with an allomorph of ndi-, which I argue is a copula that can take a relative clause as its complement. I show that this biclausal cleft structure is preferable to an monoclausal account of ndi- as a left-peripheral focus marker. Finally, Shona allows ex-situ wh-phrases to appear sentence-finally; this involves remnant movement of a TopP to SpecTopP in the matrix (copular) clause. In the analysis that I propose,
the *wh*-phrase never reaches its scopal position (it stays in its position as the head of the relative clause selected by the copula), so in reality Shona has no true full *wh*-movement; what looks like full *wh*-movement is really a case of partial *wh*-movement, which will be studied in more depth in chapter 4.

### 3.2.1 The basics of Shona *wh*-ex-situ

#### 3.2.1.1 Left-edge *wh*-phrases

In Shona, any *wh*-phrase may appear ex situ at the left edge of the sentence,\(^1\) whether it is a subject, object, or adjunct, as shown in (3.8) below. There is a gap left in an ex-situ *wh*-argument’s canonical position (see (3.7) for comparison), and no resumptive marking occurs as part of the verb, either.

(3.7) Canonical declarative word order

\[
\begin{array}{l}
\text{V-aka-teng-er-a} & \text{Ø-Thani} & \text{Ø-rokwe} & \text{ku-chi-toro} & \text{nezuro.} \\
\text{2.sm-ta-buy-appl-fv} & \text{1a-Thani} & \text{5-dress} & \text{17-7-store} & \text{yesterday} \\
\end{array}
\]

‘They bought Thandi a dress at the store yesterday.’

(2015-04-14-01-TD)

(3.8) Local *wh*-ex-situ, sentence-initial

a. **Left-edge ex-situ wh-subject**

\[
\begin{array}{l}
\text{Ndi-Ø-ani} & \text{aka-teng-er-a} & \text{Ø-Thani} & \text{Ø-rokwe} \\
\text{1i-1a-who} & \text{se.1a.sm.ta-buy-appl-fv} & \text{1a-Thani} & \text{5-dress} \\
\text{ku-chi-toro} & \text{nezuro?} \\
\text{17-7-store} & \text{yesterday} \\
\end{array}
\]

‘Who (lit., It’s who that) bought Thandi a dress at the store yesterday?’

(2014-07-16-01-TD)

b. **Left-edge ex-situ wh–indirect object**

\[
\begin{array}{l}
\text{Ndi-Ø-ani} & \text{va-v-aka-teng-er-a} & \text{Ø-rokwe} \\
\text{1i-1a-who} & \text{1a.nse-2.sm.ta-buy-appl-fv} & \text{5-dress} \\
\text{ku-chi-toro} & \text{nezuro?} \\
\text{17-7-store} & \text{yesterday} \\
\end{array}
\]

‘Who(m) did they buy (lit., It’s who that they bought) a dress (for) at the store yesterday?’

(2014-09-09-01-TD)

---

1. For the time being, I will ignore the phonologically dependent copula when describing the linear position of the *wh*-phrase as being sentence-initial.
c. **Left-edge ex-situ wh-direct object**

   *Chí-i* cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro  [Shona]

   1a-what 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store

   nezuro?

   yesterday

   ‘What did they buy (lit., It’s what that they bought) Thandi at the store yesterday?’  
   (2014-09-09-01-TD)

d. **Left-edge ex-situ wh-locative adjunct**

   *Nde-ku-pi* kwa-v-aka-teng-er-a Ø-Thandi  [Shona]

   17-which 17.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi

   Ø-rokwe ___ nezuro?

   5-dress yesterday

   ‘Where did they buy (lit., It’s where that they bought) Thandi a dress yesterday?’  
   (2014-09-09-01-TD)

e. **Left-edge ex-situ wh-temporal adjunct**

   *Ndi-rinhi* pa-v-aka-teng-er-a Ø-Thandi Ø-rokwe  [Shona]

   16-when 16.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress

   ku-chi-toro ___?

   17-7-store

   ‘When did they buy (lit., It’s when that they bought) Thandi a dress at the store?’  
   (2014-09-09-01-TD)

   Even *wh*-phrases that are thematically interpreted in an embedded clause may appear at the left edge of the matrix clause, where they take interrogative scope, as shown in (3.9).

(3.9) **Long-distance wh-ex-situ, sentence-initial**

a. **Left-edge long-distance ex-situ wh-subject**

   *Ndi-Ø-ani* wa-w-ai-fung-a kuti ___ aka-teng-er-a  [Shona]

   1a-who 1a.NSE-2SG.SM-TA-think-FV that 1a.SM.TA-buy-APPL-FV

   Ø-Thandi Ø-rokwe ku-chi-toro nezuro?

   1a-Thandi 5-dress 17-7-store yesterday

   ‘Who do you think (lit., It’s who that you thought) bought Thandi a dress at the store yesterday?’  
   (2014-09-09-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

b. Left-edge long-distance ex-situ wh—indirect object

\[\begin{align*}
\text{Ndi-Ø-ani} & \quad \text{wa-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad [\text{Shona}] \\
\text{N1-1a-who} & \quad 1a.nse-2sg.sm-ta-think-fv & \quad \text{that 2.sm-ta-buy-appl-fv} \\
\quad & \quad \text{Ø-rokwe ku-chi-toro nezuro?} & \quad \text{5-dress 17-7-store yesterday} \\
\end{align*}\]

'Who(m) did you think (lit., It’s who that you thought) they bought a dress (for) at the store yesterday?' (2014-09-09-01-TD)

c. Left-edge long-distance ex-situ wh—direct object

\[\begin{align*}
\text{Chi-i} & \quad \text{cha-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad [\text{Shona}] \\
\text{N1.7-what} & \quad 7.nse-2sg.sm-ta-think-fv & \quad \text{that 2.sm-ta-buy-appl-fv} \\
\quad & \quad \text{Ø-Thandi ku-chi-toro nezuro?} & \quad \text{1a-Thandi 17-7-store yesterday} \\
\end{align*}\]

'What did you think (lit., It’s what that you thought) they bought Thandi at the store yesterday?' (2014-09-09-01-TD)

d. Left-edge long-distance ex-situ wh—locative adjunct

\[\begin{align*}
\text{Nde-ku-pi} & \quad \text{kwa-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad [\text{Shona}] \\
\text{N1-17-which} & \quad 17.nse-2sg.sm-ta-think-fv & \quad \text{that 2.sm-ta-buy-appl-fv} \\
\quad & \quad \text{Ø-Thandi nezuro?} & \quad \text{1a-Thandi 5-dress yesterday} \\
\end{align*}\]

'Where did you think (lit., It’s where that you thought) they bought Thandi a dress yesterday?' (2014-09-09-01-TD)

e. Left-edge long-distance ex-situ wh—temporal adjunct

\[\begin{align*}
\text{Ndi-rinhi} & \quad \text{pa-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad [\text{Shona}] \\
\text{N1-when} & \quad 16.nse-2sg.sm-ta-think-fv & \quad \text{that 2.sm-ta-buy-appl-fv} \\
\quad & \quad \text{Ø-Thandi Ø-rokwe ku-chi-toro nezuro?} & \quad \text{1a-Thandi 5-dress 17-7-store} \\
\end{align*}\]

'When did you think (lit., It’s when that you thought) they bought Thandi a dress at the store?' (2014-09-09-01-TD)
3.2.1.2 Right-edge wh-phrases

Ex-situ wh-phrases may also appear sentence-finally, as illustrated in (3.10–3.11).

(3.10) Local wh-ex-situ, sentence-final

a. Right-edge ex-situ wh-subject
   \[
   \text{Àka-teng-er-a} \quad \emptyset -\text{Thandi} \quad \emptyset -\text{rokwe} \quad \text{ku-chi-toro} \quad \text{nezuro} \quad \text{n̄di-Ø-ani?} \\
   \text{se.1a.sm.ta-buy-appl-fv} \quad \text{1a-}\text{Thandi} \quad \text{5-dress} \quad \text{17-7-store} \quad \text{yesterday n̄1-1a-who}
   \]
   ‘Who bought Thandi a dress at the store yesterday?’ (lit., ‘That bought Thandi a dress at the store yesterday it’s who?’)  (2014-07-16-01-TD)

b. Right-edge ex-situ wh–indirect object
   \[
   \text{Wa-v-aka-teng-er-a} \quad \text{Ø-}\text{rokwe} \quad \text{ku-chi-toro} \quad \text{nezuro} \quad \text{n̄di-Ø-ani?} \\
   \text{1a.nse.2.sm-ta-buy-appl-fv} \quad \text{5-dress} \quad \text{17-7-store} \quad \text{yesterday n̄i-1a-who}
   \]
   ‘Who(m) did they buy a dress (for) at the store yesterday?’ (lit., ‘That they bought a dress (for) at the store yesterday it’s who?’)  (2014-09-09-01-TD)

c. Right-edge ex-situ wh–direct object
   \[
   \text{Cha-v-aka-teng-er-a} \quad \text{Ø-}\text{Thandi} \quad \text{Ø-chi-toro} \quad \text{nezuro} \quad \text{chi-i?} \\
   \text{7.nse.2.sm-ta-buy-appl-fv} \quad \text{1a-}\text{Thandi} \quad \text{17-7-store} \quad \text{yesterday n̄i.7-what}
   \]
   ‘What did they buy Thandi at the store yesterday?’ (lit., ‘That they bought Thandi at the store yesterday it’s what?’)  (2014-09-09-01-TD)

d. Right-edge ex-situ wh–locative adjunct
   \[
   \text{Kwa-v-aka-teng-er-a} \quad \text{Ø-}\text{Thandi} \quad \text{Ø-rokwe} \quad \text{nezuro} \quad \text{n̄de-ku-pi?} \\
   \text{17.nse.2.sm-ta-buy-appl-fv} \quad \text{1a-}\text{Thandi} \quad \text{5-dress} \quad \text{yesterday n̄1-17-which}
   \]
   ‘Where did they buy Thandi a dress yesterday?’ (lit., ‘That they bought Thandi a dress yesterday it’s where?’)  (2014-09-09-01-TD)

e. Right-edge ex-situ wh–temporal adjunct
   \[
   \text{Pa-v-aka-teng-er-a} \quad \text{Ø-}\text{Thandi} \quad \text{Ø-rokwe} \quad \text{ku-chi-toro} \quad \text{n̄di-rinhi?} \\
   \text{16.nse.2.sm-ta-buy-appl-fv} \quad \text{1a-}\text{Thandi} \quad \text{5-dress} \quad \text{17-7-store n̄1-when}
   \]
   ‘When did they buy Thandi a dress at the store?’ (lit., ‘That they bought Thandi a dress at the store it’s when?’)  (2014-09-09-01-TD)
(3.11) Long-distance wh-ex-situ, sentence-final

a. Right-edge long-distance ex-situ wh-subject

Wa-w-ai-fung-a kuti ___ aka-teng-er-a [Shona]
1a.nse-2sg.sm-ta-think-fv that 1a.sm.ta-buy-appl-fv

Ø-Thandi Ø-rokwe ku-chi-toro nezuro ndi-Ø-ani?
1a-Thandi 5-dress 17-7-store yesterday N1-1a-who

‘Who do you think bought Thandi a dress at the store yesterday?’ (lit., ‘That you think bought Thandi a dress at the store yesterday it’s who?’) (2014-09-09-01-TD)

b. Right-edge long-distance ex-situ wh-indirect object

Wa-w-ai-fung-a kuti v-aka-teng-er-a ___ [Shona]
1a.nse-2sg.sm-ta-think-fv that 2.sm-ta-buy-appl-fv

Ø-rokwe ku-chi-toro nezuro ndi-Ø-ani?
5-dress 17-7-store yesterday N1-1a-who

‘Who(m) did you think they bought a dress (for) at the store yesterday?’ (lit., ‘That you think they bought a dress (for) at the store yesterday it’s who?’) (2014-09-09-01-TD)

c. Right-edge long-distance ex-situ wh-direct object

Cha-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi ___ [Shona]
7.nse-2sg.sm-ta-think-fv that 2.sm-ta-buy-appl-fv 1a-Thandi

ku-chi-toro nezuro chi-i?
17-7-store yesterday N1.7-what

‘What did you think they bought Thandi at the store yesterday?’ (lit., ‘That you think they bought Thandi at the store yesterday it’s what?’) (2014-09-09-01-TD)

d. Right-edge long-distance ex-situ wh-locative adjunct

Kwa-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi [Shona]
17.nse-2sg.sm-ta-think-fv that 2.sm-ta-buy-appl-fv 1a-Thandi

Ø-rokwe ___ nezuro nde-ku-pi?
5-dress yesterday N1-17-which

‘Where did you think they bought Thandi a dress yesterday?’ (lit., ‘That you think they bought Thandi a dress yesterday it’s where?’) (2014-09-09-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

e. **Right-edge long-distance ex-situ wh–temporal adjunct**

   Pa-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi [Shona]
   16.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV 1a-Thandi

   Ø-rokwe ku-chi-toro [Ni-wh] ni-rinhi?
   5-dress 17-7-store [NI-when] ‘When did you think they bought Thandi a dress at the store?’ (lit., ‘That you think they bought Thandi a dress at the store it’s when?’)

   (2014-09-09-01-TD)

I will show below that this right-edge wh-ex-situ has identical properties to left-edge wh-ex-situ, except for the linear position of the wh-phrase. This is also true in Ikalanga, Shona’s closest relative (Letsholo 2002, 2007). In section 3.2.6.4, I will propose a unified analysis for Shona left-edge and right-edge wh-ex-situ in the spirit of Letsholo 2007; the only difference between the two derivations is that right-edge wh-ex-situ involves an additional step of remnant movement.

### 3.2.2 Island sensitivity

As discussed in section 2.2.4.2, I take island effects to be a diagnostic for movement. I assume that if a sentence containing an island is grammatical, nothing has moved overtly or covertly from within the island to a position outside it. If the sentence is ungrammatical and it involves a displacement relation (such as the one between a wh-phrase and the gap in its canonical position) across an island boundary, I will make the plausible assumption that this relation is movement. In this section, I show that full wh-movement out of an island is impossible in Shona, whether the wh-phrase appears initially or finally within the sentence.

#### 3.2.2.1 Relative clause islands

When *kupi* ‘where’ (literally ‘which’ with a locative noun class prefix) is extracted from a relative clause, the result is ungrammatical, as shown in (3.12a–3.12b). Example (3.12c), repeated from (2.30a), shows that this pattern stands in contrast to the acceptability of the
Chapter 3. Full wh-movement 3.2. Shona wh-ex-situ via clefting

wh-in-situ version of the same question.

(3.12) Wh–locative adjunct from a subject relative clause modifying an object

a. Left edge

*Nde-ku-pi*  
{kwa-a-no-farir-a}  
{[island chi-kwata]}  
**N1-17-which**  
{17.NSE-1.SM-TA-like-FV}  
{7-team}  
{chi-no-bv-a}  
{SE.7.SM-TA-be.from-FV}  
‘Where does s/he like (lit., It’s where that s/he likes) [the team that is from ___]?’  
(2014-11-01-01-TD)

b. Right edge

*{Kwa-a-no-farir-a}  
{[island chi-kwata chi-no-bv-a]}  
{17.NSE-1.SM-TA-like-FV}  
{7-team}  
{SE.7.SM-TA-be.from-FV}  
{___}]  
*nde-ku-pi?*  
**N1-17-which**  
‘Where does s/he like [the team that is from ___]?’ (lit., ‘That s/he likes [the team that is from ___] it’s where?’)  
(2014-11-01-01-TD)

c. In situ

{A-no-farir-a}  
{[island chi-kwata chi-no-bv-a] ku-pi?}  
{1.SM-TA-like-FV}  
{7-team}  
{SE.7.SM-TA-be.from-FV}  
{17-which}  
‘Where does s/he like [the team that is from ___]?’ (lit., ‘S/he likes [the team that is from where]?’)  
(2014-11-01-01-TD)

The examples in (3.13–3.14) show that extraction of a direct object or a temporal adjunct follows the same pattern.

(3.13) Wh–direct object from a subject relative clause modifying an object

a. Left edge

*Chi-í*  
{cha-va-ri ku-tsvag-a}  
{[island mu-rume]}  
**N1.7-what**  
{7.NSE-2.SM-be}  
{15-look.for-FV}  
{1-man}  
{àka-b-a}  
{SE.1.SM.TA-steal-FV}  
‘What are they (lit., It’s what that they are) looking for [the man who stole ___]?’  
(2014-12-06-02-TD)
b. Right edge
* [Cha-va-ri ku-tsvag-a [island mu-rume àka-b-a [Shona]
7.NSE-2.SM-be 15-look.for-FV 1-man SE.1.SM.TA-steal-FV
___]] chí-i?
N1.7-what
‘What are they looking for [the man who stole ___]?’ (lit., ‘That they are looking for [the man who stole ___] it’s what?’) (2014-12-06-02-TD)

In situ
Va-ri ku-tsvag-a [island mu-rume àka-b-a chí-i]? [Shona]
2.SM-be 15-look.for-FV 1-man SE.1.SM.TA-steal-FV 7-what
‘What are they looking for [the man who stole ___]?’ (lit., ‘They are looking for [the man who stole what]?’) (2014-12-06-02-TD)

(3.14) Wh–temporal adjunct from a subject relative clause modifying an object
a. *Ndi-rinhi pa-va-ri ku-tsvag-a [island mu-rume [Shona]
NI-when 16.NSE-2.SM-be 15-look.for-FV 1-man
àka-b-a Ø-mhete ___]? SE.1.SM.TA-steal-FV 10-jewelry
‘When are they (lit., It’s when that they are) looking for [the man who stole the earrings ___]?’ (2014-12-06-02-TD)

b. *[Pa-va-ri ku-tsvag-a [island mu-rume àka-b-a [Shona]
Ø-mhete ___]? ndi-rinhi?
10-jewelry NI-when
‘When are they looking for [the man who stole the earrings ___]?’ (lit., ‘That they are looking for [the man who stole the earrings ___] it’s when?’) (2014-12-06-02-TD)

c. Va-ri ku-tsvag-a [island mu-rume àka-b-a [Shona]
2.SM-be 15-look.for-FV 1-man SE.1.SM.TA-steal-FV
Ø-mhete rinhi]
10-jewelry when
‘When are they looking for [the man who stole the earrings ___]?’ (lit., ‘They are looking for [the man who stole the earrings when]?’) (2014-12-06-02-TD)

The same pattern holds when a wh-phrase is extracted from an object relative clause rather than a subject relative clause:
(3.15) Wh-subject from an object relative clause modifying an object

a. **Left edge**
   *
   
   \[ \begin{align*}
   \text{Ndi-Ø-ani} & \quad \text{wa-u-no-ziv-a} \quad \text{[island mu-sikana]} \\
   \text{N1-1a-who} & \quad 1a.NSE-2SG.SM-TA-know-FV \quad 1\text{-girl} \\
   \text{wa-v-ai-fung-a} & \quad \text{[kuti ___ aka-vhakachir-a]}? \\
   & \quad 1.NSE-2.SM-TA-think-FV \quad \text{that} \quad 1a.SM.TA-visit-FV
   \end{align*} \]

   'Who do (lit., It’s who that) you know [the girl that they thought ___ visited]?'

   (2016-03-08-01-TD)

b. **Right edge**
   *
   
   \[ \begin{align*}
   \text{[wa-u-no-ziv-a} & \quad \text{[island mu-sikana} \quad \text{wa-v-ai-fung-a]} \quad \text{[kuti [kuti [aka-vhakachir-a]}? \\
   \text{1a.NSE-2SG.SM-TA-know-FV} & \quad \text{1-girl} \quad \text{1.NSE-2.SM-TA-think-FV} \\
   \text{that} & \quad \text{1a.SM.TA-visit-FV} \quad \text{N1-1a-who}
   \end{align*} \]

   'Who do you know [the girl that they thought ___ visited]?' (lit., ‘That you know [the girl that they thought ___ visited] it’s who?’)  
   (2014-11-01-01-TD)

c. **In situ**
   \[ \begin{align*}
   \text{U-no-ziv-a} & \quad \text{[island mu-sikana} \quad \text{wa-v-ai-fung-a} \quad \text{[kuti [aka-vhakachir-a]}? \\
   \text{2SG.SM-TA-know-FV} & \quad \text{1-girl} \quad \text{1.NSE-2.SM-TA-think-FV} \quad \text{that} \\
   \text{Ø-ani} & \quad \text{aka-vhakachir-a]}? \\
   \text{1a-who} & \quad 1a.SM.TA-visit-FV
   \end{align*} \]

   'Who do you know [the girl that they thought ___ visited]?' (lit., ‘You know [the girl that they thought who visited]?’)  
   (2014-11-01-01-TD)

(3.16) Wh-locative adjunct from an object relative clause modifying an object

a. **Left edge**
   *
   
   \[ \begin{align*}
   \text{Nde-ku-pi} & \quad \text{kwa-u-no-ziv-a} \quad \text{[island mu-sikana]} \\
   \text{N1-17-which} & \quad 17.NSE-2SG.SM-TA-know-FV \quad 1\text{-girl} \\
   \text{wa-v-aka-wan-a} & \quad \text{[kuti [aka-vhakachir-a]}? \\
   & \quad 1.NSE-2.SM-TA-find-FV
   \end{align*} \]

   'Where do (lit., It’s where that) you know [the girl that they found ___]?'

   (2014-11-01-01-TD)

b. **Right edge**
   *
   
   \[ \begin{align*}
   \text{[kwa-u-no-ziv-a} & \quad \text{[island mu-sikana} \quad \text{wa-v-aka-wan-a]} \quad \text{[kuti [aka-vhakachir-a]}? \\
   \text{17.NSE-2SG.SM-TA-know-FV} & \quad \text{1-girl} \quad \text{1.NSE-2.SM-TA-find-FV} \\
   \text{that} & \quad \text{1a.SM.TA-visit-FV} \quad \text{N1-17-which}
   \end{align*} \]

   'Where do you know [the girl that they found ___]?' (lit., ‘That you know [the girl that they found ___] it’s where?’)  
   (2014-11-01-01-TD)

---

2. Example (3.16c) is slightly degraded, but I take the strong contrast between wh-in-situ and wh-ex-situ for this sentence to be the main fact to be explained.
3.2. Shona wh-ex-situ via clefting

3.2.2.2 DP with complement clause islands

Extraction of a wh-phrase from the clausal complement of a DP is also ungrammatical, as shown below. Again, the in-situ versions of these questions are acceptable, so the source of the ungrammaticality is the extraction.

(3.17) Wh-subject from the clausal complement of an object DP

a. Left edge

??Chí-i cha-v-aka-ramb-a [island ny-a ya ye-kuti ___ [Shona]
 7.NSE-2.SM-TA-deny-fv 9-story 9.of-that
 7.SM-TA-bite-fv 1a-Taurai]

‘What did they deny (lit., It’s what that they denied) [the story that ___ bit Taurai]?’

(2016-03-08-01-TD)

b. Right edge

??[Cha-v-aka-ramb-a [island ny-a ya ye-kuti ___]
 7.NSE-2.SM-TA-deny-fv 9-story 9.of-that
 7.SM-TA-bite-fv 1a-Taurai] Chí-i?

‘What did they deny [the story that ___ bit Taurai]?’ (lit., ‘That they denied [the story that ___ bit Taurai] it’s what?’)

(2016-03-08-01-TD)

c. In situ

V-aka-ramb-a [island ny-a ya ye-kuti Chí-i cha-v-aka-ramb-a [Shona]
 7 SM-TA-bite-fv 1a-Taurai]

‘What did they deny the story that ___ bit Taurai?’

(2016-03-08-01-TD)
(3.18) Wh–direct object from the clausal complement of an object DP

a. **Left edge**

*Ndí-Ø-ani wa-v-aka-ramb-a [island ny-aya ye-kuti [Shona]

1a-who 1a.NSE-2.SM-TA-deny-FV 9-story 9.of-that

y-aka-rum-a ___ pa-Ø-gumbo]? 9.SM-TA-bite-FV 16-5-leg

‘Who(m) did they deny (lit., It’s who that they denied) [the story that it (their dog) bit ___ on the leg]?’

(2016-03-08-01-TD)

b. **Right edge**

*[Wa-v-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]


___ pa-Ø-gumbo]] ndí-Ø-ani? 16-5-leg n1-1a-who

‘Who(m) did they deny [the story that it (their dog) bit ___ on the leg]?’

(lit., ‘That they denied [the story that it bit ___ on the leg] it’s who?’) 2016-03-08-01-TD

c. **In situ**

V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]


Ø-ani pa-Ø-gumbo]? 1a-who 16-5-leg

‘Who(m) did they deny [the story that it (their dog) bit ___ on the leg]?’

(lit., ‘They denied [the story that it bit who(m) on the leg]?’) 2016-03-08-01-TD

(3.19) Wh–locative adjunct from the clausal complement of an object DP

a. **Left edge**

*Nde-pa-pi pa-v-aka-ramb-a [island ny-aya ye-kuti [Shona]

n1-16-which 16.NSE-2.SM-TA-deny-FV 9-story 9.of-that

y-aka-rum-a Ø-Taurai ___]? 9.SM-TA-bite-FV 1a-Taurai

‘Where did they deny (lit., It’s where that they denied) [the story that it (their dog) bit Taurai ___]?’

(2016-03-08-01-TD)
b. \textbf{Right edge}

\begin{quote}
\[ [\text{Pa-v-aka-ramb-a} \ [\text{island ny-aya ye-kuti y-aka-rum-a}] \ [\text{Shona}]
16.\text{NSE-2.SM-TA-deny-FV} \ 9\text{-story} \ 9\text{-of-that} \ 9\text{.SM-TA-bite-FV}
\]
\[ \text{\text{Ø-Taurai \[ \_\_\_\]} nde-pa-pi?}
1a-Taurai \[ \text{\text{NI-16-which}}
\]
\end{quote}

‘Where did they deny [the story that it (their dog) bit Taurai \[ \_\_\_\]’? (lit., ‘That they denied [the story that it bit Taurai \[ \_\_\_\] it’s where?’)

\[(2016-03-08-01-TD)\]

c. \textbf{In situ}

\begin{quote}
\[ V\text{-aka-ramb-a} \ [\text{island ny-aya ye-kuti y-aka-rum-a}] \ [\text{Shona}]
1a.NSE-2.SM-TA-deny-FV \ 9\text{-story} \ 9\text{-of-that} \ 9\text{.SM-TA-bite-FV}
\]
\[ \text{Ø-Taurai pa-pi?}
1a-Taurai \[ \text{\text{16-which}}
\]
\end{quote}

‘Where did they deny [the story that it (their dog) bit Taurai \[ \_\_\_\]’? (lit., ‘They denied [the story that it bit Taurai where?’)

\[(2016-03-08-01-TD)\]

(3.20) \textit{Wh–temporal adjunct from the clausal complement of an object DP}

a. \textbf{Left edge}

\begin{quote}
\[ \text{\text{Ndi-rinhi pa-v-aka-ramb-a} \ [\text{island ny-aya ye-kuti}] \ [\text{Shona}]
\text{\text{NI-when}} \ 16.\text{NSE-2.SM-TA-deny-FV} \ 9\text{-story} \ 9\text{-of-that}
\]
\[ y\text{-aka-rum-a} \text{Ø-Taurai \[ \_\_\_\]}?
9\text{.SM-TA-bite-FV} \ 1a\text{-Taurai}
\]
\end{quote}

‘When did they deny (lit., It’s when that they denied) [the story that it (their dog) bit Taurai \[ \_\_\_\]’?

\[(2016-03-08-01-TD)\]

b. \textbf{Right edge}

\begin{quote}
\[ [\text{Pa-v-aka-ramb-a} \ [\text{island ny-aya ye-kuti y-aka-rum-a}] \ [\text{Shona}]
16.\text{NSE-2.SM-TA-deny-FV} \ 9\text{-story} \ 9\text{-of-that} \ 9\text{.SM-TA-bite-FV}
\]
\[ \text{Ø-Taurai \[ \_\_\_\]} ndi-rinhi?
1a-Taurai \[ \text{\text{NI-when}}
\]
\end{quote}

‘When did they deny [the story that it (their dog) bit Taurai \[ \_\_\_\]’? (lit., ‘That they denied [the story that it bit Taurai \[ \_\_\_\] it’s when?’)

\[(2016-03-08-01-TD)\]

c. \textbf{In situ}

\begin{quote}
\[ V\text{-aka-ramb-a} \ [\text{island ny-aya ye-kuti y-aka-rum-a}] \ [\text{Shona}]
1a.NSE-2.SM-TA-deny-FV \ 9\text{-story} \ 9\text{-of-that} \ 9\text{.SM-TA-bite-FV}
\]
\[ \text{Ø-Taurai rinhi?}
1a-Taurai \[ \text{\text{when}}
\]
\end{quote}

‘When did they deny [the story that it (their dog) bit Taurai \[ \_\_\_\]’? (lit., ‘They denied [the story that it bit Taurai when?’)

\[(2016-03-08-01-TD)\]
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

3.2.2.3 Adjunct islands

In addition to the islands shown above, adverbial clauses in Shona are islands for extraction, as shown below.

(3.21) Wh-direct object from an adverbial clause

a. Left edge

*Ndi-Ø-ani wa-v-aka-foner-a ma-purisa [island nokuti 6-police because]

N1-1a-who 1a.NSE-2.SM-TA-call-FV

v-aka-on-a [island]

2.SM-TA-see-FV

‘Who(m) did they call (lit., It’s who that they called) the police [because they saw ___]?’

(2014-11-01-01-TD)

b. Right edge

*[Wa-v-aka-foner-a ma-purisa [island nokuti v-aka-on-a 6-police because 2.SM-TA-see-FV]

ndi-Ø-ani?

N1-1a-who

‘Who(m) did they call the police [because they saw ___]?’ (lit., ‘That they called the police [because they saw ___ it’s who?’)

(2014-11-01-01-TD)

c. In situ

V-aka-foner-a ma-purisa [island nokuti v-aka-on-a 6-police because 2.SM-TA-see-FV]

Ø-ani?

1a-who

‘Who(m) did they call the police [because they saw ___]?’ (lit., ‘They called the police [because they saw who(m)]?’)

(2014-11-01-01-TD)

(3.22) Wh-subject from an adverbial clause

a. Left edge

*Ndi-Ø-ani wa-v-aka-foner-a ma-purisa [island nokuti 9-thief because]

ndi-1a-who 1a.NSE-2.SM-TA-call-FV 6-police

aka-on-a m-bavha?

1a.SM-TA-see-FV

‘Who did they call (lit., It’s who that they called) the police because ___ saw a thief?’

(2014-11-01-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

b. Right edge

* [Wa-v-aka-foner-a ma-purisa [island 1a.NSE-2.SM-TA-call-fv 6-police because 1a.SM.TA-see-fv m-bavha]] ndi-Ø-ani?

9-thief ndi-1a-who

‘Who did they call the police because ___ saw a thief?’ (lit., ‘That they called the police because ___ saw a thief it’s who?”) (2014-11-01-01-TD)

c. In situ

V-aka-foner-a ma-purisa [island 2.SM-TA-call-fv 6-police because 1a-who 1a.SM.TA-see-fv m-bavha]

‘Who did they call the police because ___ saw a thief?’ (lit., ‘They called the police because who saw a thief?’) (2014-11-01-01-TD)

3.2.2.4 Coordinate structure islands

Extracting wh-phrases from a coordinate structure is generally degraded in Shona, although in some cases not as much as the corresponding sentences would be in English. This is due to the fact that Shona does not have a conjunction ‘and’ but rather uses a comitative construction to form coordinate structures.

(3.23) Ex-situ wh-phrases as first conjunct in a coordinate structure island

a. Coordinate indirect object

?Ndi-Ø-ani wa-v-aka-teng-er-a [island na-Ø-Tendai] [Shona]

ni-1a-who 1a.NSE-2.SM-TA-buy-APPL-FV with-1a-Tendai

ma-rokwe?

6-dress

‘Who(m) did they buy [___ and Tendai] dresses?’ (lit., ‘It’s who that they bought [___ with Tendai] dresses?’) (2016-03-08-02-TD)

b. Coordinate direct object

?Chi-i cha-v-aka-teng-er-a Ø-Rumbi [island 7.NSE-2.SM-TA-buy-APPL-FV 1a-Rumbi ne-Ø-rokwe]?

with-5-dress

‘What did they buy Rumbi [___ and a dress]?” (lit., ‘It’s what that they bought Rumbi [___ with a dress]?”) (2016-03-08-02-TD)

It is completely impossible to extract the second conjunct and strand the na- ‘with’, but
this is likely because it does not meet Shona’s word minimality requirement, obscuring a clear-cut syntactic island effect. For this reason, I show examples with the na- pied-piped, which are still degraded.

(3.24) In-situ wh-phrases as second conjunct in a coordinate structure island

a. Coordinate indirect object

*Ndi-na-Ø-ani*  wa-v-aka-teng-er-a  [island Ø-Rumbi]  [Shona]

ni-with-1a-who  1a.NSE-2.SM-TA-buy-APPL-FV  Rumbi

___]  ma-rokwe?

6-dress

‘Who(m) did they buy [Rumbi and ___] dresses?’ (lit., ’It’s with who(m) that they bought [Rumbi ___] dresses?’)  (2016-03-08-02-TD)

b. Coordinate direct object

*Né-chi-i*  cha-v-aka-teng-er-a  Ø-Rumbi  [Shona]

ni.with-7-what  7.NSE-2.SM-TA-buy-APPL-FV  1a-Rumbi

[island Ø-bhutsu ___]?

10-shoe

‘What did they buy Rumbi [shoes and ___]?’ (lit., ’It’s with what that they bought Rumbi [shoes ___]?’)  (2016-03-08-02-TD)

3.2.2.5 Summary

Wh-ex-situ is sensitive to island boundaries between the pronunciation site of the wh-phrase and its base position; this means that there is movement involved in relating these two positions. Sentence-final wh-ex-situ patterns very differently from wh-in-situ in terms of island effects; because sentence-final wh-ex-situ is sensitive to islands, I will pursue a disguised movement analysis as discussed in section 2.2.2.2.

3.2.3 Reconstruction effects

Reconstruction refers to the ability of a phrase to be interpreted in a lower position than where it is pronounced. While this originally was proposed as an LF mechanism whereby a phrase moved back to this lower position and replaced its trace, more current implementations invoking the copy theory of movement no longer need to posit this process if

Here, I will follow Pesetsky (2013) and Torrence (2013) in using reconstruction as a diagnostic for whether an apparently dislocated element (here, an ex-situ wh-phrase) has itself moved from the gap position or whether it is generated where it is pronounced, with the relation between these positions established by movement of a null operator. Island effects tell us that there is movement, but they cannot distinguish between these two hypotheses.

### 3.2.3.1 Variable binding in focus constructions

Principle A of the binding theory is probably the most frequently used reconstruction test (Barss 1986, Pesetsky 2013), but most Bantu languages (including Shona) do not have DP anaphors that must be locally bound. Instead, I follow Schneider-Zioga (2009) in using the binding of a variable pronoun by a quantifier as a reconstruction diagnostic for Bantu. She shows that Kinande allows a pronoun to be interpreted in its base position (and thus receive a bound reading because this position is c-commanded by the quantifier) even if it has been extracted for focus within a clause, as in (3.25). In these examples, the quantifier is bolded and the bound variable pronoun is circled.

(3.25) Reconstruction in local focus construction

\[
\begin{array}{c}
\text{[DP E-ki-tabu kį(we)] ky'} \quad \text{[DP o-buli mu-kolo]_i akasoma ___ [Kinande]}\\
7-7-book \quad 7-1.poss \quad 7.nse \quad 1\text{-every 1\text{-student}} \quad 1\text{.sm.read}
\end{array}
\]

\text{kangikangi. regularly}

\text{‘It’s his \textit{book} that every student \textit{i} reads regularly.’}^3

(Schneider-Zioga 2009: 49 (6))

---

^3: In these reconstruction examples I translate class 1 possessive pronouns as ‘his’ rather than ‘his/her’ or ‘their’. However, the meaning of these pronouns is really 3rd person singular human; Bantu languages do not distinguish masculine and feminine, so these sentences are perhaps better in Shona than in English,
She further shows that the focused phrases cannot reconstruct across clauses, whether to the position of the gap or an intermediate position. The sentences below are grammatical, but not with a bound variable reading of the pronoun.

(3.26)  
**Lack of reconstruction in long-distance focus construction**

a.  
Pronoun cannot be interpreted in thematic position

\[
* \{[\text{DP E-ki-tabu ki-}\text{we}]} \text{ kyo ngalengekanaya } [\text{CP nga kyo}] \{[\text{Kinande}]
\]
7-7-book 7-1.poss 7.nse 1sg.sm.think that 7.nse

\[
{[\text{DP o-buli mu-kolo}]}_i \text{ akasoma ___ kangikangi].}
1-every 1-student 1.sm.read regularly

‘It’s his book that I think every student reads regularly.’

(Schneider-Zioga 2009: 49 (8))

b.  
Pronoun cannot be interpreted in intermediate position

\[
* \{[\text{DP E-ki-tabu ki-}\text{we}]} \text{ kyo } [\text{DP o-buli mu-kolo}]}_i \{[\text{Kinande}]
\]
7-7-book 7-1.poss 7.nse 1-every 1-student

\[
\text{ alengekanaya } [\text{CP nga kyo nganasoma ___ kangikangi].}
1.sm.think that 7.nse 1sg.sm.read regularly

‘It’s his book that every student thinks I read regularly.’

(Schneider-Zioga 2009: 50 (10))

From these facts, Schneider-Zioga (2009) concludes that the focused phrase moves to its scopal position when the focus construction is monoclausal, as in (3.25), but when there is a clause boundary between the focused phrase and the corresponding gap, the focused phrase is generated in its scopal position and a null resumptive operator is what moves.

This pattern contrasts with what is found in Shona, where the bound reading is just as possible with long-distance clefting as it is with local clefting:

where backward binding of a 3rd person singular pronoun by a gender-neutral quantifier seems slightly degraded.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

(3.27) Reconstruction in Shona local and long-distance clefts

a. Reconstruction in local cleft

\[
\begin{align*}
\text{Shona} & \quad \text{I-[DP Ø-bhora ra-[ke_i]}] \quad [\text{DP mw-ana w-ese}_i] \\
\text{NI-5-ball} & \quad 5.\text{of-1.poss} \quad \textbf{1-child} \quad \textbf{1-every} \\
& \quad \text{ra-a-no-farir-a} \\
& \quad 5.\text{NSE-1.SM-TA-like-FV} \\
\end{align*}
\]

'It's his \text{i ball} that every \text{i child} likes.' 

(2014-09-06-02-TD)

b. Reconstruction in long-distance cleft

\[
\begin{align*}
\text{Shona} & \quad \text{I-[DP Ø-bhora ra-[ke_i]}] \quad \text{ra-ndi-no-fung-a} \quad [\text{CP kuti} \quad \text{that}] \\
\text{NI-5-ball} & \quad 5.\text{of-1.poss} \quad 5.\text{NSE-1SG.SM-TA-think-FV} \\
& \quad [\text{DP mw-ana w-ese}_i] \quad \text{a-no-farir-a} \\
& \quad \textbf{1-child} \quad \textbf{1-every} \quad \text{1.SM-TA-like-FV} \\
\end{align*}
\]

'It's his \text{i ball} that I think every \text{i child} likes.' 

(2014-09-06-02-TD)

Example (3.28) shows that the bound reading is ruled out when the base position of the pronoun is not in the c-command domain of the quantifier; in this case, the quantifier is part of the direct object and therefore does not c-command the pronoun’s base position. If the grammaticality of (3.27) were due to covert quantifier raising to a position that c-commands the pronoun’s pronunciation site, we would predict (3.28) to also allow this quantifier raising and thus be grammatical. Because it is not, the source of the grammaticality of the bound variable pronoun reading in (3.27) must be due to reconstruction.

(3.28) No bound reading with object quantifier

\[
\begin{align*}
\ast [\text{DP A-mai va-[ke_i]}] \quad \text{va-no-d-a} \quad [\text{DP mu-komana} \quad \text{[Shona]}] \\
\quad 2b.\text{mother} \quad 2b.\text{of-1.poss} \quad 2b.\text{SM-TA-love-FV} \quad \text{1-boy} \\
\quad \text{w-ese}_i. \\
\quad \text{1-every} \\
\end{align*}
\]

'His \text{i mother} loves every \text{i boy}.' 

(2014-10-22-01-TD)

\textbf{Torrence (2013)} argues on the basis of reconstruction effects that Wolof clefts are derived by movement of the clefted phrase, not by base generation of the clefted elements and movement of a null operator. I follow that line of reasoning in taking these Shona facts to indicate that the clefted phrase itself, rather than a null operator, has moved to the pronunciation site. Next, I consider reconstruction effects in wh-questions and show
that Shona wh-phrases may reconstruct, suggesting that they also are generated in the gap position (or below it, in the case of subjects) and move to their pronunciation site.

### 3.2.3.2 Variable binding in wh-questions

In Shona, a quantifier like -ese ‘every’ may bind a variable pronoun within the clausal complement of a DP. For example, in (3.29), mwana wese ‘every child’ can bind the null subject of the verb akangwara ‘s/he is smart’.

(3.29) **Quantifier can bind variable pronoun embedded within complement clause**

\[
\text{[DP} \text{ Mw-ana w-ese}]_i \quad a\text{-no-kosh-es-a} \quad [\text{DP} \text{ ma-onero}] \quad [\text{Shona}]
\]

\[1\text{-child} \quad 1\text{-every} \quad 1\text{SM-}TA\text{-be.valued-Caus-FV} \quad 6\text{-view} \]

\[e\text{-mu-dzidzisi wa-ke}_i \quad e\text{-kuti } [\text{a}_j\text{-ka-ngwar-a}]. \]

\[6\text{.of-1-teacher} \quad 1\text{.of-1.poss} \quad 6\text{.of-that} \quad 1\text{SM-}TA\text{-be.smart-FV} \]

‘Every child, values his/her teacher’s opinion that s/he is smart.’

(2014-10-04-02-TD)

This variable binding can take place when the pronoun is within a complex wh-phrase that is c-commanded by the quantifier (see (3.30a)). Crucially, if this complex wh-phrase (maonero aani ekuti akangwara ‘the view of whom that s/he is smart’) appears sentence-initially, as in (3.30b), the highest copy of the pronoun is not c-commanded by the quantifier, but the bound reading is still possible.

(3.30) **Reconstruction of a pronoun bound by a subject quantifier**

a. **Wh-in-situ: Quantifier c-commands highest copy of pronoun**

\[
\text{U-no-fung-a} \quad [\text{CP kuti} \quad [\text{DP mw-ana w-ese}]_i \quad [\text{Shona}]
\]

\[2\text{SG.SM-}TA\text{-think-FV} \quad \text{that} \quad 1\text{-child} \quad 1\text{-every} \]

\[a\text{-no-kosh-es-a} \quad [\text{DP ma-onero} \quad a\text{-}Ø\text{-ani} \quad e\text{-kuti} \quad [\text{a}_j\text{-ka-ngwar-a}]. \]

\[1\text{SM-}TA\text{-be.valued-Caus-FV} \quad 6\text{-view} \quad 6\text{.of-1a-who} \quad 6\text{.of-that} \]

‘Whose opinion that s/he, is smart do you think every child, values?’ (lit., ‘You think that every child, values the opinion of whom that s/he, is smart?’)

(2014-10-04-02-TD)

---

4. I am circling the subject agreement marker, but I do not claim that this is itself the pronoun; it is merely the spell-out of $\varphi$-features valued under Agree with the null subject pronoun, following Carstens (2005).
Chapter 3. Full *wh*-movement

3.2. Shona *wh*-ex-situ via clefting

b. *Wh*-ex-situ: Quantifier does not c-command highest copy of pronoun

[DP Má-onero a-Ø-ani e-kuti [\(\text{a}_{1}\)-ka-ngwar-a]] [Shona]

\[\text{ni.6-view 6.of-1a-who 6.of-that 1.sm-TA-be.smart-fv}\]

a-u-no-fung-a [\(\text{cp kuti [DP mw-ana w-esē]}\)]

\[\text{6.NSE-2SG.SM-TA-think-fv that 1-child 1-every}\]

a-no-kosh-es-a \[\text{1.sm-TA-be.valued-caus-fv}\]

‘Whose opinion that s/he, is smart do you think every child, values?’ (lit., ‘It’s the opinion of whom that s/he, is smart that you think every child, values?’) (2014-10-04-02-TD)

This can be explained if the *wh*-phrase containing the pronoun originated in its thematic position (the complement of the verb root *-kosh-* ‘be.valued’) and then moved to the position where it is pronounced. Binding can occur because the quantifier does c-command the base position of the *wh*-phrase. An account of *wh*-ex-situ in which the *wh*-phrase is generated where it is pronounced and the *wh*-dependency is derived through the movement of a null operator would explain the island sensitivity of this dependency, but it could not explain this reconstruction effect because there would be no copy of the pronoun in the thematic position.

3.2.3.3 Lack of Principle C reconstruction in *wh*-questions

Another reconstruction test that can be applied to Bantu involves Principle C of the binding theory, according to which an R-expression such as a name cannot be bound (i.e., c-commanded by a coreferring expression) (Chomsky 1981). If an R-expression is bound, we expect that moving it to a position where it is no longer bound will not obviate the ungrammaticality due to Principle C because a lower copy is still in the original bound position.

Shona appears to have Principle C effects. When the R-expression *Taurai* is bound by the coreferential null subject of the matrix clause, as in (3.31a), the sentence is ungrammatical. However, the sentence in (3.31b) is fine because the coreferential pronoun is embedded within the matrix subject and thus does not c-command *Taurai*. Therefore,
the R-expression Taurai is not bound, satisfying Principle C. In these sentences, as before, the (potentially) bound element is circled, while the coreferential pronoun (really the agreement with the null pronoun) is in bold.

(3.31)  Principle C with subject binder

a. Pronoun c-commands R-expression

* 1a. A₁-cha-edz-a ku-ramb-a Ø-wanikidzo ya-ngu ye-kuti [Shona]
he.will.try to.deny the.discovery of.mine that Ø-Taurai i 1a-Taurai Taurai 1a-sm-Ta-aux-fv had sold the.earrings


10-sm-se-Ta-steal-pass-fv

that.were.stolen ‘He; will try to dismiss my discovery that Taurai; had sold the stolen earrings.’ (2014-10-04-01-TD)

b. Pronoun does not c-command R-expression

[DP Ø-Gweta ra-ke₁] ri-cha-edz-a ku-ramb-a [Shona]

5-lawyer 5.of.1-poss 5-sm-Ta-try-fv 15-deny-fv 
the.lawyer of.his will.try to.deny Ø-wanikidzo ya-ngu ye-kuti Ø-Taurai i 1a-Taurai 1a-sm-Ta-aux-fv

9-discovery 9.of-1sg.poss 9.of-that 1a-Taurai 1a-sm-Ta-aux-fv 
the.discovery of.mine that Taurai had a-teng-es-a Ø-mhete dz-aka-b-iw-a.

1a-sm-Ta-buy-caus-fv 10-jewelry 10-sm-se-Ta-steal-pass-fv

sold the.earrings that.were.stolen ‘His; lawyer will try to dismiss my discovery that Taurai; had sold the stolen earrings.’ (2014-10-04-01-TD)

The prediction for reconstruction, then, is that if wh-ex-situ involves moving the wh-phrase from its thematic position to where it is pronounced, putting a bound R-expression within an in-situ wh-phrase will be ungrammatical, and this ungrammaticality will persist even when the wh-phrase is extracted so that the overt R-expression is no longer c-commanded by the coreferential pronoun (Pesetsky 2013: 129–130, Sauerland 2003: 208–209). Some examples where this prediction has been claimed to be borne out in English
are presented in (3.32), but as pointed out to me by Richard Kayne (pers. comm.), a number of researchers have shown that judgments on these sentences and others like them are by no means uniform. See Safir’s (1999: 608–611, 2004: 103–104) discussion of this variability and its implications for theories of reconstruction.

(3.32)  Principle C reconstruction with subject binder

a. \* [DP Whose proof that [John] deserved to share the prize] does he think [CP ___ is relevant to the discussion]? \((\text{Pesetsky 2013: 130 (10b)})\)

b. \* [DP Which argument that [John] was wrong] did he accept ___ in the end? \((\text{Sauerland 2003: 208 (4a)})\)

As it turns out, this prediction is not borne out in Shona. The in-situ example in (3.33a) is unacceptable as expected given normal Principle C, but the ex-situ examples in (3.33b–3.33c) are acceptable. This suggests that reconstruction is optional or the wh-phrase in these sentences can be generated in its surface position, preventing reconstruction from taking place.

(3.33)  Lack of Principle C reconstruction with subject binder

a. Wh-in-situ: Pronoun c-commands highest copy of R-expression

\* A\textsubscript{1}-no-fung-a [CP kuti [DP Ø-wanikidzo ya-Ø-ani ye-kuti] [Shona]
1.sm-ta-think-fv that 9-discovery 9.of-1a-who 9.of-that
he.thinks that the.discovery of.whose that
Ø-Taurai aka-ng-e a-teng-es-a Ø-mhete
1a-Taurai 1a.SM.TA-AUX-FV 1a.SM.TA-buy-CAUS-FV 10-jewelry
Taurai had sold the.earrings
dz-àka-b-iw-a] y-ai-v-e ma-nyepo]?
10.SM.SE.TA-steal-PASS-FV 9.SM-ta-become-fv 6-lie
that.were.stolen was lies
‘Whose discovery that Taurai\textsubscript{i} had sold the stolen earrings does he\textsubscript{i} think was fabricated?’ (lit., ‘He\textsubscript{i} thinks that whose discovery that Taurai\textsubscript{i} had sold the stolen earrings was fabricated?’) \((2014-10-04-01-TD)\)
b. **Left-edge wh-ex-situ: Pronoun does not c-command highest copy of R-expression**

\[ [\text{Shona}] \]

\[ I-[\text{DP } \emptyset-\text{wanikidzo } ya-\emptyset-\text{ani } ye-kuti \begin{array}{c} O-Taurai \end{array} \text{aka-ng-e} ] \]

\[ ni-9-\text{discovery } 9.\text{of-1a-who } 9.\text{of-that } 1a-Taurai 1a.\text{SM.TA-AUX-FV} \]

\[ \text{it's the discovery of whose that } Taurai \text{ had } \]

\[ a-teng-es-a \quad \emptyset-\text{mhete } dz-\text{àka-b-ìw-a} ] \]

\[ 1a.\text{SM.TA-buy-CAUS-FV } 10-\text{jewelry } 10.\text{SM-SE.TA-steal-PASS-FV} \]

\[ \text{sold } \text{the earrings } \text{that were stolen } \]

\[ ya-a_i-\text{no-fung-a } [\text{CP kuti } y-\text{ai-v-e } \text{ma-nyepo}] \]

\[ 9.\text{NSE-1.SM-TA-think-FV } \text{that } 9.\text{SM-TA-become-FV } 6-\text{lie} \]

\[ \text{that he thinks that was lies} \]

\[ '\text{Whose discovery that Taurai}_i \text{ had sold the stolen earrings does } \text{he}_i \text{ think was fabricated?'} \] (lit., 'It's whose discovery that Taurai\text{ had sold the stolen earrings that he, thinks was fabricated?')

(2014-10-04-01-TD)

c. **Right-edge wh-ex-situ: Pronoun does not c-command highest copy of R-expression**

\[ [\text{CP Ya-a}_i-\text{no-fung-a } [\text{CP kuti } y-\text{ai-v-e } \text{ma-nyepo}]] [\text{DP i-\emptyset-\text{wanikidzo } ya-\emptyset-\text{ani } ye-kuti} \]

\[ 6-\text{lie } ni-9-\text{discovery } 9.\text{of-1a-who } 9.\text{of-that} \]

\[ \text{lies } \text{it's the discovery of whose that } \]

\[ O-Taurai \quad a-teng-es-a \quad \emptyset-\text{mhete} \]

\[ 1a-Taurai \quad 1a.\text{SM.TA-AUX-FV } 1a.\text{SM.TA-buy-CAUS-FV } 10-\text{jewelry} \]

\[ \text{Taurai had sold } \text{the earrings } \]

\[ dz-\text{àka-b-ìw-a} ] \]

\[ 10.\text{SM-SE.TA-steal-PASS-FV} \]

\[ \text{that were stolen} \]

\[ '\text{Whose discovery that Taurai}_i \text{ had sold the stolen earrings does } \text{he}_i \text{ thinks was fabricated?'} \] (lit., 'That he\text{ thinks was fabricated it's whose discovery that Taurai}_i \text{ had sold the stolen earrings?'})

(2014-10-04-01-TD)

### 3.2.3.4 Summary and discussion

In Shona, the possibility of interpreting a variable pronoun P as being bound by a quantifier Q depends on Q c-commanding P. However, it is sufficient for this c-command relation to be established between Q and a lower (unpronounced) copy of P when P is pronounced outside of Q’s c-command domain (such as in a cleft or wh-ex-situ question).

The fact that the bound reading is still possible in such scenarios means that there must be
a copy of $P$ within $Q$’s c-command domain, ruling out an analysis in which the wh-phrase
containing $P$ is generated high (in its overt position) and a null operator establishes the
dependency between that position and the gap in thematic position.

The results of Principle C tests, however, suggest that an ex-situ wh-phrase does not
have to reconstruct. There are several possible explanations of this difference between
the variable binding and Principle C reconstruction effects.\footnote{Through all of this, it is important to acknowledge that the Principle C reconstruction data for better-studied languages like English are disputed and far from clear-cut (Safir 1999, 2004, and others), so further research is necessary before we can come to any firm conclusions.}

One is to say that wh-ex-situ in Shona is A-movement rather than $A’$-movement, be-
cause A-movement shows Principle A and variable binding reconstruction but not Prin-
ciple C reconstruction \citep[Chomsky 1993, Fox 1999, Mahajan 1990, Miyagawa 2010, Pesetsky
tests that often help diagnose the $A/A’$-movement distinction are unavailable in Shona be-
cause there are no independent reflexives, but the possibility of long-distance wh-ex-situ
seems to militate against viewing it as A-movement \citep[though see Carstens 2011, Carstens
& Diercks 2013 on hyper-raising in Bantu]{Carstens2011, Carstens&Diercks2013}. Other arguments against treating Shona wh-
ex-situ as A-movement \citep[from Safir 2015]{Safir2015} include the fact that it allows pied-piping and
does not bleed normal subject marking on T.

Another option is that the clause ‘that Taurai had sold the stolen earrings’ may be an
adjunct rather than a complement of wanikidzo ‘discovery’. This would lead to an anti-
reconstruction effect due to Late Merge of the adjunct \citep[Lebeaux 1988, Fox 1999, Pesetsky
2013]{Lebeaux1988, Fox1999, Pesetsky2013}. I tried to choose a noun that would easily take a clausal complement, but they are
not easy to find in Shona, and the fact that the possessive is also an ‘of’-PP may indicate
that the clause is not a complement. Further testing with a wider range of nouns would
help to determine the status of this clause.

A third possible explanation stems from an asymmetry in Principle C reconstruction
effects in wh-questions vs. relative clauses. Sauerland \citeyear{Sauerland2003} argues that English relative
clauses test positive for reconstruction diagnostics like Principle A and variable binding, but not for Principle C, unlike English wh-questions, which show reconstruction in all cases:

(3.34) Principle C reconstruction in wh-questions but not relative clauses

a. * [DP Which picture of [John] does he like? ]
   (Sauerland 2003: 210 (12b))

b. Which is [RelCl the picture of [John] that he likes ]?
   (Sauerland 2003: 210 (12a))

According to Cheng (2006: 201), Bemba relative clauses behave the same way, permitting reconstruction of a bound variable pronoun but not requiring it for Principle C:

(3.35) a. Variable binding: Pronoun can reconstruct
   [RelCl Bululu ua-[kwe] uo [DP cila muntu] a-temwa [Bemba]
   1.relative 1.of-1.poss 1.REL each 1.person 1.sm-like
   ____] a-ikala ukutali.
   1.sm-live far.away
   ‘The relative of his, that every person, likes lives far away.’
   (Cheng 2006: 201 (14))

b. Principle C: R-expression does not need to reconstruct
   Bushe ici e-[RelCl cikope ca-kwa [Yoani] ico [Bemba]
   q 7.this cop-7.picture 7.of-1.poss 1.John 7.REL
   a1-temwa ____]?
   1.sm-like
   ‘Is this the picture of John, that he, likes?’
   (Cheng 2006: 201 (13))

Thus, Shona wh-ex-situ patterns like English relative clauses (but not wh-questions) and Bemba relative clauses in terms of reconstruction effects: a pronoun may reconstruct in order to be bound as a variable, but an R-expression may escape reconstruction to avoid a Principle C violation. I conclude from this that Shona wh-ex-situ involves relativization (in the creation of a cleft) rather than wh-movement, an analysis that will be supported further in section 3.2.4.3. As argued by Sauerland (2003) for English relative clauses, I assume that Shona relative clauses and clefts (including wh-ex-situ) are structurally ambiguous between a raising/promotion analysis (allowing reconstruction) and a matching analysis (blocking reconstruction). For simplicity, the rest of this chapter will consider
only the raising/promotion structure required to derive the cases where reconstruction does take place.

### 3.2.4 Wh-ex-situ as clefting

#### 3.2.4.1 Wh-ex-situ as focus-ex-situ

The following examples highlight that an allomorph of the copula *ni* is required when a *wh*-phrase has been extracted and appears either sentence-initially or sentence-finally. The morphological conditioning of this allomorphy will be discussed in section 3.2.4.3, but the key point here is that no ex-situ *wh*-phrase may take the same form as it does in situ.

\[(3.36) \text{ Local wh-ex-situ} \]

a. *Left-edge ex-situ wh-subject*

\[
*\text{(Ndi)-Ø-ani} \quad \text{aka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{Ø-rokwe} \quad \text{[Shona]} \\
\text{n1-1a-who} \quad \text{SE.1a.SM.TA-buy-APPL-FV} \quad \text{1a-Thandi} \quad \text{5-dress} \\
\text{ku-chi-toro} \quad \text{nezuro?} \\
\text{17-7-store} \quad \text{yesterday} \\
\text{‘Who (lit., It’s who that) bought Thandi a dress at the store yesterday?’} \quad (2014-07-16-01-TD)
\]

b. *Left-edge ex-situ wh-indirect object*

\[
*\text{(Ndi)-Ø-ani} \quad \text{wa-v-aka-teng-er-a} \quad \text{Ø-rokwe} \quad \text{[Shona]} \\
\text{n1-1a-who} \quad \text{la.NSE.2.SM-TA-buy-APPL-FV} \quad \text{5-dress} \\
\text{ku-chi-toro} \quad \text{nezuro?} \\
\text{17-7-store} \quad \text{yesterday} \\
\text{‘Who(m) did they buy (lit., It’s who that they bought) a dress (for) at the store yesterday?’} \quad (2014-09-09-01-TD)
\]

c. *Left-edge ex-situ wh-direct object*

\[
*\text{Chi-i/Chi-i} \quad \text{cha-v-aka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{[Shona]} \\
*\text{(n1).7-what} \quad \text{7.NSE.2.SM-TA-buy-APPL-FV} \quad \text{1a-Thandi} \\
\text{ku-chi-toro} \quad \text{nezuro?} \\
\text{17-7-store} \quad \text{yesterday} \\
\text{‘What did they buy (lit., It’s what that they bought) Thandi at the store yesterday?’} \quad (2014-09-09-01-TD)
\]
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

d. **Left-edge ex-situ** wh-locative adjunct

*(Nde)-**ku-pi** kwa-v aka-teng-er-a Ø-Thandi Ø-rokwe [Shona]

**NI-17**-which 17.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress

___ nezuro?
yesterday

‘Where did they buy (lit., It’s where that they bought) Thandi a dress yesterday?’ (2014-09-09-01-TD)

e. **Left-edge ex-situ** wh-temporal adjunct

*(Nd)°-**rinhi** pa-v aka-teng-er-a Ø-Thandi Ø-rokwe [Shona]

**NI-when** 16.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress

ku-chi-toro ___?
17-7-store

‘When did they buy (lit., It’s when that they bought) Thandi a dress at the store?’ (2014-09-09-01-TD)

(3.37) **Long-distance** wh-ex-situ

a. **Left-edge long-distance ex-situ** wh-subject

*(Nd)-**0-ani** wa-w ai-fung-a kuti ___ aka-teng-er-a [Shona]

**NI-1a**-who 1a.NSE-2.SG-TA-think-FV that 1a.SM.TA-buy-APPL-FV

Ø-Thandi Ø-rokwe ku-chi-toro nezuro?
1a-Thandi 5-dress 17-7-store yesterday

‘Who do (lit., It’s who that) you think bought Thandi a dress at the store yesterday?’ (2014-09-09-01-TD)

b. **Left-edge long-distance ex-situ** wh-indirect object

*(Nd)-**0-ani** wa-w ai-fung-a kuti v aka-teng-er-a [Shona]

**NI-1a**-who 1a.NSE-2.SG-TA-think-FV that 2.SM-TA-buy-APPL-FV

___ Ø-rokwe ku-chi-toro nezuro?
5-dress 17-7-store yesterday

‘Who(m) did (lit., It’s who that) you think they bought a dress (for) at the store yesterday?’ (2014-09-09-01-TD)

c. **Left-edge long-distance ex-situ** wh-direct object

{*Chi-i/Chi-i*} cha-w ai-fung-a kuti v aka-teng-er-a [Shona]

*(N1).7**-what** 7.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV

Ø-Thandi ___ ku-chi-toro nezuro?
1a-Thandi 17-7-store yesterday

‘What did (lit., It’s what that) you think they bought Thandi at the store yesterday?’ (2014-09-09-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

d. *Left-edge long-distance ex-situ wh-locative adjunct*

\[
\begin{align*}
\text{*(Nde)-ku-pi} & \quad \text{kwa-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad \text{[Shona]} \\
\text{NI-17-which} & \quad \text{17.NSE-2SG.SM-TA-think-FV} & \quad \text{that 2.SM-TA-buy-APPL-FV} \\
\text{Ø-Thandi} & \quad \text{Ø-rokwe ___ nezuro?} & \quad \text{1a-Thandi 5-dress yesterday} \\
\end{align*}
\]

‘Where did (lit., It’s where that) you think they bought Thandi a dress yesterday?’ (2014-09-09-01-TD)

e. *Left-edge long-distance ex-situ wh-temporal adjunct*

\[
\begin{align*}
\text{*(Ndi)-rinhi} & \quad \text{pa-w-ai-fung-a} & \quad \text{kuti v-aka-teng-er-a} & \quad \text{[Shona]} \\
\text{NI-when} & \quad \text{16.NSE-2SG.SM-TA-think-FV} & \quad \text{that 2.SM-TA-buy-APPL-FV} \\
\text{Ø-Thandi} & \quad \text{Ø-rokwe ku-chi-toro ___?} & \quad \text{1a-Thandi 5-dress 17-7-store} \\
\end{align*}
\]

‘When did (lit., It’s when that) you think they bought Thandi a dress at the store?’ (2014-09-09-01-TD)

(3.38) *Local wh-ex-situ, sentence-final*

a. *Right-edge ex-situ wh-subject*

\[
\begin{align*}
\text{___ Áka-teng-er-a} & \quad \text{Ø-Thandi Ø-rokwe ku-chi-toro ___ nezuro ___?} & \quad \text{1a-Thandi 5-dress 17-7-store} \\
\text{se.1a.SM.TA-buy-APPL-FV} & \quad \text{la-Thandi 5-dress 17-7-store} \\
\text{ni-1a-who} & \quad \text{ni-1a-who} \\
\end{align*}
\]

‘Who bought Thandi a dress at the store yesterday?’ (lit., ‘That bought Thandi a dress at the store yesterday it’s who?’) (2014-07-16-01-TD)

b. *Right-edge ex-situ wh-indirect object*

\[
\begin{align*}
\text{Wa-v-aka-teng-er-a ___ Ø-rokwe ku-chi-toro nezuro ___?} & \quad \text{[Shona]} \\
\text{1a.NSE-2.SM.TA-buy-APPL-FV} & \quad \text{5-dress 17-7-store yesterday} \\
\text{*ndi-Ø-ani?} & \quad \text{*ndi-Ø-ani?} \\
\text{NI-1a-who} & \quad \text{NI-1a-who} \\
\end{align*}
\]

‘Who(m) did they buy a dress (for) at the store yesterday?’ (lit., ‘That they bought a dress (for) at the store yesterday it’s who?’) (2014-09-09-01-TD)

c. *Right-edge ex-situ wh-direct object*

\[
\begin{align*}
\text{Cha-v-aka-teng-er-a} & \quad \text{Ø-Thandi ___ ku-chi-toro nezuro ___?} & \quad \text{[Shona]} \\
\text{7.NSE-2.SM.TA-buy-APPL-FV} & \quad \text{1a-Thandi 17-7-store yesterday} \\
\text{*chi-i/chi-i?} & \quad \text{*chi-i/chi-i?} \\
\text{*ni-7-what} & \quad \text{*ni-7-what} \\
\end{align*}
\]

‘What did they buy Thandi at the store yesterday?’ (lit., ‘That they bought Thandi at the store yesterday it’s what?’) (2014-09-09-01-TD)
3.2. Shona wh-ex-situ via clefting

**d. Right-edge ex-situ wh–locative adjunct**

Kwa-v-aka-teng-er-a Ø-Thandi Ø-rokwe ___ nezuro [Shona]
17.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress yesterday *(nde)-ku-pi?

NI-17-which

‘Where did they buy Thandi a dress yesterday?’ (lit., ‘That they bought Thandi a dress yesterday it’s where?’) (2014-09-09-01-TD)

**e. Right-edge ex-situ wh–temporal adjunct**

Pa-v-aka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro ___ [Shona]
16.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-store *(ndi)-rinhi?

NI-when

‘When did they buy Thandi a dress at the store?’ (lit., ‘That they bought Thandi a dress at the store it’s when?’) (2014-09-09-01-TD)

(3.39) *Long-distance wh-ex-situ, sentence-final*

**a. Right-edge long-distance ex-situ wh–subject**

Wa-w-ai-fung-a kuti ___ aka-teng-er-a [Shona]
1a.NSE-2SG.SM-TA-think-FV that 1a.SM.TA-buy-APPL-FV

Ø-Thandi Ø-rokwe ku-chi-toro nezuro *(ndi)-Ø-ani?
1a-Thandi 5-dress 17-7-store yesterday NI-1a-who

‘Who do you think bought Thandi a dress at the store yesterday?’ (lit., ‘That you think bought Thandi a dress at the store yesterday it’s who?’) (2014-09-09-01-TD)

**b. Right-edge long-distance ex-situ wh–indirect object**

Wa-w-ai-fung-a kuti v-aka-teng-er-a ___ [Shona]
1a.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV

Ø-rokwe ku-chi-toro nezuro *(ndi)-Ø-ani?
5-dress 17-7-store yesterday NI-1a-who

‘Who(m) did you think they bought a dress (for) at the store yesterday?’ (lit., ‘That you think they bought a dress (for) at the store yesterday it’s who?’) (2014-09-09-01-TD)

**c. Right-edge long-distance ex-situ wh–direct object**

Cha-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi [Shona]
7.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV 1a-Thandi ___ ku-chi-toro nezuro {*chi-i/chi-i}?
17-7-store yesterday *(NI).7-what

‘What did you think they bought Thandi at the store yesterday?’ (lit., ‘That you think they bought Thandi at the store yesterday it’s what?’) (2014-09-09-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

d. Right-edge long-distance ex-situ wh–locative adjunct
Kwa-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi [Shona]
17.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV 1a-Thandi
Ø-rokwe ___ nezuro *(nde)-ku-pi?
5-dress yesterday ni-17-which
‘Where did you think they bought Thandi a dress yesterday?’ (lit., ‘That you think they bought Thandi a dress yesterday it’s where?’)
(2014-09-09-01-TD)

e. Right-edge long-distance ex-situ wh–temporal adjunct
Pa-w-ai-fung-a kuti v-aka-teng-er-a Ø-Thandi [Shona]
16.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV 1a-Thandi
Ø-rokwe ku-chi-toro ___ *(ndi)-rinhi?
5-dress 17-7-store ni-when
‘When did you think they bought Thandi a dress at the store?’ (lit., ‘That you think they bought Thandi a dress at the store it’s when?’)
(2014-09-09-01-TD)

Just as wh-in-situ was shown in section 2.3.2.1 to have the same distribution as focus-in-situ more generally, wh-ex-situ has the same distribution as focus-ex-situ. Compare the wh-ex-situ questions in (3.36) and (3.38) to the corresponding focus-ex-situ sentences in (3.40–3.41).

(3.40) Local focus-ex-situ

a. Left-edge ex-situ wh-subject
{*Va/Vá}-kadzi ___ v-àka-teng-er-a Ø-Thandi Ø-rokwe [Shona]
*(Ni).2-woman 2.SM-SE.TA-buy-APPL-FV 1a-Thandi 5-dress
ku-chi-toro nezuro.
17-7-store yesterday
‘It’s the WOMEN who bought Thandi a dress at the store yesterday.’
(2016-03-08-02-TD)

b. Left-edge ex-situ wh–indirect object
*(Ndì)-Ø-Thandi wa-v-aka-teng-er-a ___ Ø-rokwe [Shona]
Ni-1a-Thandi 1a.NSE-2.SM-TA-buy-APPL-FV 5-dress
ku-chi-toro nezuro.
17-7-store yesterday
‘It’s THANDI that they bought a dress (for) at the store yesterday.’
(2016-03-08-02-TD)
c. *Left-edge ex-situ wh–direct object*

*(I)-Ø-rokwe* ra-aka-teng-er-a Ø-Thandi ___ [Shona]

\[\text{ni-5-dress} \quad 5.\text{nse-2.sm-ta-buy-appl-fv} \quad 1a-\text{Thandi}\]

ku-chi-toro nezuro.

17-7-store yesterday

‘It’s a dress that they bought Thandi at the store yesterday.’

(2016-03-08-02-TD)

d. *Left-edge ex-situ wh–locative adjunct*

{*Ku/Kǔ}-chi-toro kwa-v-aka-teng-er-a Ø-Thandi [Shona]

\[\text{*ni.17-7-store} \quad 17.\text{nse-2.sm-ta-buy-appl-fv} \quad 1a-\text{Thandi}\]

Ø-rokwe ___ nezuro.

5-dress yesterday

‘It’s at the store that they bought Thandi a dress yesterday.’

(2016-03-08-02-TD)

(3.41) *Local focus-ex-situ, sentence-final*

a. *Right-edge ex-situ wh–subject*

___ V-aka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]

\[2.\text{sm-se.ta-buy-appl-fv} \quad 1a-\text{Thandi} \quad 5-\text{dress} \quad 17-7-\text{store}\]

nezuro {\*va/vá}-kadzi.

yesterday *(ni).2-woman

‘It’s the women who bought Thandi a dress at the store yesterday.’ (lit., ‘That bought Thandi a dress at the store yesterday it’s the women.’)

(2016-03-08-02-TD)

b. *Right-edge ex-situ wh–indirect object*

Wa-v-aka-teng-er-a ___ Ø-rokwe ku-chi-toro nezuro [Shona]

\[1a.\text{nse-2.sm-ta-buy-appl-fv} \quad 5-\text{dress} \quad 17-7-\text{store} \quad \text{yesterday}\]

*(ndi)-Ø-Thandi.

\[\text{ni-1a-who}\]

‘It’s Thandi that they bought a dress (for) at the store yesterday.’ (lit., ‘That they bought a dress (for) at the store yesterday it’s Thandi.’)

(2016-03-08-02-TD)

c. *Right-edge ex-situ wh–direct object*

Ra-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro [Shona]

\[5.\text{nse-2.sm-ta-buy-appl-fv} \quad 1a-\text{Thandi} \quad 17-7-\text{store} \quad \text{yesterday}\]

*(i)-Ø-rokwe.

\[\text{ni-5-dress}\]

‘It’s a dress that they bought Thandi at the store yesterday.’ (lit., ‘That they bought Thandi at the store yesterday it’s a dress.’)
d. **Right-edge ex-situ wh–locative adjunct**


*(ni).17-7-store

'It’s at the store that they bought Thandi a dress yesterday.' (lit., 'That they bought Thandi a dress yesterday it’s at the store.') (2016-03-08-02-TD)

This section will examine the structure of these focus-ex-situ constructions in order to understand the structure of *wh*-ex-situ. In many languages, clefts, a type of focus-ex-situ consisting of a copular clause plus an embedded clause, change over time into focus fronting constructions with a simpler structure (Harris 2001, Harris & Campbell 1995, Heine & Reh 1984, Jendraschek 2009, Van der Wal & Maniacky 2015). One frequently attested grammaticalization path is shown in (3.42). A biclausal cleft has a pronoun, copula, (focused) cleft phrase, and a cleft clause (which is often a relative clause). Over time, the pronoun may become optional and disappear, and then the copula may be reanalyzed as a focus marker, which itself may become optional and disappear. At some point along this process, the biclausal structure of the cleft is reanalyzed as monoclausal.

(3.42) **A common grammaticalization path from cleft to simple focus construction**

<table>
<thead>
<tr>
<th>Biclausal:</th>
<th>(pronoun)</th>
<th>copula</th>
<th>cleft phrase</th>
<th>cleft clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monoclausal:</td>
<td>(focus marker)</td>
<td>focused phrase</td>
<td>rest of clause</td>
<td></td>
</tr>
</tbody>
</table>

Other grammaticalization paths are possible; for example, Van der Wal & Maniacky (2015) investigate central Bantu languages in which the word *moto* ‘person’ has been grammaticalized as a focus marker.

The question at hand is not so much where along this process of grammaticalization Shona lies, but rather the more concrete question of whether the structure of its focus-ex-situ (and *wh*-ex-situ) is biclausal or monoclausal. In order to test this question, I will replicate the diagnostics discussed by Abels & Muriungi (2008) for Kîìtharaka.

At first glance, the Shona and Kîìtharaka constructions in (3.43–3.44) appear quite similar. Both constructions involve displacement of the direct object ‘thief’ from its canonical
postverbal position to the front of the sentence, immediately preceded by \textit{i-}. However, as might be surmised from the differences in the free translations, I will argue against a unified analysis of these constructions.

\textbf{(3.43) Superficially similar focus-ex-situ in Shona and Kîîtharaka}

a. \textit{Ex-situ focused direct object}

\begin{verbatim}
\textbf{I-m-bavha} ya-aka-on-a _____ nezuro.  \textbf{[Shona]}
\textbf{Ni-9-thief} 9.NSE-1.SM.TA-see-FV yesterday
\end{verbatim}

`It’s a thief that s/he saw yesterday.’

(2015-04-14-02-TD)

b. \textit{Ex-situ focused direct object}

\begin{verbatim}
\textbf{I-mw-amba} Peter  a-ra-on-ir-e _____ i-goro.  \textbf{[Kîîtharaka]}
\textbf{Ni-1-thief} 1.Peter 1.SM.REC.PST-see-PFV-FV 5-yesterday
\end{verbatim}

`The thief Peter saw yesterday.’

(\textit{Abels & Muriungi 2008: 725 (99a)})

\textbf{(3.44) Superficially similar focus-ex-situ in Shona and Kîîtharaka}

a. \textit{Ex-situ focused subject of an unaccusative}

\begin{verbatim}
\textbf{I-m-bavha} _____ y-àka-pind-a.  \textbf{[Shona]}
\textbf{Ni-9-thief} 9.SM-SE.TA-come.in-FV
\end{verbatim}

`It’s a thief who came in.’

(2014-09-20-02-TD)

b. \textit{Ex-situ focused subject of an unaccusative}

\begin{verbatim}
\textbf{I-Maria}  _____ a-kiny-ir-e.  \textbf{[Kîîtharaka]}
\textbf{Ni-1.Maria} 1.SM-arrive-PFV-FV
\end{verbatim}

`MARIA arrived.’

(\textit{Abels & Muriungi 2008: 692 (10b)})

The structure of these focus-ex-situ constructions has been the topic of some debate, even when the scope of the discussion is limited to Bantu languages, as shown in Table 3.1. In what follows, I will argue that Shona has a biclausal cleft construction, in contrast to the Kîîtharaka construction, which \textit{Abels & Muriungi (2008)} have convincingly argued is monoclausal.

\textbf{3.2.4.2 The basics of focus-ex-situ in Kîîtharaka and Shona}

The examples in (3.45–3.46) illustrate that focus-ex-situ in both Shona and Kîîtharaka involves displacement of the focused phrase to the front of the sentence. A wide range of categories (nominals, locatives, infinitives, some adjectives, some temporals treated as
Table 3.1: Prior analyses of Bantu focus-ex-situ

locatives) may bear ϕ-features in Bantu, and these may be all focused ex situ, but those that do not bear ϕ-features (e.g., adverbial and verbal phrases) may not (Abels & Muriungi 2008: 608–705). The focused phrase is attached to a copula or focus marker, whose allomorphy will be discussed below.

(3.45)  

a. *Ex-situ focused subject of an intransitive verb*

\[ \text{I-m-bavha} \quad \text{y-àka-pind-a.} \quad \text{[Shona]} \]

\[ \text{NI-9-thief} \quad \text{9.sm-se.ta-come.in-fv} \]

‘It’s a thief who came in.’

(2014-09-20-02-TD)

b. *Ex-situ focused subject of a transitive verb*

\[ \text{Ndi-Ø-Tendai} \quad \text{àka-teng-er-a} \quad \text{Ø-Thandi} \quad \text{Ø-rokwe.} \quad \text{[Shona]} \]

\[ \text{NI-1a-Tendai} \quad \text{se.1a.sm.ta-buy-appl-fv} \quad \text{1a-Thandi} \quad \text{5-dress} \]

‘It’s TENDAI who bought Thandi a dress.’

(2014-08-29-03-TD)
c. **Ex-situ focused direct object**

<table>
<thead>
<tr>
<th>Shona</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I-Ø-rokwe</strong></td>
<td>Ø-Thandi ___</td>
</tr>
<tr>
<td><strong>ni-5-dress</strong></td>
<td>1a-Thandi 5.NSE-1.SM.TA-buY-APPL-FV</td>
</tr>
<tr>
<td>'It's a dress that s/he bought Thandi.' (2014-09-06-02-TD)</td>
<td></td>
</tr>
</tbody>
</table>

**Kú-chi-toro kwa-aka-teng-er-a Ø-Thandi [Shona] 17.NSE-1.SM.TA-buY-APPL-FV 1a-Thandi

Ø-rokwe ___ 5-dress

'It's at the store that s/he bought Thandi a dress.' (2014-08-04-01-TD)

(3.46) a. **Ex-situ focused subject of an intransitive verb**

<table>
<thead>
<tr>
<th>Kiïtharaka</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I-Maria</strong></td>
<td>a-kiny-ir-e ___</td>
</tr>
<tr>
<td><strong>ni-1.Maria</strong></td>
<td>1.SM-arrive-PFV-FV</td>
</tr>
<tr>
<td>'Maria arrived.' (Abels &amp; Muriungi 2008: 692 (10b))</td>
<td></td>
</tr>
</tbody>
</table>

b. **Ex-situ focused subject of a transitive verb**

<table>
<thead>
<tr>
<th>Kiïtharaka</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N-Aana</strong></td>
<td>a-gûr-îr-e i-buku.</td>
</tr>
<tr>
<td><strong>ni-1.Ana</strong></td>
<td>1.SM-buy-PFV-FV 5-book</td>
</tr>
<tr>
<td>'Ana bought a book.' (Abels &amp; Muriungi 2008: 690 (4b))</td>
<td></td>
</tr>
</tbody>
</table>

c. **Ex-situ focused direct object**

<table>
<thead>
<tr>
<th>Kiïtharaka</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N-iî-buku</strong></td>
<td>Maria a-gûr-i-îr-e mw-arîmû ___</td>
</tr>
<tr>
<td><strong>ni-5-book</strong></td>
<td>1.Maria 1.SM-buy-APPL-PFV-FV 1-teacher</td>
</tr>
<tr>
<td>'Maria bought the teacher A BOOK.' (Abels &amp; Muriungi 2008: 691 (6b))</td>
<td></td>
</tr>
</tbody>
</table>

d. **Ex-situ focused locative adjunct**

<table>
<thead>
<tr>
<th>Kiïtharaka</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I-mûciî gw-a mw-arîmû</strong></td>
<td>Maria a-thî-îr-e ___</td>
</tr>
<tr>
<td><strong>ni-17.home 17-of 1-teacher</strong></td>
<td>1.Maria 1.SM-go-PFV-FV</td>
</tr>
<tr>
<td>'Maria went to the teacher's home.' (Abels &amp; Muriungi 2008: 702 (47d))</td>
<td></td>
</tr>
</tbody>
</table>

e. **Ex-situ focused temporal adjunct**

<table>
<thead>
<tr>
<th>Kiïtharaka</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I-rû’kîiri</strong></td>
<td>Maria a-thom-îr-e mbibiria ___</td>
</tr>
<tr>
<td><strong>ni-11-morning</strong></td>
<td>1.Maria 1.SM-read-PFV-FV 9.Bible</td>
</tr>
<tr>
<td>'Maria read the Bible IN THE MORNING.' (Abels &amp; Muriungi 2008: 704 (55a))</td>
<td></td>
</tr>
</tbody>
</table>

### 3.2.4.3 Biclausal or monoclausal?

This section runs through a battery of tests that have been used to examine the grammaticalization away from a classical biclausal cleft (Harris & Campbell 1995, Harris 2001, Abels...
& Muriungi 2008, Van der Wal & Maniacky 2015). Along the way, I will point out the ways in which many of these diagnostics can produce ambiguous results, but there is enough evidence to conclude that Shona focus-ex-situ is biclausal while Kîîtharaka focus-ex-situ is monoclausal.

First of all, there are several characteristics of grammaticalization that both languages share, shown in Table 3.2, but these are not conclusive about a monoclausal versus biclausal structure. The fact that a cleft pronoun is not required is not meaningful in null subject languages. It is true that neither language allows the copula/focus marker to bear tense inflection or the $\varphi$-agreement with the subject that would normally appear on verbs; while this is certainly consistent with its being a grammaticalized focus marker, it is also possible that it is a defective copular verb in its own copular clause (perhaps with a reduced structure). The copula/focus marker is phonologically dependent, but this could have a number of structural explanations and does not definitively indicate either a monoclausal or biclausal structure.

<table>
<thead>
<tr>
<th></th>
<th>Shona</th>
<th>Kîîtharaka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft pronoun not required</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Copula/focus marker</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cannot bear subject marking or tense</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Phonologically dependent</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3.2: Properties of Shona and Kîîtharaka focus-ex-situ (interim)

**Allomorphy.** If a copula is on its way to becoming a focus marker, we might expect it to crystallize into an invariant form. However, both the Kîîtharaka focus marker and the Shona copula display allomorphy, and the morphological shapes of these allomorphs appear to be cognate.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

(3.47) *Shona* ni copula allomorphs

\[ \text{ndi-} \leftrightarrow / \_\_ \{1\text{sg}, 1\text{pl}, 2\text{sg}, 2\text{pl}, 1\alpha\} \]

\[ \text{ndé-} \leftrightarrow / \_\_ \{\text{'which'}, \text{'whose'}\} \]

\[ \text{i-} \leftrightarrow / \_\_ \{5, 9, 10\} \]

\[ \text{H-} \leftrightarrow / \_\_ \text{elsewhere} \]


All of the Shona allomorphs are associated with high tone; in fact, the elsewhere allomorph has no segmental content but is a floating high tone that docks on the noun class prefix of the clefted phrase. In the example sentences, I only transcribe the high tone in the floating high tone cases.

(3.48) *Kítharaka* focus marker allomorphs

\[ \text{n-} \leftrightarrow / \_\_ \text{V} \]

\[ \text{i-} \leftrightarrow / \_\_ \text{C} \]

(Abels & Muriungi 2008: 690)

Note that the allomorphy is phonologically conditioned in Kítharaka but morphologically conditioned in Shona. This could be indicative that Kítharaka is further along the path of grammaticalization, but it certainly is not as clear-cut as it would be if the Kítharaka focus marker were completely invariant. Duala, by contrast, has an invariant focus marker *nde* that appears to be cognate with the forms in Shona and Kítharaka (Epée 1975, 1976a,b).

Use of copula/focus marker in copular constructions. We might also expect a grammaticalized focus marker to no longer be able to be used as a copula, or at least it might take a different form (Harris & Campbell 1995). However, both Kítharaka and Shona use the same forms in copular constructions as in focus-ex-situ.

Shona has two copulas, *ndi* (glossed as *ni* in examples) and *-ri* (glossed as ‘be’ in examples). The *-ri* copula bears subject agreement, while the *ndi-* copula does not. Neither copula may combine with tense or aspect morphology directly, but the past and future tenses of *-va/-ve* ‘become’ are used as suppletive forms of *-ri*. In the negative, *-ri* takes

6. There is considerable dialectal variation in the form of these allomorphs. For example, some varieties use *ndo-* instead of *nde-. The forms reported here are those preferred by my consultant. See the references provided for further discussion.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

the negative marker *ha*- but in some dialects this combines with a negative suppletive form *-si* or *-zi*, as shown in (3.49b). Whether *ndi-* may appear in the negative as *ha-ndi-* also varies dialectally (Fortune 1985: 140–141); my consultant prefers to use *-zi* in negative copular constructions whose positive counterparts would have *ndi-*.

The *-ri* copula often is used in locative constructions, as in (3.49c). Additionally, it may take an infinitive (class 15), in which case it expresses progressive aspect. See Brauner 1995: 41–47, Carter 1956, Fortune 1984, 1985, and Toews 2009 for more information.

(3.49) Uses of *-ri* ‘be’

a. *-ri as predicative copula with null subject*  
   
   Mu-*ri* va-nhu ve-chi-tender-o zvikuru.  
   2PL.SM-*be* 2-person 2.of-7-believe-NMLZ greatly  
   ‘You are people of great faith.’  
   
   (Acts 17:22, BSN)

b. *-ri as predicative copula with null subject, negative *-si*  
   
   Ti-*ri* va-nhu v-aka-tendek-a; *ha-ti-*si  
   1PL.SM-*be* 2-person 2.SM-TA-be.trustworthy-FV NEG-1PL.SM-NEG.*be*  
   va-sor-i.  
   2-spy-NMLZ  
   ‘We are trustworthy people; we are not spies.’  
   
   (Gen. 42:31, BSN)

c. *Locative sense of *-ri*, with future auxiliary*  
   
   Va-rume va-viri va-cha-ng-e va-*ri* mu-mu-nda.  
   2-man 2-two 2.SM-TA-AUX-FV 2.SM-*be* 18-3-field  
   ‘Two men will be in the field.’  
   
   (Matt. 24:40, BSN)

d. *-ri as progressive auxiliary*  
   
   Mu-rayir-o we-nyu u-*ri* ku-puts-w-a.  
   3-command-NMLZ 3.of-2PL.Poss 3.SM-*be* 15-break-PASS-FV  
   ‘Your command is being broken.’  
   
   (Psa. 119:126, BSN)

The copula that is used in focus-ex-situ is not *-ri* but *ndi*-.

As mentioned above, *ndi-* has several allomorphs, including *nde-* and *i-*, and a floating high tone that raises the tone of the noun class marker on the following word (see Brauner 1995: 42–43, Carter 1956, Fortune 1984, 1985, and Pongweni 1980 for more information about this allomorphy). This copula may be used in predicational copular sentences, such as (3.50).

---

7. In the traditional grammatical literature this copula is known as the “stabilizer” because it can turn a noun into a complete sentence, what Hedberg (2000) calls a truncated cleft.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

(3.50) Predicational uses of ndi-

a. Predicational copular sentence, ndi- allomorph

Ø-Taurai ndi-Ø-mambo. [Shona]
1a-Taurai NI-1a-king
‘Taurai is the king.’

(2014-09-13-01-TD)

b. Predicational copular sentence, i- allomorph

Mu-rume u-ya i-m-bavha. [Shona]
1-man 1-that NI-9-thief
‘That man is a thief.’

(2014-09-13-01-TD)

c. Predicational copular sentence, H- allomorph

Ø-Rumbi mü-biki. [Shona]
1a-Rumbi NI.1-cook
‘Rumbi is a cook.’

(2014-09-13-02-TD)

The ndi- copula also has a specificational usage, and this is the one that is relevant for clefts. Examples are shown in (3.51).

(3.51) Specificational uses of ndi-

a. Specificational copular sentence, ndi- allomorph

Mu-tungamir-i wa-va-nhu va-Ø-Judha ndi-Ø-Nashani [Shona]
1-lead-MLZ 1.of-2-person 2.of-1a-Judah NI-1a-Nahshon
 mw-anakomana wa-Ø-Aminadhabhi.
1.son 1.of-1a-Amminadab
‘The leader of the people of Judah is Nahshon son of Amminadab.’

(Num. 2:3, bsn)

b. Specificational copular sentence, ndi- allomorph

Mu-mwe à-no-ndi-pupur-ir-a ndi-Ø-Baba. [Shona]
1-other SE.1.PL-TA-1SG.OM-be.witness-APPL-FV NI-1a-Father
‘The other one who is a witness for me is the Father.’

(John 8:18, bsn)

Kîîtharakà also has both a -ri and n-/i- copula (Muriungi 2005), just as in Shona, with a similar set of restrictions on tense and subject marking. As shown in (3.52), the n-/i- that appears in focus-ex-situ may appear in copular constructions.

(3.52) Kîîtharakà n-/i- used in copular constructions

a. Karimi i-mubiasara. [Kîîtharakà]
Karimi NI-businesswoman
‘Karimi is a businesswoman.’

(Muriungi 2005: 82 (98))
Chapter 3. Full *wh*-movement 3.2. Shona *wh*-ex-situ via clefting

b. David **n**-obisa. [Kiitharaka]
   David **ni**-officer
   ‘David is an officer.’ (Muriungi 2005: 82 (98))

Of course, this by itself does not constitute an airtight argument for a biclausal cleft. The copula could be left-peripheral (Den Dikken 2006, Torrence 2013), the focus marker and copula could simply be homophones, or as Abels & Muriungi (2008) argue for Kiitharaka, the copula could be null, in which case the focus marker would simply mark focus.

**Optionality of copula/focus marker.** In the late stages of grammaticalization from a biclausal cleft into a monoclausal focus construction, the focus marker may become optional or disappear (Harris & Campbell 1995, Van der Wal & Maniacky 2015). This has not happened in either Shona (see (3.36–3.41)) or Kiitharaka (Abels & Muriungi 2008, Muriungi 2003, 2005, 2011). Again, though, this diagnostic is inconclusive because focus markers may be overt even in simple monoclausal focus constructions.

**Interim summary.** So far, Shona and Kiitharaka pattern virtually the same, with some properties that may suggest a classical cleft structure and some that do not, as shown in Table 3.3.

<table>
<thead>
<tr>
<th></th>
<th>Shona</th>
<th>Kiitharaka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft pronoun not required</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Copula/focus marker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannot bear subject marking or tense</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Phonologically dependent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Morphologically invariant</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Separate form in copular constructions</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

Table 3.3: Properties of Shona and Kiitharaka focus-ex-situ (interim)

All of these properties could be explained under either analysis. But next, we will examine differences between the focus fronting constructions in the two languages and look for better diagnostics for determining the clausal structure.
Focus marking on non-fronted elements. As discussed in detail by Abels & Muriungi (2008), the distribution of the focus marker n-/i- is not limited to the prenominal focus construction shown in (3.53a). Verbs, too, may bear the focus marker, as in (3.53b), in which case there may be VP focus or verum focus, but not narrow focus on a postverbal constituent.

(3.53) a. Focus-marked direct object

\[\text{N-ii-buku} \quad \text{Maria} \quad \text{a-gûr-îr-e} \quad \text{ni-5-book} \quad \text{1.Maria} \quad \text{1.sm-buy-pfv-fv}\]

‘Maria bought a book.’ / ‘Maria bought a book.’

(Abels & Muriungi 2008: 707 (64b))

b. Focus-marked verb

\[\text{Maria} \quad \text{n-a-gûr-îr-e} \quad \text{î-buku.} \quad \text{1.Maria} \quad \text{ni-1.sm-buy-pfv-fv} \quad 5\text{-book}\]

‘Maria bought a book.’ / ‘Maria bought a book.’

(Abels & Muriungi 2008: 706 (60))

This preverbal focus construction looks considerably less like a cleft because there is no fronting of the focused constituent. Abels & Muriungi (2008) argue that the preverbal and prenominal focus markers are in complementary distribution within a clause, indicating that they cannot be analyzed simply as a homophonous copula and focus marker.

In Shona, on the other hand, it is impossible to attach the copula to the verb as in (3.53b). Thus, this diagnostic is useful to distinguish the ndi- in Shona from the n-/i- in Kîîtharaka, suggesting that the Kîîtharaka is a focus marker and not just a copula. However, this does not necessarily bear on the question at hand, namely, whether the structure is monoclausal or biclausal.

Lack of relative clause morphology. The cleft clause is classically analyzed as a relative clause (see Hartmann & Veenstra 2013 and Reeve 2012 for a survey). In many Bantu languages, complementizers or verbs in relative clauses have dedicated morphology (Cheng 2006, Henderson 2006b, Zentz 2013, 2015), which would be expected to disappear if the cleft grammaticalized into a monoclausal structure.
Chapter 3. Full wh-movement 3.2. Shona wh-ex-situ via clefting

The verb in the Shona cleft clause bears the same morphology it would have in a relative clause: a floating low tone prefix for subject extraction, as in (3.54), and a $\varphi$-agreeing prefix for non-subject extraction, as in (3.55). See section 3.2.5 for further discussion of these morphological alternations.

(3.54) Subject extraction marking

a. Wh-ex-situ requires extraction marking

\[
\text{Ndi-Ø-ani} \quad \{^*a-/à-\}\text{ka-teng-a} \quad Ø-rokwe? \\
\text{N1-1a-who} \quad ^*(\text{se}).\text{1a.sm.ta-buy-fv} \quad 5\text{-dress}
\]

‘Who (lit., It’s who that) bought a dress?’

(2014-06-28-01-TD)

b. Focus-ex-situ requires extraction marking

\[
\text{Ndi-Ø-Rumbi} \quad \{^*a-/à-\}\text{ka-teng-a} \quad Ø-rokwe. \\
\text{N1-1a-Rumbi} \quad ^*(\text{se}).\text{1a.sm.ta-buy-fv} \quad 5\text{-dress}
\]

‘It’s Rumbi who bought a dress.’

(2016-03-14-TD)

c. Relative clauses require extraction marking

\[
\text{Ndi-no-ziv-a} \quad \left[\right.\text{RelCl} \quad \text{mu-sikana} \quad \{^*a-/à-\}\text{ka-teng-a} \quad \left[\right. \\
\text{1sg.sm-ta-know-fv} \quad \text{1-girl} \quad ^*(\text{se}).\text{1.sm.ta-buy-fv}
\]

Ø-rokwe].

5-dress

‘I know the girl who bought a dress.’

(2016-03-14-TD)

(3.55) Non-subject extraction marking

a. Wh-ex-situ requires extraction marking

\[
\text{Ndi-Ø-ani} \quad ^*(\text{wa})\text{-v-aka-teng-er-a} \quad Ø-rokwe? \\
\text{N1-1a-who} \quad 1\text{a.nse-2.sm-ta-buy-appl-fv} \quad 5\text{-dress}
\]

‘Who(m) did they buy a dress (for)?’

(lit., ‘It’s who that they bought a dress (for)?’)

(2016-02-13-01-TD)

b. Focus-ex-situ requires extraction marking

\[
\text{Ndi-Ø-Thandi} \quad ^*(\text{wa})\text{-v-aka-teng-er-a} \quad Ø-rokwe. \\
\text{N1-1a-Thandi} \quad 1\text{a.nse-2.sm-ta-buy-appl-fv} \quad 5\text{-dress}
\]

‘It’s Thandi that they bought a dress (for).’

(2016-02-13-01-TD)

c. Relative clauses require extraction marking

\[
\text{Ndi-no-ziv-a} \quad \left[\right.\text{RelCl} \quad \text{mu-sikana} \quad ^*(\text{wa})\text{-v-aka-teng-er-a} \quad \left[\right. \\
\text{1sg.sm-ta-know-fv} \quad \text{1-girl} \quad 1\text{.NSE-2.sm-ta-buy-appl-fv}
\]

Ø-rokwe].

5-dress

‘I know the girl who they bought a dress (for).’

(2016-02-13-01-TD)
Kîîtharaka has no such morphological alternations in either relative clauses or focus constructions.⁸ Even if it did, that would not necessitate a relative structure. Abels & Muriungi (2008) and Zentz (2011, 2015) argue that these alternations could simply mark A’-movement in general rather than relativization specifically, so the test is inconclusive.

**Fronted temporal modifiers.** In the spirit of Schwarz’s (2003: 78–82) argument from topicalization out of focus constructions in Kikuyu, Abels & Muriungi (2008) introduce a new diagnostic for the clause boundary.

If the focus construction were biclausal, then the fronting of the temporal modifier out of the focus construction in (3.56b) should be just as bad as fronting it out of the relative clause in (3.57b), contrary to fact. Because of the contrast between (3.56b) and (3.57b), Abels & Muriungi (2008) argue against Harford’s (1997a) claim that the Kîîtharaka prenominal focus construction is a biclausal cleft, instead positing that it is monoclausal.

(3.56) **Temporal modifiers may be fronted out of a focus-ex-situ construction**

a. **Temporal modifier within focus-ex-situ construction**

\[\text{I-mw-amba}_i\text{ Peter a-ra-on-ir-e} t_i \text{ [i-goro]. } \]  

\[\text{N1-1-thief 1.Peter 1.sm-rec.pst-see-pfv-fv} 5\text{-yesterday} \]  

‘The thief Peter saw yesterday.’  

(Abels & Muriungi 2008: 725 (99a))

b. **Temporal modifier fronted out of focus-ex-situ construction**

\[\text{[i-goro] i-mw-amba}_i\text{ Peter} \]  

\[\text{5-yesterday N1-1-thief 1.Peter} \]  

\[\text{a-ra-on-ir-e} t_i t_j. \]  

\[\text{1.sm-rec.pst-see-pfv-fv} \]  

‘Yesterday the thief Peter saw.’  

(Abels & Muriungi 2008: 725 (99a))

---

Temporal modifiers may not be fronted out of a relative clause

a. Temporal modifier within relative clause

\[\text{Boriisi ba-ka-thaik-a } \text{[RelCI } \text{mw-amba}_i \text{ } \text{ú-ra Peter } [\text{Kîîtharaka}] \]
\[\text{2.police 2.SM-FUT-arrest-fv 1-thief 1-that 1.Peter } \]
\[\text{a-ra-on-ir-e } t_i [\text{goro}]. \]
\[\text{1.SM-REC.PST-see-PFV-FV 5-yesterday } \]

‘The police will arrest the thief that Peter saw yesterday.’

\[\text{(Abels & Muriungi 2008: 725 (98a))} \]

b. Temporal modifier fronted out of relative clause

\[\text{*[goro] boriisi ba-ka-thaik-a } \text{[RelCI } \text{mw-amba}_i \text{ } [\text{Kîîtharaka}] \]
\[\text{5-yesterday 2.police 2.SM-FUT-arrest-fv 1-thief } \]
\[\text{ú-ra Peter a-ra-on-ir-e } t_i [\text{goro}]. \]
\[\text{1-that 1.Peter 1.SM-REC.PST-see-PFV-FV } \]

‘Yesterday the police will arrest the thief that Peter saw.’

\[\text{(Abels & Muriungi 2008: 725 (98b))} \]

In Shona, fronting the temporal modifier out of a focus-ex-situ construction is disallowed (3.58b), just like fronting it out of a relative clause (3.59b). This sets the Shona construction apart from the one in Kîîtharaka.

Temporal modifiers may not be fronted out of a focus-ex-situ construction

a. Temporal modifier within focus-ex-situ construction

\[\text{I-m-bavha}_i \text{ ya-aka-on-a } t_i [\text{nezuro}. } \text{[Shona]} \]
\[\text{NI-9-thief 9.NSE-1.SM.TA-see-PFV yesterday } \]

‘It’s a thief that s/he saw yesterday.’

\[\text{(2015-04-14-02-TD)} \]

b. Temporal modifier fronted out of focus-ex-situ construction

\[\text{*[Nezuro] i-m-bavha}_i \text{ ya-aka-on-a } t_i t_j [\text{Shona]} \]
\[\text{yesterday NI-9-thief 9.NSE-1.SM.TA-see-PFV } \]

‘Yesterday it’s a thief that s/he saw.’

\[\text{(2015-04-14-02-TD)} \]

Temporal modifiers may not be fronted out of a relative clause

a. Temporal modifier within relative clause

\[\text{Ma-purisa a-cha-sung-a } \text{[RelCI } \text{m-bavha}_i \text{ } \text{ya-aka-on-a } [\text{Shona}] \]
\[\text{6.police 6.SM-FUT-arrest-fv 9-thief 9.NSE-1.SM.TA-see-PFV } \]
\[\text{t}_i [\text{nezuro}]. \]
\[\text{yesterday } \]

‘The police will arrest the thief that s/he saw yesterday.’

\[\text{(2015-04-14-02-TD)} \]
b. **Temporal modifier fronted out of relative clause**

\[
\text{Shona} \quad \left( \begin{array}{c}
\text{Nezuro} \\
\text{yesterday}
\end{array} \right) \text{ma-purisa a-cha-sung-a} \quad \left[ \begin{array}{c}
\text{RelCl} \\
\text{m-bavha}_i
\end{array} \right] \quad \text{[Shona]}
\]

\[
\text{yesterday} \quad 6-\text{police} \quad 6.\text{SM-FUT-arrest-Fv} \quad 9-\text{thief}
\]

\[
y\text{aaka-on-a} \quad t_i \quad t_j.
\]

\[
9.\text{NSE-1.SM.TA-see-Fv}
\]

‘Yesterday the police will arrest the thief that s/he saw.’ (2015-04-14-02-TD)

---

Given that Shona temporal modifier fronting is acceptable within a single clause (see (3.60b)) but not across even a simple declarative clause boundary (see (3.61b)), the unavailability of (3.58b) is likely due to something more general than the islandhood of relative clauses: temporal modifiers cannot be fronted across a clause boundary (or, depending on the analysis, cannot take scope across a clause boundary). This indicates that the focus-ex-situ construction is a biclausal cleft.

(3.60) **Temporal modifiers may be fronted within a single clause**

a. **No fronting of temporal modifier**

\[
\text{Shona} \quad \text{Aka-on-a} \quad \text{m-bavha} \quad \text{nezuro}.
\]

\[
1.\text{SM.TA-see-Fv} \quad 9-\text{thief} \quad \text{yesterday}
\]

‘S/he saw a thief yesterday.’ (2015-04-14-02-TD)

b. **Fronting of temporal modifier**

\[
\text{Shona} \quad \text{Nezuro} \quad \text{yesterday} \quad \text{aka-on-a} \quad \text{m-bavha} \quad t_i.
\]

‘Yesterday s/he saw a thief.’ (2015-04-14-02-TD)

(3.61) **Temporal modifiers may not be fronted across clauses**

a. **Temporal modifier within embedded clause**

\[
\text{Shona} \quad \text{Va-cha-ti} \quad \text{[cp aka-on-a} \quad \text{m-bavha} \quad \text{nezuro].}
\]

\[
2.\text{SM-FUT-say} \quad 1.\text{SM.TA-see-Fv} \quad 9-\text{thief} \quad \text{yesterday}
\]

‘They will say s/he saw a thief yesterday.’ (2015-07-31-TD)

b. **Temporal modifier fronted out of embedded clause**

\[
\text{Shona} \quad \text{Nezuro} \quad \text{va-cha-ti} \quad \text{[cp aka-on-a} \quad \text{m-bavha} \quad t_j].
\]

\[
yesterday \quad 2.\text{SM-FUT-say} \quad 1.\text{SM.TA-see-Fv} \quad 9-\text{thief}
\]

‘Yesterday they will say s/he saw a thief.’ (2015-07-31-TD)

---

**Summary of diagnostics.** Most of the properties in Table 3.4 are not definitive diagnostics, as they could be consistent with either a monoclausal or biclausal structure. For
Chapter 3. Full *wh*-movement  

3.2. Shona *wh*-ex-situ via clefting

Kiitharaka, the fact that the focus marker appears on verbs and that temporal modifiers can be fronted out of the focus construction indicate that it is monoclausal. For Shona, the impossibility of a fronted temporal adjunct modifying the cleft clause points to a biclausal structure.

<table>
<thead>
<tr>
<th>Property</th>
<th>Shona</th>
<th>Kiitharaka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleft pronoun not required</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Copula/focus marker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannot bear subject marking or tense</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Phonologically dependent</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Morphologically invariant</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Separate form in copular constructions</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>May appear on verbs</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>Cleft clause</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lacks relative clause morphology</td>
<td>x</td>
<td>✓</td>
</tr>
<tr>
<td>May be modified by fronted temporal modifier</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 3.4: Properties of Shona and Kiitharaka focus-ex-situ (final)

**Structure for Kiitharaka.** For the monoclausal focus construction in Kiitharaka, Abels & Muriungi (2008) propose that the focused phrase moves to a specifier position between two Focus heads in the left periphery:9

(3.62) *Proposal for the Kiitharaka prenominal focus construction*  
*(Abels & Muriungi 2008: 719 (93))*

![Diagram of Kiitharaka focus construction]

9. They actually argue for three Focus heads; the subject moves to the specifier of the lowest of these heads. See the paper for further explanation.
Shona, on the other hand has a biclausal cleft structure, in which the focused or wh-phrase ends up as the head of a relative clause, but not all the way up in the left periphery of the matrix clause. Before I propose an analysis for the Shona biclausal cleft in section 3.2.6, the nature of the extraction marking mentioned above needs to be explored further, as well as its relation to subject agreement and the position of overt subjects.

### 3.2.5 Extraction marking and subject agreement

#### 3.2.5.1 Extraction of non-subjects

When a wh–non-subject is extracted in Shona, the verb immediately below its pronunciation site must agree with the extracted wh-phrase in \(\phi\)-features, as shown in (3.63–3.64).

(3.63) **Non-subject extraction marking with local wh-ex-situ**

\[\begin{align*}
\text{a. Left-edge ex-situ wh–indirect object} \\
\text{Ndi-Ø-ani *(wa)-v-aka-teng-er-a} \quad &\quad \text{Ø-rokwe} \\
\text{1a.nse-2.sm-ta-buy-appl-fv} \quad &\quad \text{5-dress} \\
\text{ku-chi-toro nezuro?} \\
\text{17-7-store yesterday} \\
&\quad \text{‘Who(m) did they buy a dress (for) at the store yesterday?’} \\
\text{(2014-09-09-01-TD)}
\end{align*}\]

\[\begin{align*}
\text{b. Left-edge ex-situ wh–direct object} \\
\text{Chi-i *(cha)-v-aka-teng-er-a} \quad &\quad \text{Ø-Thandi} \\
\text{7.nse-2.sm-ta-buy-appl-fv 1a-Thandi} \\
\text{ku-chi-toro nezuro?} \\
\text{17-7-store yesterday} \\
&\quad \text{‘What did they buy Thandi at the store yesterday?’} \\
\text{(2014-09-09-01-TD)}
\end{align*}\]

\[\begin{align*}
\text{c. Left-edge ex-situ wh–locative adjunct} \\
\text{Nde-ku-pi *(kwa)-v-aka-teng-er-a} \quad &\quad \text{Ø-Thandi} \\
\text{17.nse-2.sm-ta-buy-appl-fv 1a-Thandi} \\
\text{Ø-rokwe ___ nezuro?} \\
\text{5-dress ___ yesterday} \\
&\quad \text{‘Where did they buy Thandi a dress yesterday?’} \\
\text{(2014-09-09-01-TD)}
\end{align*}\]
When a wh–non-subject is extracted long-distance, only the verb immediately below the pronunciation site of the wh-phrase may bear the extraction marking:

(3.64) **Long-distance wh-ex-situ**

a. **Left-edge long-distance ex-situ wh–indirect object**

\[
\text{Ndi-Ø-ani } *^{(wa)}-w-ai-fung-a \quad \text{kuti} \quad [\text{Shona}]
\]

\[
\text{NI-1a-who 1a.NSE-2SG.SM-TA-think-FV that}
\]

\[
(*^{(wa)}-v-aka-teng-er-a \quad \text{Ø-rokwe ku-chi-toro nezuro?})
\]

\[
1a.NSE-2.SM-TA-buy-APPL-FV \quad 5\text{-dress} \quad 17\text{-7-store} \quad \text{yesterday}
\]

‘Who(m) did you think they bought a dress (for) at the store yesterday?’

(2014-09-09-01-TD)

b. **Left-edge long-distance ex-situ wh–direct object**

\[
\text{Chí-i } *^{(cha)}-w-ai-fung-a \quad \text{kuti} \quad [\text{Shona}]
\]

\[
\text{NI.7-what 7.NSE-2SG.SM-TA-think-FV that}
\]

\[
(*^{(cha)}-v-aka-teng-er-a \quad \text{Ø-Thandi ku-chi-toro nezuro?})
\]

\[
7.NSE-2.SM-TA-buy-APPL-FV \quad 1a-\text{Thandi} \quad 17\text{-7-store} \quad \text{yesterday}
\]

‘What did you think they bought Thandi at the store yesterday?’

(2014-09-09-01-TD)

c. **Left-edge long-distance ex-situ wh–locative adjunct**

\[
\text{Nde-ku-pi } *^{(kwa)}-w-ai-fung-a \quad \text{kuti} \quad [\text{Shona}]
\]

\[
\text{NI-17-which 17.NSE-2SG.SM-TA-think-FV that}
\]

\[
(*^{(kwa)}-v-aka-teng-er-a \quad \text{Ø-Thandi Ø-rokwe nezuro?})
\]

\[
17.NSE-2.SM-TA-buy-APPL-FV \quad 1a-\text{Thandi} \quad 5\text{-dress} \quad \text{yesterday}
\]

‘Where did you think they bought Thandi a dress yesterday?’

(2014-09-09-01-TD)

---

10. The wh-word rinhi ‘when’ does not appear to bear a noun class marker, so it does not seem as nominal as the other wh-phrases, but it does trigger class 16 extraction marking. Class 16 is a locative class and is often used for default agreement (e.g., in existential sentences). It is possible that rinhi is generated where it is pronounced and a null class 16 operator is what moves and triggers agreement. However, if this is so we might expect the same thing to happen in (3.67d), but it does not. I leave this as an open question to be investigated in future work.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

d. **Left-edge long-distance ex-situ wh–temporal adjunct**

\[
\begin{align*}
\text{Ndi-rinhi} & \quad \text{(*pa)}-\text{w-ai-fung-a} \\
\text{ni-when} & \quad 16.\text{NSE-2SG.SM-TA-think-FV} \\
\phi-\text{Thandi} & \quad \phi-\text{rokwe} \\
1a-\text{Thandi} & \quad 5-\text{dress} \\
& \quad 17-7-\text{store} \\
& \quad \text{?} \\
\end{align*}
\]

‘When did you think they bought Thandi a dress at the store?’

(2014-09-09-01-TD)

This is the same pattern found in Ikalanga (Letsholo 2002, Letsholo & Pires 2003), but it contrasts with \(\varphi\)-agreeing extraction marking found in Kilega, which occurs on each verb along the path of movement (Kinyalolo 1991, Carstens 2005), and Kinande, which occurs obligatorily in the highest clause and optionally in lower clauses (Schneider-Zioga 2007, Philip Mutaka pers. comm.). Crucially, all of these languages require that the highest verb along the path bear \(\varphi\)-agreeing extraction marking. Reintges et al. (2006) find the same generalization in a broader sampling of extraction marking in languages outside Bantu.

Just as in Ikalanga (Letsholo 2007), sentence-final wh-ex-situ requires non-subject extraction marking on the highest verb, as shown in (3.65–3.66). At first glance, this appears to be an exception to the generalization that only the verb immediately below the wh-phrase may bear extraction marking. However, the generalization still holds if the right-edge sentences are the same as the left-edge ones except that the entire sentence has moved above the wh-phrase after agreement has taken place.

(3.65) **Local wh-ex-situ, sentence-final**

a. **Right-edge ex-situ wh–indirect object**

\[
\begin{align*}
\text{(*Wa)}-\text{v-aka-teng-er-a} \\
1a.\text{NSE-2SM-TA-buy-APPL-FV} \\
\text{ndi-}\phi-\text{ani?} \\
\text{ni-1a-who} \\
\end{align*}
\]

‘Who(m) did they buy a dress (for) at the store yesterday?’

(2014-09-09-01-TD)
3.2. Shona wh-ex-situ via clefting

b. Right-edge ex-situ wh–direct object

\[ *(\text{Cha})v-aka-teng-er-a \quad \emptyset-\text{Thandi} \quad \text{ki-chi-toro} \quad \text{nezuro} \quad [\text{Shona}] \]
\[ 7.\text{NSE}-2.\text{SM-TA-buy-APPL-FV} \quad 1a-\text{Thandi} \quad 17-7\text{-store yesterday} \]

\[ \text{chi-i?} \]

\[ \text{NI.7-what} \]

‘What did they buy Thandi at the store yesterday?’ (2014-09-09-01-TD)

c. Right-edge ex-situ wh–locative adjunct

\[ *(\text{Kwa})v-aka-teng-er-a \quad \emptyset-\text{Thandi} \quad \emptyset-\text{rokwe} \quad \emptyset \quad \text{nezuro} \quad [\text{Shona}] \]
\[ 17.\text{NSE}-2.\text{SM-TA-buy-APPL-FV} \quad 1a-\text{Thandi} \quad 5\text{-dress yesterday} \]

\[ \text{nde-ku-pi?} \]

\[ \text{NI-17-which} \]

‘Where did they buy Thandi a dress yesterday?’ (2014-09-09-01-TD)

d. Right-edge ex-situ wh–temporal adjunct

\[ *(\text{Pa})v-aka-teng-er-a \quad \emptyset-\text{Thandi} \quad \emptyset-\text{rokwe} \quad \text{ki-chi-toro} \quad [\text{Shona}] \]
\[ 16.\text{NSE}-2.\text{SM-TA-buy-APPL-FV} \quad 1a-\text{Thandi} \quad 5\text{-dress 17-7-store} \]

\[ \text{ndi-rinhi?} \]

\[ \text{NI-when} \]

‘When did they buy Thandi a dress at the store?’ (2014-09-09-01-TD)

(3.66) Long-distance wh-ex-situ, sentence-final

a. Right-edge long-distance ex-situ wh–indirect object

\[ *(\text{Wa})w-ai-fung-a \quad \text{kuti} \quad (\text{*wa})v-aka-teng-er-a \quad [\text{Shona}] \]
\[ 1a.\text{NSE}-2.\text{SG-SM-TA-think-FV} \quad \text{that} \quad 1a.\text{NSE}-2.\text{SM-TA-buy-APPL-FV} \]
\[ \quad \emptyset-\text{rokwe} \quad \text{ki-chi-toro} \quad \text{nezuro} \quad \text{ndi-\emptyset-ani?} \]
\[ 5\text{-dress 17-7-store yesterday} \quad \text{NI-1a-who} \]

‘Who(m) did you think they bought a dress (for) at the store yesterday?’ (2014-09-09-01-TD)

b. Right-edge long-distance ex-situ wh–direct object

\[ *(\text{Cha})w-ai-fung-a \quad \text{kuti} \quad (\text{cha})v-aka-teng-er-a \quad [\text{Shona}] \]
\[ 7.\text{NSE}-2.\text{SG-SM-TA-think-FV} \quad \text{that} \quad 7.\text{NSE}-2.\text{SM-TA-buy-APPL-FV} \]
\[ \emptyset-\text{Thandi} \quad \text{ki-chi-toro} \quad \text{nezuro} \quad \text{chi-i?} \]
\[ 1a-\text{Thandi} \quad 17-7\text{-store yesterday} \quad \text{NI.7-what} \]

‘What did you think they bought Thandi at the store yesterday?’ (2014-09-09-01-TD)
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

c. **Right-edge long-distance ex-situ wh-locative adjunct**

[*(Kwa)*-w-ai-fung-a kuti (*kwa)*-v-aka-teng-er-a] [Shona]

17.**NSE**-2sg.sm-ta-think-fv that 17.**NSE**-2.sm-ta-buy-appl-fv

Ø-Thani Ø-rokwe ___ nezuro  nde-ku-pi?

1a-Thani 5-dress yesterday] np-17-which

‘Where did you think they bought Thandi a dress yesterday?’

(2014-09-09-01-TD)

d. **Right-edge long-distance ex-situ wh-temporal adjunct**

[*(Pa)*-w-ai-fung-a kuti (*pa)*-v-aka-teng-er-a] [Shona]

16.**NSE**-2sg.sm-ta-think-fv that 16.**NSE**-2.sm-ta-buy-appl-fv

Ø-Thani Ø-rokwe ku-chi-toro ___ ndi-rinhi?

1a-Thani 5-dress 17-7-store] np-when

‘When did you think they bought Thandi a dress at the store?’

(2014-09-09-01-TD)

Non-subject extraction marking in Shona is *addition extraction marking* in the sense of Zentz 2015: this agreement is simply added to the morphology that would normally appear in a declarative sentence (i.e., it does not bleed subject agreement or any other morphology). As observed by Cheng (2006), this agreement in Shona is morphologically identical to what is often called the associative, connective, possessive, or genitive marker. I will analyze the segmental component of this marker to be a single syntactic head, but it is possible that it is actually decomposed into *a*-immediately preceded by a noun class agreement marker. When it attaches to verb, I gloss it as nse, but elsewhere I gloss it as ‘of’. This marker always bears low tone.

In the Bantu literature (and in prior work on Shona), the non-subject extraction marker is often called the relative marker because it also appears in relative clauses (Cheng 2006, Demuth & Harford 1999, Henderson 2006b, Zentz 2015):

(3.67) **Non-subject extraction marking in relative clauses**

a. **Indirect object relative**

Ndi-no-ziv-a [RelCl mu-sikana *(wa)*-v-aka-teng-er-a] [Shona]

1sg.sm-ta-know-fv 1-girl 1.**NSE**-2.sm-ta-buy-appl-fv

__Ø-rokwe ku-chi-toro nezuro].

5-dress 17-7-store yesterday

‘I know the girl that they bought a dress (for) at the store yesterday.’

(2016-03-08-02-TD)
3.2. Shona wh-ex-situ via clefting

b. **Direct object relative**

\[
\begin{align*}
\text{Ndi-no-farir-a} & \quad [\text{RelCl } \emptyset - \text{rokw}e \ (\text{ra}) - \text{v-aka-teng-er-a}] \quad [\text{Shona}] \\
1\text{sg.sm-ta-like-fv} & \quad 5\text{.NSE} - 2\text{.sm-ta-buy-appl-fv} \\
\emptyset - \text{Thandi} & \quad \emptyset - \text{ku-chi-toro nezuro}. \\
1\text{a-Thandi} & \quad 17\text{-7-store yesterday} \\
\end{align*}
\]

'I like the dress that they bought Thandi at the store yesterday.'

(2016-03-08-02-TD)

c. **Locative relative**

\[
\begin{align*}
\text{Nd-a-end-a} & \quad [\text{RelCl } \text{ku-chi-toro } (\text{kwa}) - \text{v-aka-teng-er-a}] \quad [\text{Shona}] \\
1\text{sg.sm-ta-go-fv} & \quad 17\text{.NSE} - 2\text{.sm-ta-buy-appl-fv} \\
\emptyset - \text{Thandi} & \quad \emptyset - \text{rokw}e \quad \emptyset - \text{nezuro}. \\
1\text{a-Thandi} & \quad 5\text{-dress yesterday} \\
\end{align*}
\]

'I went to the store where they bought Thandi a dress yesterday.'

(2016-03-08-02-TD)

d. **Temporal relative**

\[
\begin{align*}
\text{Ndi-no-yeuk-a} & \quad [\text{RelCl } \emptyset - \text{zuva } (\text{ra}) - \text{v-aka-teng-er-a}] \quad [\text{Shona}] \\
1\text{sg.sm-ta-remember-fv} & \quad 5\text{.NSE} - 2\text{.sm-ta-buy-appl-fv} \\
\emptyset - \text{Thandi} & \quad \emptyset - \text{rokw}e \quad \text{ku-chi-toro } \emptyset. \\
1\text{a-Thandi} & \quad 5\text{-dress } 17\text{-7-store} \\
\end{align*}
\]

'I remember the day when they bought Thandi a dress at the store.'

(2016-03-08-02-TD)

Some have taken this as evidence that wh-ex-situ in languages like Shona involves relativization, but as Sabel & Zeller (2006: 282) and Abels & Muriungi (2008: 724–725) point out, the morphological alternation could just as easily reflect A′-movement more generally, which would predict its occurrence in relative clauses, it-clefts, and wh-ex-situ. I agree that the fact that the same extraction marking appears in all these types of A′-movement is not conclusive evidence in itself that they all involve relative clauses (see Zentz 2015: 295–296), but it at least is consistent with that hypothesis.

### 3.2.5.2 Subjects in non-subject extraction: Agreement and word order

Thus far, all the Shona examples with ex-situ wh–non-subjects have had a null subject, so the question of whether the subject inverts with the verb has not been an issue. In the literature on Bantu relative clauses, non-subject relatives in Shona have generally been taken to require subject inversion. The example in (3.68a), originally from Demuth &
Harford (1999), has been widely cited (Cheng 2006: 198 (3b), seven times in Henderson 2006b, Henderson 2007: 168 (2), Henderson 2011a: 19 (5), Hyman 2012: 97 (1b), Letsholo 2009: 132 (1), Marten & Van der Wal 2014: 335 (37), Wasike 2007: 37 (18), Zeller 2006a: 227 (15a)). In some cases, the citations are simply to show that Shona relatives require $\varphi$-agreement with both the non-subject head of the relative and the subject, but often this example is used to support the conclusion that inversion is obligatory in Shona relatives. (3.68) Classic examples, judgments as reported in Demuth & Harford 1999

a. Direct object relative with postverbal subject

[Shona]Ø-mbatya dza-v-aka-son-er-a va-kadzi mw-enga
10-clothes 10.nse-2.sm-ta-sew-appl-fv 2-woman 1-bride
'clothes that the women sewed (for) the bride'

(Demuth & Harford 1999: 42 (1b))

b. Direct object relative with preverbal subject

[Shona]?Ø-mbatya va-kadzi dza-v-aka-son-er-a mw-enga
10-clothes 2-woman 10.nse-2.sm-ta-sew-appl-fv 1-bride
'clothes that the women sewed (for) the bride'

(Demuth & Harford 1999: 47n5 (i))

However, Demuth & Harford (1999) do provide (3.68b) in a footnote (47n5), saying that it is “‘grammatical’ but highly marked.” Letsholo (2009), a native speaker of the closely related Ikalanga, also cites this sentence as being marked in Shona, and Zeller (2006a: 227) calls it “only marginally acceptable.”

My consultant does not find the relative clause in (3.68a) very acceptable, which may be due to several factors. First, the lexical choices seem archaic or formal: she would use hembe instead of mbatya for ‘clothes’, and she is not very familiar with mwenga for ‘bride’. Second, in general she prefers not to have a postverbal subject followed by another argument;\(^{11}\) for this minimal pair, she actually prefers (3.68b) over (3.68a). An even better solution is to reword this using a passive, which is consistent with how non-subject relatives are typically translated in the Shona Bible (BSN). It is not the case, however, that

\(^{11}\) Richie Kayne (pers. comm.) points out that this preference bears resemblance to French Stylistic Inversion. I would have to investigate further to see if the analysis of French SI proposed in Kayne & Pollock (2001) might be of some help here.
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

she categorically prefers the subjects to be preverbal in non-subject relative clauses; when the postverbal subject is the only argument after the verb, as in (3.69a), that is preferred over the preverbal subject version in (3.69b), corresponding to the judgments provided by Harford & Demuth (1999).

(3.69) Classic examples, judgments as reported in Harford & Demuth 1999

a. Direct object relative with postverbal subject

Ø-mbatya dza-v-aka-son-a va-kadzi
10-clothes 10.nse-2.sm-ta-sew-fv 2-woman
‘clothes that the women sewed’ (Harford & Demuth 1999: 50 (3))

b. Direct object relative with preverbal subject

?Ø-mbatya va-kadzi dza-v-aka-son-a
10-clothes 2-woman 10.nse-2.sm-ta-sew-fv
‘clothes that the women sewed’ (Harford & Demuth 1999: 50 (4))

For non-subject wh-questions with an overt subject, my consultant produces the following options. She considers all of (3.70a–e) to be acceptable translations of ‘Who(m) did the lion lick?’ Her order of preference is (a) > {(b), (c)} > (d) > (e).

(3.70) a. In-situ wh–non-subject, preverbal subject

Ø-Shumba y-aka-nanzv-a Ø-ani?
9-lion 9.sm-ta-lick-fv 1a-who
‘Who(m) did the lion lick?’ (lit., ‘The lion licked who(m)?’) (2015-04-14-02-TD)

b. Right-edge ex-situ wh–non-subject, preverbal subject

Ø-Shumba wa-y-aka-nanzv-a ___ ndi-Ø-ani?
9-lion 1a.nse-9.sm-ta-lick-fv ni-1a-who
‘Who(m) did the lion lick?’ (lit., ‘That the lion licked it’s who?’) (2015-04-17-TD)

c. Extraction of the passivized wh–non-subject, demoted subject

Ndi-Ø-ani ___ åka-nanzv-iw-a ne-Ø-shumba?
N1-1a-who se.1a.sm.ta-lick-pass-fv by-9-lion
‘Who(m) did the lion lick?’ (lit., ‘It’s who that was licked by the lion?’) (2015-04-14-02-TD)
d. **Ex-situ wh–non-subject, postverbal subject**

\[ \text{Ndi-Ø-ani wa-yaka-nanzv-a Ø-shumba ___?} \quad \text{[Shona]} \]

\[ \text{NI-1a-who 1a.NSE-9.SM-TA-lick-fv 9-lion} \]

‘Who(m) did the lion lick?’ (lit., ‘It’s who that licked the lion?’) 
(2015-04-14-02-TD)

---

e. **Ex-situ wh–non-subject, preverbal subject**

\[ \text{Ndi-Ø-ani Ø-shumba wa-yaka-nanzv-a ___?} \quad \text{[Shona]} \]

\[ \text{NI-1a-who 9-lion 1a.NSE-9.SM-TA-lick-fv} \]

‘Who(m) did the lion lick?’ (lit., ‘It’s who that the lion licked?’) 
(2015-04-14-02-TD)

Verbal agreement with the logical subject is always required in a wh-ex-situ construction, as shown in (3.71). This stands in contrast to the pattern found in Kilega, Dzamba, and Lingala, where postverbal subjects do not trigger agreement in non-subject relatives and wh-ex-situ (Carstens 2005, Demuth & Harford 1999, Henderson 2006b).

(3.71) **Verb must agree with logical subject even if postverbal**

a. “Subject” agreement with ex-situ wh–non-subject, postverbal subject

\[ \text{*Ndi-Ø-ani àka-nanzv-a Ø-shumba ___?} \quad \text{[Shona]} \]

\[ \text{NI-1a-who se.1a.SM-TA-lick-fv 9-lion} \]

‘Who(m) did the lion lick?’ (lit., ‘It’s who that licked the lion?’) 
(2015-04-14-02-TD)

b. Ex-situ wh–non-subject, postverbal subject

\[ \text{*Ndi-Ø-ani waka-nanzv-a Ø-shumba ___?} \quad \text{[Shona]} \]

\[ \text{NI-1a-who 1a.NSE.TA-lick-fv 9-lion} \]

‘Who(m) did the lion lick?’ (lit., ‘It’s who that licked the lion?’) 
(2016-03-08-02-TD)

Shona wh-ex-situ permits a morpheme order that displays a cross-serial dependency, as shown in (3.72):

(3.72) **Cross-serial dependency in Shona wh-ex-situ**

a. Left-edge wh-ex-situ

\[ \text{Ndi-Ø-ani Ø-shumba wa-yaka-nanzv-a ___?} \quad \text{[Shona]} \]

\[ \text{NI-1a-who 9-lion 1a.NSE-9.SM-TA-lick-fv} \]

‘Who(m) did the lion lick?’ 
(2015-04-14-02-TD)
Chapter 3. Full wh-movement 3.2. Shona wh-ex-situ via clefting

b. Right-edge wh-ex-situ

\[ \text{Ø-Shumba wa-} \text{aka-nanzv-a } \text{ndi-Ø-ani?} \]  
\[ \text{9-lion 1a.NSE-9.SM-TA-lick-FV N1-1a-who} \]

‘Who(m) did the lion lick?’ (2015-04-14-02-TD)

As noted above, (3.72a) is relatively marked, but below I will provide a derivation for it for two reasons. First, (3.72b) is relatively unmarked (my consultant prefers it over even left-edge wh-ex-situ with a postverbal subject), and the most straightforward way to derive this is to say that it is (3.72a) with an additional step of remnant movement, following Letsholo’s (2007) analysis of the same pattern in the closely related Ikalanga. Second, in Ikalanga, the structure in (3.72a) is unmarked (Letsholo 2002, 2007, 2009), so it cannot be ignored as a marked variant the way it has been in prior work on Shona.

3.2.5.3 Extraction of subjects

As discussed in section 2.3, Shona wh-subjects may not appear in the preverbal subject position of matrix clauses. Instead, they must be extracted. In a declarative sentence, the tone on the subject marker on the verb is high, but when local subject extraction takes place, the subject marker must be low.¹² This is shown for both left-edge and right-edge local subject extraction in (3.73), where the gloss se refers to the low tone that marks subject extraction.

(3.73) Subject extraction marking with local full wh-movement

a. Left-edge ex-situ wh-subject

\[ \text{Ndi-Ø-ani } \{{}^{*a/-ä}{}\text{-ka-teng-er-a} \} \text{Ø-Thandi Ø-rokwe} \]  
\[ \text{N1-1a-who } \{{}^{*(se)}{}\text{1a.SM.TA-buy-APPL-FV} \} \text{1a-Thandi 5-dress} \]

\[ \text{ku-chi-toro nezuro?} \]
\[ \text{17-7-store yesterday} \]

‘Who bought Thandi a dress at the store yesterday?’ (2014-07-16-01-TD)

¹². This is true for all third person subject markers in Shona, which are the relevant ones for wh-questions. First and second person subject markers are low in both extraction and non-extraction contexts.

¹³. I put the immediately before the whole verbal complex in subject extraction examples for ease of exposition and representation. However, under the analysis I present in section 3.2.6, the gap is really at SpecTP, between the low tone subject extraction prefix (on a low head in the left periphery) and the subject marker (on T).
3.2. Shona wh-ex-situ via clefting

b. **Right-edge ex-situ wh-subject**

\[ \text{shona} \]

\[ \text{\{*A-/Â\}-ka-teng-er-a} \quad \emptyset-\text{Thandi} \quad \emptyset-\text{rokwe ku-chi-toro} \quad \text{[Shona]} \]
\[ \text{*se.1a.sm.ta-buy-appl-fv} \quad \text{1a-\text{Thandi} 5-dress} \quad \text{17-7-store} \]

nezuro ndi-Ø-ani?
yesterday ni-1a-who

‘Who bought Thandi a dress at the store yesterday?’ (2014-07-16-01-TD)

Shona displays no alternative or anti-agreement effects (Baier 2015, 2016, Baker 2008, Cheng 2006, Diercks 2009, 2010, Henderson 2009, 2013, Ouali 2008, Ouahalla 1993, Schneider-Zioga 2007). As shown in (3.74), there is no person leveling in either the singular or the plural, so the class 1 subject agreement marker a- is the same in extraction contexts as in non-extraction contexts (cf. Lubukusu, Kinande, Kikuyu, Bemba, etc.) except for the tonal change just discussed.

(3.74) **Lack of person leveling (alternative/anti-agreement) in clefts**

a. **1st person singular**

\[ \text{shona} \]

\[ \text{ndi-ni \ ni-1sg nd-a-pwany-a} \quad \text{mu-siwo.} \quad \text{[Shona]} \]
\[ \text{ni-1sg 1sg.sm.se.ta-break-fv 3-door} \]

‘It’s me who broke the door.’ (2016-03-08-02-TD)

b. **2nd person singular**

\[ \text{shona} \]

\[ \text{ndi-we \ ni-2sg m-a-pwany-a} \quad \text{mu-siwo.} \quad \text{[Shona]} \]
\[ \text{ni-2sg 2sg.sm.se.ta-break-fv 3-door} \]

‘It’s you who broke the door.’ (2016-03-08-02-TD)

c. **3rd person singular (human)**

\[ \text{shona} \]

\[ \text{ndi-ye \ a-pwany-a} \quad \text{mu-siwo.} \quad \text{[Shona]} \]
\[ \text{ni-1 1sm.se.ta-break-fv 3-door} \]

‘It’s him/her who broke the door.’ (2016-03-08-02-TD)

d. **1st person plural**

\[ \text{shona} \]

\[ \text{tisu \ t-a-pwany-a} \quad \text{mu-siwo.} \quad \text{[Shona]} \]
\[ \text{ni.1pl 1pl.sm.se.ta-break-fv 3-door} \]

‘It’s us who broke the door.’ (2016-03-08-02-TD)

e. **2nd person plural**

\[ \text{shona} \]

\[ \text{ndi-mi \ m-a-pwany-a} \quad \text{mu-siwo.} \quad \text{[Shona]} \]
\[ \text{ni-2pl 2pl.sm.se.ta-break-fv 3-door} \]

‘It’s you (pl.) who broke the door.’ (2016-03-08-02-TD)
3rd person plural (human)
Ndi-vo v-à-pwany-a mu-siwo. [Shona]
NI-2 2.SM-se.ta-break-fv 3-door
‘It’s them who broke the door.’ (2016-03-08-02-TD)

It is clear that the ϕ-agreement that appears on the verb in subject extraction is just normal subject marking because it does not have the a that is always part of the non-subject extraction marker. This can be seen in non-past tenses, as in (3.75–3.76); a past tense would obscure this distinction because of coalescence with the a(ka)-tense prefix. This patterns differently from Kilega, where subject extraction uses agreement on C but not agreement on T (Carstens 2005, Kinyalolo 1991).

(3.75) Verbal ϕ-agreement under subject extraction is subject marking, not extraction marking (active)

a. No extraction, with subject marking
Chi-pembere chi-cha-tiz-a. [Shona]
7-black.rhinoceros 7.SM-fut-run.away-fv
‘The rhino will run away.’ (2018-03-08-02-TD)

b. Subject extraction, with subject marking
Chi-i chi-cha-tiz-a? [Shona]
NI.7-what se.7.SM-fut-run.away-fv
‘What (lit., It’s what that) will run away?’ (2018-03-08-02-TD)

c. Subject extraction, with higher agreement marker
*Chi-i cha-cha-tiz-a? [Shona]
NI.7-what 7.NSE-fut-run.away-fv
‘What (lit., It’s what that) will run away?’ (2018-03-08-02-TD)

(3.76) Verbal ϕ-agreement under subject extraction is subject marking, not extraction marking (passive)

a. No extraction, with subject marking
Chi-pembere chi-cha-chenget-edz-w-a. [Shona]
7-black.rhinoceros 7.SM-fut-preserve-caus-pass-fv
‘The black rhinoceros will be preserved.’ (2018-03-08-02-TD)

b. Subject extraction, with subject marking
Chi-i chi-cha-chenget-edz-w-a? [Shona]
NI.7-what se.7.SM-fut-preserve-caus-pass-fv
‘What (lit., It’s what that) will be preserved?’ (2018-03-08-02-TD)
c. **Subject extraction, with higher agreement marker**

\[ \text{Chí-í cha-cha-chenget-edz-w-a?} \]

\[ \text{Ni-7-what 7.NSE-fut-preserve-caus-pass-fv} \]

‘What (lit., It’s what that) will be preserved?’ (2018-03-08-02-TD)

When a *wh*-subject is extracted across clauses, none of the verbs receive this tonal subject extraction marking. The highest verb within the scope of the *wh*-phrase displays non-subject extraction marking that agrees in \( \phi \)-features with the extracted subject, but no other verbs show extraction marking.

(3.77) a. **Left-edge long-distance ex-situ wh-subject**

\[ \text{Ndi-Ø-ani *(wa)-w-ai-fung-a [CP kuti ___]} \]

\[ \text{Ni-1a-who 1a.NSE-2sg.sm-ta-think-fv that} \]

\[ *(\text{à-/a-})\text{ka-teng-er-a} \, \text{Ø-Thandi Ø-rokwe ku-chi-toro nezuro]?} \]

\[ (*\text{SE})1a.sm.ta-buy-appl-fv 1a-\text{Thandi 5-dress 17-7-store yesterday} \]

‘Who do you think bought Thandi a dress at the store yesterday?’

(2014-09-09-01-TD)

b. **Right-edge long-distance ex-situ wh-subject**

\[ *(\text{Wa})-w-ai-fung-a [CP kuti ___} \text{(*\text{à-/a-})ka-teng-er-a} \]

\[ 1a.NSE-2sg.sm-ta-think-fv that \text{(*SE).1a.sm.ta-buy-appl-fv} \]

\[ \text{Ø-Thandi Ø-rokwe ku-chi-toro nezuro ndi-Ø-ani?} \]

\[ 1a-\text{Thandi 5-dress 17-7-store yesterday ni-1a-who} \]

‘Who do you think bought Thandi a dress at the store yesterday?’

(2014-09-09-01-TD)

### 3.2.6 Proposal

In this section I propose that Shona *wh*-ex-situ does not involve movement of the *wh*-phrase to its scopal position in the left periphery of the matrix clause; therefore, it is not full *wh*-movement, but only appears to be because of reduced structure and very little phonological content in the matrix clause. First, I review what was proposed in section 2.3.2 for the structural constraints on focus licensing in Shona and how that explains why *wh*-ex-situ requires a biclausal cleft. Next, I propose an analysis of the cleft clause as a relative clause and compare this analysis to prior analyses of the Shona relative. The structure of the copular clause is the topic of the next section, and then I conclude by
examining the ways that topicalization can operate on a \textit{wh}-ex-situ question to produce the sentence-final pattern and what has been called the “intermediate” strategy.

### 3.2.6.1 Apparent full \textit{wh}-movement

As discussed in section 2.3.2, I assume that \textit{wh}-phrases must be pronounced within a focus licensing domain.\textsuperscript{14} Shona allows constituents (including \textit{wh}-phrases) to be narrowly focused postverbally in the matrix clause or anywhere within an embedded clause. I concluded from this distribution that the focus licensing domain for Shona is the $vP$, meaning that the head of a chain must be dominated by a $vP$ in order for that lexical item to receive narrow focus in the semantics.

Because of this configuration for focus licensing in Shona, if \textit{wh}-phrases moved all the way to their scopal position in the left periphery of the matrix clause, that would be outside the focus licensing domain. To make this more concrete, I claim that there is no focus projection (FocP) in Shona, whether in the left periphery, as proposed by Rizzi (1997, 2004), or lower in the spine, as proposed by Belletti (2004). Therefore, if a phrase moves out of a $vP$, it cannot be focused unless there is another $v$ merged above it. This is how a cleft structure rescues the situation: it introduces a $v$ (the copula) above the \textit{wh}-phrase, which allows it to be focused.

The relation between the scopal position and the pronunciation site of the \textit{wh}-phrase, then, is unselective binding by a null operator, just as in \textit{wh}-in-situ. This simplifies the possibilities for forming \textit{wh}-questions in Shona: the \textit{wh}-phrase may stay in situ or move to become the head of a relative clause, but in both cases, the relation between the scopal position and the pronunciation site is unselective binding.

\textsuperscript{14} More precisely, the head of a \textit{wh}-chain must be in a focus licensing domain. I assume that focus licensing takes place at LF, which would not have access to information about which copy has survived chain reduction at PF.
3.2.6.2 The cleft (relative) clause

Properties of the cleft clause. In the previous sections, several properties of Shona wh-ex-situ have been discussed, and an analysis of the cleft clause must account for these:

(3.78) Properties of the cleft clause in Shona wh-ex-situ

a. No island boundary may intervene between the canonical and pronunciation positions of the wh-phrase/relative head (section 3.2.2).

b. The wh-phrase/relative head may reconstruct (section 3.2.3).

c. The wh-phrase/relative head triggers φ-agreement at the beginning of the verbal complex, but only on the highest verb within the relative clause (section 3.2.5.1).

d. The logical subject may be null or overt, preverbal or postverbal, but it always triggers a verbal φ-agreement prefix (subject marking) (section 3.2.5.2).

e. When a subject is locally extracted, the verb only shows one φ-agreement morpheme (the subject marker), but this bears low tone (section 3.2.5.3).

Theoretical assumptions. As discussed in section 1.4, I follow Julien’s (2002) analysis of how the Shona verbal complex is formed, with the suffixes derived via head movement of the verb root up to a Mood head below T, resulting in morphological structure that is a mirror image of the syntactic structure (Baker 1985). The prefixes, on the other hand, are heads that simply stay where they are merged.

For reasons outlined in section 1.4, I assume that Agree and Internal Merge (i.e., movement) are not restricted to taking place at the phase level but may happen as the phase is being built via External Merge. These operations, however, are limited by the Phase Impenetrability Condition (Chomsky 2000), so material in the complement of a phase head is not accessible for Agree or Internal Merge by a probe in a higher phase; this forces
long-distance agreement and movement to involve successive-cyclic movement through phase edges (i.e., the specifiers of phase heads).

I follow Aravind (2015a,b) in assuming that all features on a head, even features associated with A’-positions, are organized into a hierarchy (Abels 2012b, Rizzi 2004, Starke 2001), and probing is relativized to particular positions within that hierarchy (Béjar & Rezac 2009, Harley & Ritter 2002, Preminger 2011, 2014; see also Belletti et al. 2012, Bentea et al. 2016, Friedmann et al. 2009, Rizzi 2013 for relativized probing without a hierarchy). Following Carstens (2005), I assume that probes that are relativized for [ϕ] come with edge features that trigger Internal Merge of the goal in the probe’s specifier.

**Relativization as raising/promotion of the relative head.** Because of the island and reconstruction evidence, I propose a raising/promotion analysis of the relative clause (Bianchi 1999, Kayne 1994, Sauerland 2003, Torrence 2013): the wh-phrase itself moves from its base position to where it is pronounced. On the way, it will need to stop in the edges of phases (vP, and, in a long-distance cleft, CP) due to the Phase Impenetrability Condition (Chomsky 2000). What triggers these intermediate movement steps remains an open question, and in fact nothing in this analysis depends on any particular implementation of this successive-cyclic movement.

**Non-subject extraction with a null subject.** The simplest type of wh-ex-situ question involves a null subject and extraction of a wh-direct object, as illustrated in (3.79).

(3.79) *Ex-situ* wh-direct objects with null subjects

a. **Ndi-Ø-ani** wa-u-no-ziv-a ___? [Shona]
   **ni-1a-who** 1a.NSE-2SG.SM-TA-KNOW-FV
   ‘Who(m) do (lit., It’s who that) you know?’
   (2014-07-09-01-TD)

b. **Chí-í** cha-yaka-on-a ___? [Shona]
   **ni.7-what** 7.NSE-9.SM-TA-SEE-FV
   ‘What did it (e.g., the lion) see?’ (lit., ‘It’s what that it saw?’)
   (2014-06-25-01-TD)
Chapter 3. Full wh-movement  

3.2. Shona wh-ex-situ via clefting

c. Chi-i cha-aka-teng-a ____?  
[Shona]  
N1.7-what 7.NSE-1.SM.TA-buy-FV  
‘What did s/he buy?’ (lit., ‘It’s what that s/he bought?’)  
(2014-06-28-03-TD)

In the derivation of these sentences, the direct object moves to an outer specifier of SpecvP before the VP is transferred to the interfaces. I take the two specifier positions to be equidistant from a higher probe (Chomsky 1995). The tree in (3.80) shows that T probes for $\varphi$-features and undergoes Agree with the subject pro, which moves to SpecTP. At Vocabulary Insertion, the subject marker prefix will be inserted on T because this valuation of the $\varphi$-probe has occurred. If T instead agreed with the wh–direct object, pro would not be morphologically identified and the derivation would crash (Carstens 2005: 245).

For this tree and the following ones, I use <> to mark constituents that have been transferred to the interfaces and bold to mark the pronounced copy of a vocabulary item. Non-pronounced copies are struck through. Probes are represented as empty square brackets with a subscript indicating how they are relativized; that is, what feature they are probing for. Thus $[\phantom{\varphi}]_{\varphi}$ indicates a probe for $\varphi$-features, whereas $[\phantom{\text{rel}}]_{\text{rel}}$ is a probe for a [relative] feature. In later stages of the derivation these brackets are filled in with the feature that valued the probe. I use subscript $\alpha$ and $\beta$ variables to track different sets of $\varphi$-features; the subject bears $[\varphi_\alpha]$ and the object bears $[\varphi_\beta]$. 

186
The $\varphi$-agreement with the extracted constituent (hereafter called the relative marker and abbreviated rm) is typically taken to be the instantiation of a $\varphi$-probe on a head in the left periphery (Carstens 2005, Demuth & Harford 1999, Henderson 2006b). However, a challenge that any analysis needs to overcome is that under a simple implementation of this idea, the subject in SpecTP will intervene and block agreement with the object in SpecvP (Carstens 2005):
This runs counter to generalization observed in (3.78c) and section 3.2.5 that the relative marker in Shona agrees with whatever is being relativized.

There are several possible ways to avoid the subject intervention effect. One would be to say that a DP in SpecTP has received nominative Case, deactivating it from serving as a goal in future Agree relations (Chomsky 2000, 2001). However, the status of a Case-based Activity Condition in Bantu has been the topic of considerable debate in recent years (Carstens 2005, 2010, 2011, 2016, Carstens & Diercks 2013, Carstens & Mletshe 2015, forthcoming, Diercks 2012, Halpert 2012, 2016, Van der Wal 2015). A popular view is that the activity of Bantu DPs depends on gender, not Case, and so they remain permanently active through the derivation (Carstens 2005, 2010, 2011, 2016, Carstens & Diercks 2013). Under this approach, the subject in SpecTP would still be active and thus would be the closest goal for C’s $\varphi$-probe.

In her account of the lack of null subject intervention in Kilega, Carstens (2005: 245–246) argues that pro in SpecTP moves out of the way by adjoining to C. This would work
for null subjects in Shona, but overt subjects would still intervene. As pointed out in (3.78c–d), agreement on C and T in Shona relatives does not vary with respect to the subject’s position or whether it is null or overt, so ideally the lack of intervention would not appeal to pro’s properties specifically.

Another possibility would be to encode in the grammar somehow that only operators can serve as goals for ϕ-agreement on C. Carstens (2005: 251 (49)) proposes a constraint that blocks non-operator XPs from appearing in SpecCP; because of the tight relation between ϕ-agreement and movement in Carstens’s analysis, this constraint has the effect of blocking a non-operator from valuing C’s ϕ-probe.

Rather than stipulating this constraint as a representational filter, I propose that the pickiness of C’s ϕ-probing is a result of the featural properties of heads in the left periphery combined with an independently motivated derivational locality constraint. As discussed in section 1.4, I follow Preminger (2011, 2014) in assuming that probes are relativized.¹⁵ This means that a probe is looking for a particular feature, and it will simply skip over potential goals that do not have this feature.

One way to do this would be to have a C head that is probing for both [rel] and [ϕ]. However, this could be problematic in cases where the two probes would find separate goals due to locality being computed for each probe separately. For example, if an object is the relative head, [rel] would find that, but the subject in SpecTP would be the closest potential goal for [ϕ]. There would need to be some kind of resolution process, especially if these probes are supposed to trigger movement of their goal.

The alternative that I propose is that the relative marker is actually the realization of agreement on two separate heads in the left periphery, which I will call X and Y. I will postpone discussion of whether these heads correspond to heads in Rizzi’s (1997, 2004) articulated left periphery until later.

As shown in (3.82), the lower head (X) probes for a relative feature and finds the wh-

¹⁵. Probes are ”relativized” in the sense of Relativized Minimality (Rizzi 1990, 2013), not in the sense of the process by which relative clauses are derived.
phrase in SpecvP, skipping over the subject in SpecTP because it has no [rel]. I assume that valuation of [rel] triggers Internal Merge just as valuation of [\( \varphi \)] does, so the \( wh \)-object then moves to the specifier of this head, bringing it into a position that c-commands the subject in SpecTP. Recall that the relative marker always bears low tone, which I analyze as the phonological realization of this X head (represented in the tree as \( L̥- \)).

\[ (3.82) \quad \text{Low-tone agreement and operator extraction to SpecXP (null subject)} \]

Now that the non-subject operator in SpecXP c-commands the subject in SpecTP, when the \( \varphi \)-probe on the next higher head (Y) looks for the closest goal, it finds the operator, as desired. The \( wh \)-phrase values the \( \varphi \)-probe on Y, where the relative marker will be inserted at Vocabulary Insertion, and then moves into its specifier.\(^{16}\) This is illustrated in (3.83).

\[^{16}\text{I am forced to assume that these movement steps are not subject to Criterial Freezing (Rizzi 2006, 2007, Rizzi & Shlonsky 2006, 2007).}\]
Relative agreement and operator extraction to SpecYP (null subject)

The derivation thus far has produced the desired word order and agreement pattern for the sentences in (3.79), as shown below:

Derivation of non-subject relative with null subject
Non-subject extraction with a preverbal subject. In his comparative study of Bantu relative clauses, Henderson (2006b: ch. 6) claims that the Shona relative marker is agreement on the Force head, the highest head in the left periphery. However, he only considers Shona examples with inversion (i.e., with a postverbal subject). As discussed in section 3.2.5.2, Shona at least marginally allows non-subject relatives and clefts without inversion (i.e., with a preverbal subject), as shown in (3.85), and these are actually quite good when the extracted wh-phrase ends up sentence-final via remnant movement (see section 3.2.6.4).

(3.85) Ex-situ wh-direct objects with preverbal subjects

a. Ex-situ wh-direct object, preverbal subject

\[
\text{Ndi-Ø-ani} \quad \text{Ø-shumba} \quad \text{wa-y-aka-nanzv-a} \\ nt1-1a-who \quad 9-\text{lion} \quad 1a.\text{nse-9.sm-ta-lick-fv} \\
\text{‘Who(m) did the lion lick?’ (lit., ‘It’s who that the lion licked?’)}
\]

\[\text{(2015-04-14-02-TD)}\]

b. Ex-situ wh-direct object, preverbal subject

\[
\text{Ndi-Ø-ani} \quad \text{Ø-Taurai} \quad \text{wa-a-no-farir-a} \\
nt1-1a-who \quad 1a-\text{Taurai} \quad 1a.\text{nse-1a.sm-ta-like-fv} \\
\text{‘Who(m) does Taurai like?’ (lit., ‘It’s who that Taurai likes?’)}
\]

\[\text{(2014-07-12-01-TD)}\]

c. Ex-situ wh-direct object, preverbal subject

\[
\text{Chi-i} \quad \text{mw-ana} \quad \text{cha-aka-teng-a} \\
\text{n1.7-what} \quad 1\text{-child} \quad 7.\text{nse-1.sm.ta-buy-fv} \\
\text{‘What did the child buy?’ (lit., ‘It’s what that the child bought?’)}
\]

\[\text{(2014-07-09-01-TD)}\]

If ForceP is the highest projection in the clause, in whose specifier the relative head will end up, then the Shona relative marker cannot be in the Force head because that would leave no room for a preverbal subject between the extracted non-subject in SpecForceP and the relative marker in Force.

I propose that the Y head discussed above is not Force but a lower head in the left periphery; X could be as low as Fin, the lowest head in the left periphery. Because the semantics of probing for a relative feature or for \(\varphi\)-features does not clearly favor one of Rizzi’s (1997, 2004) heads over another, I will remain agnostic about what they are. But
the key is that they need to be low enough to be able to have a Topic projection above them; this is where the preverbal subject will go.

When there is an overt preverbal subject, the derivation proceeds as shown in (3.80) and (3.82–3.84). Then the preverbal subject is merged in SpecTopP. In (3.86), this is represented as movement of an overt preverbal subject from SpecTP to SpecTopP, but nothing here hinges on topicalization being a step of movement as opposed to base-generation of the subject in SpecTopP and resumption by a null pronoun in SpecTP (Henderson 2006b, Schneider-Zioga 2007). This analysis predicts that preverbal subjects in the context of non-subject extraction will pass topicality diagnostics; I leave the testing of that prediction for future work.

(3.86)  \textit{Topicalization of overt subject}

Now the subject is preverbal, but the object is not yet where it needs to be. It needs to c-command the rest of the clause, so I propose that it moves to SpecForceP via another step of [rel]-probing. Then the ForceP is selected by the D head, following Kayne’s (1994)

17. If the subject is overt, there must be some reason that T agrees with it rather than the object. I do not have any strong opinions about what ensures this, but whatever it is is likely at work in blocking subject–object reversal in Shona too.
I assume that although the TopP may be absent when there is no preverbal subject (Rizzi 1997), the ForceP may not be because that is what D selects for. Therefore, this step of agreement and movement from SpecYP to SpecForceP takes place even in sentences where it is string-vacuous because the subject is null or postverbal. This is illustrated in (3.88).
Chapter 3. Full wh-movement

3.2. Shona wh-ex-situ via clefting

(3.88) **Non-subject extraction to SpecForceP (null or postverbal subject)**

![Diagram](image)

**Non-subject extraction with a postverbal subject.** When a non-subject wh-phrase is sentence-initial, a postverbal subject is preferred over a preverbal one. Examples with postverbal subjects are shown in (3.89). As noted before, a key feature of these sentences that distinguishes them from some other languages with inversion in questions is that the postverbal subject still must trigger subject marking on the verb (agreement on T).

(3.89) **Ex-situ wh-direct objects with preverbal subjects**

a. **Ex-situ wh-direct object, preverbal subject**
   
   Ndi-Ø ani wa-y-aka-nanzv-a Ø-shumba ___?

   [Shona]

   ni-1a-who 1a.NSE-9.SM-TA-lick-fv 9-lion

   ‘Who(m) did the lion lick?’ (lit., ‘It’s who that licked the lion?’)

   (2015-04-14-02-TD)

b. **Ex-situ wh-direct object, postverbal subject**

   Ndi-Ø ani wa-a-no-farir-a Ø-Taurai ___?

   [Shona]

   ni-1a-who 1a.NSE-1a.SM-TA-like-fv 1a-Taurai

   ‘Who(m) does Taurai like?’ (lit., ‘It’s who that likes Taurai?’)

   (2014-07-12-01-TD)

c. **Ex-situ wh-direct object, postverbal subject**

   Chi-i cha-aka-teng-a mw-ana ___?

   [Shona]

   N1.7-what 7.NSE-1.SM.TA-buy-fv 1-child

   ‘What did the child buy?’ (lit., ‘It’s what that bought the child?’)

   (2014-07-09-01-TD)
In the derivations shown above for null and preverbal subjects, there is never an overt subject pronounced in SpecTP. When the subject is pro, it is in that position, but it is silent. When the subject is preverbal, SpecTP hosts either pro or an unpronounced copy of the lexical subject, but again both are silent.

As Demuth & Harford (1999) and Harford & Demuth (1999) point out, Shona does not allow an overt subject to intervene between the relative marker and the subject marker. They argue that the relative marker on C is phonologically dependent, and so it triggers head movement of the verbal complex up to C. The postverbal subject, then is in SpecTP, and the whole verbal complex is above it in C. This accounts for the word-level ordering facts, but it fails to capture the affix-level ordering within the verbal complex that falls out from Julien’s (2002) analysis.

Henderson (2006b: 102–114) takes a different approach, arguing that Shona postverbal subjects trigger agreement on T and move to SpecTP, but they are not pronounced there. He argues that the relative marker undergoes PF merger with the verbal complex (Bobaljik 1995, 2002, Matushansky 2006), so when there is a lexical subject in SpecTP, that copy cannot be pronounced. Instead, the lower copy in SpecvP is pronounced, and the result is that the subject appears after the verb. I follow this approach here, whereby inversion in Shona is not syntactic but morphophonological.

This is not to say that postverbal subjects in Bantu always move to SpecTP and then are pronounced in their base position. Henderson (2006b) argues that in languages like Kirundi, Dzamba, and Lingala, the postverbal subject never moves to SpecTP. Morphologically, this has the consequence that T does not agree with the logical subject, and he highlights some interpretive contrasts between this syntactic approach to inversion and the postsyntactic one as well.

**Subject extraction.** Recall that in subject extraction, illustrated in (3.90), Shona shows normal ϕ-agreement on T, but it does not bear the relative marker (overtly, at least). The
only vestige of extraction marking is the floating low tone, which I have analyzed to be the realization of the X head.

(3.90)  Subject extraction marking with local full wh-movement

a.  Left-edge ex-situ wh-subject

\[
\text{Ndi-Ø-ani} \quad \text{à-ka-teng-a} \quad \text{Ø-rokwe?}
\]

\[
\text{ni-1a-who} \quad \text{se.1a.sm.ta-buy-fv} \quad 5\text{-dress}
\]

‘Who bought a dress?’  (2014-06-28-01-TD)

b.  Left-edge ex-situ wh-subject

\[
\text{Ndi-vana-ani} \quad \text{v-à-ka-uy-a} \quad \text{ku-ma-biko?}
\]

\[
\text{ni-2a-who} \quad \text{2a.sm.se.ta-come-fv} \quad 17\text{-6-feast}
\]

‘Who (pl.) came to the party?’  (2014-07-16-01-TD)

c.  Left-edge ex-situ wh-subject

\[
\text{Ndi-Ø-ani} \quad \text{à-ri} \quad \text{ku-tsvag-a} \quad \text{Ø-chi-remba?}
\]

\[
\text{ni-1a-who} \quad \text{se.1a.sm-be} \quad 15\text{-look.for-fv} \quad 1a\text{-7-doctor}
\]

‘Who is looking for a doctor?’  (2015-08-29-01-TD)

I propose that subject extraction has the same derivation as non-subject extraction, but a morphological requirement (Kinyalolo’s Constraint from Kinyalolo 1991 and Carstens 2005: 255) bans two heads within the same phonological word from agreeing with the same element. In Shona only the lower head (T) gets pronounced, in contrast to Kilega, where the higher head is pronounced. The low tone on X still survives, though, resulting in a tonal instantiation of subject extraction marking. This is illustrated in (3.91).
Lack of relative marking on lower clauses. When there is long-distance extraction in Shona, extraction marking only appears on the verb immediately below the relative head. I assume that the probes on the X, Y, and Force heads are all specific to relative clauses; they are in a chain of selection from the relative D head. The left-peripheral heads on lower clauses within the relative clause are not selected by a relative D, and so they do not bear extraction marking. In languages like Kilega where there is $\varphi$-agreement on each verb along the path of $wh$-movement (Carstens 2005: 228n7 (ii), 247 (47), 256 (55)), $wh$-movement does not involve clefting and so the $\varphi$-agreement is not dependent on a relative clause structure.
3.2.6.3 The copular (matrix) clause

For the copular clause, I propose a quite reduced structure. There is no verb root; instead, the *ni* copula is a *v* that directly selects a relative clause. There is no inflectional layer, which explains why the *ni* cannot bear tense or subject marking, as discussed in section 3.2.4.3.¹⁸ A [Q] feature on C represents the null operator; just as in *wh*-in-situ, this unselectively binds the *wh*-phrase in SpecForceP of the relative clause. Further evidence for this unselective binding relation will be provided in chapter 4.

(3.92) \textit{Copular clause}

\[
\text{CP} \\
\text{C} \quad \text{vP} \\
\quad \text{[Q]} \quad \text{v} \quad \text{DP} \\
\quad \quad \text{NI} \\
\quad \quad \quad \text{D} \quad \text{ForceP} \\
\quad \quad \quad \quad \text{DP} \\
\quad \quad \quad \quad \quad \text{wh-phrase} \quad \text{Force} \quad \cdots \\
\quad \quad \quad \quad \quad \quad \quad \text{[rel]}_{rel} \\
\quad \quad \quad \quad \quad \quad \quad \quad \text{[wh]} \\
\quad \quad \quad \quad \quad \quad \quad \quad \quad \text{[φ]}
\]

3.2.6.4 Remnant movement in right-edge *wh*-ex-situ

Recall that Shona allows the copula and *wh*-phrase to appear sentence-finally as well as sentence-initially, and this right-edge *wh*-ex-situ patterns with left-edge *wh*-ex-situ in terms of island and reconstruction effects and agreement.

¹⁸ In some dialects there may need to be a NegP, but my consultant does not allow *ni* to be negated.
I propose that sentence-final wh-ex-situ is derived via disguised movement as discussed in section 2.2.2. Because the wh-phrase moves from SpecYP to SpecForceP, as depicted in (3.87–3.91), the YP (or TopP in the case of non-subject extraction with a preverbal subject) is a remnant. This remnant may undergo topicalization to SpecTopP in the matrix (copular) clause, which leaves the copula and wh-phrase at the end of the sentence. This is shown for preverbal, null or postverbal, and extracted subjects below.
(3.94) Remnant movement to matrix SpecTopP (preverbal subject)

\[
\text{ForceP} \\
\text{Force} [\text{\$}] \\
\text{TopP} \\
\text{Top} \text{vP} \\
\text{DP}_{\text{subj}} \text{DP}_{\text{obj}} \text{V} \ldots
\]

(3.95) Remnant movement to matrix SpecTopP (null or postverbal subject)

\[
\text{ForceP} \\
\text{Force} [\text{\$}] \\
\text{TopP} \\
\text{Top} \text{vP} \\
\text{DP}_{\text{obj}} \text{V} (\text{DP}_{\text{subj}}) \ldots
\]

DP_{\text{subj}} DP_{\text{obj}} V \ldots
This disguised movement approach to sentence-final *wh*-ex-situ has been pursued by Letsholo (2007) for Ikalanga and Abner (2011) for American Sign Language in addition to the work on Romance described in section 2.2.2. One difference between my analysis and the ones suggested by Letsholo (2007) and Abner (2011) is that their step of remnant movement was quite local, simply to a higher projection within the left periphery of the same clause. Because of the biclausal cleft analysis motivated in section 3.2.4.3, my step of remnant movement crosses more structure. In order for this not to violate the Phase Impenetrability Condition, I claim that the phase head in the relative clause is not Force but a lower head, such as Int (following Carstens 2016). If Y is Int, then YP and the higher TopP would both still be accessible from above, even after Y’s complement is transferred.¹⁹ The copular vP would have to be a weak phase (Chomsky 2001, 2008) or not a phase at all, but that is consistent with the fact that in this construction it does not admit specifiers.

¹⁹. See section 5.2.1.2 for another argument that Y is Int.
3.2.6.5 Topicalization and the biclausal cleft

In both Kîîtharaka and Shona, ex-situ wh-phrases must appear in the focus/cleft constructions discussed above. Kîîtharaka has an ex-situ wh-question strategy that Muriungi (2003, 2011) dubs “intermediate” because the wh-phrase stands between the subject and the verb (3.97a). He analyzes this as clause-bounded topicalization of the subject to the SpecTopP above the focused wh-phrase in SpecFocP, patterning with (3.97b).

\[(3.97)\]
\[\text{a. Subject may be topicalized above focus-marked wh-phrase} \quad [\text{Kîîtharaka}]\]
\[\text{Nazario i-} \text{mb} \text{i}_1 \text{ a-} \text{gür-} \text{ir-} \text{e} \quad t_i?\]
\[\text{Nazario n} \text{1-what 1.SM-buy-PFV-FV}\]
\[\text{‘Nazario, what did he buy?’ (Muriungi 2003: 86 (5a))}\]

\[\text{b. Subject may be topicalized above focus-marked direct object} \quad [\text{Kîîtharaka}]\]
\[\text{5-book } \text{n} \text{1-Maria a-} \text{gür-i-ir-} \text{e} \quad \text{mw-} \text{arîmû.}\]
\[\text{‘The book, MARIA bought (it) for the teacher.’ (Abels & Muriungi 2008: 692 (7a))}\]

In my analysis, Shona clefted wh-phrases are in the highest specifier of the cleft clause. Given the behavior of the temporal modifiers in (3.58–3.61), we might imagine that topicalization of the subject to a position higher than that would be impossible, making the Shona counterpart of (3.97a) ungrammatical.

\[(3.98)\]
\[\text{Subject may be topicalized above clefted wh-phrase} \quad [\text{Shona}]\]
\[\text{Ø-Shumba ndi-Ø-ani}_1 \text{ wa-} \text{y-aka-nanzv-} \text{a} \quad t_i?\]
\[\text{9-lion n} \text{1a-who 1a.NSE-9.SM-TA-lick-FV}\]
\[\text{‘The lion, who is it that it licked?’ (2015-07-31-TD)}\]

However, this sentence is acceptable, suggesting that in Shona temporal modification is clause-bounded but topicalization is not. I propose that in these sentences, the subject is in SpecTopP within the matrix clause, as shown in (3.99). It may be the case that the lexical subject is generated in the matrix SpecTopP with resumption in the cleft clause, but in (3.99) I have represented this as topicalization via movement. The movement approach is compatible with the topicalization of the cleft clause discussed in section 3.2.6.4.
Chapter 3. Full wh-movement

3.3. Outstanding issues

3.3.1 Crosslinguistic variation


There are many, many crosslinguistic variables, so it will be a challenge to develop a typology that reduces such variation to a few parameters. For example, Bantu languages vary as to whether wh-ex-situ requires clefting, whether there is extraction mark-
Chapter 3. Full wh-movement

3.3. Outstanding issues

ing, whether extraction marking involves \( \varphi \)-agreement or invariant segments or just tonal changes, whether extraction marking is an independent morpheme or not, whether extraction marking bleeds subject marking, which clauses along the path of extraction the extraction marking appears in, whether subject inversion is required in non-subject wh-questions, whether long-distance questions show reconstruction effects, whether subjects can topicalize above the ex-situ wh-phrase, and so on.

Given the analysis proposed in this chapter, there are a number of potential loci of variation, including the morphophonological requirements of the extraction marking, whether there is a Focus head in the left periphery, which heads probe, which features are probed for, which features trigger movement, whether Kinyalolo’s Constraint applies and whether it forces the higher or the lower head to be pronounced, whether pronouncing a lower copy of the wh-phrase is available, whether remnant movement is available, etc.

In the long run, the goal would be to simplify this system in such a way that it captures crosslinguistic variation with only a few minor parameter adjustments. The analysis I have proposed for Shona wh-ex-situ already accounts for several permutations (whether the wh-phrase is a subject or non-subject, whether the subject is null, preverbal, or postverbal, whether the subject or the relative clause topicalizes) while reducing grammatical machinery by appealing to processes and structures needed independently for wh-in-situ and relative clauses. Given that one of the roadblocks to performing a large-scale typological survey on these fine-grained details is that existing empirical coverage is somewhat spotty even in the best-described languages. The diagnostic testing I have showcased in this chapter provides a model for future fieldwork on Bantu wh-questions.

3.3.2 Exhaustivity and other semantic effects

I have not yet thoroughly tested for semantic effects that we might expect to go along with clefting, such as exhaustivity. Zerbian (2006a) reports that in Northern Sotho, non-subject clefts show exhaustivity effects but subject clefts do not. The preliminary testing
I have done in Shona has indicated that Shona might not have the same exhaustivity effects that we have in English clefts, which is one of the reasons I have hesitated to use English clefts when glossing the Shona clefts.

### 3.4 Conclusion

In this chapter, I have argued that Shona full *wh*-movement involves movement of the *wh*-phrase, but it is neither *full* (because the *wh*-phrase is not pronounced in its scopal position) nor *wh*-movement in the strict sense, by which I mean that the movement of the *wh*-phrase is triggered not by a [wh] feature or a need to establish a *wh*-dependency but rather by a [rel] feature.²⁰ Instead, a *wh*-phrase with a [rel] feature undergoes relativization to become the head of a relative (cleft) clause, and the *wh*-dependency is established via unselective binding just as it is in *wh*-in-situ. This is shown in (3.100).

(3.100) **Proposal for Shona (interim)**

a. *Wh*-in-situ: \[\text{scopal} \quad [\text{cp Op … wh …}] \]

   \[\text{unselective binding} \]

b. “Full” *wh*-movement: \[\text{scopal} \quad [\text{cp Op ni-[RelCl wh … wh … ]}] \]

   \[\text{unsel. binding} \quad \text{ovrt relativization} \]

²⁰ This relativization would be *wh*-movement in the sense of *Chomsky 1977*, but that more general phenomenon is usually called A’-movement now.
Chapter 4

Partial *wh*-movement

4.1 Introduction

4.1.1 What is partial *wh*-movement?

The term *partial* *wh*-movement refers to a phenomenon in which a *wh*-phrase is pronounced neither in the position where it is interpreted thematically (as in *wh*-in-situ) nor in the position where it takes scope (as in full *wh*-movement), but instead in an intermediate position between the two. In his review of partial *wh*-movement, Fanselow (2006) distinguishes what he calls the *WHAT-construction*, exemplified by the German *was*-construction, from *simple partial movement*, which refers to partial *wh*-movement that does not involve an overt scope marker. *WHAT-constructions* are better studied, but to my knowledge, Bantu languages do not have them, so this chapter will focus exclusively on simple partial *wh*-movement.

4.1.2 The basic picture of Bantu partial *wh*-movement

Simple partial *wh*-movement has been documented in several Bantu languages, including Kikuyu (Clements 1984), Kiitharaka (Muriungi 2005, Abels & Muriungi 2008), Gichuka (Muriungi et al. 2014), Lubukusu (Wasike 2007), Ikalanga (Letsholo 2002, Letsholo & Pires
Chapter 4. Partial wh-movement

4.1. Introduction

2003), and Zulu (Sabel & Zeller 2006). Examples of local partial wh-movement (i.e., where the wh-phrase appears at the boundary of the thematic clause) are shown in (4.1), and (4.2) illustrates long-distance partial wh-movement (i.e., where the wh-phrase appears at an intermediate clause boundary).

(4.1) Local partial wh-movement in Bantu

a. Local partial wh-movement of an embedded subject

[CP Ngóye a-úy-íre [CP ate n-óo ___ [Kikuyu]
2SG.SM-T-think-T Nguţi 1.SM-say-T that NI-who
o-þn-íre Kaanake]]?
1.AA-see-T Kaanake?
‘Who do you think Nguţi said saw Kanake?’ (Clements 1984: 47 (25c))

b. Local partial wh-movement of an embedded direct object

[CP Pat a-ug-ir-e [CP i-mbi [Kíítharaka]
Maria a-gûr-ir-e ___]]?
1.Maria 1.SM-buy-PFV-FV
‘What did John say Pat said Mary bought?’ (Abels & Muriungi 2008: 716 (89b))

c. Local partial wh-movement of an embedded locative adjunct

John etikitie [CP Mwende augire [CP ni-ku kairitu [Gichuka]
John believe Mwende said NI-where girl
karugire irio ___]]?
cooked food
‘Where does John believe Mwende said the girl cooked food?’ (Muriungi et al. 2014: 191 (25e))

d. Local partial wh-movement of an embedded subject

[CP ba-li naanu ni-y-e ___ [Lubukusu]
2-2-child 2.SM-PST-say-FV 2-that who NI-1-PRON
o-w-a-rem-a ku-mu-saala]?
1.SE-LAA-PST-cut-FV 3-3-tree?
‘Who did the children say cut the tree?’ (Wasike 2007: 163 (71a))

e. Local partial wh-movement of an embedded direct object

[CP kuti ndi-Ø-ani Nchidzi [Ikalanga]
1a.Neo 1a.SM-THINK that NI-1a-WHO 1a.Nchidzi
wa-a-noo-bona ___]?
1a.NSE-1a.SM-FUT-SEE
‘Who does Neo think Nchidzi will see?’ (Letsholo 2002: 36 (56a))
Chapter 4. Partial wh-movement

4.1. Introduction

f. Local partial wh-movement of an embedded subject

U-cabanga  [CP ukuthi ba-the] [CP ng-ubani] [Zulu]
2sg-sm-think that 2.sm-said ni-1a.who
1a.rel-worked
'Who do you think they said worked?' (Sabel & Zeller 2006: 276 (15c))

(4.2) Long-distance partial wh-movement in Bantu

a. Long-distance partial wh-movement of an embedded subject

Ó-ɣw-ꜝéciiri-á [CP nó.o Ngóye a-úy-IRÉ] [CP áte] [Kikuyu]
2sg.sm-think-t ni-who Ngügí 1.sm-say-t that
1a.rel-Kanake
'Who do you think Ngügí said saw Kanake?' (Clements 1984: 47 (25b))

b. Long-distance partial wh-movement of an embedded direct object

John a-ug-ir-e [CP i-mbi Pat a-ug-ir-e] [Kîîtharaka]
[CP Maria a-gûr-ir-e]?
1.Maria 1.sm-buy-pfv-fv
'What did John say Pat said Mary bought?' (Abels & Muriungi 2008: 716 (89c))

c. Long-distance partial wh-movement of an embedded locative adjunct

John etikitie [CP ni-ku Mwende augire] [CP kairitu] [Gichuka]
John believe ni-where Mwende said girl
ni-karugire irio
ni-cooked food
'Where does John believe Mwende said the girl cooked food?' (Muriungi et al. 2014: 196 (35))

d. Long-distance partial wh-movement of an embedded subject

U-cabanga [CP ukuthi ng-ubani aba-the] [Zulu]
2sg-sm-think that ni-1a.who 2.rel-said
1a.sm-worked
'Who do you think they said worked?' (Sabel & Zeller 2006: 276 (15b))

To my knowledge, Duala is the only Bantu language that has been argued not to have partial wh-movement, but as the map in Figure 4.1 illustrates, the phenomenon has not been investigated in very many languages within the family. The claim about Duala orig-
Figure 4.1: Map of Bantu languages with partial *wh*-movement.
inates in Epée (1976a), and (4.3) shows the only examples provided there to support the argument:

(4.3) a. Long-distance embedded in-situ wh-direct object
\[
\text{[Duala]}\text{O} \quad \text{ta} \quad \text{pula} \quad [\text{CP} \ 	ext{na} \ 	ext{Kuo} \ 	ext{a} \ 	ext{keke} \ [\text{CP} \ 	ext{wan-ea} \ [\text{CP} \ 	ext{muna-o} \ 	ext{nje}]?] \\
\text{2sg.sm} \ 	ext{T} \ 	ext{2sg.sm} \ 	ext{want} \ 	ext{that} \ 	ext{1.Kuo} \ 	ext{1.sm} \ 	ext{try} \ 	ext{bring-appl} \ \\
\text{child-1.poss \ what} \]
\]
‘What did you want Kuo to try to bring to his child?’ (lit., ‘You wanted that Kuo try to bring his child what?’) (Epée 1976a: 159 (23a))

b. Long-distance full wh-movement of an embedded direct object
\[
\text{[Duala]}\text{Nje} \quad \text{o} \quad \text{ta} \quad \text{nø} \quad \text{o} \quad \text{pula} \quad [\text{CP} \ 	ext{na} \ 	ext{Kuo} \ 	ext{a} \ 	ext{keke} \ [\text{CP} \ 	ext{wan-ea} \ [\text{CP} \ 	ext{muna-o} \ 	ext{___}]?] \ \\
\text{2sg.sm} \ 	ext{T} \ 	ext{nse} \ 	ext{2sg.sm} \ 	ext{want} \ 	ext{that} \ 	ext{1.Kuo} \ 	ext{1.sm} \ 	ext{try} \ 	ext{bring-appl} \ 	ext{nse} \ 	ext{child-1.poss} \ \\
\text{‘What did you want Kuo to try to bring to his child?’} \quad (\text{Epée 1976a: 159 (23b)})
\]

c. Local partial wh-movement of an embedded direct object
\[
\text{[Duala]}\ast \text{O} \quad \text{ta} \quad \text{o} \quad \text{pula} \quad [\text{CP} \ 	ext{na} \ 	ext{Kuo} \ 	ext{a} \ 	ext{keke} \ [\text{CP} \ 	ext{nje} \ [\text{CP} \ 	ext{wan-ea} \ [\text{CP} \ 	ext{muna-o} \ 	ext{___}]?] \ \\
\text{2sg.sm} \ 	ext{T} \ 	ext{2sg.nø} \ 	ext{want} \ 	ext{that} \ 	ext{1.Kuo} \ 	ext{1.sm} \ 	ext{try} \ 	ext{what} \ 	ext{bring-appl} \ 	ext{nse} \ 	ext{child-1.poss} \ \\
\text{‘What did you want Kuo to try to bring to his child?’} \quad (\text{lit., ‘You wanted that Kuo try what to bring his child ___?’}) \quad (\text{Epée 1976a: 159 (23c)})
\]

d. Long-distance partial wh-movement of an embedded direct object
\[
\text{[Duala]}\ast \text{O} \quad \text{ta} \quad \text{o} \quad \text{pula} \quad [\text{CP} \ 	ext{na} \ 	ext{nje} \ 	ext{Kuo} \ 	ext{a} \ 	ext{keke} \ [\text{CP} \ 	ext{nø} \ 	ext{nje} \ [\text{CP} \ 	ext{wan-ea} \ [\text{CP} \ 	ext{muna-o} \ 	ext{___}]?] \ \\
\text{2sg.sm} \ 	ext{T} \ 	ext{2sg.sm} \ 	ext{want} \ 	ext{that} \ 	ext{1.Kuo} \ 	ext{1.sm} \ 	ext{try} \ 	ext{nse} \ 	ext{what} \ 	ext{brin-appl} \ 	ext{nse} \ 	ext{child-1.poss} \ \\
\text{‘What did you want Kuo to try to bring to his child?’} \quad (\text{lit., ‘You wanted that what Kuo try to bring his child ___?’}) \quad (\text{Epée 1976a: 159 (23d)})
\]

The idea that Duala lacks partial wh-movement has been repeated somewhat often (Fanselow 2006, Muriungi 2005, Sabel 2000, Sabel & Zeller 2006), but I question whether that conclusion can be so readily drawn from the examples in (4.3). First, ‘want’ and ‘try’ are not the best candidates for bridge verbs, so it is possible that a sentence with embedding verbs such as ‘say’, ‘hear’, ‘think’, ‘believe’, etc., would result in grammaticality. Second, it is not obvious that there must be a CP boundary between ‘try’ and ‘bring’,
especially given that ‘bring’ does not bear tense or subject marking; further testing would be required to determine whether this patterns like subject control in English or like a serial verb construction, which may have a different structure that would not include a partial wh-movement landing site. Third, the wh-phrase is shown in (4.3d) below the complementizer na, but it would also be good to check that it cannot appear immediately above this complementizer. However, in the absence of available data to tease these issues apart, I will accept Roger Epée’s conclusion that Duala lacks partial wh-movement, given that he was a native speaker of the language.

4.1.3 Theoretical issues at stake

Several questions come to mind when considering partial wh-movement. First, what is the nature of the relation between the canonical position and the pronunciation site of the wh-phrase? In this chapter, I will refer to this relation as the lower relation. Second, what is the nature of the relation between the pronunciation site of the wh-phrase and its scopal position? This issue of the higher relation is particularly relevant for simple partial wh-movement, where there is no overt scope marker. Finally, why do some languages allow partial wh-movement while others do not? Can we predict the possibility of partial wh-movement on the basis of other properties of a language? Addressing these questions is the goal of this chapter.

In order to probe these questions more thoroughly than the existing Bantu literature has done, I will present a case study of Shona partial wh-movement. I follow up on the claim made in chapter 3 that when a wh-phrase appears sentence-initially in Shona, it is actually in an intermediate position rather than its scopal position. Therefore, apparent full wh-movement is really a subcase of partial wh-movement, so it is unsurprising that more obvious cases of partial wh-movement are possible the language. I will argue that Shona wh-ex-situ can be reduced to a movement step plus a non-movement relation, a composite derivation that has been predicted to be possible but for which clear empirical
support has been lacking until now.

4.1.4 Roadmap

I briefly present the basic picture of Shona partial *wh*-movement in section 4.2 before turning in section 4.3 to prior analyses of simple partial *wh*-movement both inside and outside of Bantu. Section 4.4 demonstrates the pattern of island sensitivity found in Shona partial *wh*-movement, which stands in contrast to what has been described in other languages. Then in section 4.5, provide several supporting pieces of evidence for the conclusion that the lower relation in Shona partial *wh*-movement is derived via movement (like the apparent full *wh*-movement discussed in chapter 3), while the upper relation does not involve movement (like the *wh*-in-situ strategy discussed in chapter 2).

A quick glance through (4.1–4.2) reveals that the partially moved *wh*-phrases are all marked with a form that reconstructs to Proto-Bantu *ni-*. I will consider in section 4.6.1 what to make of this fact within the broader question of how to predict which languages will allow partial *wh*-movement. Section 4.6.2 deals with the issue of trying to determine which contexts make partial *wh*-movement felicitous. Section 4.7 concludes the chapter.

4.2 The basics of Shona partial *wh*-movement

Partial *wh*-movement is a completely acceptable way to ask a *wh*-question in Shona, although it is not judged to be the most natural or obvious way to express a long-distance question. Sentences with partial *wh*-movement are undoubtedly interrogative, and the *wh*-phrase takes matrix scope. The set of acceptable answers to a *wh*-question does not vary with respect to the strategy employed (*wh*-in-situ vs. full *wh*-movement vs. partial *wh*-movement).

The examples below demonstrate that there are no restrictions on the types of *wh*-phrases that can be partially moved, and both local and long-distance partial *wh*-move-
ment are available for questions with more than two clauses.

(4.4) Partial \(wh\)-movement of non-subjects

a. Partially moved \(wh\)-indirect object

\[ \text{W-ai-fung-a kuti } \text{ndi-}\text{\text{\text{-O-ani wa-v-aka-teng-er-a}} [Shona]} \]

\[ \text{2sg.sm-ta-think-fv that NI-1a-who 1a.nse-2.sm-ta-buy-appl-fv} \]

\[ \text{Ø-rokwe ku-chi-toro nezuro?} \]

\[ \text{5-dress 17-7-store yesterday} \]

\'Who(m) did you think they bought a dress (for) at the store yesterday?\'

(2014-09-16-01-TD)

b. Partially moved \(wh\)-direct object

\[ \text{W-ai-fung-a kuti } \text{chi-i cha-v-aka-teng-er-a [Shona]} \]

\[ \text{2sg.sm-ta-think-fv that NI.7-what 7.nse-2.sm-ta-buy-appl-fv} \]

\[ \text{Ø-Thandi } \text{Ø-rokwe } \text{nezuro?} \]

\[ \text{1a-Thandi 17-7-store yesterday} \]

\'What did you think they bought Thandi at the store yesterday?\'

(2014-09-16-01-TD)

c. Partially moved \(wh\)-locative adjunct

\[ \text{W-ai-fung-a kuti } \text{nde-ku-pi kwa-v-aka-teng-er-a [Shona]} \]

\[ \text{2sg.sm-ta-think-fv that NI-17-where 17.nse-2.sm-ta-buy-appl-fv} \]

\[ \text{Ø-Thandi } \text{Ø-rokwe } \text{nezuro?} \]

\[ \text{1a-Thandi 5-dress yesterday} \]

\'Where did you think they bought Thandi a dress yesterday?\'

(2014-09-16-01-TD)

d. Partially moved \(wh\)-temporal adjunct

\[ \text{W-ai-fung-a kuti } \text{ndi-rinhi pa-v-aka-teng-er-a [Shona]} \]

\[ \text{2sg.sm-ta-think-fv that NI-when 16.nse-2.sm-ta-buy-appl-fv} \]

\[ \text{Ø-Thandi } \text{Ø-rokwe ku-chi-toro } \text{?} \]

\[ \text{1a-Thandi 5-dress 17-7-store} \]

\'When did you think they bought Thandi a dress at the store?\'

(2014-09-16-01-TD)

(4.5) Partial \(wh\)-movement of subjects

a. Partially moved \(wh\)-subject (local)

\[ \text{W-ai-fung-a [kuti ndi-}\text{\text{-O-ani } âka-teng-er-a [Shona]} \]

\[ \text{2sg.sm-ta-think-fv that NI-1a-who se.1a.sm.ta-buy-appl-fv} \]

\[ \text{Ø-Thandi } \text{Ø-rokwe ku-chi-toro nezuro?} \]

\[ \text{1a-Thandi 5-dress 17-7-store yesterday} \]

\'Who did you think bought Thandi a dress at the store yesterday?\'

(2014-09-09-01-TD)
4.3 Previous approaches to partial wh-movement

The primary way that nature of the higher relation and lower relation in partial wh-movement has been investigated is through the use of island diagnostics. The next section will examine the island sensitivity pattern found in Singaporean Malay and Kîîtharaka, followed by discussions of the analyses proposed for languages with this pattern.

4.3.1 Island sensitivity and partial wh-movement

4.3.1.1 Singaporean Malay

Cole & Hermon (1998) show that in Singaporean Malay, an island boundary may intervene between an in-situ wh-phrase and its scopal position, as schematized in (4.6a) and illustrated in (4.7a). However, wh-ex-situ is sensitive to islands whether above or below the pronunciation site of the wh-phrase, which is schematized in (4.6b–d) and illustrated in (4.7b–d).
Chapter 4. Partial wh-movement 4.3. Previous approaches to partial wh-movement

(4.6) Island sensitivity in Singaporean Malay (Cole & Hermon 1998)

a. Wh-in-situ: \[ \text{CP} \quad \ldots \quad [\text{island} \ldots \text{CP} \ldots \text{wh}] ]

b. Full wh-movement: \[ *[\text{CP} \quad \text{wh} \quad \ldots \quad \text{CP} \ldots \text{island} \ldots ] ]

c. Partial wh-movement: \[ *[\text{CP} \quad \ldots \quad \text{CP} \quad \text{wh} \quad \ldots \quad \text{island} \ldots ] ]

d. Partial wh-movement: \[ *[\text{CP} \quad \ldots \quad \text{island} \ldots \text{CP} \quad \text{wh} \quad \ldots ] ]

(4.7) Complex DP island (relative clause)

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

Kamu sayang [island perempuan yang Ali fikir] [Singaporean Malay] you love woman that Ali thinks

\[ [\text{CP} \quad \text{yang telah} \quad \text{makan apa}]? \quad \text{that already eat} \quad \text{what} \]

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

(Cole & Hermon 1998: 235 (34b))

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

*Di mana kamu fikir [CP Ali suka] [Singaporean Malay] at where you think Ali like

\[ [\text{island} \quad \text{perempuan yang tinggal ___}]? \quad \text{woman that live} \]

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

(Cole & Hermon 1998: 227 (7a))

c. Partial wh-movement out of a subject relative clause

*Ali memberitahu kamu [CP apa yang Mari fikir] [Singaporean Malay] Ali told you what that Mari think

\[ [\text{CP} \quad \text{dia suka} \quad [\text{island} \quad \text{perempuan yang beli ___}]? \quad \text{he likes woman that buy} \]

‘What did Ali tell you that Mary thinks that he likes a woman who bought ___?’

(Cole & Hermon 1998: 235 (33))

d. Partial wh-movement within a subject relative clause

*Kamu sayang [island perempuan yang Ali fikir] [Singaporean Malay] you love woman that Ali thinks

\[ [\text{CP} \quad \text{apa yang telah} \quad \text{makan ___}]? \quad \text{what that already eat} \]

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

(Cole & Hermon 1998: 235 (35b))
Cole & Hermon (1998) show further that the higher relation’s island sensitivity extends beyond relative islands to subject islands, adjunct islands, wh-islands, factive islands, and negative islands.

### 4.3.1.2 Kîîtharaka

In Kîîtharaka, the same pattern holds. If a wh-phrase is generated within an island, it may stay in situ, but any movement of the wh-phrase above its canonical position is blocked, even it stays within the island.

(4.8) Island sensitivity in Kîîtharaka (*Abels 2012a*)

<table>
<thead>
<tr>
<th>Scopal</th>
<th>Canonical</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Wh-in-situ</td>
<td><img src="#" alt="Scopal Diagram" /></td>
</tr>
<tr>
<td>b. Full wh-movement</td>
<td><img src="#" alt="Canonical Diagram" /></td>
</tr>
<tr>
<td>c. Partial wh-movement</td>
<td><img src="#" alt="Canonical Diagram" /></td>
</tr>
<tr>
<td>d. Partial wh-movement</td>
<td><img src="#" alt="Canonical Diagram" /></td>
</tr>
</tbody>
</table>

(4.9) Complex DP island (relative clause)

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

\[ \text{Û-rî-thûgan-i-á [CP n-ding-ir-e [island mw-arî [Kîîtharaka] 2sg.sm-prs-think-caus-pfv 1sg.sm-hit-pfv-pfv 1-girl û-ra a-ug-ir-e [CP ati Peter a-gur-ir-e ūû]??]??}] \]

‘Who do you think I hit the girl who said that Peter will marry ___?’

*(Abels 2012a: 71 (10a))

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


‘Who do you think I hit the girl who said that Peter will marry ___?’

*(Abels 2012a: 71 (10e))
c. **Partial wh-movement out of a subject relative clause**

\*U-ri-thûgan-i-a [\text{\textsc{cp} n-ûû n-ding-ir-e} [\text{\textsc{kîîtharaka}}] 2sg.sm-prs-think-caus-fv \text{n-who} 1sg.sm-hit-pfv-fv

\[
\begin{array}{l}
\text{\textsc{island} mw-ari \ û-ra n-a-ug-ir-e} \ [\text{\textsc{cp ati Peter}}
\][\text{\textsc{cp n-ûû ni-who 1sm-say-pfv-fv} that 1.Peter}
\] n-a-gur-ir-e 1.sm-marry-pfv-fv
\]?
\end{array}
\]

‘Who do you think I hit the girl who said that Peter will marry ___?’

(\text{Abels 2012a: 71 (10d)})

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

\*U-ri-thûgan-i-a [\text{\textsc{cp} n-ding-ir-e} [\text{\textsc{island} mw-ari} [\text{\textsc{kîîtharaka}}] 2sg.sm-prs-think-caus-fv 1sg.sm-hit-pfv-fv 1-girl

\[
\begin{array}{l}
\text{û-ra a-ug-ir-e} \ [\text{\textsc{cp ati n-ûû Peter a-gur-ir-e}}
\][\text{\textsc{cp n-ûû ni-who 1sm-marry-pfv-fv} that 1.Peter}
\] n-a-gur-ir-e 1.sm-marry-pfv-fv
\]?
\end{array}
\]

‘Who do you think I hit the girl who said that Peter will marry ___?’

(\text{Abels 2012a: 71 (10b)})

On the basis of data like what was just shown for Singaporean Malay and Kîîtharaka, \text{Fanselow (2006)} proposes the following generalization:

\begin{equation}
(4.10)
\text{Fanselow’s (2006) Generalization S4:}
\end{equation}

A \text{wh-phrase} that has undergone (partial) \text{wh-movement} must not be separated from its scope position by an island for movement.

This generalization will be falsified by the Shona facts presented in section 4.4, but first, I will discuss some of the prior analyses of simple partial \text{wh-movement}.

\textbf{4.3.2 Partial wh-movement is an independent construction}

In some analyses, partial \text{wh-movement} is treated as a construction that has a derivational mechanism that is not used for either the \text{wh-in-situ} and full \text{wh-movement} strategies. In this sense, partial \text{wh-movement} is an independent construction.

\textbf{4.3.2.1 Covert (LF) movement}

\text{Cole & Hermon (1998)} argue that the lower relation of partial \text{wh-movement} is overt \text{wh-movement}, just as in full \text{wh-movement}. This is shown in (4.11b–c). However, to explain
the fact that partial wh-movement is sensitive to island boundaries above the pronunciation site, they claim that covert (LF) wh-movement is involved in establishing the higher relation (see (4.11d)). This is separate from the mechanism they propose for the wh-in-situ strategy, namely unselective binding, shown in (4.11a). Saddy (1991) proposes a similar analysis to account for the same island sensitivity pattern in Indonesian.

The key point here is that under this analysis, partial wh-movement involves a step of wh-movement before Spell-out, and then a second step of wh-movement afterwards at LF. This covert wh-movement is not independently required for either the wh-in-situ or full wh-movement strategies, so these languages are argued to have three separate wh-question strategies.

(4.11) Cole & Hermon’s (1998) analysis of Singaporean Malay

a. Wh-in-situ: \[\text{scopal} \] \[\text{canonical} \]
\[
\begin{array}{c}
\text{[CP Op ... [island ... [CP ... wh]]]} \\
\text{unselective binding}
\end{array}
\]

b. Full wh-movement: \[
\begin{array}{c}
\text{*[CP wh ... [CP ... [island ... wh]]]} \\
\text{overt wh-movement}
\end{array}
\]

c. Partial wh-movement: \[
\begin{array}{c}
\text{*[CP wh ... [CP wh ... [island ... wh]]]} \\
\text{overt wh-movement}
\end{array}
\]

d. Partial wh-movement: \[
\begin{array}{c}
\text{*[CP wh ... [island ... [CP wh ... wh]]]} \\
\text{covert wh-movement}
\end{array}
\]

4.3.2.2 Overt movement of a null operator

Abels (2012a: ch. 5) also analyzes partial wh-movement as involving a mechanism not involved in wh-in-situ or full wh-movement, but this mechanism is overt wh-movement of a null operator rather than covert wh-movement of the wh-phrase. Under his analysis, wh-in-situ involves successive-cyclic agreement between the wh-phrase and downward-probing uninterpretable wh-features (notated [uWh\#] by Abels) generated in each phase head all the way up to the scopal position. This is illustrated in (4.12a), although the [uWh\#] features at each intermediate phase edge are omitted for space reasons. Ex-situ
Chapter 4. Partial wh-movement

4.3. Previous approaches to partial wh-movement

wh-phrases, on the other hand, are generated as the complement of a null operator, and the wh-phrase undergoes focus movement to its pronunciation site, pied-piping the operator, as shown in (4.12b–c). In full wh-movement, that site is the scopal position, but in partial wh-movement, the null operator undergoes (overt) wh-movement by itself to the scopal position, stranding the wh-phrase at the pronunciation site (see (4.12d)).

The step of wh-movement is not necessary to account for either the wh-in-situ or full wh-movement strategy but is introduced to explain the island sensitivity of the higher relation in Kiitharaka and Malay. In this sense, then partial wh-movement is treated as a separate wh-question construction.

(4.12) *Abels’s (2012a) analysis of Kiitharaka*

\[
\begin{align*}
\text{a. In-situ: } & \quad \text{scopal} \quad \text{CP [uWh]} \ldots \text{CP} \ldots \text{island} \ldots \text{CP} \ldots \text{wh} \quad \text{[canonical]} \\
\text{b. Full: } & \quad \ast \text{[CP Op-wh} \ldots \text{CP} \ldots \text{island} \ldots \text{CP} \ldots \text{Op-wh}] \quad \text{[downward agreement]} \\
\text{c. Partial: } & \quad \ast \text{[CP Op-wh} \ldots \text{CP Op-wh} \ldots \text{island} \ldots \text{CP} \ldots \text{Op-wh}] \quad \text{[overt focus movement]} \\
\text{d. Partial: } & \quad \ast \text{[CP Op-wh} \ldots \text{CP Op-wh} \ldots \text{island} \ldots \text{CP Op-wh} \ldots \text{Op-wh}] \quad \text{[overt wh-movement]}
\end{align*}
\]

4.3.3 Partial wh-movement is not an independent construction

Other researchers have argued that simple partial wh-movement does not need a separate derivational mechanism in addition to what is required for wh-in-situ and full wh-movement.

4.3.3.1 Partial wh-movement assimilated to full wh-movement

Fanselow & Ćavar (2001) and Richards (2001: §3.2) assimilate partial wh-movement to full wh-movement. In both approaches, the wh-phrase moves overtly to the scopal position; what varies is which copy is pronounced. In full wh-movement, the head of the chain
is pronounced, but in partial *wh*-movement, an intermediate copy is pronounced. This account of the higher relation is the same as the approach to *wh*-in-situ taken by Reintges et al. (2006) and discussed in section 2.2.3: the relation between the pronunciation site and the scopal position is derived via movement, but a lower copy is pronounced.

### 4.3.3.2 Partial *wh*-movement is a hybrid of *wh*-in-situ and full *wh*-movement

The analyses discussed so far are all attempts to characterize the island sensitivity pattern displayed by Singaporean Malay and Kĩĩtharaka, in which *wh*-in-situ is permitted within an island but partial *wh*-movement is not. However, another class of analyses suggest that partial *wh*-movement is composed of a step that looks like full *wh*-movement and a step that looks like *wh*-in-situ. This would predict a different island sensitivity pattern, the one found in Shona, in which both *wh*-in-situ and partial *wh*-movement are possible within islands but partial *wh*-movement and full *wh*-movement are impossible across island boundaries.

Sabel (2000: 441) proposes that Kikuyu partial *wh*-movement is derived by a step of focus movement to the pronunciation site of the *wh*-phrase along with unselective binding of the [+*wh*] feature by another instance of the same feature in the scopal position. The same configuration is advocated for Zulu partial *wh*-movement by Sabel & Zeller (2006: 280). This approach clearly predicts the island sensitivity pattern displayed by Shona, but neither paper discusses this.

Abels (2012a: 155–156) proposes this same type of hybrid analysis (for him, there is focus movement followed by downward agreement) as the simplest way to model simple partial *wh*-movement within his theory, but then because of the impossibility of islands above the pronunciation site in Kĩĩtharaka and Singaporean Malay he introduces the null operator that moves from the pronunciation site to the scopal position. However, it is clear that his overall framework predicts that there could be a language that has partial *wh*-movement that is sensitive to islands below but not above the pronunciation site of
4.4 Shona island data

Just as in Singaporean Malay and Kiitharaka, Shona partial wh-movement out of an island is impossible (4.13c), like apparent full wh-movement (4.13b). In contrast to Singaporean Malay and Kiitharaka, Shona allows partial wh-movement within an island (4.13d), like wh-in-situ (4.13a). According to Kandybowicz & Torrence (2014), Krachi (Kwa, Ghana) shows the same pattern, and recently Michelle Yuan (p.c.) has replicated my findings in Kikuyu.

(4.13) Island sensitivity in Shona

<table>
<thead>
<tr>
<th>Scopals</th>
<th>Canonical</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Wh-in-situ:</td>
<td><img src="Diagram.png" alt="Diagram" /></td>
</tr>
<tr>
<td>b. Full wh-movement:</td>
<td><img src="Diagram.png" alt="Diagram" /></td>
</tr>
<tr>
<td>c. Partial wh-movement:</td>
<td><img src="Diagram.png" alt="Diagram" /></td>
</tr>
<tr>
<td>d. Partial wh-movement:</td>
<td><img src="Diagram.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Below, I illustrate this pattern for adjunct islands, complement clause islands, and relative clause islands. In each case, the island sensitivity behaves as we might naïvely expect it to: when the wh-phrase is pronounced outside the island there is ungrammaticality, but moving the wh-phrase is fine as long as it stays within the island.

(4.14) Adjunct island

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

\[
\text{W-ai-fung-a} \quad \text{[CP kuti v-aaka-foner-a ma-purisa]} \quad \text{[Shona]} \\
\text{2sg.sm-ta-think-fv that 2sm-ta-call-fv 6-police} \\
\text{[island nokuti v-aaka-on-a Ø-ani]}? \\
\text{because 2sm-ta-see-fv 1a-who} \\
\text{‘Who(m) did you think they called the police because they saw ___?’} \\
\text{(2014-09-27-01-TD)}
\]
b. **Full wh-movement out of an adverbial clause**

*Ndi-Ø-ani* wa-w-ai-fung-a  

*[cp kuti v-aka-foner-a] [Shona]

**NI-1a-who** 1a.NSE-2SG.SM-TA-think-FV  
that 2.SM-TA-call-FV

ma-purisa [island nokuti v-aka-on-a ____]]?  
6-police  
because 2.SM-TA-see-FV

‘Who(m) did you think they called the police because they saw ____?’  
(2014-09-27-01-TD)

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

*W-ai-fung-a*  

*[cp kuti ndi-Ø-ani wa-v-aka-foner-a] [Shona]

2SG.SM-TA-think-FV  
that **NI-1a-who** 1a.NSE-2.SM-TA-call-FV

ma-purisa [island nokuti v-aka-on-a ____]]?  
6-police  
because 2.SM-TA-see-FV

‘Who(m) did you think they called the police because they saw ____?’  
(2014-09-27-01-TD)

d. **Partial wh-movement within an adverbial clause**

W-ai-fung-a  

*[cp kuti ndi-Ø-ani wa-v-aka-foner-a ma-purisa] [Shona]

2SG.SM-TA-think-FV  
that 2.SM-TA-call-FV 6-police

[island nokuti ndi-Ø-ani wa-v-aka-on-a ____]]?  
because **NI-1a-who** 1a.NSE-2.SM-TA-see-FV

‘Who(m) did you think they called the police because they saw ____?’  
(2014-09-27-01-TD)

(4.15) **Complex DP island (complement clause)**

a. **Wh-in-situ within a DP’s clausal complement**

W-aka-nzw-a  

*[cp kuti v-aka-ramb-a] [island ny-aya] [Shona]

2SG.SM-TA-hear-FV  
that 2.SM-TA-deny-FV 9-story

ye-kuti y-aka-rum-a Ø-ani pa-Ø-gumbo]??  
9.of-that 9.SM-TA-bite-FV **1a-who** 16-5-leg

‘Who(m) did you hear that they denied the story that it (their dog) bit ____ on the leg?’  
(2014-09-27-01-TD)

b. **Full wh-movement out of a DP’s clausal complement**

*Ndi-Ø-ani* wa-w-aka-nzw-a  

*[cp kuti v-aka-ramb-a] [Shona]

**NI-1a-who** 1a.NSE-2SG.SM-TA-hear-FV  
that 2.SM-TA-deny-FV

[island ny-aya ye-kuti y-aka-rum-a ____ pa-Ø-gumbo]]?  

‘Who(m) did you hear that they denied the story that it (their dog) bit ____ on the leg?’  
(2014-09-27-01-TD)
Chapter 4. Partial wh-movement 4.4. Shona island data

c.  **Partial wh-movement out of a DP’s clausal complement**  

\[ \text{W-aka-nzw-a}_{\text{cp}} \quad \text{kuti} \quad \text{ndi-Ø-ani}_{\text{1a}} \quad \text{wa-v-aka-ramb-a} \]  
\[ \text{2sg.sm-ta-hear-fv} \quad \text{that} \quad \text{1a.nse-2.sm-ta-deny-fv} \]  
\[ \text{[island ny-aya ye-kuti y-aka-rum-a pa-Ø-gumbo]} \]  
\[ \text{9-story 9.of-that 9.sm-ta-bite-fv 16-5-leg} \]  
‘Who(m) did you hear that they denied the story that it (their dog) bit ___ on the leg?’  
(2014-09-27-01-TD)

d.  **Partial wh-movement within a DP’s clausal complement**  

\[ \text{W-aka-nzw-a}_{\text{cp}} \quad \text{kuti} \quad \text{v-aka-ramb-a} \]  
\[ \text{2sg.sm-ta-hear-fv} \quad \text{that} \quad \text{2.sm-ta-deny-fv} \]  
\[ \text{ye-kuti ndi-Ø-ani}_{\text{1a}} \quad \text{wa-y-aka-rum-a pa-Ø-gumbo]} \]  
\[ \text{9.of-that 1a.nse-9.sm-ta-bite-fv 16-5-leg} \]  
‘Who(m) did you hear that they denied the story that it (their dog) bit ___ on the leg?’  
(2014-09-27-01-TD)

(4.16)  **Complex DP island (relative clause)**  

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

\[ \text{U-no-fung-a}_{\text{cp}} \quad \text{kuti} \quad \text{a-no-farir-a} \]  
\[ \text{2sg.sm-ta-think-fv} \quad \text{that} \quad \text{1.sm-ta-like-fv} \]  
\[ \text{chi-no-bv-a ku-pi} \]  
\[ \text{se.7.sm-ta-be.from-fv 17-which} \]  
‘Where do you think s/he likes the team that is from ___?’  
(2014-09-20-01-TD)

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

\[ * \text{Nde-ku-pi}_{\text{cp}} \quad \text{kwa-u-no-fung-a} \]  
\[ \text{17.nse-2sg.sm-ta-think-fv} \quad \text{that} \quad \text{1.sm-ta-like-fv} \]  
\[ \text{[island chi-kwata chi-no-bv-a]} \]  
\[ \text{7-team se.7.sm-ta-be.from-fv} \]  
‘Where do you think s/he likes the team that is from ___?’  
(2014-09-20-01-TD)

c.  **Partial wh-movement out of a subject relative clause**  

\[ * \text{U-no-fung-a}_{\text{cp}} \quad \text{kuti} \quad \text{nde-ku-pi} \quad \text{kwa-a-no-farir-a} \]  
\[ \text{2sg.sm-ta-think-fv} \quad \text{that} \quad \text{17.nse-1.sm-ta-like-fv} \]  
\[ \text{[island chi-kwata chi-no-bv-a]} \]  
\[ \text{7-team se.7.sm-ta-be.from-fv} \]  
‘Where do you think s/he likes the team that is from ___?’  
(2014-09-20-01-TD)

As discussed in chapter 3, Shona wh-ex-situ involves relativization, and there is only room for one head of a relative clause. Therefore, for the relative islands, it is not possible
Chapter 4. Partial wh-movement

4.4. Shona island data

to test local partial wh-movement by putting the wh-phrase immediately at the island boundary. This is why in (4.17) the ‘think’-clause is moved to be inside the island: it provides a landing site for local partial wh-movement that is still within the relative clause. The resulting relative within a relative in (4.17c) is not quite as good as partial wh-movement within other islands, but I take the main fact to be explained here to be the strong contrast between (4.17c) and (4.16c). This highlights the Shona pattern where partial wh-movement is acceptable within an island but not if the wh-phrase is pronounced above the island boundary.

(4.17) Complex DP island (relative clause)

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

\[\text{A-no-farir-a} \quad \text{[island chi-kwata cha-u-no-fung-a]} \quad \text{[Shona]} \]
\[\text{1.SM-TA-like-FV} \quad 7\text{-team} \quad 7\text{.NSE-2SG.SM-TA-think-FV} \]
\[\text{[CP kuti chi-no-bv-a} \quad \text{ku-pi}]?) \quad \text{that} \quad 7\text{.SM-TA-be.from-FV} \quad 17\text{-which} \]

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

(2014-09-20-01-TD)

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

\[\text{*Nde-ku-pi} \quad \text{kwa-a-no-farir-a} \quad \text{[island chi-kwata]} \quad \text{[Shona]} \]
\[\text{N1-17-which} \quad 17\text{.NSE-1.SM-TA-like-FV} \quad 7\text{-team} \]
\[\text{cha-u-no-fung-a} \quad \text{[CP kuti chi-no-bv-a} \quad \text{)}]?) \quad \text{that} \quad 7\text{.NSE-2SG.SM-TA-think-FV} \quad 7\text{.SM-TA-be.from-FV} \]

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

(2014-09-20-01-TD)

c. Partial wh-movement within a subject relative clause

\[\text{?A-no-farir-a} \quad \text{[island chi-kwata cha-u-no-fung-a]} \quad \text{[Shona]} \]
\[\text{1.SM-TA-like-FV} \quad 7\text{-team} \quad 7\text{.NSE-2SG.SM-TA-think-FV} \]
\[\text{[CP kuti Nde-ku-pi} \quad \text{kwa-chi-no-bv-a} \quad \text{)}]?) \quad \text{that} \quad \text{N1-17-which} \quad 17\text{.NSE-7.SM-TA-be.from-FV} \]

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

(2014-09-20-01-TD)
Recall that what appears on the surface to be full *wh*-movement in Shona was argued in section 3.2.6 to be movement of the *wh*-phrase to an intermediate position, specifically to be the head of a relative clause selected by the copula ni, the matrix v. The analysis that I propose for partial *wh*-movement in Shona is exactly the same, except that there may be additional clauses with bridge verbs intervening between the scopal C and the copula v. In this sense then, apparent full *wh*-movement is really a subcase of partial *wh*-movement: both involve a step of movement-based relativization followed by unselective binding down to that position by a null operator in the scopal position. The next sections provide arguments in favor of this analysis, first examining the properties of the lower relation and then the higher relation.

(4.18) Accounting for the Shona island sensitivity pattern

a. In-situ: \[
\begin{array}{c}
\text{scopal} \\
(CP \text{ Op}) \\
\ldots (CP) \\
\ldots (\text{island}) \\
\ldots \text{wh} \ldots \\
\end{array}
\]

b. “Full”: *\[
\begin{array}{c}
\text{scopal} \\
(CP \text{ Op}) \\
\text{ni- [RC wh]} \ldots (CP) \\
\ldots (\text{island}) \\
\ldots \text{wh} \ldots \\
\end{array}
\]

c. Partial: *\[
\begin{array}{c}
\text{scopal} \\
(CP \text{ Op}) \\
\text{ni- [RC wh]} \ldots (CP) \\
\ldots (\text{island}) \\
\ldots \text{wh} \ldots \\
\end{array}
\]

d. Partial: \[
\begin{array}{c}
\text{scopal} \\
(CP \text{ Op}) \\
\ldots (CP) \\
\ldots (\text{island ni- [RC wh]} \ldots \text{wh}) \\
\end{array}
\]

4.5.1 Lower relation assimilated to apparent full *wh*-movement

In several respects, partial *wh*-movement in Shona patterns like the apparent full *wh*-movement construction examined in chapter 3. First, partial *wh*-movement out of an island is unacceptable. Second, partially moved *wh*-phrases must be attached to an allomorph of the copula ni. Third, partially moved *wh*-phrases trigger extraction marking on the first verb they c-command. Finally, the *wh*-phrase can reconstruct in its base (thematic) position. I will argue in this section that these properties constitute evidence that
the \textit{wh}-phrase moves from its base position to its pronunciation site.

4.5.1.1 \textbf{Island sensitivity}

As we saw in section 4.4, the lower relation in partial \textit{wh}-movement is sensitive to islands in exactly the same way as apparent full \textit{wh}-movement is. This follows if both are instances of overt relativization.

4.5.1.2 \textbf{Presence of the copula}

As discussed in section 3.2.4.1, \textit{wh}-phrases that undergo apparent full \textit{wh}-movement must be marked with an allomorph of the copula \textit{ndi-}. Example (4.19) shows that partially moved \textit{wh}-phrases are subject to the same constraint. In this respect, the pronunciation site of partial \textit{wh}-movement is like the pronunciation site in apparent full \textit{wh}-movement and unlike the pronunciation site in \textit{wh}-in-situ.

(4.19) \textit{Wh}-phrases marked with \textit{ni}

\begin{enumerate}
\item \textit{Wh}-\textit{in-situ cannot have \textit{ni}}
\begin{verbatim}
W-ai-fung-a [\textsc{cp} kuti t-aka-teng-er-a (\*\textit{ndi})\textit{-0-ani} [Shona]
2SG.SM-TA-think-FV that 1PL.SM-TA-buy-APPL-FV \textbf{ni-1a-who}
\end{verbatim}
\begin{verbatim}
\textit{O-rokwe]? 5-dress
\end{verbatim}
\begin{verbatim}
‘Who(m) did you think we bought a dress (for)?’ \hspace{1cm} (2014-07-30-01-TD)
\end{verbatim}
\item \textit{Apparent full \textit{wh}-movement requires \textit{ni}}
\begin{verbatim}
\*\textit{(ndi)}\textit{-0-ani} wa-w-ai-fung-a [\textsc{cp} kuti t-aka-teng-er-a [Shona]
\textbf{ni-1a-who} 1a.NSE-2SG.SM-TA-think-FV that 1PL.SM-TA-buy-APPL-FV
\begin{verbatim}
\textit{O-rokwe]? 5-dress
\end{verbatim}
\begin{verbatim}
‘Who(m) did you think we bought a dress (for)?’ \hspace{1cm} (2014-07-30-01-TD)
\end{verbatim}
\item \textit{Partial \textit{wh}-movement requires \textit{ni}}
\begin{verbatim}
W-ai-fung-a [\textsc{cp} kuti \*\textit{(ndi)}\textit{-0-ani} wa-t-aka-teng-er-a [Shona]
2SG.SM-TA-think-FV that \textbf{ni-1a-who} 1a.NSE-1PL.SM-TA-buy-APPL-FV
\begin{verbatim}
\textit{O-rokwe]? 5-dress
\end{verbatim}
\begin{verbatim}
‘Who(m) did you think we bought a dress (for)?’ \hspace{1cm} (2014-07-30-01-TD)
\end{verbatim}
\end{enumerate}
4.5.3 Extraction marking

As discussed in section 3.2.5, clefting in Shona co-occurs with extraction marking. When a subject is locally extracted, the verb that agrees with it must have a low tone on its subject agreement prefix. This happens for both so-called full wh-movement and for partial wh-movement, as shown in (4.20).

(4.20) Local subject extraction marking

a. Full wh-movement requires extraction marking

\[ \text{Ndi-Ø-ani} \quad \{^*a-/à-\}ka-teng-a \quad \text{Ø-rokwe?} \]  
[Shona]  
\[ \text{NI-1a-who} \quad ^*(\text{se}).1a.sm.ta-buy-fv \quad 5\text{-dress} \]  
‘Who (lit., It’s who that) bought a dress?’

b. Partial wh-movement requires extraction marking

\[ \text{W-ai-fung-a} \quad \text{[cp kuti Ndi-Ø-ani]} \quad \{^*a-/à-\}ka-teng-a \quad \text{Ø-rokwe?} \]  
[Shona]  
\[ ^*(\text{se}).1a.sm.ta-buy-fv \quad 5\text{-dress} \]  
‘Who did you think bought a dress?’ (lit., ‘You thought that it’s who that bought a dress?’)

When a non-subject like the indirect object ani ‘who’ in (4.21a–b) is extracted for either full wh-movement or partial wh-movement, the verb in the clause in which the wh-phrase is pronounced must agree with it in \( \phi \)-features, in addition to bearing \( \phi \)-agreement with the subject.¹

(4.21) Non-subject extraction marking

a. Full wh-movement requires extraction marking

\[ \text{Ndi-Ø-ani} \quad \{^*(wa)\}-w-ai-fung-a \quad \text{[cp kuti v-aka-teng-er-a]} \quad \text{[Shona]} \]  
\[ \text{NI-1a-who} \quad 1a.nse-2sg.sm.ta-think-fv \quad \text{that 2.sm.ta-buy-appl-fv} \]  
\[ \text{Ø-rokwe]?} \]  
\[ 5\text{-dress} \]  
‘Who(m) did you think (lit., It’s who that you thought) they bought a dress (for)?’ (2016-02-13-01-TD)

¹ The location of extraction marking is dependent on the location of the pronunciation site of the wh-phrase. Thus, the extraction marking appears in different clauses for full wh-movement versus partial wh-movement, but the generalization still holds that the pronunciation clause verb must agree with a clefted non-subject wh-phrase.
4.5. A composite derivation

b. **Partial wh-movement requires extraction marking**

\[
\text{W-ai-fung-a [CP kuti ndi-Ø-ani *(wa)-v-aka-teng-er-a [Shona]}
\]

\[
2\text{sg.sm-ta-think-fv that NI-1a-who 1a.NSE-2.sm-ta-buy-appl-fv Ø-rokke)}?
\]

5-dress

‘Who(m) did you think they bought a dress (for)?’ (lit., ‘You thought that it’s who(m) that they bought a dress (for)?’) (2016-02-13-01-TD)

Note that the location of extraction marking is dependent on the location of the pronunciation site of the \( wh \)-phrase. Thus, the extraction marking appears in different clauses for full \( wh \)-movement versus partial \( wh \)-movement, but the generalization still holds that the pronunciation clause verb must agree with a moved non-subject \( wh \)-phrase.

### 4.5.1.4 Reconstruction effects

Partial \( wh \)-movement shows exactly the same reconstruction effects discussed in section 3.2.3. Pronouns that are within a partially moved \( wh \)-phrase may reconstruct to their base position in order to be bound by a subject quantifier. However, Principle C reconstruction is not obligatory, a property of relative clauses but not \( wh \)-movement (Sauerland 2003), so this is another argument in favor of a cleft-based analysis of partial \( wh \)-movement.

**Variable binding.** When a non-subject \( wh \)-phrase containing a bound variable pronoun is clefted, it is able to reconstruct to its base position so that the pronoun can be bound by a quantifier in subject position. In this respect, partial \( wh \)-movement and “full” \( wh \)-movement pattern the same.
Chapter 4. Partial wh-movement

4.5. A composite derivation

(4.22) Reconstruction of a pronoun bound by a subject quantifier

a. Wh-in-situ: Quantifier c-commands highest copy of pronoun

U-no-fung-a \[CP \text{kuti} \ [DP \text{mw-ana w-ese}]_1 \] [Shona]
2sg.sm-ta-think-fv that 1-child 1-every
a-no-kosh-es-a \[DP \text{ma-onero a-Ø-ani e-kuti} \]
1.sm-ta-be.valued-caus-fv 6-view 6.of-1a-who 6.of-that
\[\text{[a]-ka-ngwar-a}]\)
1.sm-ta-be.smart-fv

Whose opinion that s/he is smart do you think every child values? (lit., ‘You think that every child values the opinion of whom that s/he is smart?’) (2014-10-04-02-TD)

b. Local partial wh-movement: Quantifier does not c-command highest copy of pronoun

U-no-fung-a \[CP \text{kuti} \ [DP \text{ma-onero a-Ø-ani e-kuti}] \] [Shona]
2sg.sm-ta-think-fv that ni.6-view 6.of-1a-who 6.of-that
\[\text{[a]-ka-ngwar-a}] \ [DP \text{mw-ana w-ese}]_1 \]
1.sm-ta-be.smart-fv 1-child 1-every
a-a-no-kosh-es-a ___\]
6.nse-1.sm-ta-be.valued-caus-fv

Whose opinion that s/he is smart do you think every child values? (lit., ‘You think that it’s the opinion of whom that s/he is smart that every child values?’) (2014-10-04-02-TD)

c. “Full” wh-movement: Quantifier does not c-command highest copy of pronoun

\[DP \text{ma-onero a-Ø-ani e-kuti [a]-ka-ngwar-a} \] [Shona]
ni.6-view 6.of-1a-who 6.of-that 1.sm-ta-be.smart-fv
a-u-no-fung-a \[CP \text{kuti} \ [DP \text{mw-ana w-ese}]_1 \]
6.nse-2sg.sm-ta-think-fv that 1-child 1-every
a-no-kosh-es-a ___\]
1.sm-ta-be.valued-caus-fv

Whose opinion that s/he is smart do you think every child values? It’s the opinion of whom that s/he is smart that you think every child values? (2014-10-04-02-TD)

Lack of Principle C reconstruction. Again, partial wh-movement behaves exactly like apparent full wh-movement with respect to Principle C reconstruction: it is not obligatory, so moving a potentially bound R-expression out of the binding domain of the binder results in an obviation of the Principle C effect.
4.5. A composite derivation

(4.23) **Lack of Principle C reconstruction with subject binder**

a. **Wh-in-situ: Pronoun c-commands highest copy of R-expression**

\[
[W:\text{aka-nzw-a}]_{CP} \text{kuti} \ a_{i-\text{no-fung-a}} \ [\text{CP kuti} \ [\text{Shona}]
\]

\[
2\text{sg.sm-ta-hear-fv} \quad \text{that} \quad 1.\text{sm-ta-think-fv} \quad \text{that}
\]

\[
[\text{dp} \ O-wanikidzo \ \text{ya-}\text{O-ani} \ \text{ye-kuti} \ (O-Taurai) \ \text{aka-ng-e} \quad \text{9-discovery} \quad \text{9.of-1a-who} \quad \text{9.of-that} \quad \text{1a-Taurai} \quad 1.\text{sm.ta-aux-fv} \quad \text{a-teng-es-a} \quad O-mhete \quad dz-\text{aka-b-}\text{iw-a}]
\]

\[
1.\text{sm.ta-buy-caus-fv} \quad \text{10-jewelry} \quad 10.\text{sm.ta-steal-pass-fv} \quad y-\text{ai-v-e} \quad \text{ma-nyepo}]
\]

‘Whose discovery that Taurai, had sold the stolen earrings did you hear that he, thinks was fabricated?’  
(2014-10-04-01-TD)

b. **Local partial wh-movement: Pronoun c-commands highest copy of R-expression**

\[
[W:\text{aka-nzw-a}]_{CP} \text{kuti} \ a_{i-\text{no-fung-a}} \ [\text{CP kuti} \ [\text{Shona}]
\]

\[
2\text{sg.sm-ta-hear-fv} \quad \text{that} \quad 1.\text{sm-ta-think-fv} \quad \text{that}
\]

\[
[\text{dp} \ i-O-wanikidzo \ \text{ya-}\text{O-ani} \ \text{ye-kuti} \ (O-Taurai) \ \text{aka-ng-e} \quad \text{9-discovery} \quad \text{9.of-1a-who} \quad \text{1a-Taurai} \quad 1.\text{sm.ta-aux-fv} \quad \text{a-teng-es-a} \quad O-mhete \quad dz-\text{aka-b-}\text{iw-a}]
\]

\[
1.\text{sm.ta-buy-caus-fv} \quad \text{10-jewelry} \quad 10.\text{sm.ta-steal-pass-fv} \quad y-\text{ai-v-e} \quad \text{ma-nyepo}]
\]

‘Whose discovery that Taurai, had sold the stolen earrings did you hear that he, thinks was fabricated?’  
(2014-10-04-01-TD)

c. **Long-distance partial wh-movement: Pronoun does not c-command highest copy of R-expression**

\[
W:\text{aka-nzw-a} \ [\text{CP kuti} \ [\text{dp} \ i-O-wanikidzo \ \text{ya-}\text{O-ani} \ \text{ye-kuti} \ (O-Taurai) \ \text{aka-ng-e} \quad \text{a-teng-es-a} \quad O-mhete \quad dz-\text{aka-b-}\text{iw-a}]
\]

\[
9\text{-discovery} \quad \text{9.of-1a-who} \quad \text{1a-Taurai} \quad 1.\text{sm.ta-aux-fv} \quad \text{10-jewelry} \quad 10.\text{sm.ta-steal-pass-fv} \quad y-\text{ai-v-e} \quad \text{ma-nyepo}]
\]

‘Whose discovery that Taurai, had sold the stolen earrings did you hear that he, thinks was fabricated?’  
(2014-10-04-01-TD)
d. **Full wh-movement: Pronoun does not c-command highest copy of R-expression**


e. **Full wh-movement with remnant movement: Pronoun does not c-command highest copy of R-expression**


4.5.1.5 Summary

The lower relation in partial wh-movement has all the properties of the relation between the canonical position and the pronunciation position in “full” wh-movement: it is sensitive to islands, it requires the copula and extraction marking, and it allows for bound variable reconstruction. This suggests that the same derivational mechanism underlies both of these relations.
4.5.2 Higher relation assimilated to wh-in-situ

4.5.2.1 Lack of island sensitivity

As we saw in section 4.4, the higher relation in partial wh-movement is insensitive to islands in exactly the same way as the wh-in-situ relation. This follows if both are instances of unselective binding (Pesetsky 1987), as commonly assumed for Bantu wh-in-situ (Sabel 2000, Sabel & Zeller 2006, Schneider-Zioga 2007) and argued for in chapter 2.

4.5.2.2 Lack of extraction marking

Extraction marking is impossible above the pronunciation site of a partially moved wh-phrase (4.24b), just as it is with wh-in-situ, illustrated in (4.24a) and discussed further in section 2.2.3.2.

(4.24) Non-subject extraction marking

a. Wh-in-situ cannot have extraction marking

\[(*Wa)\text{-}w\text{-ai-fung-a} \quad [\text{cp} \text{ kuti} \quad (*wa)\text{-}t\text{-aka-teng-er-a} \quad \text{[Shona]}\]
\[1a.\text{NSE}\text{-}2\text{sg.sm\text{-}ta-think-fv} \quad \text{that} \quad 1a.\text{NSE}\text{-}1\text{pl.sm\text{-}ta-buy-appl-fv} \]
\[\text{Ø-ani} \quad \text{Ø-rokwe]?} \]
\[1a-\text{who} \quad \text{5\text{-}dress} \]
‘Who(m) did you think we bought a dress (for)?’ (2014-07-30-01-TD)

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

\[(*Wa)\text{-}w\text{-ai-fung-a} \quad [\text{cp} \text{ kuti} \quad ndi-Ø-ani \quad \text{[Shona]}\]
\[1a.\text{NSE}\text{-}2\text{sg.sm\text{-}ta-think-fv} \quad \text{that} \quad n1-1a-\text{who} \]
\[*(wa)\text{-}t\text{-aka-teng-er-a} \quad \text{Ø-rokwe}?} \]
\[1a.\text{NSE}\text{-}1\text{pl.sm\text{-}ta-buy-appl-fv} \quad \text{5\text{-}dress} \]
‘Who(m) did you think we bought a dress (for)?’ (2014-07-30-01-TD)

4.5.2.3 Lack of intervention effects

Focus elements and negation between the scopal position and pronunciation site do not cause intervention effects (Beck 1996, 2006) for either wh-in-situ or partial wh-movement. This suggests that the semantic relation between these two positions is not Rooth-
Chapter 4. Partial wh-movement

Hamblin alternative computation (Kotek 2014a) but unselective binding. See section 2.2.5.2 for further discussion.

(4.25) *Intervener above adjunct island in Shona long-distance wh-in-situ*

a. *Focus: ‘only’*

\[\text{Ø-Taurai chete aka-fonera ma-purisa [island nokuti]}\]
\[\text{1a-Taurai only 1a.SM.TA-call-fv 6-police because}
\]
\[\text{aka-on-a [Ø-ani]}?\]
\[\text{1a.SM.TA-see-fv 1a-who}\]

‘Who(m) did only Taurai call the police because he saw \_\_\_\_?’

(2015-01-17-01-TD)

b. *Focus: ‘even’*

\[\text{Chero Ø-Taurai aka-fonera ma-purisa [island nokuti]}\]
\[\text{even 1a-Taurai 1a.SM.TA-call-fv 6-police because}
\]
\[\text{aka-on-a [Ø-ani]}?\]
\[\text{1a.SM.TA-see-fv 1a-who}\]

‘Who(m) did even Taurai call the police because he saw \_\_\_\_?’

(2015-01-17-01-TD)

c. *Focus: ‘also’*

\[\text{Ø-Taurai aka-fonera=wo ma-purisa [island nokuti aka-on-a[Shona]}\]
\[\text{1a-Taurai 1a.SM.TA-call-fv=also 6-police because 1a.SM.TA-see-fv}
\]
\[\text{Ø-ani]}?\]
\[\text{1a-who}\]

‘Who(m) did [Taurai also] call the police because he saw \_\_\_\_?’

(2015-01-17-01-TD)

d. *Negation*

\[\text{Ø-Taurai ha-an-a ku-fonera ma-purisa [island nokuti]}\]
\[\text{1a-Taurai NEG-AUX-fv 15-call-fv 6-police because}
\]
\[\text{aka-on-a [Ø-ani]}?\]
\[\text{1a.SM.TA-see-fv 1a-who}\]

‘Who(m) didn’t Taurai call the police because he saw \_\_\_\_?’

(2015-01-17-01-TD)
(4.26)  *Intervener above adjunct island in Shona partial wh-movement*

a.  *Focus: ‘only’*

\[
\text{Ø-Taurai chete aka-foner-a } \text{ma-purisa } \text{[island nokuti]} \quad \text{Shona}
\]

\[
\begin{align*}
\text{1a-Taurai} & \text{ only } 1a.\text{SM.TA-call-FV} \text{ 6-police because} \\
\text{ndi-Ø-ani} & \text{ wa-aka-on-a } \quad \text{[}] \\
\text{NI-1a-who} & \text{ 1a.NSE-1a.SM.TA-see-FV}
\end{align*}
\]

‘Who(m) did only Taurai call the police because he saw ___?’

(b)  *Focus: ‘even’*

\[
\text{Chero Ø-Taurai aka-foner-a } \text{ma-purisa } \text{[island nokuti]} \quad \text{Shona}
\]

\[
\begin{align*}
\text{even} & \text{ 1a-Taurai 1a.SM.TA-call-FV} \text{ 6-police because} \\
\text{ndi-Ø-ani} & \text{ wa-aka-on-a } \quad \text{[}] \\
\text{NI-1a-who} & \text{ 1a.NSE-1a.SM.TA-see-FV}
\end{align*}
\]

‘Who(m) did even Taurai call the police because he saw ___?’

(c)  *Focus: ‘also’*

\[
\text{Ø-Taurai aka-foner-a} = \text{wo } \text{ma-purisa } \text{[island nokuti]} \quad \text{Shona}
\]

\[
\begin{align*}
\text{1a-Taurai} & \text{ 1a.SM.TA-call-FV=also 6-police because} \\
\text{ndi-Ø-ani} & \text{ wa-aka-on-a } \quad \text{[]} \\
\text{NI-1a-who} & \text{ 1a.NSE-1a.SM.TA-see-FV}
\end{align*}
\]

‘Who(m) did [Taurai also] call the police because he saw ___?’

(d)  *Negation*

\[
\text{Ø-Taurai ha-an-a ku-foner-a ma-purisa } \text{[island nokuti]} \quad \text{Shona}
\]

\[
\begin{align*}
\text{1a-Taurai} & \text{ NEG-AUX-FV 15-call-FV 6-police because} \\
\text{ndi-Ø-ani} & \text{ wa-aka-on-a } \quad \text{[]} \\
\text{NI-1a-who} & \text{ 1a.NSE-1a.SM.TA-see-FV}
\end{align*}
\]

‘Who(m) didn’t Taurai call the police because he saw ___?’

4.5.2.4  *Summary*

The higher relation in partial *wh*-movement patterns exactly like *wh*-in-situ: it lacks island sensitivity, extraction marking, and intervention effects. This suggests that these two relations are derived via the same mechanism, unselective binding.
4.5.3 A unified analysis for \textit{wh}-ex-situ

This lack of sensitivity to islands above the pronunciation site distinguishes Shona from other languages with partial \textit{wh}-movement, such as Singaporean Malay and Kîîtharaka. As a result, the Shona pattern is incompatible with analyses involving a movement relation between the pronunciation site and the scopal position, whether covert movement \cite{Cole:1998}, overt movement with pronunciation of the lower copy \cite{Richards:2001}, or overt movement of a null operator \cite{Abels:2012}. Instead, the Shona facts provide novel support for proposals that posit a non-movement relation between the scopal position and the pronunciation site \cite{Sabel:2000, Sabel:Zeller:2006, Abels:2012}.

As argued in section 3.2.6, ex-situ \textit{wh}-phrases are heads of relative clauses which are selected by the copula \textit{ni}. They undergo relativization to this position, but they stay there and are unselectively bound by a null operator in the scopal position. In-situ \textit{wh}-phrases do not undergo A′-movement but only this unselective binding. This is illustrated in (4.27).²

\begin{itemize}
\item a. In-situ: \[ [\text{CP Op} \ldots [\text{CP} \ldots wh \ldots ]] \]
\item b. “Full”: \[ [\text{CP Op NI-[RelCl wh} \ldots [\text{CP} \ldots wh \ldots ]] \]
\item c. Partial: \[ [\text{CP Op} \ldots [\text{CP NI-[RelCl wh} \ldots wh \ldots ]] \]
\end{itemize}

² I label the lowest position of the \textit{wh}-phrase in (4.27) as the canonical position. In most cases, the base or thematic position of a \textit{wh}-phrase is the same as its canonical position, but for some constituents (e.g., subjects) it is not. A more precise representation of what I am claiming would be to label the pronunciation site of \textit{wh}-in-situ as the canonical position but the lowest position of the \textit{wh}-phrase in \textit{wh}-ex-situ to be the base or thematic position. I do think that subjects that are extracted long-distance do move through their canonical position (SpecTP of the clause in which they originate) in order to trigger subject marking there (see section 3.2.6.2), but that step of A-movement is not shown in (4.27), and nothing about my analysis of \textit{wh}-ex-situ hinges on that assumption.
4.6 Outstanding issues

4.6.1 Predicting the possibility of partial wh-movement

Given how rare partial wh-movement seems to be within the world’s languages, an immediate question that springs to most people’s minds is what is it about a language that allows it to have partial wh-movement. Fanselow (2006) addresses this issue by showing that for a language to have partial wh-movement, it must also allow wh-in-situ in the same environment where it allows partial wh-movement. Sabel (1998, 2006) and Sabel & Zeller (2006) claim that the possibility of partial wh-movement is dependent on the possibility of wh-in-situ in embedded (indirect) questions. They show that French and Duala allow wh-in-situ, but wh-phrases cannot remain in situ in embedded questions in these languages, and partial wh-movement is unavailable. On the other hand, Zulu allows wh-in-situ in embedded questions and allows partial wh-movement.

As discussed throughout this chapter and chapter 2, Shona permits wh-in-situ in all cases where partial wh-movement is also allowed, so Fanselow’s (2006) criterion is met. The indirect question criterion is met too:

(4.28) Indirect (embedded) wh-questions in Shona

a. In-situ wh–direct object

\[ \text{W-aka-bvunz-a } \emptyset-\text{Rumbi \text{[cp kuti v-aka-wan-a } \emptyset-\text{ani]}. [Shona]} \]
\[ \begin{array}{ll}
2\text{sg.sm-ta-ask-fv} & 1\text{a-Rumbi that 2.sm-ta-find-fv 1a-who} \\
\end{array} \]
\[ \text{‘You asked Rumbi who(m) they found.’ (2014-08-20-01-TD)} \]

b. In-situ wh–direct object

\[ \text{W-aka-bvunz-a \text{[cp kuti } \emptyset-\text{Thandi aka-on-a } \chi-\text{i]. [Shona]} \]
\[ \begin{array}{ll}
2\text{sg.sm-ta-ask-fv} & \text{that 1a-Thandi 1a.sm.ta-see-fv 7-what} \\
\end{array} \]
\[ \text{‘You asked what Thandi saw.’ (2014-07-12-01-TD)} \]

My observation is that all the Bantu languages that have been shown to have partial wh-movement (which admittedly is not very many) use a reflex of Proto-Bantu \textit{*ni} (Givón 1974, 2015, McWhorter 1992, 1994) in their focus-ex-situ and wh-ex-situ. See (4.1–4.2) for verification of this. The way I have analyzed partial wh-movement in Shona, it is merely
Chapter 4. Partial \textit{wh}-movement

4.6. Outstanding issues

an embedded cleft, which is not nearly as exotic as partial \textit{wh}-movement. David Pesetsky (pers. comm.) has suggested to me that the cleft structure allows for the possibility of these forms of partial \textit{wh}-movement. However, the issue is not as straightforward as that because some of these languages (Kiitharaka and Kikuyu) have been reliably shown to have monoclausal focus-ex-situ and \textit{wh}-ex-situ, not biclausal clefts (see section 3.2.4.3). Perhaps partial \textit{wh}-movement was part of these languages when they had biclausal clefts (just as in Shona), but it stayed around and was reanalyzed as true partial \textit{wh}-movement (rather than embedded relativization/clefting) during the grammaticalization from biclausal cleft into monoclausal focus construction. This reanalysis might explain why Kiitharaka has the island pattern of Singaporean Malay and no Shona. However, Michelle Yuan (pers. comm.) has recently found that Kikuyu partial \textit{wh}-movement has the same island sensitivity pattern I describe for Shona, and this is the other language that would have undergone this reanalysis.

In any case, a broader sample of languages is needed to really evaluate these claims about the criteria for partial \textit{wh}-movement. In particular, it would be good to look at languages like Kinande that have ni-clefts but can form \textit{wh}-ex-situ with or without them. My hypothesis would predict that partial \textit{wh}-movement would be possible in these languages only with a ni-cleft and not with normal \textit{wh}-movement. Another type of language to check for partial \textit{wh}-movement would be one that has clefts that do not use ni (such as Sotho), to see if my observation is really about ni in particular or clefting more generally.

4.6.2 Determining when partial \textit{wh}-movement would be felicitous

Languages seem to vary with respect to which \textit{wh}-movement strategy seems most natural in a neutral context. According to Jason Kandybowicz (pers. comm.), Krachi ([kye], Kwa, Ghana) speakers prefer full \textit{wh}-movement, followed by partial \textit{wh}-movement, and then \textit{wh}-in-situ is considered the least natural while still grammatical. In Shona non-subject \textit{wh}-questions, \textit{wh}-in-situ is the most natural, followed by full \textit{wh}-movement and then
Chapter 4. Partial *wh*-movement

4.6. Outstanding issues

Partial *wh*-movement. For Shona subject *wh*-questions, local partial *wh*-movement is the most natural, followed by full *wh*-movement, then long-distance partial *wh*-movement and *wh*-in-situ.

We might imagine that these orders might change if one strategy that ordinarily is less natural produces an unambiguous question while the others result in ambiguity. However, that does not seem to be the case for Shona, at least. In (4.29), the construal possibilities for *rinhi* ‘when’ differ depending on the *wh*-question formation strategy used. *Wh*-in-situ and full *wh*-movement allow the *wh*-phrase to be asking about the time of buying, saying, or thinking. Long-distance partial *wh*-movement does not allow the *wh*-phrase to refer to the time of the matrix verb, and local partial *wh*-movement is completely unambiguous: it can only be asking about the time of the most embedded event. Although the local partial *wh*-movement version in (4.29b) is unambiguous, the *wh*-in-situ version in (4.29a) is still judged to be the most natural to ask about the time of the buying event.

(4.29)  *Ambiguous construal of ‘when’*

a.  *Wh*-in-situ: *Three-ways ambiguous*
[Shona]
W-ai-fung-a kuti v-aka-ti O-Taurai aka-teng-a  
2sg.sm-ta-think-fv that 2.sm-ta-say 1a-Taurai 1a.sm.ta-buy-fv
Ø-rokke *rinhi*?
5-dress *when*
‘*[CP When did you think [CP that they said [CP Taurai bought a dress ___]]]’?
‘*[CP When did you think [CP that they said [CP Taurai bought a dress] ___]]’?
‘*[CP When did you think [CP that they said [CP Taurai bought a dress]] ___]]’?
(2014-10-22-01-TD)

b.  *Local partial *wh*-movement: Unambiguous*
[Shona]
W-ai-fung-a kuti v-aka-ti *ndi-rinhi* O-Taurai  
2sg.sm-ta-think-fv that 2.sm-ta-say *ni*-when 1a-Taurai
pa-aka-teng-a Ø-rokke?
16.nse-1a.sm.ta-buy-fv 5-dress
‘*[CP When did you think [CP that they said [CP Taurai bought a dress ___]]]’?
*‘*[CP When did you think [CP that they said [CP Taurai bought a dress] ___]]’?
*‘*[CP When did you think [CP that they said [CP Taurai bought a dress]] ___]]’?
(2014-10-22-01-TD)
Chapter 4. Partial wh-movement

4.7 Conclusion

In this chapter, I presented an island pattern (predicted by prior analyses but not shown to exist until now3) that supports the cleft-based analysis proposed in section 3.2.6. I demonstrated that that “full” wh-movement and partial wh-movement pattern the same in terms of cleft structure, reconstruction effects, and extraction marking. Finally, I concluded that full wh-movement is really a subcase of partial wh-movement: it involves a step of relativization to get the wh-phrase to its pronunciation site and then a step of unselective binding to allow the wh-phrase to take wide scope. My proposal for the full system of

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3. In work simultaneous with mine, Torrence & Kandybowicz (2015: 274) have discovered the same pattern in Krachi, a Niger-Congo language of Ghana. After I began presenting this pattern, Michelle Yuan (pers. comm.) has replicated my results in Kikuyu, showing that the predictions made by Sabel (2000) are borne out there.
Shona *wh*-question strategies is shown in (4.27).
Chapter 5

Conclusion

5.1 Contributions

In this dissertation, I have conducted the most thorough investigation of \textit{wh}-questions in any Bantu language to date, providing a model for future work. Throughout, I have highlighted crosslinguistic diversity in \textit{wh}-question formation, even within the Bantu language family, which is sometimes thought and said to be relatively homogeneous.

In chapter 2, I confirmed the traditional Bantuist view that \textit{wh}-in-situ is not derived via movement but also showed that the crosslinguistic picture is not quite as uniform as might have been thought. Also in chapter 2 I proposed a correlation between more restricted \textit{wh}-in-situ and immediately after the verb (IAV) focus. In chapter 3, I argued that Shona \textit{wh-ex-situ} is a biclausal cleft and developed an analysis of how it is derived. I uncovered a previously predicted island sensitivity pattern in chapter 4 and used it to support of my unified analysis of “full” \textit{wh}-movement and partial \textit{wh}-movement as cleft-based \textit{wh-ex-situ}. As shown in (5.1), my proposed derivation for Shona \textit{wh-ex-situ} involves a step of relativization (independently needed for relative clauses) and a step of unselective binding (independently needed for \textit{wh-in-situ}).
Chapter 5. Conclusion

5.2 Future research

5.2.1 Open questions about Shona *wh*-questions

There are several aspects of *wh*-questions in Shona that I have been unable to explore in this dissertation, either for time reasons or because of challenges in the elicitation process.

5.2.1.1 Enclitic *wh*-questions

It is possible to ask some *wh*-questions in Shona using an enclitic =i, whose meaning seems to depend on the context. I am told that these are often the most natural, colloquial way to ask these short questions.

(5.2) *Wh*-questions with enclitic =i

a. *Cliticized to verb*

Aka-on-e=i?

{lsm.ta-see-fv=*wh*}

‘What did s/he see?’

(2014-09-23-01-TD)

b. *Cliticized to verb*


{1-man se.1.sm.ta-steal-appl-fv=*wh* 10-jewelry 1.sm.ta-run.away.fv}

‘[The man who stole the earrings why] ran away?’

(2015-01-17-02-TD)

c. *Cliticized to direct object*

U-no-da Ø-mari=i?

{2sg.sm.ta-need-fv 9-money=*wh*}

‘How much money do you need?’

(2014-09-23-01-TD)
d. *Cliticized to predicate nominal*

\[ \text{I-n-guva=i?} \]
\[ \text{NI-9-time=WH} \]
\[ \text{‘What time is it?’} \]

(2014-09-23-01-TD)

There is also an enclitic \(-pi\), which has a locative meaning:

(5.3) *Wh-question with enclitic \(-pi*  

\[ \text{U-no-bv-e=pi?} \]
\[ \text{2sg.sm-ta-be.from=LOC.WH} \]
\[ \text{‘Where are you from?’} \]

(2014-09-23-01-TD)

I am aware that other Bantu languages have similar \(wh\)-clitics (e.g., Zulu (Buell 2011, Sabel & Zeller 2006)), but I have not investigated these thoroughly to be able to provide an analysis. I am intrigued by the possibility that the \(i\) vowel is a \(wh\)-morpheme, since it does appear in every \(wh\)-word in Shona, including these clitics.

5.2.1.2 How ‘why’ is different

In many languages, ‘why’ behaves differently from other \(wh\)-words. In Shona, just as in Ikalanga (Letsholo 2011), the same form is used to mean both ‘how’ and ‘why’. Postverbally, \(sei\) can either mean ‘how’ or ‘why’, but sentence-initially, it can only mean ‘why’. Another way \(sei\) is different from other \(wh\)-words in Shona is that it can never be clefted or trigger extraction marking.

(5.4) *Distribution of \(sei\) ‘how, why’*

a. *Sentence-initial*  

\[ \text{Sei ma-purisa a-chi-fung-a kuti mu-rume aka-b-a} \]
\[ \text{why 6-police 6.SM-TA-think-FV that 1-man 1.SM.TA-steal-FV} \]
\[ \text{Ø-mhete?} \]
\[ \text{10-jewelry} \]
\[ \text{‘Why do the police think that the man stole the earrings?’} \]
* ‘Why do the police think that the man \textbf{stole} the earrings?’
* ‘How do the police think that the man \textbf{stole} the earrings?’
* ‘How do the police think that the man \textbf{stole} the earrings?’

(2016-03-08-01-TD)
b. **Sentence-final**

Ma-purisa a-chi-fung-a kuti mu-rume aka-b-a [Shona]
6-police 6.sm-TA-think-fv that 1-man 1.sm.TA-steal-fv

Ø-mhete sei?
10-jewelry **why/how**

*’Why do the police think that the man stole the earrings?’*

*’Why do the police think that the man stole the earrings?’*

*’How do the police think that the man stole the earrings?’*

*’How do the police think that the man stole the earrings?’*

(2016-03-08-01-TD)

c. **Edge of embedded clause**

Ma-purisa a-chi-fung-a kuti sei mu-rume aka-b-a [Shona]
6-police 6.sm-TA-think-fv that **why** 1-man 1.sm.TA-steal-fv

Ø-mhete?
10-jewelry

*’Why do the police think that the man stole the earrings?’*

*’Why do the police think that the man stole the earrings?’*

*’How do the police think that the man stole the earrings?’*

*’How do the police think that the man stole the earrings?’*

(2016-03-08-01-TD)

Tentatively, I would follow Letsholo (2011) and analyze sei as being ‘why’ when it is generated in the left periphery and ‘how’ when it is generated lower. A number of researchers have argued that ‘why’ is base-generated in the left periphery instead of moving there like other *wh*-words. Rizzi (2001, 2004) posits an Int(rogative) head below Force, and he says that Italian *perché* ‘why’ is generated in the specifier of the projection (see also Abels 2012b). Buell (2011) argues that Zulu *ngani* ‘why’ is generated as the Int head, and the IP moves around it to SpecIntP. Letsholo (2011) puts the Ikalanga *ini* ‘why’ and *chini* ‘how come’ in SpecFocP, with the possibility of the IP moving around it to SpecTopP.

My current thinking for Shona sei ‘why’ is that it may be generated as the Int head, as Buell (2011) proposes for Zulu. Recall that in section 3.2.6.4 I tentatively suggested that the Y head that hosts the non-subject extraction marking might be Int. If this is so, then this is a natural explanation for the complementary distribution of sei and extraction marking. I am less sure about where sei ‘how’ is generated. It may initially seem puzzling that
it cannot be clefted, but in general, Bantu languages only cleft phrases with φ-features (Abels & Muriungi 2008), so if sei is an adverbial with no φ-features, that could be the explanation. This would make it different from the locative and temporal adjuncts that bear φ-features and consequently can be clefted. The behavior of ‘why’ with respect to islands is something that keeps it here in the future research category: often it is sensitive to islands when no other wh-words are, as in (5.5). (Cf. (2.29–2.32).)

(5.5) In-situ ‘why’ in a subject relative clause modifying an object

a. *Va-ri ku-tsvag-a [island mu-rume àka-b-a [Shona]
  2.SM-be 15-look.for-FV 1-man SE.1.SM.TA-steal-FV
  Ø-mhete sei]? 10-jewelry why
  ‘Why are they looking for [the man who stole the earrings ___]?’
  (2014-12-06-02-TD)

b. *E-m-bwa ya-a-lum-a [island o-mw-a-aana o-w-a-fun-a [Lubukusu]
  e-n-debe si-kila si(ina)]? 7-reason 7.what
  ‘Why did the dog bite [the child who broke the chair ___]?’
  (Wasike 2007: 268 (55a))

c. *Juma a-na-m-tafut-a [island mw-anafunzi ambaye [Swahili]
  1.Juma 1.SM-PRS-1.OM-look.for-FV 1-student PRED-1.SE
  a-li-uz-a ki-tabu kwa nini]? 1.SM-PST-sell-FV 7-book for what
  ‘Why is Juma looking for [the student who sold the book ___]?’
  (Wasike 2007: 268 (55b))

d. *Paul a-ka-ror-a [island o-mw-ana a-many-ir-e [Runyoro]
  1.Paul 1.SM-PST-see-FV 1-1-child 1.SM-KNOW-ASP-FV
  o-mu-somesa habwaki]? 1-1-teacher why
  ‘Why did Paul see [the child who knows the teacher ___]?’
  (Wasike 2007: 268 (55c))

5.2.1.3 Multiple wh-questions and wh-islands

A few times I have attempted to elicit multiple wh-questions and wh-islands, but there are a few complicating factors that have made it challenging. First, it is possible to have multi-
ple \textit{wh}-questions, but it is impossible to front more than one \textit{wh}-phrase to a single clause boundary. This means that testing for superiority violations would require that the object \textit{wh}-phrase be in SpecCP and the subject \textit{wh}-phrase be in situ, which is independently ruled out (section 2.3).

Another issue is that I have been unable to uncover a separate complementizer ‘whether’. The verb \textit{kubvunza} ‘to ask’ takes the normal \textit{kuti} ‘that’ complementizer and readily permits extracting \textit{wh}-phrases out of its complement just like out of a declarative complement clause. This means that the only kind of \textit{wh}-island I can construct is by using \textit{wh}-ex-situ, which itself is really a relative clause. So we cannot test \textit{wh}-islands independently of relative clause islands. Even if we could (e.g., if we found a ‘whether’), the adjuncts ‘how’ and ‘why’ are typically the ones that give rise to the strongest \textit{wh}-island effect, but as discussed above, they have a number of special quirks in Shona and it is not obvious that they move at all.

There is a rich literature on multiple \textit{wh}-questions, superiority effects, and \textit{wh}-island effects, and it would be great to investigate these for Shona, but there are challenges to be aware of in doing so.

5.2.1.4 Semantic and discourse effects

As mentioned in section 3.3.2 and section 4.6.2, I have done very little semantic and pragmatic testing to determine if there interpretive or discourse consequences of choosing one \textit{wh}-question formation strategy over another. This might be something to collaborate with native speaker linguists about, because the judgments can be tricky to work with in a traditional elicitation setting.

5.2.2 Crosslinguistic investigation

As discussed in section 3.3.1, there are many points of variation across Bantu \textit{wh}-questions, especially in \textit{wh}-ex-situ, and there has not been very much consensus on the structure of
these questions. To some degree that is because they often depend on other structures (e.g., relative clauses) that may have their own set of considerations and debates. There is much left to do, but the groundwork I laid in chapter 3 serves to illustrate the kind of testing that can be done to tease apart the details of these constructions. Shona is unusual in that it allows subjects in relative clauses and wh-ex-situ to be null, preverbal, or postverbal, all with full agreement, so the derivations I proposed can become models for a variety of patterns that are found in other languages.

There is so little known about partial wh-movement in Bantu, so that is an area where any new work will help advance our knowledge. In particular, as I discussed in section 4.6.1, it would be helpful to test for partial wh-movement and its island sensitivity in languages with and without wh-in-situ in indirect questions and with and without cleft-based wh-ex-situ.

5.3 Final remarks

I find wh-questions and other A’-movement phenomena to be fascinating, with endless room for further investigation. It is my sincere hope that future scholars of Shona, other Bantu languages, or wh-dependencies will find this dissertation instructive and useful.
References


Downing, Laura J. 2012. On the (non-)congruence of focus and prominence in Tumbuka.


References


270


Mathangwane, Joyce T. 1998a. Allomorphy and the morphology-syntax distinction in Ikalanga. In Ian Maddieson & Thomas J. Hinnebusch (eds.), Language history and lin-


Ouali, Hamid. 2008. On C-to-T φ-feature transfer: The nature of Agreement and Anti-agreement in Berber. In Roberta D’Alessandro, Susann Fischer & Gunnar Hrafn Hrafn-


283


Wal, Jenneke van der. 2006. The disjoint verb form and an empty Immediate After Verb position in Makhuwa. *ZAS Papers in Linguistics* 43. 233–256.


