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Forming Wh-Questions in Shona: A Comparative Bantu Perspective

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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 Kĩitharaka, [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 Kîitharaka) 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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of
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in Candidacy for the Degree of
Doctor of Philosophy

by
Jason Arik Zentz

Dissertation Directors: Robert Frank & Raffaella Zanuttini

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List of Abbreviations

1PL	first person plural
1SG	first person singular
2PL	second person plural
2SG	second person singular
3PL	third person plural
3SG	third person singular
AA	anti-agreement
ACC	accusative
APPL	applicative
ASCL	assertive subject clitic
ASP	aspect
AUX	auxiliary
CAUS	causative
CLF	classifier
COP	copula
DEM	demonstrative
F	feminine
FOC	focus

FUT	future
FV	final vowel
HAB	habitual
HON	honorific
IMPF	imperfective
INF	infinitive
IPFV	imperfective
IRR	irrealis
LK	linker
LOC	locative
M	masculine
NASCL	non-assertive subject clitic
NEG	negative
NI	reflex of Proto-Bantu copula <i>*ni</i>
NMLZ	nominalizer
NOM	nominative
NSE	non-subject extraction
OBL	oblique
OM	object marker
PASS	passive
PCL	particle
PFV	perfective
PL	plural
POSS	possessive

PRED	predicative
PRF	perfect
PROG	progressive
PRON	pronoun
PRS	present
PST	past
Q	question particle
REC	recent
REL	relative
RM	agreeing relative marker
SE	subject extraction
SG	singular
SM	subject marker
STAT	stative
T	tense
TA	tense and/or aspect
WH	<i>wh</i> -particle

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](#).

Language	ISO 639-3	Guthrie	Countries	L1 Speakers
Akɔɔse	[bss]	A15C	Cameroon	100,000
Bakweri	[bri]	A22	Cameroon	20,000
Duala	[dua]	A24	Cameroon	87,700
Bàsáá	[bas]	A43a	Cameroon	300,000
Gyeli	[gyi]	A801	Cameroon	4,279
Nzadi	N/A	B865	DRC	N/A
Lingala	[lin]	C30B	DRC, Congo	2,146,210
Likila	[lie]	C31a	DRC	8,400
Dzamba	[bni]	C322	DRC, Congo	118,740
Kilega	[lea]	D51	DRC	400,000

Language	ISO 639-3	Guthrie	Countries	L1 Speakers
Kikuyu	[kik]	E51	Kenya	6,623,000
Kĩitharaka	[thk]	E54	Kenya	176,000
Gichuka	[cuh]	E541	Kenya	70,000
Sambaa	[ksb]	G23	Tanzania	664,000
Swahili	[swh]	G40	Tanzania, Somalia, Kenya	15,754,860
Bena	[bez]	G63	Tanzania	670,000
Kituba	[ktu]	H10A	DRC	4,200,000
Kikongo	[kon]	H16	DRC, Angola	5,016,500
Kimanyaanga	[kng]	H16b	DRC	N/A
Kiyoombe	[yom]	H16c	DRC, Angola, Congo	734,400
Kinande	[nnb]	JD42	DRC	903,000
Kinyarwanda	[kin]	JD61	Rwanda, Uganda, DRC	11,299,900
Runyoro	[nyo]	JE11	Uganda	667,000
Luganda	[lug]	JE15	Uganda	4,133,450
Haya	[hay]	JE22	Tanzania	1,740,000
Lubukusu	[bxk]	JE31c	Kenya	1,433,000
Kuria	[kuj]	JE43	Tanzania, Kenya	690,000
Totela	[ttl]	K41	Zambia	1,120
Lunda	[lun]	L52	Zambia, Angola	403,000
Bemba	[bem]	M42	Zambia, DRC	4,110,000
Chicheŵa	[nya]	N31b	Malawi, Zambia, Mozambique, Zimbabwe	9,536,700
Nsenga	[nse]	N41	Zambia, Mozambique	562,100
Makhuwa	[vmw]	P31	Mozambique	3,220,000
Shona	[sna]	S11–15	Zimbabwe, Mozambique	13,274,100

Language	ISO 639-3	Guthrie	Countries	L1 Speakers
Ikalanga	[kck]	S16	Zimbabwe, Botswana	850,000
Northern Sotho	[nso]	S32	South Africa	4,631,000
Sotho	[sot]	S33	South Africa, Lesotho	5,634,000
Xhosa	[xho]	S41	South Africa	8,177,300
Zulu	[zul]	S42	South Africa, Lesotho, Swaziland	11,969,100
Tsonga	[tso]	S53	South Africa, Mozambique	5,079,000

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 *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

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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

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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).

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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!

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*To my grandparents Jesse & Joyce Eaton —
your decision to leave your comfort zone to pursue global ministry has impacted each of
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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.

- (1.1) a. ***Wh*-in-situ:**
$$\left[\text{CP} \underbrace{\quad \dots \left[\text{CP} \quad \dots \mathbf{wh} \dots \right]}^{\text{scopal}} \right]$$
- b. **Full *wh*-movement:**
$$\left[\text{CP} \mathbf{wh} \dots \left[\text{CP} \quad \dots \quad _ \dots \right] \right]$$
- c. **Partial *wh*-movement:**
$$\left[\text{CP} \quad \dots \left[\text{CP} \mathbf{wh} \dots \quad _ \dots \right] \right]$$

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.¹ Singaporean 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*

Huǎngróng xiāngxìn [_{CP} Guójìng mǎile **shěnmě**]? [Mandarin Chinese]
 Huangrong believe Guojing bought **what**
 ‘What does Huangrong believe that Guojing bought?’ (Cheng 2009: 770 (9))

b. *Full wh-movement*

What do you think [_{CP} we found ___]? [English]

c. *Partial wh-movement*

Kamu percaya [_{CP} **ke mana** Mary pergi ___]? [Singaporean Malay]
 you believe **to where** Mary go
 ‘Where do you believe Mary went?’ (Cole & Hermon 1998: 225 (3b))

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*

Was meinst du [CP **was** Peter glaubt [CP **wen** [German]
WH think you.NOM **WH** Peter.NOM believes **who.ACC**
 Maria ___ liebt]]?
 Maria.NOM loves
 ‘Who(m) do you think Peter believes Maria loves?’ (Sabel 2000: 415 (19a))

b. *Wh-copying*

Kas o Demiri mislinola [CP **kas** i Arifa dikhla ___]? [Romani]
who the Demir think **who** the Arifa saw
 ‘Who(m) does Demir think Arifa saw?’ (McDaniel 1989: 569 n.5 (ii))

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 *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 (Cheng 2006, Demuth & Harford 1999, Nsuka Nkutsi 1982, Henderson 2006b), subject inversion (Demuth & Harford 1999, Henderson 2006b, 2011b, Marten & Van der Wal 2014), object marking (Beaudoin-Lietz et al. 2004, Henderson 2006b, Marlo 2015, Marten & Kula 2012, Riedel 2009), and double object constructions (Bresnan & Moshi 1990, Simango 1995). In prior work (Zentz 2013, 2015), 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 *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 *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.

1.3 An introduction to Shona

1.3.1 General background

In terms of Guthrie zones, the Shona language falls within the Shona group (S10) of Zone S (Gowlett 2003), 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.

In general Shona is quite well documented for a Bantu language. Early work on the language includes Carter 1956, Doke 1929, 1931a,b, Fortune 1955, 1962, 1967, 1969, Herrick 1968, Marconnès 1931, Stevick 1959, 1960, and Stevick 1966.

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.

There has been some research done on the non-Shona languages within the Shona S10 group, especially Ikalanga and Nambya. This includes Chabata 2007, Downing & Gick 2001, Kadenge 2010c, 2013, 2015, Letsholo 2002, 2004, 2006a,b, 2007, 2009, 2011, 2012, 2013, Letsholo & Pires 2003, Mathangwane 1998a,b, 1999, 2001, Mathangwane & Osam 2006, and Mudzingwa & Kadenge 2011.

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 Ndaou, the variety spoken in Chipinge, where her parents lived prior to moving to Harare. The Ndaou-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 length² or any other feature, as shown in Table 1.1.

i	high front unrounded	u	high back rounded
e	mid front unrounded	o	mid back rounded
a		low central unrounded	

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 /s^w/ may be [s^{kw}] and /m^w/ may be [m^ŋ], etc.

(1.4) *Contrastive prenasalization*

- | | | | | |
|----|----------------------|----------|---------|--------------------------|
| a. | /ɣùrà/ | <-vhura> | ‘open’ | (Kadenge 2010a: 399 (6)) |
| b. | / ^m ɣùrà/ | <mvura> | ‘water’ | (Kadenge 2010a: 399 (6)) |

(1.5) *Contrastive labiovelarization*

- | | | | | |
|----|------------------------|-----------|----------------|--------------------|
| a. | /kùsèrà/ | <kusera> | ‘to rotate’ | (Hannan 1984: 597) |
| b. | /kùs ^w èrà/ | <kuswera> | ‘to pass time’ | (Hannan 1984: 628) |

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. | /kùtsàtà/ | <kutsata> | ‘to stalk’ | (Hannan 1984: 662) |
| b. | /kùts ^v àtà/ | <kutsvata> | ‘to harm’ | (Hannan 1984: 678) |
| c. | /kùt ^f àtà/ | <kuchata> | ‘to marry’ | (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.

- (1.7) *Contrastive breathy voice*
- | | | | | |
|----|---------|----------|-----------------------|--------------------|
| a. | /mándá/ | <manda> | ‘animal fat’ | (Hannan 1984: 322) |
| b. | /ṃándá/ | <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. | /gùrù/ | <guru> | ‘hole’ | (Kadenge 2010a: 395) |
| b. | /gùrú/ | <guru> | ‘tripe’ | (Kadenge 2010a: 395) |
| c. | /gúrú/ | <guru> | ‘polygamy’ | (Kadenge 2010a: 395) |

- (1.9) *Contrastive grammatical tone*
- | | | | | |
|----|--------|---------|-----------------|--------------------|
| a. | /mùǰá/ | <musha> | ‘land’ | (Brauner 1995: 17) |
| b. | /múǰá/ | <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).

For more information on the phonetics, phonology, and morphophonology of Shona, see Beckman 1997, Bladon et al. 1987, Chimhundu 2002, Dembetembe 1974, 1987, Donnelly 1981, Downing & Kadenge 2015, Fivaz 1970, Harford 1997b, Jefferies 1990, Kadenge 2010a,b, Kadenge & Mudzingwa 2011, Kadenge 2014a,b, Kadenge & Simango 2014, Manuel 1987, Mkanganwi 1972, Mudzingwa 2010, 2013, Mudzingwa & Kadenge 2011, 2013, Myers 1987, 1990, 1994, Odden 1980, 1981a,b, 1984b, 2014, Pongweni 1978, 1980, 1981, 1983a,b, 1990, and Schellenberg 2009.

	Bilabial	Labiodental	Alveolar	Labiodental- ized Alveolar	Palato- alveolar	Palatal	Velar	Glottal
Implosive	ɓ		ɗ					
Plosive	p ɸ mɸ mɸ p ^w b ^w mɸ ^w		t ɗ nɗ nɗ t ^w d ^w nɗ ^w				k g ɠ k ^w g ^w ɠ ^w	
Nasal	m n m ^w n ^w		ɲ n n ^w			ɲ	ŋ ŋ ^w	
Tap			r r ^w					
Fricative		f v ɱv	s z nɰ s ^w z ^w nɰ ^w	s ^v z ^v nɰ ^v s ^{uv} z ^{uv}	ʃ ʒ ʒ ^w			h h ^w
Affricate		pʰ bʱ ɸʱ	tʰ dʒ ɗʒ ^w	tʰ ^v dʒ ^v	tʃ dʒ nɰ tʃ ^w dʒ ^w nɰ ^w			
Approximant	w	ʋ				j		

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

This section provides a brief overview of the basic properties of Shona morphosyntax, but refer to the existing literature for more details: Aranovich 2015, Bax & Diercks 2012, Bellusci 1991, Bliss 2009, 2010, Bliss & Storoshenko 2008, 2009, Déchaine et al. 2014, Dembetembe 1976, 1986, Demuth & Harford 1999, Erickson 1988, Ferch 2009, 2010, 2013, Fivaz 1970, Fortune 1970, Harford Perez 1983, Harford 1985, 1990, Harford & Demuth 1999, Hawkinson & Hyman 1974, Kadenge & Mhute 2014, Mabugu 2002, Makoni & Mashiri 2011, Mhute 2011, Mhute, Kadenge & Mutasa 2013, Mhute & Kadenge n.d., Mkanganwi 2002, Mudzingwa 2008, Mugari 2013, Mugari et al. 2015, Mukaro 2012, Pongweni 1982, Posegate 2010, Stevick 1966, Storoshenko 2009, 2010, Toews 2009, and Zentz 2015.

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–

Orthography	IPA	Orthography	IPA	Orthography	IPA
a	/a/	m	/m/	r	/r/
b	/b/	mb	/ ^m b/ ~ / ^m b̥/	rw	/r ^w /
bh	/b̥/	mbw	/ ^m b ^w /	s	/s/
bv	/b̥v̥/	mh	/m̥/	sh	/ʃ/
bw	/b ^w /	mhw	/m̥ ^w /	shw	/ʃ ^w /
ch	/tʃ/	mv	/ ^m v̥/	sv	/s ^v /
chw	/tʃ ^w /	n	/n/	svw	/s ^{vw} /
d	/d/	n'	/ŋ/	sw	/s ^w /
dh	/d̥/	n'w	/ŋ ^w /	t	/t/
dw	/d ^w /	nd	/ ⁿ d/ ~ / ⁿ d̥/	ts	/ts̥/
dz	/d̥z̥/	ndw	/ ⁿ d ^w /	tsv	/ts̥ ^v /
dzv	/d̥z̥ ^v /	nh	/n̥/	tsw	/ts̥ ^w /
dzw	/d̥z̥ ^w /	ng	/ ⁿ g/	tw	/t ^w /
dy	/d̥ʒg/	ngw	/ ⁿ g ^w /	ty	/t̥j̥k/
e	/e/	nj	/ ⁿ d̥ʒ̥/	u	/u/
f	/f/	njw	/ ⁿ d̥ʒ̥ ^w /	v	/v̥/
g	/g/	nw	/n ^w /	vh	/v̥h̥/
gw	/k ^w /	ny	/ɲ/	w	/w/
h	/h̥/	nz	/ ⁿ z̥/	y	/j/
hw	/h̥ ^w /	nzv	/ ⁿ z̥ ^v /	z	/z̥/
i	/i/	nzw	/ ⁿ z̥ ^w /	zh	/ʒ̥/
j	/d̥ʒ̥/	o	/o/	zhw	/ʒ̥ ^w /
jw	/d̥ʒ̥ ^w /	p	/p/	zv	/z̥ ^v /
k	/k/	pf	/p̥f̥/	zvw	/z̥ ^{vw} /
kw	/k ^w /	pw	/p ^w /	zw	/z̥ ^w /

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.

Noun Class	Number	Nominal Prefix	'Which' Prefix	Relative Marker	Subject Marker	Object Marker
First Person						
	SG			wa-	ndi-	ndi-
	PL			va-	ti-	ti-
Second Person						
	SG			wa-	u-	ku-
	PL			va-	mu-	mu-
Third Person						
1	SG	mu-	ú-	wa-	á-	mu-
1a	SG	∅-	ú-	wa-	á-	mu-
2	PL	vá-	vá-	va-	vá-	va-
2a	HON.SG/PL	va-	vá-	va-	vá-	va-
2b	HON.SG	a-	vá-	va-	vá-	va-
3	SG	mu-	ú-	wa-	ú-	u-
4	PL	mi-	í-	ya-	í-	i-
5	SG	∅-	rí-	ra-	rí-	ri-
6	PL	ma-	á-	a-	á-	a-
7	SG	chi-	chí-	cha-	chí-	chi-
8	PL	zvi-	zví-	zva-	zví-	zvi-
9	SG	N-	í-	ya-	í-	i-
10	PL	N-	dzí-	dza-	dzí-	dzi-
11	SG	ru-	rú-	rwa-	rú-	ru-
12	SG	ka-	ká-	ka-	ká-	ka-
13	PL	tu-	tú-	twa-	tú-	tu-
14	SG	u-	hú-	hwa-	hú-	hu-
15	INF	ku-	kú-	kwa-	kú-	ku-
16	LOC	pa-	pá-	pa-	pá-	pa-
17	LOC	ku-	kú-	kwa-	kú-	ku-
18	LOC	mu-	mú-	mwa-	mú-	mu-
21	SG	zi-	rí-	ra-	rí-	ri-

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

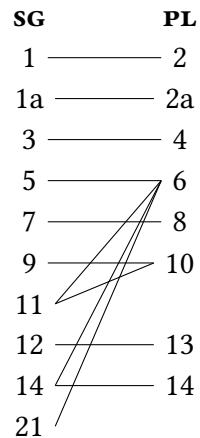


Table 1.5: Shona noun classes paired into genders. Gleaned from Brauner 1995: 21–28 and Fortune 1970, 1985: 39–83.

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

Table 1.6: Shona genders and meanings. Gleaned from Brauner 1995: 21–28 and Fortune 1970, 1985: 39–83.

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
 'The child bought bananas.' (2014-06-25-01-TD)

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.

Noun Class	<i>Wh</i> -Word	Gloss
1a	Ø-ani	who.SG
2a	vana-ani	who.PL
7	chi-i	what.SG
8	zvi-i	what.PL
	rinhi	when
	sei	how, why
	ne-i	with-what
	-ngani	how many

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*

V-aka-teng-er-a **Ø-ani** Ø-rokwe? [Shona]
 2.SM-TA-buy-APPL-FV **1a-who** 5-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*

W-ai-fung-a [_{CP} kuti v-aka-teng-er-a **Ø-ani** [Shona]
 2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV **1a-who**
 Ø-rokwe]?
 5-dress
 ‘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 unmarked 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*

Ndi-Ø-ani wa-v-aka-teng-er-a ____ Ø-rokwe? [Shona]
NI-1a-who 1a.NSE-2.SM-TA-buy-APPL-FV 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*

Ndi-Ø-ani wa-w-ai-fung-a [_{CP} kuti [Shona]
NI-1a-who 1a.NSE-2SG.SM-TA-think-FV that
 v-aka-teng-er-a ____ Ø-rokwe]?
 2.SM-TA-buy-APPL-FV 5-dress
 ‘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 *wh*-phrase may appear at an intermediate clause boundary, and this partial *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) *Shona partial wh-movement*a. *Partial movement of a wh-indirect object*

W-ai-fung-a [CP kuti **ndi-Ø-ani** wa-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **ni-1a-who** 1a.NSE-2.SM-TA-buy-APPL-FV
 ___ Ø-rokwe]?
 5-dress

‘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)

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

W-ai-fung-a [CP kuti **ndi-Ø-ani** wa-t-aka-fember-a [Shona]
 2SG.SM-TA-think-FV that **ni-1a-who** 1a.NSE-1PL.SM-guess-FV
 [CP kuti v-aka-teng-er-a ___ Ø-rokwe]]?
 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 *wh*-question that involves multiple levels of embedding, it is possible for the *wh*-phrase to be pronounced at several places in the structure:

(1.14) *Wh-questions with two bridge verbs*a. *Long-distance full wh-movement of a direct object*

[**Chí-í** **cha**-w-ai-fung-a [kuti t-aka-fember-a [Shona]
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]]]?
 that 2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday

b. *Long-distance partial wh-movement of a direct object*

[W-ai-fung-a [kuti **chí-í** **cha**-t-aka-fember-a [Shona]
 2SG.SM-TA-think-FV that **ni.7-what** 7.NSE-1PL.SM-TA-guess-FV
 [kuti v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro]]]?
 that 2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday

c. *Local partial wh-movement of a direct object*

[W-ai-fung-a [kuti t-aka-fember-a [kuti **chí-í** [Shona]
 2SG.SM-TA-think-FV that 1PL.SM-TA-guess-FV that **NI.7-what**
cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro]]]?
 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday

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

[W-ai-fung-a [kuti t-aka-fember-a [kuti v-aka-teng-er-a[Shona]
 2SG.SM-TA-think-FV that 1PL.SM-TA-guess-FV that 2.SM-TA-buy-APPL-FV
 Ø-Thandi **chì-ì** ku-chi-toro nezuro]]]?
 1a-Thandi 7-**what** 17-7-store yesterday
 ‘What did you think that we guessed that they bought Thandi at the store
 yesterday?’ (2014-09-16-01-TD)

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,³ 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).

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 φ -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 Kîtharaka, 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 Kîtharaka) also lack IAV effects.

Full *wh*-movement in Shona gives rise to questions that bear a certain similarity to En-

glish *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 Spec ν P, 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-nyɛn **nzɛ́?** [Akɔɔse]
 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 **kúb étǎŋ?** [Akɔɔse]
 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 **héé?** [Akɔɔse]
 1-go.IPFV **where**
 ‘Where is s/he going?’ (Hedinger 2008: 195 (477))

The Kĩitharaka examples in (2.2) and the Zulu examples in (2.3) illustrate that unlike French, whose in-situ *wh*-phrases cannot take scope across a clause boundary (Bošković 1998, Cheng & Rooryck 2000, Mathieu 1999, 2002, 2004, Obenauer 1994, Sabel 2000, Taillefer 2013), many Bantu languages allow *wh*-in-situ in embedded clauses, both declarative and interrogative.

(2.2) *Wh*-in-situ in Kĩitharaka

- a. *In-situ wh*-direct object
 Maria a-gúr-ir-e **mbi?** [Kĩitharaka]
 1.Maria 1.SM-buy-PFV-FV **7.what**
 ‘What did Maria buy?’ (Abels & Muriungi 2008: 695 (17a))

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 [Kĩitharaka]
 1.John 1.SM-say-PFV-FV 1.Pat 1.SM-say-PFV-FV 1.Maria
 a-gûr-ir-e **mbi]]]])?**
 1.SM-buy-PFV-FV **7.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-gur-ir-e **mbi]? [Kĩitharaka]
 1SG.SM-NEG-know 1.Munene 1.SM-buy-PFV-FV **7.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]? [Kĩitharaka]
 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?** [Lubukusu]
 1.Nafula 1.SM-PRS-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)? [Lubukusu]
 1.mother 1.SM-PST-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 [Lubukusu]
 1.Nafula 1.SM-PRS-believe-FV 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 [Lubukusu]
 1.Nafula 1.SM-PRS-believe-FV 1-that 1.Wafula 1-PST-steal-FV
 sii-tabu **liina]**?
 7-book **5.what**³
 ‘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 [Lubukusu]
 1.Nafula 1.SM-PRS-believe-FV 1-that 1.Wafula 1-steal-FV
 sii-tabu **waae(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 [Lubukusu]
 1.Nafula 1.SM-PRS-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

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

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 there 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

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 Kĩitharaka, 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 Kĩitharaka 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.

(2.7) *Indefinites' lack of island sensitivity*

- a. If John comes upon **a donkey**, Mary tries to hide it.
LF: a donkey_i [if John comes upon e_i , Mary tries to hide it _{i}]
 (Pesetsky 1987: 102 (14–15a))
- b. ***What donkey_i**, if John comes upon e_i , does Mary try to hide 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:*
always _{i,j} [if **a man _{i}** owns **a donkey _{j}** , he _{i} 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*
Who _{i} did you promise e_i to read **what**? (Pesetsky 1987: 104 (20a))
- b. *Superiority violation with non-D-linked wh-phrases yields ungrammaticality*
 ??**What _{j}** did you promise **who** to read e_j ? (Pesetsky 1987: 104 (20b))

- c. *No Superiority violation*
Which man_i did you promise *e_i* to read **which book**?
(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_i** **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

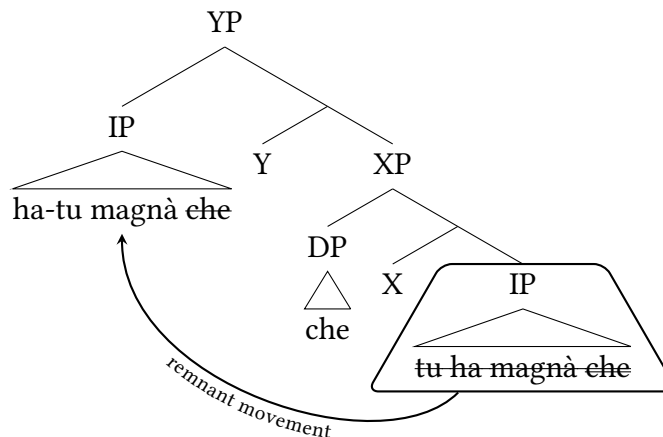
Whereas unselective binding is a non-movement dependency that is established after Transfer/Spell-out in (or on the way to) LF, another possibility is that the relation between the pronunciation site of the *wh*-phrase and its scopal position is established by movement in the narrow syntax.

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, Taillefer 2013):

- (2.10) a. *Postverbal in-situ wh–locative adjunct*
 Tu vas **où**? [French]
 2SG go **where**
 ‘Where are you going?’ (Poletto & Pollock 2015: 138 (6a))
- b. *Postverbal in-situ wh–direct object*
 Pierre a fait **quoi**? [French]
 Pierre has done **what**
 ‘What has Pierre done?’ (Poletto & Pollock 2015: 142 (15a))
- c. *Postverbal in-situ wh–direct object*
 Marie a embrassé **qui**? [French]
 Marie has kissed **who**
 ‘Who(m) has Mariy kissed?’ (Poletto & Pollock 2015: 142 (15b))
- d. *Postverbal in-situ wh–direct object*
 Marie a engagé **quel linguiste**? [French]
 Marie has hired **which linguist**
 ‘Which linguist has Mariy hired?’ (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

- 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.NASCL given **what** to his brother
 ‘What did he give, to his brother?’ (Poletto & Pollock 2015: 140 (9f))

2.2.2.2 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 lɔme. [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**
 lɔme?
 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** lɔme? [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 lɔme? [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-Nkɔkɔ a-eza-áki o-ndaola yɛi lɔme (**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-Nkɔkɔ a-eza-áki o-ndaola yɛi lɔme **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-Nkɔkɔ a-eza-áki mbano lɔme (**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 bíkulu b-á-kás-íl-é mwámí **bíkí** mu-mwilo? [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).⁸ 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

necessarily be the same as their base position.

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 Nkonyani & 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 objectKambale a-alangira **ndi**? [Kinande]1.Kambale 1.SM-saw **1.who**

'Who(m) did Kambale see?'

(Schneider-Zioga 2007: 408 (15))

b. *In-situ wh*-direct objectYosefu a-kaha **ki** ky-o Marya? [Kinande]1.Joseph 1.SM-gave **7.what** 7-LK 1.Mary

'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-subjectsa. *In-situ wh*-indirect object

V-aka-teng-er-a \emptyset -ani \emptyset -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 \emptyset -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 \emptyset -Thandi \emptyset -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 \emptyset -Thandi \emptyset -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-subjectsa. *Long-distance in-situ wh*-indirect object

W-ai-fung-a kuti v-aka-teng-er-a \emptyset -ani \emptyset -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 \emptyset -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)

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

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

ku-pi 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*

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

ku-chi-toro **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 Belunese 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.

	Unselective Binding	Disguised Movement
1. Word order same as declarative	✓	✗

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.

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 & Ćavar 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*

nt-a nim tšpo na-f n-tei-hypomone...? [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*

e-i-na-tše u na-k? [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*

e-tetən-šine ənsa nim? [Coptic]
REL.PRS-2PL-search for who
 ‘Who(m) are you looking for?’ (John 18:4,
 cited in Reintges et al. 2006: 179 (26c))

- d. *In-situ wh*-locative adjunct
 awɔ **nt**-a-u-ei eβol **tɔn**? [Coptic]
 and **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
 ɔnt-a-k-ei e-pei-ma ɔn-əs n-he? [Coptic]
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
 (***Wa**)-v-aka-teng-er-a Ø-ani Ø-rokwe ku-chi-toro [Shona]
1a.NSE-2.SM-TA-buy-APPL-FV 1a-who 5-dress 17-7-store
 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 tricausal 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*
 (***Wa**)-w-ai-fung-a kuti **Ø-ani** {*à-/a}ka-teng-er-a [Shona]
1a.NSE-2SG.SM-TA-think-FV that **1a-who** (***SE**).1a.SM.TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro nezuro?
 1a-Thandi 5-dress 17-7-store yesterday
 ‘Who did you think bought Thandi a dress at the store yesterday? (out of the blue)’
 (2014-09-09-01-TD)

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.

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

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 *wh*-in-situ.

Huang (1982) noted that Mandarin Chinese *wh*-in-situ is sensitive to islands, but only when the *wh*-phrase is an adjunct, as shown in (2.26).

(2.26) *Argument–adjunct asymmetry in Mandarin Chinese wh-in-situ*

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

On the basis of these facts, he proposed that Mandarin *wh*-in-situ does involve *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 (Chomsky 1981) 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*

- *Tân sẽ thua cuộc [island vì ai làm hư xe [Vietnamese]
 Tan FUT lose event because **who** make damage vehicle
 của anh.ta]?
 belong he
 '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*

- *Tân sẽ chụp hình [island con hổ đã dọa 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 [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-**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 [island si-i-tabu ni-syo **naanu** [Lubukusu]
 1.John 1.SM-PST-see-FV 7-7-book NI-7.NSE **1.who**
 a-a-som-a]?
 1.SM-PST-read-FV
 ‘Who did John see the book that ___ read?’ (Diercks 2010: 173 (137))
- c. ?Juma a-na-tafut-a [island ki-tabu amba-cho **nani** [Swahili]
 1.Juma 1.SM-PRS-look.for-FV 7-book PRED-7.NSE **1.who**
 a-li-uz-a]?
 1.SM-PST-sell-FV
 ‘Who is Juma looking for the book that ___ sold?’
 (Wasike 2007: 267 (54b))

- d. Paul a-ku-serr-a [island e-ki-tabo **oha** [Runyoro]
 1.Paul 1.SM-PRS-look.for-FV 7-7-book **1.who**
 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))

(2.29) *In-situ wh*-direct object within 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
chi-i]?
7-what
 ‘What are they looking for the man who stole ___?’ (2014-12-06-02-TD)
- b. Neo waka-bon-a [island nthu waka-lob-a **ani**]? [Ikalanga]
 1a.Neo 1a.SM.TA-see-FV 1.person 1.SM.TA-hit-FV **who**
 ‘Who(m) did Neo see the person who hit ___?’ (Letsholo 2002: 216 (113a))
- c. E-m-bwa ya-a-lum-a [island o-mw-aana o-w-a-fun-a [Lubukusu]
 9-9-dog 9.SM-PST-bite-FV 1-1-child 1.SE-1.AA-PST-break-FV
si(ina)]?
what
 ‘What did the dog bite the child who broke ___?’ (Wasike 2007: 266 (53a))
- 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 **nini**]?
 1.SM-PST-sell-FV **what**
 ‘What is Juma looking for the student who sold ___?’
 (Wasike 2007: 266 (53b))
- e. Paul ka-ror-a [island o-mw-ana a-many-ir-e **oha**]? [Runyoro]
 1.Paul 1.SM-see-FV 1-1-child 1.SM-know-ASP-FV **who**
 ‘Who(m) did Paul see the child who knows ___?’
 (Wasike 2007: 266 (53c.i))

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.

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

a. A-no-farir-a [island chi-kwata chi-no-bv-a **ku-pi**? [Shona]
 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 àka-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-ndu o-w-a-kul-a [Lubukusu]
 1.Wafula 1.SM-PRS-look.for-FV 1-1-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-ntu a-y-a-guz-ir-e [Runyoro]
 1.Paul 1.SM-PRS-look.for-FV 1-1-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 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 ___]?’
 (2014-12-06-02-TD)

- b. Wafula a-kha-enj-a [island o-mu-ndu o-o-kha-kul-e [Lubukusu]
 1.Wafula 1.SM-PRS-look.for-FV 1-1-person 1.SE-1.SM-FUT-buy-FV
 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]
 1.Paul 1.SM-PRS-look.for-FV 1-1-person 1.SE-1.SM-PST-buy-FV
 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 aka-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]
 9-9-dog 9.SM-PST-bite-FV 1-1-child 1.SE-1.AA-PST-break-FV
 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))

- d. ?Paul a-ku-serr-a [island o-mu-ntu a-y-a-guz-ir-e [Runyoro]
 1.Paul 1.SM-PRS-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]
 2.SM-TA-deny-FV 9-story 9.of-that **7-what** 7.SM-TA-bite-FV
 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-PRS-like-FV candy
 ‘Who have the children spread rumors that ___ likes candy?’
 (Wasike 2007: 252 (35b))

(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]
 2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV **1a-who**
 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]
 2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV
 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 **waae(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))

- c. Wa-toto wa-li-enez-a [island uvumi kwamba Juma [Swahili]
 2-child 2.SM-PST-spread-FV rumors that 1.Juma
 a-li-nunu-a **wapi** peremende]?
 1.SM-PST-buy-FV **where** candy
 ‘Where did the children spread rumors [that Juma bought candy ___]?’
 (Wasike 2007: 255 (39b))
- 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) *In-situ wh-temporal adjunct within the clausal complement of an object DP*
- a. V-aka-ramb-a [island ny-aya 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))
- c. Wa-toto wa-li-enez-a [island uvumi kwamba Juma [Swahili]
 2-child 2.SM-PST-spread-FV rumors that 1.Juma
 a-li-nunu-a **nini** peremende]?
 1.SM-PST-buy-FV **when** candy
 ‘When did the children spread rumors [that Juma bought candy ___]?’
 (Wasike 2007: 253 (37b))
- 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))

(2.39) *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]
 2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV
 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 rumors 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.i))
- 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)

- 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*

V-aka-teng-er-a [island \emptyset -Rumbi na- \emptyset -ani] ma-rokwe? [Shona]
 2.SM-TA-buy-APPL-FV Rumbi with-1a-who 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*

V-aka-teng-er-a \emptyset -Rumbi [island \emptyset -bhutsu ne-**chi-i**?] [Shona]
 2.SM-TA-buy-APPL-FV 1a-Rumbi 10-shoe 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*

*Te a-li dit che Piero l’ \grave{a} compr \grave{a} [Bellunese]
 2SG have-3PL.M.NASCL told that Piero 3SG.M.ASCL-has bought

[island an libro che parla de **che**?
 a book that speaks of **what**

‘What have they told you that Piero bought a book that talks about ___?’
 (Munaro et al. 2001: 157 (24a))

- 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.M.NASCL told that the relatives of **whom**
 no i-é vegnesti?
 not 3PL.M.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.M.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.

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

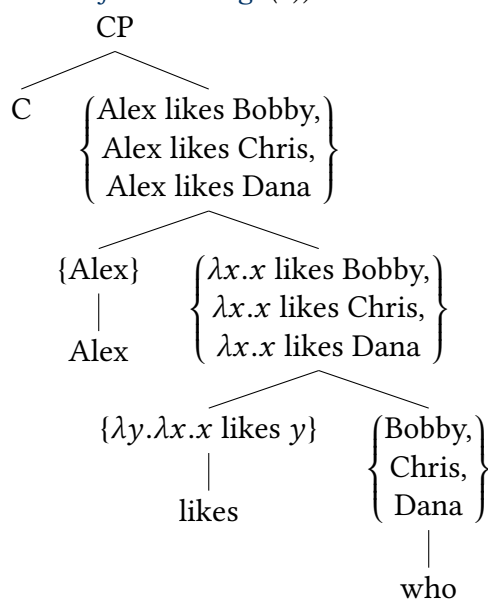
Table 2.3: Properties and analyses of Bantu *wh*-in-situ (interim)

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 **muôs-ûl** sa-ss-ni? [Korean]

Suna-NOM **what-ACC** buy-PST-Q

‘What did Suna buy?’

(Beck & Kim 1997: 339 (1a))

b. *Ex-situ wh*-direct object

Muôs-ûl Suna-ka _____ sa-ss-ni? [Korean]

what-ACC Suna-NOM _____ buy-PST-Q

‘What did Suna buy?’

(Beck & Kim 1997: 339 (1b))

(2.47) *Intervention effect with ‘only’*a. *In-situ wh–direct object**Minsu-**man** **nuku-lûl** po-ass-ni? [Korean]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-lûl** Minsu-**man** ____ po-ass-ni? [Korean]**who-ACC** Minsu-**only** see-PST-Q

‘Who(m) did only Minsu see?’ (Beck & Kim 1997: 370 (73b))

Muriungi (2011) reports that Kîitharaka 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 Kîitharaka wh-in-situ*a. *Focus marker**I-tû-gwatanî-îr-e **ûû** n-a-ij-ir-e? [Kîitharaka]1PL.SM-agree-PFV-FV **who** NI-1.SM-steal-PFV-FV

‘Who did we agree stole?’ (Muriungi 2011: 828 (27))

b. *Focus: ‘even’****Kinya** a-gwîmi ba-gwatanî-îr-a **ûû** n-a-ij-ir-e? [Kîitharaka]**even** 2-hunter 2.SM-agree-PFV-FV **who** NI-1.SM-steal-PFV-FV

‘Who did even the hunters agree stole?’ (Muriungi 2011: 828 (31))

c. *Negation**Tû-**ti**-ra-gwatanî-îr-a **ûû** n-a-ij-ir-e? [Kîitharaka]1PL.SM-**NEG**-REC.PST-agree-PFV-FV **who** NI-1.SM-steal-PFV-FV

‘Who didn’t we agree stole?’ (Muriungi 2011: 828 (30))

d. *Factive verb**Tû-**îrir**-ir-e **ûû** n-a-ij-ir-e? [Kîitharaka]1PL.SM-regret-PFV-FV **who** NI-1.SM-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)?** [Lubukusu]
 1.Wafula **1-also** 1.SM-PST-buy-FV **what**
 ‘What did Wafula also buy?’ (Wasike 2007: 242 (25b))
- b. *Focus: ‘only’*
 Wafula **ye-eng’ene** a-a-kul-a **si(ina)?** [Lubukusu]
 1.Wafula **1-only** 1.SM-PST-buy-FV **what**
 ‘What did only Wafula buy?’ (Wasike 2007: 242 (25c))
- c. *Universal quantifier subject*
Buli muu-ndu a-a-som-a **si(ina)?** [Lubukusu]
every 1-person 1.SM-PST-buy-FV **what**
 ‘What did everyone read?’ (Wasike 2007: 242 (25d))
- d. *Existential quantifier subject*
 Muu-ndu **fulani** a-a-som-a **si(ina)?** [Lubukusu]
 1-person **certain** 1.SM-PST-buy-FV **what**
 ‘What did someone read?’ (Wasike 2007: 242 (25f))
- e. *Focus: ‘even’*
 ??**Ata** Wafula a-a-som-a **naanu?** [Lubukusu]
even 1.Wafula 1.SM-PST-call-FV **who**
 ‘Who(m) did even Wafula call?’ (Wasike 2007: 242 (25g))
- f. *Negation*
 *Wekesa **se**-a-a-kul-a **si(ina)** ta? [Lubukusu]
 1.Wekesa **NEG**-1.SM-PST-buy-FV **what** NEG
 ‘What didn’t Wekesa buy?’ (Wasike 2007: 244 (28b))
- g. *Negation*
 *Wekesa a-**kha**-a-kul-a **si(ina)** ta? [Lubukusu]
 1.Wekesa 1.SM-**NEG**-PST-buy-FV **what** NEG
 ‘What didn’t Wekesa buy?’ (Wasike 2007: 245 (29a))

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'*
 ?(Ndi)-Ø-Rumbi **chete** aka-vereng-a Ø-bhuku ri-pi? [Shona]
 ni-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? [Shona]
 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? [Shona]
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-teng-a **chi-i?** [Shona]
 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 [Shona]
 1a-Taurai **only** 1a.SM.TA-think-FV that 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 [Shona]
 1a-Taurai **alone** 1a.SM.TA-think-FV that 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'*

Chero Ø-Taurai ai-fung-a [CP kuti v-aka-teng-er-a [Shona]
even 1a-Taurai 1a.SM.TA-think-FV that 2.SM-TA-buy-APPL-FV

Ø-**ani** Ø-rokwe?

1a-who 5-dress

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

(2015-01-17-01-TD)

d. *Focus: 'also'*

Ø-Taurai ai-fung-a=**wo** [CP kuti v-aka-teng-er-a [Shona]
 1a-Taurai 1a.SM.TA-think-FV=**also** that 2.SM-TA-buy-APPL-FV

Ø-**ani** Ø-rokwe?

1a-who 5-dress

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

(2015-01-17-01-TD)

e. *Negation*

Ø-Taurai ai-**sa**-fung-a [CP kuti v-aka-teng-er-a [Shona]
 1a-Taurai 1a.SM.TA-**NEG**-think-FV that 2.SM-TA-buy-APPL-FV

Ø-**ani** Ø-rokwe?

1a-who 5-dress

'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) *Intervener above adjunct island in Shona long-distance wh-in-situ*a. *Focus: 'only'*

Ø-Taurai **chete** aka-foner-a ma-purisa [island nokuti [Shona]
 1a-Taurai **only** 1a.SM.TA-call-FV 6-police because

aka-on-a Ø-**ani**]?

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: 'alone'*

Ø-Taurai (ndi-ye) **ega** aka-foner-a ma-purisa [Shona]
 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)

- b. *Focus: 'alone'*
 Ø-Taurai **ega** aka-ramb-a [island ny-aya ye-kuti [Shona]
 1a-Taurai **alone** 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 Taurai alone deny the story that he kissed ___?'
 (2015-01-17-01-TD)
- c. *Focus: 'even'*
Chero Ø-Taurai aka-ramb-a [island ny-aya ye-kuti [Shona]
even 1a-Taurai 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 even Taurai deny the story that he kissed ___?'
 (2015-01-17-01-TD)
- d. *Focus: 'also'*
 Ø-Taurai aka-ramb-a=**wo** [island ny-aya ye-kuti [Shona]
 1a-Taurai 1a.SM.TA-deny-FV=**also** 9-story 9.of-that
 aka-tsvod-a Ø-ani]?
 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*
 Ø-Taurai **ha**-a-n-a ku-ramb-a [island ny-aya ye-kuti [Shona]
 1a-Taurai **NEG**-1a.SM-be.with-FV 15-deny-FV 9-story 9.of-that
 aka-tsvod-a Ø-ani]?
 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, Kîitharaka 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.

	Unselective Binding	Disguised Movement	Lower Copy Spell-out	Covert Movement	Alternative Computation
1. Word order same as declarative	✓	×	✓	✓	✓
2. Lack of non-subject extraction marking above in-situ <i>wh</i> -phrases	✓	×	×	✓	✓
3. Lack of island effects	✓	×	×	×	✓
4. Lack of intervention effects	✓	✓	✓	✓	×

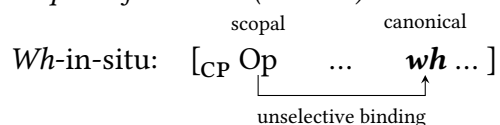
Table 2.4: Properties and analyses of Shona *wh*-in-situ (final)

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 Kĩitharaka and Lubukusu, but not in Shona. I have argued that alternative computation would account for the Kĩitharaka 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)*



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: 3n2) 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 Kîitharaka 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-*wh*-subject would appear in a declarative clause. I will show how information structure restricts the distribution of in-situ *wh*-subjects and subjects that contain in-situ *wh*-non-subjects and then consider alternative approaches to these restrictions. In the end, I conclude that a non-movement-based analysis of Bantu *wh*-in-situ is still tenable when combined with focus licensing requirements.

2.3.1 The ban on in-situ preverbal *wh*-subjects

2.3.1.1 The basic facts

A monoclausal *wh*-question uttered in a neutral, out-of-the-blue context cannot have a *wh*-subject in the preverbal subject position where a non-*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.¹¹

Zulu bans preverbal in-situ *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 *wh*-movement requires clefting and extraction marking (Sabel & Zeller 2006), which are not present here.

(2.55) *Zulu preverbal in-situ wh*-subjects

- a. *In-situ wh*-subject in a matrix clause with an active, transitive verb

*U-Ø-bani u-banga lowo msindo? [Zulu]

1a-1a-who 1a.SM-cause 3.DEM 3.noise

‘Who is making that noise?’

(Sabel & Zeller 2006: 272 (3a))

- b. *In-situ wh*-subject in a matrix clause with an active, unaccusative verb

*U-Ø-bani u-fikile? [Zulu]

1a-1a-who 1a.SM-arrived

‘Who arrived?’

(Sabel & Zeller 2006: 273 (5a))

11. 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 *wh*-ex-situ requires clefting, the extraction is obvious, but even in languages without cleft-based *wh*-ex-situ, some form of extraction marking (Zentz 2015) is required for subject *wh*-questions (e.g. Akɔɔse (Hedinger 2008, Zentz 2011, 2012)), suggesting that the subject does not remain in its canonical preverbal position.

- c. *In-situ wh-subject in a matrix clause with a passive verb*
 ***U-Ø-bani** u-ya-shay-wa? [Zulu]
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 *v*P 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?** [Zulu]
 17.SM-arrive **1a-who**
 ‘Who arrived?’ (Sabel & Zeller 2006: 273 (5b))

Kiitharaka also bans preverbal in-situ *wh*-subjects, as shown in (2.57a). However, Kiitharaka 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) *Kiitharaka preverbal vs. postverbal wh-subjects*
- a. *Preverbal wh-subject*
 ***Ba-û** ba-in-ag-a mbaa î-no? [Kiitharaka]
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?** [Kiitharaka]
 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:

(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?’ (2014-08-27-01-TD)
 *(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 Kîtharaka, 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)

- d. * [island O-mu-ntu a-y-a-cwir-e **ki**] a-ka-teer-a [Runyoro]
 1-1-person 1.SE-1.SM-PST-break-FV **what** 1.SM-PST-beat-FV

Peter?

1.Peter

‘What did [the person who broke ___] beat Peter?’

(Wasike 2007: 272 (60c))

(2.62) *In-situ wh*-direct object within 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

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]
 9-9-dog 9.SM-PST-bite-FV 1-1-child 1.SE-1.AA-PST-break-FV

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]
 1.Juma 1.SM-PRS-1.OM-look.for-FV 1-student PRED-1.SE

a-li-uz-a **nini**]?

1.SM-PST-sell-FV **what**

‘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]
 1.Paul 1.SM-see-FV 1-1-child 1.SM-know-ASP-FV **who**

‘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):

(2.63) *Subject relative clause modifying a subject*

- a. [_{island} Mu-rume àka-b-a Ø-mhete] 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 o-w-a-fun-a e-n-debe] 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 amba-ye 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] 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))

- 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
 ki-ka-kang-a Peter?
 7.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. ?? [_{island} Chi-lomo mbo Wafula a-a-ib-a si(ina)] [Lubukusu]
 10-report that 1.Wafula 1.SM-PST-steal-FV 7.what
 cha-a-chun-i-a Nafula ku-mw-oyo?
 10.SM-PST-hurt-CAUS-FV 1.Nafula 3-3-heart
 ‘What did [the information that Wafula stole ____] hurt Nafula?’
 (Wasike 2007: 259 (43a))
- b. ?? [_{island} U-vumi kwamba Juma a-na-pend-a nini] [Swahili]
 11-rumor that 1.Juma 1.SM-PRS-like-FV what
 u-me-ene-a?
 11.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. ?? [_{island} Chi-lomo mbo Wafula a-a-ib-a sii-tabu] [Lubukusu]
 10-report that 1.Wafula 1.SM-PST-steal-FV 7-book
 waae] cha-a-chun-i-a Nafula ku-mw-oyo?
 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))

- 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]
 10-report that 1.Wafula 1.SM-PST-steal-FV 7-book
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 (48a))
- 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))

- 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 Kĩitharaka (2.69d), even out of the blue.¹²

12. Muriungi (2011) examines whether Kĩitharaka 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 Kĩitharaka 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):

(2.69) *In-situ wh*-subjects in embedded declarative clauses¹³

- a. W-ai-fung-a [kuti Ø-ani aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **1a-who** 1a.SM.TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro nezuro]?
 1a-Thandi 5-dress 17-7-store yesterday
 ‘Who did you think bought Thandi a dress at the store yesterday?’
 (out of the blue) (2014-09-09-01-TD)
- b. Va-no-fung-a [kuti Ø-ani aka-teng-a Ø-rokwe iro]? [Shona]
 2.SM-TA-think-FV that **1a-who** 1a.SM.TA-buy-FV 5-dress 5.that
 ‘Who do they think bought that dress?’ (out of the blue) (2014-12-06-01-TD)

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

- a. *In-situ wh*-subject in an embedded interrogative clause
 *Tû-ûr-iir-i-e [CP ûû n-a-ij-ir-e]? [Kiitharaka]
 1PL.SM-ask-PFV-CAUS-FV **1.who** NI-1.SM-steal-PFV-FV
 ‘We asked who stole?’ (Muriungi 2011: 824 (13))
- b. *In-situ wh*-subject in a declarative clause embedded within an embedded interrogative clause
 Tû-riam-a [CP John a-ug-ir-e [CP ûû n-a-ij-ir-e]]? [Kiitharaka]
 1PL.SM-wonder-FV 1.John 1.SM-say-PFV-FV **1.who** NI-1.SM-steal-PFV-FV
 ‘Whom do we wonder John said stole?’ (Muriungi 2011: 830 (40))

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** 1.SM.TA-buy-FV 5-dress 5.that
 ‘Who did they ask Rumbi if ___ bought that dress?’ (2014-12-06-01-TD)
 *(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.

- c. W-aka-ti [Ø-ani aka-teng-er-a Ø-Thandi [Shona]
 2SG.SM-TA-say **1a-who** 1a.SM.TA-buy-APPL-FV 1a-Thandi
 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*
 Tû-gwatanî-îr-e [CP ûû n-a-ij-ir-e]? [Kũtharaka]
 1PL.SM-agree-PFV-FV **1.who** NI-1.SM-steal-PFV-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 languages 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 preverbal *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 a object relative clause modifying a subject*

- a. * [_{island} O-muu-ndu ni-ye **naanu** a-a-rum-a] a-a-p-a [Lubukusu]
 1-1-person NI-1.NSE **1.who** 1.SM-PST-send-FV 1.SM-PST-beat-FV
 Nekesa?
 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]
 1-farmer PRED-1.SE **1.who** 1.SM-PST-1.OM-steal-APPL-FV
 pesa] a-me-nunu-a motokaa?
 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-yayasir-e] ki-ri o-mu-nju? [Runyoro]
 7-7-pot **1.who** 1.SM-7.OM-break-FV 7.SM-be 18-18-house
 ‘Who is [the pot that ___ broke] in the house?’ (Wasike 2007: 273 (61c))

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

- a. 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-**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 [island si-i-tabu ni-syo **naanu** [Lubukusu]
 1.John 1.SM-PST-see-FV 7-7-book NI-7.NSE **1.who**
 a-a-som-a]?
 1.SM-PST-read-FV
 ‘Who did John see the book that ___ read?’ (Diercks 2010: 173 (137))
- c. ?Juma a-na-tafut-a [island ki-tabu amba-cho **nani** [Swahili]
 1.Juma 1.SM-PRS-look.for-FV 7-book PRED-7.NSE **1.who**
 a-li-uz-a]?
 1.SM-PST-sell-FV
 ‘Who is Juma looking for the book that ___ sold?’ (Wasike 2007: 267 (54b))
- d. Paul a-ku-serr-a [island e-ki-tabo **oha** [Runyoro]
 1.Paul 1.SM-PRS-look.for-FV 7-7-book **1.who**
 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 **nani** 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))

(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-PRS-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 vari-

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)

- 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’)
 (2015-08-29-01-TD)
- 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.’ (2015-08-29-01-TD)

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.’ (2015-08-29-01-TD)

- b. *Focus-sensitive ‘only’ sentence-finally*
 Mu-kadzi a-no-unz-a v-ana ku-chi-koro **chete**. [Shona]
 1-woman 1.SM-TA-bring-FV 2-child 17-7-school **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*
 Mu-kadzi a-no-unz-a v-ana **chete** ku-chi-koro. [Shona]
 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*
 Mu-komana ha-a-n-a ku-teng-es-a **chi-ngwa** [Shona]
 1-boy NEG-1.SM-be.with-FV 15-buy-CAUS-FV **7-bread**
 nezuro, 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*
 Mu-komana ha-a-n-a ku-teng-es-a chi-ngwa [Shona]
 1-boy NEG-1.SM-be.with-FV 15-buy-CAUS-FV 7-bread
nezuro, 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 ___ à-ri ku-tsvag-a Ø-chi-remba? [Shona]
NI-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 ___ à-ri ku-tsvag-a Ø-chi-remba. [Shona]
NI.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)

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

Mu-chembere ndi-ye ___ à-ri ku-tsvag-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)

- c. *Focus-sensitive ‘only’ in a pronominally headed subject pseudocleft*
 Mu-kadzi ndi-ye **ega/chete** ____ à-no-unz-a v-ana [Shona]
 1-woman NI-1 **only** SE.1.SM-TA-bring-FV 2-child
 ku-chi-koro.
 17-7-school
 ‘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*
 *Ø-Chi-remba we-chi-Shona **chete** a-ri ku-rap-a mu-sikana. [Shona]
 1a-7-doctor 1a.of-7-Shona **chete** 1a.SM-be 15-treat-FV 1-girl
 ‘Only the SHONA doctor is treating the girl.’ (2015-08-29-01-TD)
- b. *Focus-sensitive ‘only’ in a subject it-cleft*
 Ndi-Ø-chi-remba we-chi-Shona **chete** ____ à-ri ku-rap-a [Shona]
 NI-1a-7-doctor 1a.of-7-Shona **only** SE.1a.SM-be 15-treat-FV
 mu-sikana?
 1-girl
 ‘It’s only the SHONA doctor who is treating the girl.’ (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*
 ***Mu-komana** ha-a-n-a ku-teng-es-a chi-ngwa [Shona]
1-boy NEG-1.SM-be.with-FV 15-buy-CAUS-FV 7-bread
 nezuro, **mu-chembere**.
 yesterday **1-old.person**
 ‘THE BOY didn’t sell bread yesterday, THE OLD PERSON did.’
 (2015-08-29-01-TD)

& 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 *wh*-phrases or non-specific indefinites).

For Shona specifically, Bliss & Storoshenko (2008) have used the impossibility of the answers to *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 *A'*-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 *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 *familiar topic*. The theme of the sentence (i.e., what the sentence as a whole is about) is called an *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) *Impossibility of non-specific reading of preverbal indefinite subject*

- a. O-mu-kali a-gul-a obuli ri-tunda. [Kinande]
 1-1-woman 1.SM.TA-buy-FV every 5-fruit
 ‘A woman bought every fruit.’ ($\exists > \forall$, $*\forall > \exists$) (Baker 2003: 120 (29))
- b. Mu-kadzi aka-teng-a ma-bhanana \emptyset -ese. [Shona]
 1-woman 1.SM.TA-buy-FV 6-banana 6-every
 ‘A woman bought every banana.’ ($\exists > \forall$, $*\forall > \exists$) (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) *Discourse-new preverbal subjects*

- a. *Context question*
 Chí-í ___ ch-àka-it-ik-a nezuro ma-nheru? [Shona]
 NI.7-what 7.SM-SE.TA-do-STAT-FV yesterday 6-night
 ‘What happened last night?’ (2015-03-21-01-TD)
- b. *Existential construction*
 Pa-n-e mu-nhu ___ àka-gogodz-a pa- \emptyset -gonhi. [Shona]
 16-be.with-FV 1-person SE.1.SM.TA-knock-FV 16-5-door
 ‘Someone knocked on the door.’ (lit., ‘There is a person who knocked on the door.’) (2015-03-21-01-TD)
- c. *?Non-specific indefinite as preverbal subject*
 Mu-nhu aka-gogodz-a pa- \emptyset -gonhi. [Shona]
 1-person 1.SM.TA-knock-FV 16-5-door
 ‘Someone knocked on the door.’ (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*

Ké **mang** a bal-a-ng puku, **Masilo** goba **Molatelo?** [N. Sotho]
 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.

(2.89) *Answers to (2.88)*

a. *Narrowly focused (but discourse-old) subject in situ*

***Masilo** o bal-a puku. [N. Sotho]

1.Masilo 1.SM read-FV 9.book

‘MASILO is reading the book.’ (Zerbian 2006a: 181 (13a))

b. *Narrowly focused (but discourse-old) subject in an it-cleft*

Ké **Masilo** a bal-a-ng puku. [N. Sotho]

COP **Masilo** 1.AA read-FV-REL 9.book

‘It’s MASILO who is reading the book.’ (Zerbian 2006a: 180 (12a.ii))

Similarly, even if an answer to a *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) *Subject wh-question with mention of potential answer*

Ké **mang** a rat-a-ng mma wa Karabo? [N. Sotho]

COP **1.who** 1.AA like-FV-REL 1.mother 1.of 1.Karabo

‘Who likes Karabo’s mother’ (lit., ‘It’s who that likes Karabo’s mother?’)

(Zerbian 2006a: 181 (12c.i))

(2.91) *Answers to (2.90)*

a. *Narrowly focused (but discourse-old) subject in situ*

***Karabo** o rat-a mma wa gagwe. [N. Sotho]

1.Karabo 1.SM like-FV 1.mother 1.of 1.POSS

‘KARABO likes his mother.’ (Zerbian 2006a: 181 (13b))

b. *Narrowly focused (but discourse-old) subject in an it-cleft*

Ké **Karabo** a rat-a-ng mma wa gagwe. [N. Sotho]

COP **1.Karabo** 1.AA like-FV-REL 1.mother 1.of 1.POSS

‘It’s KARABO who likes his mother.’ (Zerbian 2006a: 181 (12c.ii))

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 **mang** 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*

***Mo-dimo** o bop-il-e le-fase le le-godimo? [N. Sotho]
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*

Ndi-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)

(2.95) *Answers to (2.94)*

- a. *Narrowly focused (but discourse-old) subject in situ*
 #? **Ø-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 preserve 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 \(20a.i\)](#))

- b. Mma o rut-a ngwana go bal-a buka. [N. Sotho]
 1.mother 1.SM teach-FV 1.child 15 read-FV 9.book
 ‘A mother is teaching a child to read a book.’ (Zerbian 2006a: 187 (20a.ii))
- c. Mo-nna o rem-a kota. [N. Sotho]
 1-man 1.SM chop-FV 9.wood
 ‘A man is chopping wood.’ (Zerbian 2006a: 188 (20c.iii))

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 & Waters 1984). Within narrow Bantu, several other languages have been shown to display similar effects (see for example Downing 2006, 2011, 2012, Downing & Hyman 2015, Hyman & Katamba 2011, Morimoto 2000, Odden 1984a, Van der Wal 2006, 2009, Yoneda 2011).

Zulu is perhaps the language whose IAV position has received the most attention (Buell 2009, Carstens & Mletshe forthcoming, Cheng 2009, Cheng & Downing 2012, Sabel & Zeller 2006, Van der Spuy 1993). Just as in Shona, the canonical Zulu constituent order 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 [Zulu]
 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**? [Zulu]
 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? [Zulu]
 2SG.SM-9.OM-buy-PFV **when** 9.dress 9.new
 ‘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.¹⁵ 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, Kĩitharaka, 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 Kĩitharaka do. Because Zulu has IAV focus effects whereas Shona, Lubukusu, and Kĩitharaka 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.

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 & Mletshu (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.

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.

(2.100) *Preverbal in-situ wh*-subjects

- a. ***Che** te disturbe-lo? [Bellunese]
who 2SG disturbs-3SG.M.NASCL
 ‘Who disturbs 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** 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 *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 2.2.¹⁷

2.3.2.5 Summary

Because *wh*-phrases have the same distribution as narrowly focused non-*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 *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 *wh*-phrases in preverbal subject position within embedded clauses, whereas *wh*-phrases may appear there in the languages that permit narrow focus in any postverbal position. In echo or quiz questions, *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.

2.3.3 Improper movement

This section considers a movement-based approach to the ban on *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.

¹⁷ 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.

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 *wh*-subjects from appearing in preverbal subject position.

A second issue concerns the assumption that the *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 φ -features on T by the φ -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 *wh*-subjects depends on the *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.

2.3.3.3 Empirical evaluation: *Wh*-phrases within topicalized non-subjects.

First of all, the improper movement approach cannot account for pattern found in Shona, Lubukusu, and Kĩitharaka, in which preverbal *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 *wh*-subjects should be available

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*

a. *No topicalization*

Ø-Rumbi aka-vereng-a [_{DP} bhuku iro]. [Shona]
 1a-Rumbi 1.SM.TA-read-FV 5-book 5.that
 ‘Rumbi read that book.’ (2015-04-14-01-TD)

b. *Topicalization*

[_{DP} Bhuku iro], Ø-Rumbi aka-ri-vereng-a ____ [Shona]
 5-book 5.that 1a-Rumbi 1.SM.TA-5.OM-read-FV
 ‘That book, Rumbi read it.’ (2015-04-14-01-TD)

When the direct object is a *wh*-phrase like *chii* ‘what’, however, topicalization is impossible:

(2.103) *Wh-phrase as (topicalized) non-subject*

a. *Without topicalization*

Ø-Rumbi aka-vereng-a **chi-i?** [Shona]
 1a-Rumbi 1.SM.TA-read-FV 7-chapter
 ‘What did Rumbi read?’ (lit., ‘Rumbi read what?’) (2015-04-14-01-TD)

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.

b. *With topicalization*

- ***Chi-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)

(2.106) *Wh*-in-situ within (topicalized) non-subjecta. *Without 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-**chi-i**?
 7.of-7-**what**

‘What did Rumbi read the beginning chapter of?’ (lit., ‘Rumbi read the beginning chapter of what?’) (2015-04-14-01-TD)

b. *With topicalization*

*[DP Chi-kamu che-ku-tang-a che-**chi-i**], Ø-Rumbi [Shona]
 7-chapter 7.of-15-begin-FV 7.of-7-**what** 1a-Rumbi
 aka-chi-vereng-a ____?
 1.SM.TA-7.OM-read-FV

‘The beginning chapter of what, did Rumbi read it?’ (2015-04-14-01-TD)

(2.107) *Wh*-in-situ within (topicalized) non-subjecta. *Without 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 ri-pi**?
 7.of-5-**book** 5-**which**

‘Which book did Rumbi read the beginning chapter of?’ (lit., ‘Rumbi read the beginning chapter of which book?’) (2015-04-14-01-TD)

b. *With topicalization*

*[DP Chi-kamu che-ku-tang-a che-Ø-**bhuku ri-pi**], Ø-Rumbi [Shona]
 7-chapter 7.of-15-begin-FV 7.of-5-**book** 5-**which** 1a-Rumbi
 aka-chi-vereng-a ____?
 1.SM.TA-7.OM-read-FV

‘The beginning chapter of which book, did Rumbi read it?’ (2015-04-14-01-TD)

Finally, although *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 *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 *wh*-phrase being embedded within the preverbal subject position. Here I follow Wasike (2007) in concluding that the same

is true for *wh*-phrases within islands within topicalized non-subjects.

(2.108) *Relative clause modifying direct object*

- a. Ø-Taurai aka-bik-a [DP mi-riwo ya-v-aka-teng-er-a [Shona]
1a-Taurai 1a.SM.TA-cook-FV 4-vegetable 4.NSE-2.SM-TA-buy-APPL-FV
Ø-Tendai].
1a-Tendai

‘Taurai cooked the vegetables that they bought (for) Tendai.’

(2015-04-14-01-TD)

- b. Nasimiyu a-a-tekh-a [DP chii-nyenyi ni-cho [Lubukusu]
1.Nasimiyu 1.SM-PST-cook-FV 10-vegetable NI-10.NSE
Simiyu a-a-kul-il-a Naakhaanu].
1.Simiyu 1.SM-PST-buy-APPL-FV 1.Naakhaanu

‘Nasimiyu cooked the vegetables that Simiyu bought for Naakhaanu.’

(Wasike 2007: 277 (67a))

- c. Hadija a-li-u-kat-a [DP m-ti amba-o Juma [Swahili]
1.Hadija 1.SM-PST-3.OM-cut-FV 3-tree PRED-3.NSE 1.Juma
a-li-m-pand-i-a m-kulima].
1.SM-PST-1.OM-plant-APPL-FV 1-farmer

‘Hadija cut the tree that Juma planted for the farmer.’

(Wasike 2007: 278 (68a))

(2.109) *Topicalization of direct object modified by a relative clause*

- a. [DP Mi-riwo ya-v-aka-teng-er-a Ø-Tendai], Ø-Taurai [Shona]
4-vegetable 4.NSE-2.SM-TA-buy-APPL-FV 1a-Tendai 1a-Taurai
aka-i-bik-a ____.
1a.SM.TA-4.OM-cook-FV

‘The vegetables that they bought (for) Tendai, Taurai cooked (them).’

(2015-04-14-01-TD)

- b. [DP Chii-nyenyi ni-cho Simiyu a-a-kul-il-a [Lubukusu]
10-vegetable NI-10.NSE 1.Simiyu 1.SM-PST-buy-APPL-FV
Naakhaanu], Nasimiyu a-a-(chi)-tekh-a ____.
1.Naakhaanu 1.Nasimiyu 1.SM-PST-10.OM-cook-FV

‘The vegetables that Simiyu bought for Naakhaanu, Nasimiyu cooked.’

(Wasike 2007: 277 (67b))

- c. [_{DP} M-ti amba-o Juma a-li-m-pand-i-a [Swahili]
 3-tree PRED-3.NSE 1.Juma 1.SM-PST-1.OM-plant-APPL-FV
 m-kulima], Hadija a-li-u-kat-a ____.
 1-farmer 1.Hadija 1.SM-PST-3.OM-cut-FV
 ‘The tree that Juma planted for the farmer, Hadija cut it.’
 (Wasike 2007: 278 (68b))

(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 [Lubukusu]
 10-vegetable NI-10.NSE 1.Simiyu 1.SM-PST-buy-APPL-FV
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 [Swahili]
 3-tree PRED-3.NSE 1.Juma 1.SM-PST-1.OM-plant-APPL-FV
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 *v*P, so both the preverbal subject position and the left-peripheral position for topicalization are anti-focus

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 Kĩtharaka, 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 its 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 in-situ 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*
 [DP Mú-tyairi we-**chi-i**] ____ àka-konzer-a [Shona]
 NI.1-driver 1.of-7-**what** SE.1.SM.TA-cause-FV
 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*
 W-aka-on-a [DP mu-tyairi we-**chi-i**] [Shona]
 2-TA-see-FV 1-driver 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*
 [DP Mu-tyairi we-Ø-mota **i-pi**] aka-konzer-a [Shona]
 1-driver 1.of-9-car **9-which** 1.SM.TA-cause-FV
 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*
 [DP Mú-tyairi we-Ø-mota **i-pi**] ____ àka-konzer-a [Shona]
 NI.1-driver 1.of-9-car **9-which** SE.1.SM.TA-cause-FV
 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*
 W-aka-on-a [DP mu-tyairi we-Ø-mota **i-pi**] [Shona]
 2-TA-see-FV 1-driver 1.of-9-car **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*
 [DP Mi-fananidzo ya-Ø-**ani**] y-aka-konzer-a Ø-bongozozo? [Shona]
 4-picture 4.of-**1a-who** 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*
 [DP Mí-fananidzo ya-Ø-ani] ___ y-àka-konzer-a [Shona]
 NI.4-picture 4.of-1a-who 4.SM-SE.TA-cause-FV
 Ø-bongozozo?
 5-riot
 ‘Who did the pictures of cause a riot?’ (lit., ‘It’s the pictures of who(m) that caused the riot?’)
 (2015-04-14-01-TD)

- (2.114) a. *Preverbal subject whose complement is a D-linked wh-phrase*
 [DP Mi-fananidzo ye-mu-imbi u-pi] y-aka-konzer-a [Shona]
 4-picture 4.of-1-singer 1-which 4.SM-TA-cause-FV
 Ø-bongozozo?
 5-riot
 ‘Which singer did the pictures of cause a riot?’ (lit., ‘The pictures of which singer caused the riot?’)
 (2015-04-14-01-TD)

- b. *Clefted subject whose complement is a D-linked wh-phrase*
 [DP Mí-fananidzo ye-mu-imbi u-pi] ___ y-àka-konzer-a [Shona]
 NI.4-picture 4.of-1-singer 1-which 4.SM-SE.TA-cause-FV
 Ø-bongozozo?
 5-riot
 ‘Which singer did the pictures of cause a riot?’ (lit., ‘It’s the pictures of which singer that caused the riot?’)
 (2015-04-14-01-TD)

The focus licensing account proposed in section 2.3.2 predicts that the in-situ questions (in the (a) sentences above) should not be acceptable except as echo or quiz questions. They should be significantly worse than the (b) or (c) examples, but this contrast does not seem to exist, or at least not as strongly as would be expected. My consultant Thabani Dhlakama said, “I think [(2.111b)] just sounds more interesting, for lack of a better word. [...] Like in a conversation [(2.111a)] is a bit more bland than [(2.111b)]. But it might be because in [(2.111b)] you’re emphasizing the person a little bit more, or it seems like it.” She also said that “[[(2.111c)] is a bit more natural” than (2.111a). It is possible that the blandness and lack of emphasis she refers to is that the *wh*-phrase is not focused (or emphasized, as she said), but this should make it an echo or quiz question.

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?
 9.SM-TA-2.SM-be.angry-CAUS-FV
 '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?
 9.SM-TA-2.SM-be.angry-CAUS-FV
 '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?
 9.SM-TA-2.SM-be.angry-CAUS-FV
 '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)

- d. *In-situ wh-temporal adjunct*
 [DP Ny-aya ye-kuti y-aka-rum-a Ø-Taurai **rinhi**] [Shona]
 9-story 9.of-that 7.SM-TA-bite-FV Ø-Taurai **when**
 y-aka-va-tsamw-is-a?
 9.SM-TA-2.SM-be.angry-CAUS-FV
 ‘When did [the story that it (their dog) bit Taurai ____] anger them?’ (lit., ‘[The story that it bit Taurai when] angered them?’) (2016-03-08-01-TD)
- e. *In-situ wh-manner adjunct*
 [DP Ny-aya ye-kuti y-aka-rum-a Ø-Taurai **sei**] [Shona]
 9-story 9.of-that 7.SM-TA-bite-FV Ø-Taurai **how**
 y-aka-va-tsamw-is-a?
 9.SM-TA-2.SM-be.angry-CAUS-FV
 ‘How did [the story that it (their dog) bit Taurai ____] anger them?’ (lit., ‘[The story that it bit Taurai how] angered them?’) (2016-03-08-01-TD)

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 ẽ-pim-ɛ́é Ø-mbaangé. [Akɔɔse]
 1-child 1.SM.NEG-throw.out-PRF.IRR 10-cocoyam
 ‘The child didn’t throw out the cocoyams.’ (Hedinger 2008: 105 (295))

b. *Ex-situ wh–direct object*

Chě mw-ǎn é-pim-ɛ́é ____? [Akɔɔse]
what 1-child NSE.1.SM.NEG-throw.out-PRF.IRR
 ‘What didn’t the child throw out?’ (Hedinger 2008: 106 (297))

(3.2) *Wh-ex-situ in Bakweri*

a. *No extraction*

Na-zoz-î. [Bakweri]
 1SG.SM-wash-PRF
 ‘I have washed.’ (Marlo & Odden 2007: 27 (29))

b. *Ex-situ wh–direct object*

Njé 'ná-'zóz-î ____? [Bakweri]
who NSE.1SG.SM-wash-PRF
 ‘Who(m) have I washed?’ (Marlo & Odden 2007: 27 (31b))

(3.3) *Wh-ex-situ in Kikuyu*

a. *No extraction*

Kamaú é:r-íré Ka:náké [_{CP} áté Káriók'í á-tém-íré [Kikuyu]
 1.Kamau 1.SM.tell-PST Kanake that 1.Kariūki 1.SM-cut-PST
 mótě].
 tree
 ‘Kamau told Kanake that Kariūki cut the tree.’ (Zaenen 1983: 473 (11))

- b. *Long-distance ex-situ wh-subject*

Nóo Kámaú é:ʼr-íré Ka:náké [_{CP} áte ____ o-t[~~Kilín~~yú]
NI.1.who 1.Kamau 1.SM.tell-PST 1.Kanake that 1.AA-cut-PST tree
 mote]?

‘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*

Mw-ána mu-sóga á-ku-kít-ag-a bú-bo. [Kilega]
 1-child 1-nice 1.SM-PROG-do-HAB-FV 14-that
 ‘A nice child always/usually does that.’ (Kinyalolo 1991: 15 (1a))

- b. *Subject extraction: anti-agreement appears*

Mw-ána u-a názi ____ ú-ku-kít-ag-a bú-bo? [Kilega]
1-child 1-of who AA.SG-PROG-do-HAB-FV 14-that
 ‘Whose child (usually) does that?’ (Kinyalolo 1991: 20 (12b))

- c. *Subject extraction: canonical subject agreement blocked*

***Mw-ána u-a názi** ____ á-ku-kít-ag-a bú-bo? [Kilega]
1-child 1-of who 1.SM-PROG-do-HAB-FV 14-that
 ‘Whose child (usually) does that?’ (Kinyalolo 1991: 20 (12c))

(3.5) *Wh-ex-situ in Lubukusu*

- a. *No extraction*

Nafula a-a-siim-a Wafula [Lubukusu]
 1.Nafula 1.SM-PRS-love-FV 1.Wafula
 ‘Nafula loves Wafula.’ (Wasike 2007: 234)

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

Naanu ni-ye Nafula a-a-siim-a ____? [Lubukusu]
1.who NI-1 1.Nafula 1.SM-PRS-love-FV
 ‘Who is it that Nafula loves?’ (Wasike 2007: 234)

- c. *Long-distance ex-situ wh-subject*

Naanu ni-ye ba-many-ile ____ o-w-a-kula [Lubukusu]
1.who NI-1 2.SM-know-PST 1.SE-1.SM-PST-buy
 ka-ma-tunda?
 6-6-fruit
 ‘Who do they know bought fruit?’ (Diercks 2010: 188 (161))

- (3.6) *Wh-ex-situ in Kinande: Long-distance ex-situ wh-direct object*
 [Ekihi ky-o Kambale a-si [nga ky-o Yosefu [Kinande]
 7.what 7-FOC 1.Kambale 1.SM-know if 7-FOC 1.Yosefu
 a-kalengekanaya [nga ky-o Mary' a-kahuka ____]]]?
 1.SM-think if 7-FOC 1.Marya 1.SM-cook
 'What did Kambale know that Yosefu thinks that Mary is cooking (for dinner)?'
 (Schneider-Zioga 2009: 47 (3))

3.1.3 Theoretical issues at stake

As discussed in chapter 2, the primary theoretical question raised by *wh*-in-situ is the nature of the relation between the scopal position and the pronunciation site of the *wh*-phrase. Similarly, the primary theoretical question raised by full *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 *wh*-phrase. Is movement involved in establishing this relation? If so, is the moving element the *wh*-phrase or a null operator? Finally, is this movement driven by the *wh*-ness of the *wh*-phrase or by focus?

A second question, already alluded to above, is whether full *wh*-movement is the same thing as having a sentence-initial *wh*-phrase. In other words, is the set of questions with full *wh*-movement (i.e., with the *wh*-phrase pronounced in scopal position) coextensive with the set of questions with the *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 *wh*-phrases that are not in their scopal position and questions with non-sentence-initial *wh*-phrases that are in their scopal position)?

This chapter centers around a case study of Shona *wh*-ex-situ, with some discussion of true and apparent full *wh*-movement in other Bantu languages. I will argue that in Shona, what appears at first glance to be full *wh*-movement within a single clause is actually relativization of a *wh*-phrase within a biclausal cleft construction. Thus, this is only *apparent* full *wh*-movement because there is silent structure that intervenes between the scopal position of the *wh*-phrase and its pronunciation site. Still, the *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 φ -agreement on the highest verb they have crossed (this is in addition to normal φ -agreement with the subject), while locally extracted *wh*-subjects trigger a floating low tone but no extra overt φ -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*

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)

(3.8) *Local wh-ex-situ, sentence-initial*

a. *Left-edge ex-situ wh-subject*

Ndi-Ø-ani ____ àka-teng-er-a Ø-Thandi Ø-rokwe [Shona]
NI-1a-who SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress
 ku-chi-toro nezuro?
 17-7-store yesterday
 '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*

Ndi-Ø-ani wa-v-aka-teng-er-a ____ Ø-rokwe [Shona]
NI-1a-who 1a.NSE-2.SM-TA-buy-APPL-FV 5-dress
 ku-chi-toro nezuro?
 17-7-store yesterday
 '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-í cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro [Shona]
NI-7-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]
NI-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]
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)

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]
NI-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)

- b. *Left-edge long-distance ex-situ wh-indirect object*
Ndi-Ø-ani wa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-1a-who 1a.NSE-2SG.SM-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 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*
Chí-í cha-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-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 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*
Nde-ku-pi kwa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-17-which 17.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ___ nezuro?
 1a-Thandi 5-dress yesterday
 ‘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*
Ndi-rinhi pa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-when 16.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro ___?
 1a-Thandi 5-dress 17-7-store
 ‘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*

___ Àka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]
 SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-store

nezuro **ndi-Ø-ani?**

yesterday **NI-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*

Wa-v-aka-teng-er-a ___ Ø-rokwe ku-chi-toro nezuro [Shona]
 1a.NSE-2.SM-TA-buy-APPL-FV 5-dress 17-7-store yesterday

ndi-Ø-ani?

NI-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*

Cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro [Shona]
 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday

chi-í?

NI.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*

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)

(3.11) *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 **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 **chí-í?**

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)

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)

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

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 [Shona]
NI-17-which 17.NSE-1.SM-TA-like-FV 7-team
 chì-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 chì-no-bv-a [Shona]
 17.NSE-1.SM-TA-like-FV 7-team SE.7.SM-TA-be.from-FV
 ____]] **nde-ku-pi?**
NI-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 chì-no-bv-a **ku-pi?** [Shona]
 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*

***Chí-í** cha-va-ri ku-tsvag-a [island] mu-rume [Shona]
NI.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-í?**

NI.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)

c. *In situ*

Va-ri ku-tsvag-a [_{island} mu-rume àka-b-a **chí-í?** [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]
16.NSE-2.SM-be 15-look.for-FV 1-man SE.1.SM.TA-steal-FV

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 objecta. *Left edge*

- ***Ndi-Ø-ani** wa-u-no-ziv-a [island mu-sikana [Shona]
NI-1a-who 1a.NSE-2SG.SM-TA-know-FV 1-girl
 wa-v-ai-fung-a [kuti ___ aka-vhakachir-a]]?
 1.NSE-2.SM-TA-think-FV that 1a.SM.TA-visit-FV
 ‘Who do (lit., It’s who that) you know [the girl that they thought ___ visited]?’
 (2016-03-08-01-TD)

b. *Right edge*

- *[Wa-u-no-ziv-a [island mu-sikana wa-v-ai-fung-a [Shona]
 1a.NSE-2SG.SM-TA-know-FV 1-girl 1.NSE-2.SM-TA-think-FV
 [kuti ___ aka-vhakachir-a]]] **ndi-Ø-ani**?
 that 1a.SM.TA-visit-FV **NI-1a-who**
 ‘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*

- U-no-ziv-a [island mu-sikana wa-v-ai-fung-a [kuti [Shona]
 2SG.SM-TA-know-FV 1-girl 1.NSE-2.SM-TA-think-FV that
Ø-ani aka-vhakachir-a]]?
1a-who 1a.SM.TA-vist-FV
 ‘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 object²a. *Left edge*

- ***Nde-ku-pi** kwa-u-no-ziv-a [island mu-sikana [Shona]
NI-17-which 17.NSE-2SG.SM-TA-know-FV 1-girl
 wa-v-aka-wan-a ___]?
 1.NSE-2.SM-TA-find-FV
 ‘Where do (lit., It’s where that) you know [the girl that they found ___]?’
 (2014-11-01-01-TD)

b. *Right edge*

- *[Kwa-u-no-ziv-a [island mu-sikana wa-v-aka-wan-a [Shona]
 17.NSE-2SG.SM-TA-know-FV 1-girl 1.NSE-2.SM-TA-find-FV
 ___]] **nde-ku-pi**?
NI-17-which
 ‘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.

- c. *In situ*
 ?U-no-ziv-a [island mu-sikana wa-v-aka-wan-a [Shona]
 2SG.SM-TA-know-FV 1-girl 1.NSE-2.SM-TA-find-FV
ku-pi?
17-which
 ‘Where do you know [the girl that they found ___]?’ (lit., ‘You know [the girl that they found where]?’) (2014-11-01-01-TD)

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-í** cha-v-aka-ramb-a [island ny-aya ye-kuti ___ [Shona]
NI.7-what 7.NSE-2.SM-TA-deny-FV 9-story 9.of-that
 ch-aka-rum-a Ø-Taurai]?
 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-aya ye-kuti ___ [Shona]
 7.NSE-2.SM-TA-deny-FV 9-story 9.of-that
 ch-aka-rum-a Ø-Taurai]] **chí-í**?
 7.SM-TA-bite-FV 1a-Taurai **NI.7-what**
 ‘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-aya ye-kuti **chi-i** ch-aka-rum-a [Shona]
 2.SM-TA-deny-FV 9-story 9.of-that **7-what** 7.SM-TA-bite-FV
 Ø-Taurai]?
 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 DPa. *Left edge*

- ***Ndi-Ø-ani** wa-v-aka-ramb-a [island ny-aya ye-kuti [Shona]
NI-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]
 1a.NSE-2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV
 ___ pa-Ø-gumbo]] **ndi-Ø-ani**?
 16-5-leg **NI-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]
 1a.NSE-2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV
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 DPa. *Left edge*

- ***Nde-pa-pi** pa-v-aka-ramb-a [island ny-aya ye-kuti [Shona]
NI-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. *Right edge*

*[Pa-v-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]
 16.NSE-2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV

Ø-Taurai ____]] **nde-pa-pi**?

1a-Taurai **NI-16-which**

‘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. *In situ*

V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]
 1a.NSE-2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV

Ø-Taurai **pa-pi**]?

1a-Taurai **16-which**

‘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) *Wh-temporal adjunct from the clausal complement of an object DP*a. *Left edge*

***Ndi-rinhi** pa-v-aka-ramb-a [island ny-aya ye-kuti [Shona]
NI-when 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

‘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. *Right edge*

*[Pa-v-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]
 16.NSE-2.SM-TA-deny-FV 9-story 9.of-that 9.SM-TA-bite-FV

Ø-Taurai ____]] **ndi-rinhi**?

1a-Taurai **NI-when**

‘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. *In situ*

V-aka-ramb-a [island ny-aya ye-kuti y-aka-rum-a [Shona]
 1a.NSE-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 ____]?’ (lit., ‘They denied [the story that it bit Taurai when]?’)

(2016-03-08-01-TD)

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 clausea. *Left edge*

***Ndi-Ø-ani** wa-v-aka-foner-a ma-purisa [_{island} nokuti [Shona]
ni-1a-who 1a.NSE-2.SM-TA-call-FV 6-police because
 v-aka-on-a ____]?
 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 [Shona]
 1a.NSE-2.SM-TA-call-FV 6-police because 2.SM-TA-see-FV
 ____]] **ndi-Ø-ani**?
ni-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 [Shona]
 1a.NSE-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 ____]?’ (lit., ‘They called the police [because they saw who(m)]?’) (2014-11-01-01-TD)

(3.22) *Wh*-subject from an adverbial clausea. *Left edge*

***Ndi-Ø-ani** wa-v-aka-foner-a ma-purisa [_{island} nokuti ____ [Shona]
ndi-1a-who 1a.NSE-2.SM-TA-call-FV 6-police because
 aka-on-a m-bavha]?
 1a.SM.TA-see-FV 9-thief

‘Who did they call (lit., It’s who that they called) the police because ____ saw a thief?’ (2014-11-01-01-TD)

b. *Right edge*

* [Wa-v-aka-foner-a ma-purisa [_{island} nokuti ___ aka-on-a [Shona]
 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} nokuti **Ø-ani** aka-on-a [Shona]
 2.SM-TA-call-FV 6-police because **1a-who** 1a.SM.TA-see-FV
 m-bavha]?
 9-thief

‘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*

? **Chí-í** cha-v-aka-teng-er-a Ø-Rumbi [_{island} ___ [Shona]
NI.7-what 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-chí-í** 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

lower copies are still present in the syntactic structure at Transfer but simply go unpronounced (Barss 1986, Chomsky 1993, Fox 1999, Lebeaux 1988, Mahajan 1990, Miyagawa 2010, Pesetsky 2013, Safir 1999, Sauerland 2003, Schneider-Zioga 2009, Takahashi 2006, Takahashi & Hulsey 2009, Torrence 2013, among others).

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*

[_{DP} E-ki-tabu ki-we_i] ky' [_{DP} **o-buli mu-kolo**]_i akasoma ____ [Kinande]
 7-7-book 7-1.POSS 7.NSE **1-every 1-student** 1.SM.read

kangikangi.

regularly

'It's HIS_i BOOK that every student_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*

* [DP E-ki-tabu ki-we_i] kyo ngalengekanaya [CP nga kyo [Kinande]
7-7-book 7-1.POSS 7.NSE 1SG.SM.think that 7.NSE

[DP **o-buli mu-kolo**]_i akasoma ___ kangikangi].
1-every 1-student 1.SM.read regularly

‘It’s HIS_i BOOK that I think every student_i reads regularly.’

(Schneider-Zioga 2009: 49 (8))

b. *Pronoun cannot be interpreted in intermediate position*

* [DP E-ki-tabu ki-we_i] kyo [DP **o-buli mu-kolo**]_i [Kinande]
7-7-book 7-1.POSS 7.NSE **1-every 1-student**

alengekanaya [CP nga kyo nganasoma ___ kangikangi].
1.SM.think that 7.NSE 1SG.SM.read regularly

‘It’s HIS_i BOOK that every student_i 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.

(3.27) *Reconstruction in Shona local and long-distance clefts*a. *Reconstruction in local cleft*

I-_{[DP} Ø-bhora ra-ke_i] _{[DP} mw-ana w-ese]_i [Shona]
 NI-5-ball 5.of-1.POSS **1-child 1-every**

ra-a-no-farir-a ____.
 5.NSE-1.SM-TA-like-FV

‘It’s HIS_i BALL that every child_i likes.’ (2014-09-06-02-TD)

b. *Reconstruction in long-distance cleft*

I-_{[DP} Ø-bhora ra-ke_i] ra-ndi-no-fung-a _{[CP} kuti [Shona]
 NI-5-ball 5.of-1.POSS 5.NSE-1SG.SM-TA-think-FV that

_{[DP} mw-ana w-ese]_i a-no-farir-a ____].
1-child 1-every 1.SM-TA-like-FV

‘It’s HIS_i BALL that I think every child_i 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*

*_{[DP} A-mai va-ke_i] va-no-d-a _{[DP} mu-komana [Shona]
 2b-mother 2b.of-1.POSS 2b.SM-TA-love-FV **1-boy**

w-ese]_i.

1-every

‘His_i mother loves every boy_i.’ (2014-10-22-01-TD)

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’.⁴

- (3.29) *Quantifier can bind variable pronoun embedded within complement clause*
- [_{DP} Mw-ana w-ese]_i a-no-kosh-es-a [_{DP} ma-onero [Shona]
1-child 1-every 1.SM-TA-be.valued-CAUS-FV 6-view
 e-mu-dzidzisi wa-ke_i e-kuti [_{a_i}]-ka-ngwar-a].
 6.of-1-teacher 1.of-1.POSS 6.of-that 1.SM-TA-be.smart-FV
 ‘Every child_i values his/her_i teacher’s opinion that s/he_i 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*
- U-no-fung-a [_{CP} kuti [_{DP} mw-ana w-ese]_i [Shona]
 2SG.SM-TA-think-FV that **1-child 1-every**
 a-no-kosh-es-a [_{DP} ma-onero a-Ø-ani e-kuti
 1.SM-TA-be.valued-CAUS-FV 6-view 6.of-1a-who 6.of-that
 [_{a_i}]-ka-ngwar-a]]?
 1.SM-TA-be.smart-FV
 ‘Whose opinion that s/he_i is smart do you think every child_i values?’ (lit., ‘You think that every child_i values the opinion of whom that s/he_i 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 φ -features valued under Agree with the null subject pronoun, following Carstens (2005).

- b. *Wh-ex-situ*: *Quantifier does not c-command highest copy of pronoun*
- [_{DP} Má-onero a-Ø-ani e-kuti [_{a_i}]-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} kuti [_{DP} mw-ana w-ese]_{*i*};
 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_i* is smart do you think every child_{*i*} values?’ (lit., ‘It’s the opinion of whom that *s/he_i* is smart that you think every child_{*i*} 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*

- ***A_i**-cha-edz-a ku-ramb-a Ø-wanikidzo ya-ngu ye-kuti [Shona]
1.SM-TA-try-FV 15-deny-FV 9-discovery 9.of-1SG.POSS 9.of-that
he.will.try to.deny the.discovery of.mine that
 (Ø-Taurai_i) 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.
 10.SM-SE.TA-steal-PASS-FV
 that.were.stolen
 ‘He_i will try to dismiss my discovery that Taurai_i had sold the stolen earrings.’
 (2014-10-04-01-TD)

b. *Pronoun does not c-command R-expression*

- [_{DP} Ø-Gweta ra-**ke_i**] 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) aka-ng-e
 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-àka-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_i lawyer will try to dismiss my discovery that Taurai_i 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_i deserved to share the prize] does **he_i** think [_{CP} ___ is relevant to the discussion]? (Pesetsky 2013: 130 (10b))
- b. * [_{DP} Which argument that John_i was wrong] did **he_i** accept ___ in the end? (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_i-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_i 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_i had sold the stolen earrings does he_i think was fabricated?’ (lit., ‘He_i thinks that whose discovery that Taurai_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*
 I-_[DP] Ø-wanikidzo ya-Ø-ani ye-kuti [Ø-Taurai_i] aka-ng-e [Shona]
 NI-9-discovery 9.of-1a-who 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV
 it's.the.discovery of.whose that Taurai had
 a-teng-es-a Ø-mhete dz-àka-b-iw-a]
 1a.SM.TA-buy-CAUS-FV 10-jewelry 10.SM-SE.TA-steal-PASS-FV
 sold the.earrings that.were.stolen
 ya-a_i-no-fung-a [_{CP} kuti ___ y-ai-v-e ma-nyepo]?
 9.NSE-1.SM-TA-think-FV that 9.SM-TA-become-FV 6-lie
 that.he.thinks that was lies
 'Whose discovery that Taurai_i had sold the stolen earrings does he_i think was fabricated?' (lit., 'It's whose discovery that Taurai_i had sold the stolen earrings that he_i thinks was fabricated?') (2014-10-04-01-TD)
- c. *Right-edge wh-ex-situ: Pronoun does not c-command highest copy of R-expression*
 [_{CP} Ya-a_i-no-fung-a [_{CP} kuti ___ y-ai-v-e [Shona]
 9.NSE-1.SM-TA-think-FV that 9.SM-TA-become-FV
 that.he.thinks that was
 ma-nyepo]] [_{DP} i-Ø-wanikidzo ya-Ø-ani ye-kuti
 6-lie NI-9-discovery 9.of-1a-who 9.of-that
 lies it's.the.discovery of.whose that
 [Ø-Taurai_i] 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]?
 10.SM-SE.TA-steal-PASS-FV
 that.were.stolen
 'Whose discovery that Taurai_i had sold the stolen earrings does he_i think was fabricated?' (lit., 'That he_i thinks was fabricated it's whose discovery that Taurai_i 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.⁵

One is to say that *wh*-ex-situ in Shona is A-movement rather than A'-movement, because A-movement shows Principle A and variable binding reconstruction but not Principle C reconstruction (Chomsky 1993, Fox 1999, Mahajan 1990, Miyagawa 2010, Pesetsky 2013: 137–138, Takahashi 2006, Takahashi & Hulseley 2009). Many of the reflexive binding tests that often help diagnose the A/A'-movement distinction are unavailable in Shona because there are no independent reflexives, but the possibility of long-distance *wh*-ex-situ seems to militate against viewing it as A-movement (though see Carstens 2011, Carstens & Diercks 2013 on hyper-raising in Bantu). Other arguments against treating Shona *wh*-ex-situ as A-movement (from Safir 2015) 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 (Lebeaux 1988, Fox 1999, Pesetsky 2013). 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 (2003) argues that English relative

5. 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.

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_i does **he_i** like ___? (Sauerland 2003: 210 (12b))
- b. Which is _[RelCl] the picture of John_i that **he_i** 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_i uo _[DP cila muntu_i] 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_i that every person_i 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_i ico [Bemba]
 Q 7.this COP-7.picture 7.of-1.POSS 1.John 7.REL
a_i-temwa ___]?
1.SM-like

‘Is this the picture of John_i that he_i 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) *Local wh*-ex-situ

a. *Left-edge ex-situ wh*-subject

***(Ndi)-Ø-ani** ___ àka-teng-er-a Ø-Thandi Ø-rokwe [Shona]
NI-1a-who SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress
ku-chi-toro nezuro?
17-7-store yesterday
‘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

***(Ndi)-Ø-ani** wa-v-aka-teng-er-a ___ Ø-rokwe [Shona]
NI-1a-who 1a.NSE-2.SM-TA-buy-APPL-FV 5-dress
ku-chi-toro nezuro?
17-7-store yesterday
‘Who(m) did they buy (lit., It’s who that they bought) a dress (for) at the store yesterday?’
(2014-09-09-01-TD)

c. *Left-edge ex-situ wh*-direct object

{***Chi-i/Chí-i**} cha-v-aka-teng-er-a Ø-Thandi ___ [Shona]
***(NI).7-what** 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi
ku-chi-toro nezuro?
17-7-store 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 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*
 *(**Ndi**)-**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*
 *(**Ndi**)-**Ø-ani** wa-w-ai-fung-a kuti ___ aka-teng-er-a [Shona]
NI-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 (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*
 *(**Ndi**)-**Ø-ani** wa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-1a-who 1a.NSE-2SG.SM-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**)/**Chí-i**} cha-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
 *(**NI**).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)

- d. *Left-edge long-distance ex-situ wh-locative adjunct*
 *(**Nde**)-**ku-pi** kwa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-17-which 17.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ___ nezuro?
 1a-Thandi 5-dress yesterday
 ‘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*
 *(**Ndi**)-**rinhi** pa-w-ai-fung-a kuti v-aka-teng-er-a [Shona]
NI-when 16.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro ___?
 1a-Thandi 5-dress 17-7-store
 ‘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*
 ___ Àka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]
 SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-store
 nezuro *(**ndi**)-Ø-ani?
 yesterday **NI-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*
 Wa-v-aka-teng-er-a ___ Ø-rokwe ku-chi-toro nezuro [Shona]
 1a.NSE-2.SM-TA-buy-APPL-FV 5-dress 17-7-store yesterday
 *(**ndi**)-Ø-ani?
NI-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*
 Cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro [Shona]
 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday
 {*(**chi-i/chí-i**)?}
 *(**NI**)-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*
 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/chí-í}?**
 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)

- 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*
***(Ndi)-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-v-aka-teng-er-a Ø-Thandi ____ [Shona]
 NI-5-dress 5.NSE-2.SM-TA-buy-APPL-FV 1a-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/Kú}-chi-toro kwa-v-aka-teng-er-a Ø-Thandi [Shona]
 *(NI).17-7-store 17.NSE-2.SM-TA-buy-APPL-FV 1a-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-àka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]
 2.SM-SE.TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-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.NSE-2.SM-TA-buy-APPL-FV 5-dress 17-7-store yesterday
 *(ndi)-Ø-Thandi.
 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.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday
 *(i)-Ø-rokwe.
 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.’) (2016-03-08-02-TD)

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

{*ku/kú}-chi-toro.

***(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*

Biclausal:	(pronoun)	copula	cleft phrase	cleft clause
		↓	↓	↓
Monoclausal:		(focus marker)	focused phrase	rest of clause

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 Kĩitharaka.

At first glance, the Shona and Kĩitharaka 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 *i-*. However, as might be surmised from the differences in the free translations, I will argue against a unified analysis of these constructions.

(3.43) *Superficially similar focus-ex-situ in Shona and Kîitharaka*

- a.
- Ex-situ focused direct object*

I-m-bavha ya-aka-on-a _____ nezuro. [Shona]
NI-9-thief 9.NSE-1.SM.TA-see-FV _____ yesterday
 ‘It’s A THIEF that s/he saw yesterday.’ (2015-04-14-02-TD)

- b.
- Ex-situ focused direct object*

I-mw-amba Peter a-ra-on-ir-e _____ î-goro. [Kîitharaka]
NI-1-thief 1.Peter 1.SM-REC.PST-see-PFV-FV _____ 5-yesterday
 ‘THE THIEF Peter saw yesterday.’ (Abels & Muriungi 2008: 725 (99a))

(3.44) *Superficially similar focus-ex-situ in Shona and Kîitharaka*

- a.
- Ex-situ focused subject of an unaccusative*

I-m-bavha _____ y-àka-pind-a. [Shona]
NI-9-thief 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 an unaccusative*

I-Maria _____ a-kiny-ir-e. [Kîitharaka]
NI-1.Maria 1.SM-arrive-PFV-FV
 ‘MARIA arrived.’ (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 Kîitharaka construction, which Abels & Muriungi (2008) have convincingly argued is monoclausal.

3.2.4.2 The basics of focus-ex-situ in Kîitharaka and Shona

The examples in (3.45–3.46) illustrate that focus-ex-situ in both Shona and Kîitharaka 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

	Biclausal	Monoclausal
Kikuyu	Bergvall 1987	Clements 1984, Schwarz 2003, 2007, Yuan 2016
Kĩitharaka	Harford 1997a	Abels 2012a, Muriungi 2003, 2005, Abels & Muriungi 2008
Lubukusu	Diercks 2010	Wasike 2007
Ikalanga	Letsholo 2011, 2012	Letsholo 2002, 2007
Kinande		Schneider-Zioga 2007
Kuria		Landman & Ranero 2014, Ranero 2014
Lingala		Van der Wal & Maniacky 2015
Kituba		Van der Wal & Maniacky 2015
Kiyoombe	Van der Wal & Maniacky 2015	
Kimanyaanga	Van der Wal & Maniacky 2015	
N. Sotho	Zerbian 2006a	
Zulu	Sabel & Zeller 2006, Cheng & Downing 2013	
Bàsáá	Hamlaoui & Makasso 2015	

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: 698–705). 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*
I-m-bavha ___ y-àka-pind-a. [Shona]
NI-9-thief 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*
Ndi-Ø-Tendai ___ àka-teng-er-a Ø-Thandi Ø-rokwe. [Shona]
NI-1a-Tendai SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress
 ‘It’s TENDAI who bought Thandi a dress.’ (2014-08-29-03-TD)

- c. *Ex-situ focused direct object*
I-Ø-rokwe ra-aka-teng-er-a Ø-Thandi _____. [Shona]
NI-5-dress 5.NSE-1.SM.TA-buy-APPL-FV 1a-Thandi
 ‘It’s A DRESS that s/he bought Thandi.’ (2014-09-06-02-TD)
- d. *Ex-situ focused locative adjunct*
Kú-chí-toro kwa-aka-teng-er-a Ø-Thandi [Shona]
NI.17-7-store 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*
I-Maria ____ a-kiny-ir-e. [Kĩitharaka]
NI-1.Maria 1.SM-arrive-PFV-FV
 ‘MARIA arrived.’ (Abels & Muriungi 2008: 692 (10b))
- b. *Ex-situ focused subject of a transitive verb*
N-Aana ____ a-gũr-ĩr-e ĩ-buku. [Kĩitharaka]
NI-1.Ana 1.SM-buy-PFV-FV 5-book
 ‘ANA bought a book.’ (Abels & Muriungi 2008: 690 (4b))
- c. *Ex-situ focused direct object*
N-ĩi-buku Maria a-gũr-ĩr-e mw-arĩmũ _____. [Kĩitharaka]
NI-5-book 1.Maria 1.SM-buy-APPL-PFV-FV 1-teacher
 ‘Maria bought the teacher A BOOK.’ (Abels & Muriungi 2008: 691 (6b))
- d. *Ex-situ focused locative adjunct*
I-mũciĩ gw-a mw-arĩmũ Maria a-thi-ir-e _____. [Kĩitharaka]
NI-17.home 17-of 1-teacher 1.Maria 1.SM-go-PFV-FV
 ‘Maria went TO THE TEACHER’S HOME.’ (Abels & Muriungi 2008: 702 (47d))
- e. *Ex-situ focused temporal adjunct*
I-rũ-kĩĩrĩ Maria a-thom-ir-e mbibiria _____. [Kĩitharaka]
NI-11-morning 1.Maria 1.SM-read-PFV-FV 9.Bible
 ‘Maria read the Bible IN THE MORNING.’
 (Abels & Muriungi 2008: 704 (55a))

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 Kĩitharaka 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 φ -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.

	Shona	Kĩitharaka
Cleft pronoun not required	✓	✓
Copula/focus marker		
Cannot bear subject marking or tense	✓	✓
Phonologically dependent	✓	✓

Table 3.2: Properties of Shona and Kĩitharaka 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 Kĩitharaka focus marker and the Shona copula display allomorphy, and the morphological shapes of these allomorphs appear to be cognate.

- (3.47) *Shona NI copula allomorphs*⁶
- | | | | | |
|------|---|---|-----|--------------------------|
| ndí- | ↔ | / | ___ | {1SG, 1PL, 2SG, 2PL, 1a} |
| ndé- | ↔ | / | ___ | {‘which’, ‘whose’} |
| í- | ↔ | / | ___ | {5, 9, 10} |
| Ḩ- | ↔ | / | ___ | elsewhere |
- (Brauner 1995: 42–43, Carter 1956, Fortune 1985: 136–144, Pongweni 1980)

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) *Kĩitharaka focus marker allomorphs*
- | | | | | |
|----|---|---|-----|---|
| n- | ↔ | / | ___ | V |
| i- | ↔ | / | ___ | C |
- (Abels & Muriungi 2008: 690)

Note that the allomorphy is phonologically conditioned in Kĩitharaka but morphologically conditioned in Shona. This could be indicative that Kĩitharaka is further along the path of grammaticalization, but it certainly is not as clear-cut as it would be if the Kĩitharaka 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 Kĩitharaka (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 Kĩitharaka 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.

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. [Shona]
 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** [Shona]
 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. [Shona]
 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. [Shona]
 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-*, *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)⁷. 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.

(3.50) *Predicational uses of ndi- NI*

- 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 **mú**-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- NI*

- a. *Specificational copular sentence, ndi- allomorph*
 Mu-tungamir-i wa-va-nhu va-Ø-Judha **ndi**-Ø-Nashani [Shona]
 1-lead-NMLZ 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.SM-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*)

Kĩitharaka 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) *Kĩitharaka n-/i- used in copular constructions*

- a. Karimi **i**-mubiasara. [Kĩitharaka]
 Karimi **NI**-businesswoman
 ‘Karimi is a businesswoman.’ (Muriungi 2005: 82 (98))

- b. David **n**-obisa. [Kîtharaka]
 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 Kîtharaka, 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 Kîtharaka (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 Kîtharaka 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.

	Shona	Kîtharaka
Cleft pronoun not required	✓	✓
Copula/focus marker		
Cannot bear subject marking or tense	✓	✓
Phonologically dependent	✓	✓
Morphologically invariant	×	×
Separate form in copular constructions	×	×

Table 3.3: Properties of Shona and Kîtharaka 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*
N-îi-buku Maria a-gûr-îr-e _____. [Kîitharaka]
NI-5-book 1.Maria 1.SM-buy-PFV-FV
 ‘Maria bought A BOOK.’ / ‘Maria BOUGHT A BOOK.’
 (Abels & Muriungi 2008: 707 (64b))
- b. *Focus-marked verb*
 Maria **n-a-gûr-îr-e** î-buku. [Kîitharaka]
 1.Maria **NI-1.SM-buy-PFV-FV** 5-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 Kîitharaka, suggesting that the Kîitharaka 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.

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 φ -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*

Ndi-Ø-ani ____ {***a-/à-**}ka-teng-a Ø-rokwe? [Shona]
NI-1a-who *(**SE**).1a.SM.TA-buy-FV 5-dress
 ‘Who (lit., It’s who that) bought a dress?’ (2014-06-28-01-TD)

- b.
- Focus-ex-situ requires extraction marking*

Ndi-Ø-Rumbi ____ {***a-/à-**}ka-teng-a Ø-rokwe. [Shona]
NI-1a-Rumbi *(**SE**).1a.SM.TA-buy-FV 5-dress
 ‘It’s RUMBI who bought a dress.’ (2016-03-14-TD)

- c.
- Relative clauses require extraction marking*

Ndi-no-ziv-a [RelCl mu-sikana ____ {***a-/à-**}ka-teng-a [Shona]
 1SG.SM-TA-know-FV 1-girl *(**SE**).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*

Ndi-Ø-ani *(**wa**)-v-aka-teng-er-a ____ Ø-rokwe? [Shona]
NI-1a-who **1a.NSE-2.SM-TA-buy-APPL-FV** 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.
- Focus-ex-situ requires extraction marking*

Ndi-Ø-Thandi *(**wa**)-v-aka-teng-er-a ____ Ø-rokwe. [Shona]
NI-1a-Thandi **1a.NSE-2.SM-TA-buy-APPL-FV** 5-dress
 ‘It’s THANDI that they bought a dress (for).’ (2016-02-13-01-TD)

- c.
- Relative clauses require extraction marking*

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].
 5-dress
 ‘I know the girl who they bought a dress (for).’ (2016-02-13-01-TD)

Kiitharaka 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 Kiitharaka 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*

I-mw-amba_i Peter a-ra-on-ir-e t_i i-goro. [Kiitharaka]
NI-1-thief 1.Peter 1.SM-REC.PST-see-PFV-FV 5-yesterday
 'THE THIEF Peter saw yesterday.' (Abels & Muriungi 2008: 725 (99a))

b. *Temporal modifier fronted out of focus-ex-situ construction*

i-goro_j **i-mw-amba_i** Peter [Kiitharaka]
 5-yesterday **NI-1-thief** 1.Peter
 a-ra-on-ir-e $t_i t_j$.
 1.SM-REC.PST-see-PFV-FV
 'Yesterday THE THIEF Peter saw.' (Abels & Muriungi 2008: 725 (99a))

8. Harford (1997a) argues that Kiitharaka verbs in relative clauses and focus constructions do show alternative agreement (Diercks 2009, 2010, Henderson 2013, Schneider-Zioga 2007, Zentz 2015), but Abels & Muriungi (2008: 725) question the empirical basis for her claim.

(3.57) *Temporal modifiers may not be fronted out of a relative clause*a. *Temporal modifier within relative clause*

Boriisi ba-ka-thaik-a [RelCI mw-amba_i û-ra Peter [Kîitharaka]
 2.police 2.SM-FUT-arrest-FV 1-thief 1-that 1.Peter
 a-ra-on-ir-e t_i [î-goro].
 1.SM-REC.PST-see-PFV-FV 5-yesterday

‘The police will arrest the thief that Peter saw yesterday.’

(Abels & Muriungi 2008: 725 (98a))

b. *Temporal modifier fronted out of relative clause*

*[î-goro] boriisi ba-ka-thaik-a [RelCI mw-amba_i [Kîitharaka]
 5-yesterday 2.police 2.SM-FUT-arrest-FV 1-thief
 û-ra Peter a-ra-on-ir-e t_i .
 1-that 1.Peter 1.SM-REC.PST-see-PFV-FV

‘Yesterday the police will arrest the thief that Peter saw.’

(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 Kîitharaka.

(3.58) *Temporal modifiers may not be fronted out of a focus-ex-situ construction*a. *Temporal modifier within focus-ex-situ construction*

I-m-bavha_i ya-aka-on-a t_i [nezuro]. [Shona]
NI-9-thief 9.NSE-1.SM.TA-see-FV yesterday

‘It’s A THIEF that s/he saw yesterday.’

(2015-04-14-02-TD)

b. *Temporal modifier fronted out of focus-ex-situ construction*

*[Nezuro_j] i-m-bavha_i ya-aka-on-a $t_i t_j$. [Shona]
 yesterday **NI-9-thief** 9.NSE-1.SM.TA-see-FV

‘Yesterday it’s A THIEF that s/he saw.’

(2015-04-14-02-TD)

(3.59) *Temporal modifiers may not be fronted out of a relative clause*a. *Temporal modifier within relative clause*

Ma-purisa a-cha-sung-a [RelCI m-bavha_i ya-aka-on-a [Shona]
 6-police 6.SM-FUT-arrest-FV 9-thief 9.NSE-1.SM.TA-see-FV

t_i [nezuro].
 yesterday

‘The police will arrest the thief that s/he saw yesterday.’

(2015-04-14-02-TD)

- b. *Temporal modifier fronted out of relative clause*
 *Nezuro_j ma-purisa a-cha-sung-a [_{RelCl} m-bavha_i [Shona]
 yesterday 6-police 6.SM-FUT-arrest-FV 9-thief
 ya-aka-on-a $t_i t_j$].
 9.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*
 Aka-on-a m-bavha nezuro. [Shona]
 1.SM.TA-see-FV 9-thief yesterday
 ‘S/he saw a thief yesterday.’ (2015-04-14-02-TD)
- b. *Fronting of temporal modifier*
Nezuro_i aka-on-a m-bavha t_i . [Shona]
 yesterday 1.SM.TA-see-FV 9-thief
 ‘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*
 Va-cha-ti [_{CP} aka-on-a m-bavha nezuro]. [Shona]
 2.SM-FUT-say 1.SM.TA-see-FV 9-thief yesterday
 ‘They will say s/he saw a thief yesterday.’ (2015-07-31-TD)
- b. *Temporal modifier fronted out of embedded clause*
 *Nezuro_i va-cha-ti [_{CP} aka-on-a m-bavha t_i]. [Shona]
 yesterday 2.SM-FUT-say 1.SM.TA-see-FV 9-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

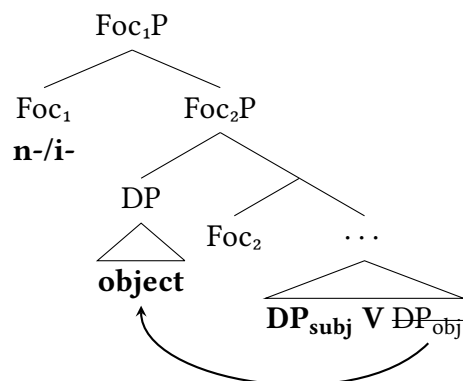
Kiitharaka, the fact that the focus marker appears on verbs and that temporal modifiers can be fronted out of the focus construction indicate that it is monoclausal. For Shona, the impossibility of a fronted temporal adjunct modifying the cleft clause points to a biclausal structure.

	Shona	Kiitharaka
Cleft pronoun not required	✓	✓
Copula/focus marker		
Cannot bear subject marking or tense	✓	✓
Phonologically dependent	✓	✓
Morphologically invariant	×	×
Separate form in copular constructions	×	×
May appear on verbs	×	✓
Cleft clause		
Lacks relative clause morphology	×	✓
May be modified by fronted temporal modifier	×	✓

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 \(93\)](#))



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 φ -features, as shown in (3.63–3.64).

(3.63) *Non-subject extraction marking with local wh-ex-situ*

a. *Left-edge ex-situ wh-indirect object*

Ndi-Ø-ani *(**wa**)-v-aka-teng-er-a ___ Ø-rokwe [Shona]
NI-1a-who **1a.NSE-2.SM-TA-buy-APPL-FV** 5-dress
ku-chi-toro nezuro?
17-7-store yesterday
‘Who(m) did they buy a dress (for) at the store yesterday?’
(2014-09-09-01-TD)

b. *Left-edge ex-situ wh-direct object*

Chí-í *(**cha**)-v-aka-teng-er-a Ø-Thandi ___ [Shona]
NI-7-what **7.NSE-2.SM-TA-buy-APPL-FV** 1a-Thandi
ku-chi-toro nezuro?
17-7-store yesterday
‘What did they buy Thandi at the store yesterday?’
(2014-09-09-01-TD)

c. *Left-edge ex-situ wh-locative adjunct*

Nde-ku-pi *(**kwa**)-v-aka-teng-er-a Ø-Thandi [Shona]
NI-17-which **17.NSE-2.SM-TA-buy-APPL-FV** 1a-Thandi
Ø-rokwe ___ nezuro?
5-dress yesterday
‘Where did they buy Thandi a dress yesterday?’
(2014-09-09-01-TD)

- d. *Left-edge ex-situ wh-temporal adjunct*¹⁰
Ndi-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 Thandi a dress at the store?’ (2014-09-09-01-TD)

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*
Ndi-Ø-ani *(wa)-w-ai-fung-a kuti [Shona]
NI-1a-who 1a.NSE-2SG.SM-TA-think-FV that
(*wa)-v-aka-teng-er-a ____ Ø-rokwe ku-chi-toro nezuro?
1a.NSE-2.SM-TA-buy-APPL-FV 5-dress 17-7-store 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*
Chí-í *(cha)-w-ai-fung-a kuti [Shona]
NI-7-what 7.NSE-2SG.SM-TA-think-FV that
(*cha)-v-aka-teng-er-a Ø-Thandi ____ ku-chi-toro nezuro?
7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store 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*
Nde-ku-pi *(kwa)-w-ai-fung-a kuti [Shona]
NI-17-which 17.NSE-2SG.SM-TA-think-FV that
(*kwa)-v-aka-teng-er-a Ø-Thandi Ø-rokwe ____ nezuro?
17.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 5-dress 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.

d. *Left-edge long-distance ex-situ wh-temporal adjunct*

Ndi-rinhi ***(pa)**-w-ai-fung-a kuti ***(pa)**-v-aka-teng-er-a [Shona]
NI-when **16.NSE-2SG.SM-TA-think-FV** that **16.NSE-2.SM-TA-buy-APPL-FV**

Ø-Thandi Ø-rokwe ku-chi-toro ___?
 1a-Thandi 5-dress 17-7-store

‘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 ϕ -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 ϕ -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*

[***(Wa)**-v-aka-teng-er-a ___ Ø-rokwe ku-chi-toro nezuro [Shona]
1a.NSE-2.SM-TA-buy-APPL-FV 5-dress 17-7-store yesterday]

ndi-Ø-ani?

NI-1a-who

‘Who(m) did they buy a dress (for) at the store yesterday?’

(2014-09-09-01-TD)

- b. *Right-edge ex-situ wh-direct object*
 [*(**Cha**)-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro [Shona]
 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday]
chí-í?
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*
 [*(**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?’ (2014-09-09-01-TD)
- d. *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?’ (2014-09-09-01-TD)
- (3.66) *Long-distance wh-ex-situ, sentence-final*
- a. *Right-edge long-distance ex-situ wh-indirect object*
 [*(**Wa**)-w-ai-fung-a kuti (***wa**)-v-aka-teng-er-a [Shona]
 1a.NSE-2SG.SM-TA-think-FV that 1a.NSE-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?’
 (2014-09-09-01-TD)
- b. *Right-edge long-distance ex-situ wh-direct object*
 [*(**Cha**)-w-ai-fung-a kuti (***cha**)-v-aka-teng-er-a [Shona]
 7.NSE-2SG.SM-TA-think-FV that 7.NSE-2.SM-TA-buy-APPL-FV
 Ø-Thandi ___ ku-chi-toro nezuro **chí-í?**
 1a-Thandi 17-7-store yesterday] **NI.7-what**
 ‘What did you think they bought Thandi at the store yesterday?’
 (2014-09-09-01-TD)

- 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-Thandi Ø-rokwe ___ nezuro **nde-ku-pi?**
 1a-Thandi 5-dress yesterday] **NI-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-Thandi Ø-rokwe ku-chi-toro ___ **ndi-rinhi?**
 1a-Thandi 5-dress 17-7-store] **NI-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)

b. *Direct object relative*

Ndi-no-farir-a [RelCl Ø-rokwe *(ra)-v-aka-teng-er-a [Shona]
 1SG.SM-TA-like-FV 5-dress 5.NSE-2.SM-TA-buy-APPL-FV

Ø-Thandi ___ ku-chi-toro nezuro].

1a-Thandi 17-7-store yesterday

'I like the dress that they bought Thandi at the store yesterday.'

(2016-03-08-02-TD)

c. *Locative relative*

Nd-a-end-a [RelCl ku-chi-toro *(kwa)-v-aka-teng-er-a [Shona]
 1SG.SM-TA-go-FV 17-7-store 17.NSE-2.SM-TA-buy-APPL-FV

Ø-Thandi Ø-rokwe ___ nezuro].

1a-Thandi 5-dress yesterday

'I went to the store where they bought Thandi a dress yesterday.'

(2016-03-08-02-TD)

d. *Temporal relative*

Ndi-no-yeuk-a [RelCl Ø-zuva *(ra)-v-aka-teng-er-a [Shona]
 1SG.SM-TA-remember-FV 5-day 5.NSE-2.SM-TA-buy-APPL-FV

Ø-Thandi Ø-rokwe ku-chi-toro ___].

1a-Thandi 5-dress 17-7-store

'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 φ -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*

Ø-mbatya dza-v-aka-son-er-a va-kadzi mw-engwa [Shona]
 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*

?Ø-mbatya va-kadzi dza-v-aka-son-er-a mw-engwa [Shona]
 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.

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 [Shona]
 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 [Shona]
 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? [Shona]
 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?** [Shona]
 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 ____ àka-nanzv-iw-a ne-Ø-shumba? [Shona]
NI-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*
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)
- e. *Ex-situ wh-non-subject, preverbal subject*
Ndi-Ø-ani Ø-shumba wa-y-aka-nanzv-a ___? [Shona]
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*
 ***Ndi-Ø-ani** aka-nanzv-a Ø-shumba ___? [Shona]
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*
 ***Ndi-Ø-ani** waka-nanzv-a Ø-shumba ___? [Shona]
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*
-
- Ndi-Ø-ani** Ø-shumba wa- y- aka-nanzv-a ___? [Shona]
NI-1a-who 9-lion 1a.NSE-9.SM-TA-lick-FV
 ‘Who(m) did the lion lick?’ (2015-04-14-02-TD)

b. *Right-edge wh-ex-situ*

	[Shona]
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?’	(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.¹³

(3.73) Subject extraction marking with local full *wh*-movement

a. *Left-edge ex-situ wh-subject*

Ndi-Ø-ani ___ {*a-/à-} ka-teng-er-a Ø-Thandi Ø-rokwe [Shona] NI-1a-who *(SE).1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress ku-chi-toro nezuro? 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).

b. *Right-edge ex-situ wh-subject*

____ {*A-/Ā-}ka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]
 *(SE).1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress 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, Ouhalla 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*

Ndi-ni **nd**-à-pwany-a mu-siwo. [Shona]
 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*

Ndi-we **w**-à-pwany-a mu-siwo. [Shona]
 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)*

Ndi-ye **à**-pwany-a mu-siwo. [Shona]
 NI-1 **1.SM**-SE.TA-break-FV 3-door
 ‘It’s HIM/HER who broke the door.’ (2016-03-08-02-TD)

d. *1st person plural*

Tísu **t**-à-pwany-a mu-siwo. [Shona]
 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*

Ndi-mi **m**-à-pwany-a mu-siwo. [Shona]
 NI-2PL **2PL.SM**-SE.TA-break-FV 3-door
 ‘It’s YOU (PL.) who broke the door.’ (2016-03-08-02-TD)

- f. *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*
Chí-í **chì**-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*
 ***Chí-í** **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*
Chí-í **chì**-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*

- ***Chí-í** **cha**-cha-chenget-edz-w-a? [Shona]
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 φ -features with the extracted subject, but no other verbs show extraction marking.

(3.77) a. *Left-edge long-distance ex-situ wh-subject*

- Ndi-Ø-ani** *(**wa**)-w-ai-fung-a [CP kuti ____ [Shona]
NI-1a-who 1a.**NSE**-2SG.SM-TA-think-FV that
{*à/a-}ka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro nezuro]?
(***SE**).1a.SM.TA-buy-APPL-FV 1a-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*

- *(**Wa**)-w-ai-fung-a [CP kuti ____ {*à/a-}ka-teng-er-a [Shona]
1a.**NSE**-2SG.SM-TA-think-FV that (***SE**).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?’
(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 *wh*-ex-situ question to produce the sentence-final pattern and what has been called the “intermediate” strategy.

3.2.6.1 Apparent full *wh*-movement

As discussed in section 2.3.2, I assume that *wh*-phrases must be pronounced within a focus licensing domain.¹⁴ Shona allows constituents (including *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 *v*P, meaning that the head of a chain must be dominated by a *v*P in order for that lexical item to receive narrow focus in the semantics.

Because of this configuration for focus licensing in Shona, if *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 *v*P, 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 *wh*-phrase, which allows it to be focused.

The relation between the scopal position and the pronunciation site of the *wh*-phrase, then, is unselective binding by a null operator, just as in *wh*-in-situ. This simplifies the possibilities for forming *wh*-questions in Shona: the *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.

14. More precisely, the head of a *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).

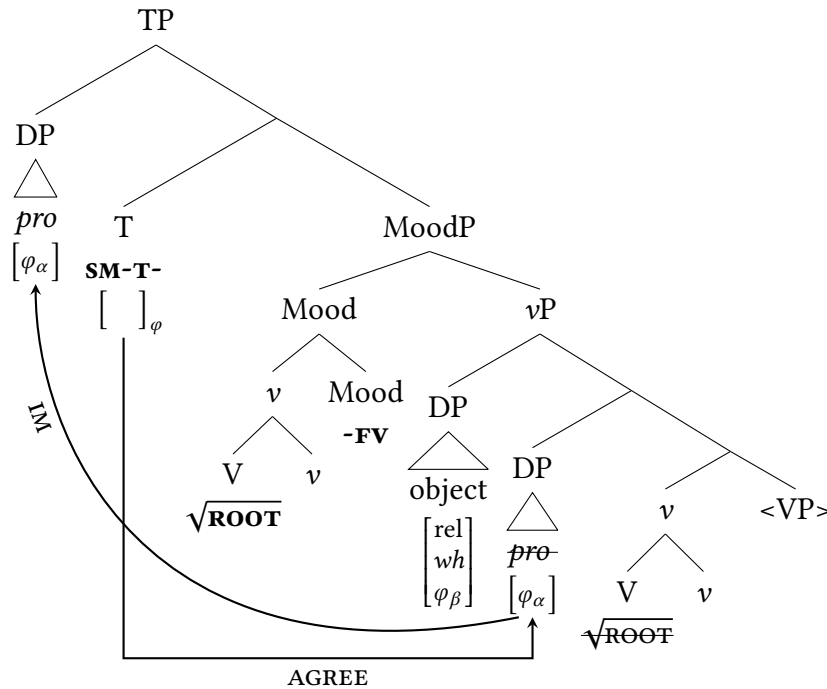
(3.79) *Ex-situ wh-direct objects with null subjects*

- 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-y-aka-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)

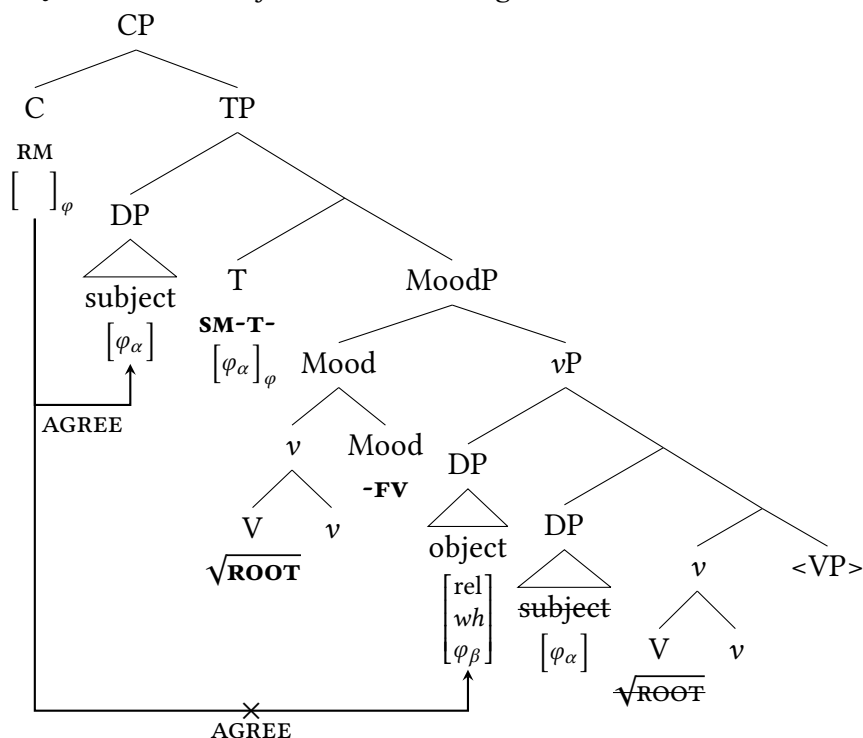
- c. **Chí-í** cha-aka-teng-a ____? [Shona]
NI.7-what 7.NSE-1.SM.TA-buy-FV
 ‘What did s/he buy?’ (lit., ‘It’s what that s/he bought?’)
 (2014-06-28-03-TD)

In the derivation of these sentences, the direct object moves to an outer specifier of Spec ν P 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 φ -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 φ -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 [] $_{\varphi}$ indicates a probe for φ -features, whereas [] $_{\text{rel}}$ 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 α and β variables to track different sets of φ -features; the subject bears [φ_{α}] and the object bears [φ_{β}].

(3.80) *Subject agreement and movement to SpecTP (null subject)*

The φ -agreement with the extracted constituent (hereafter called the relative marker and abbreviated RM) is typically taken to be the instantiation of a φ -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):

(3.81) *Subject intervention for relative marking*

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 φ -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.

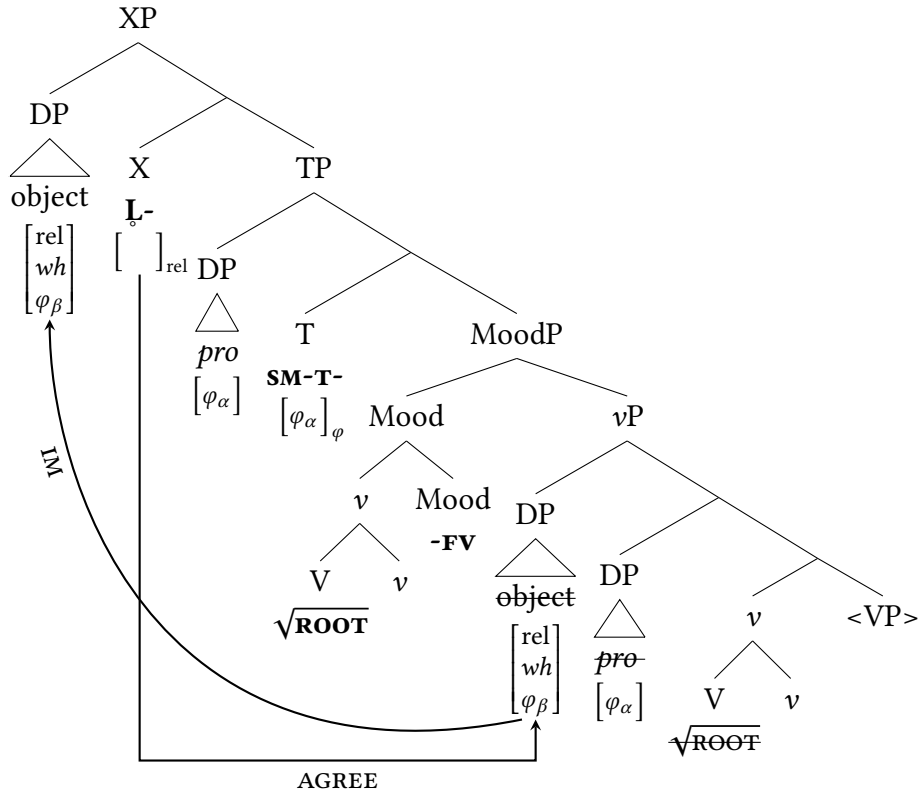
The alternative that I propose is that the relative marker is actually the realization of agreement on two separate heads in the left periphery, which I will call X and Y. I will postpone discussion of whether these heads correspond to heads in Rizzi’s (1997, 2004) articulated left periphery until later.

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 Spec v P, skipping over the subject in SpecTP because it has no [rel]. I assume that valuation of [rel] triggers Internal Merge just as valuation of [φ] 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 L_0^-).

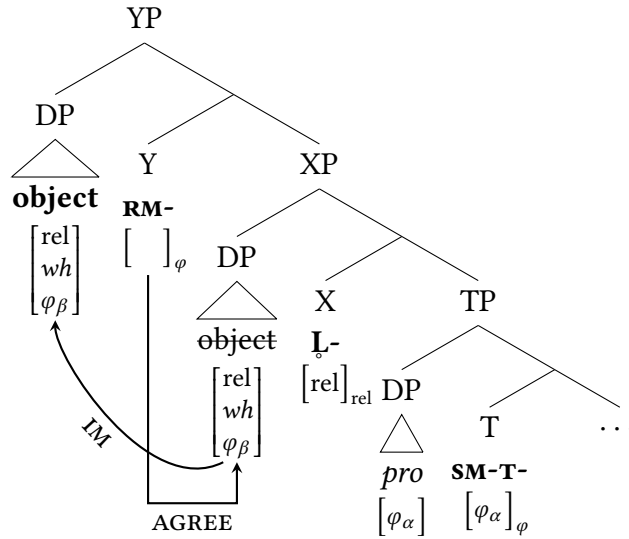
(3.82) *Low-tone agreement and operator extraction to SpecXP (null subject)*



Now that the non-subject operator in SpecXP c-commands the subject in SpecTP, when the φ -probe on the next higher head (Y) looks for the closest goal, it finds the operator, as desired. The *wh*-phrase values the φ -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).

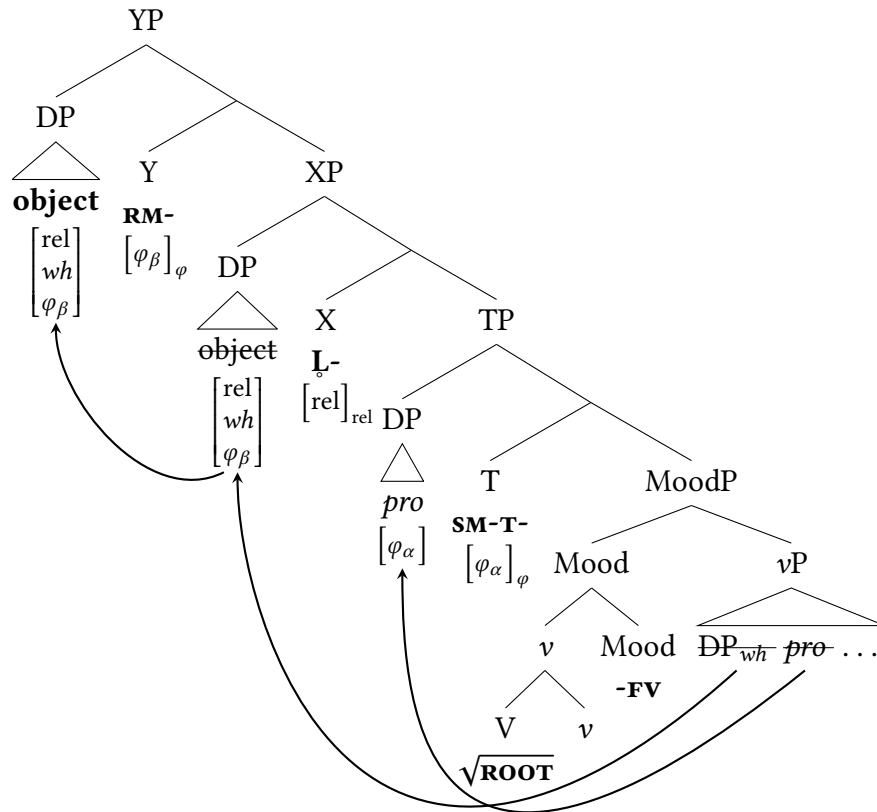
16. I am forced to assume that these movement steps are not subject to Criterial Freezing (Rizzi 2006, 2007, Rizzi & Shlonsky 2006, 2007).

(3.83) *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:

(3.84) *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*

Ndi-Ø-ani Ø-shumba wa-y-aka-nanzv-a ____? [Shona]
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)

b. *Ex-situ wh-direct object, preverbal subject*

Ndi-Ø-ani Ø-Taurai wa-a-no-farir-a ____? [Shona]
NI-1a-who 1a-Taurai 1a.NSE-1a.SM-TA-like-FV
 ‘Who(m) does Taurai like?’ (lit., ‘It’s who that Taurai likes?’)
 (2014-07-12-01-TD)

c. *Ex-situ wh-direct object, preverbal subject*

Chí-í mw-ana cha-aka-teng-a ____? [Shona]
NI.7-what 1-child 7.NSE-1.SM.TA-buy-FV
 ‘What did the child buy?’ (lit., ‘It’s what that the child bought?’)
 (2014-07-09-01-TD)

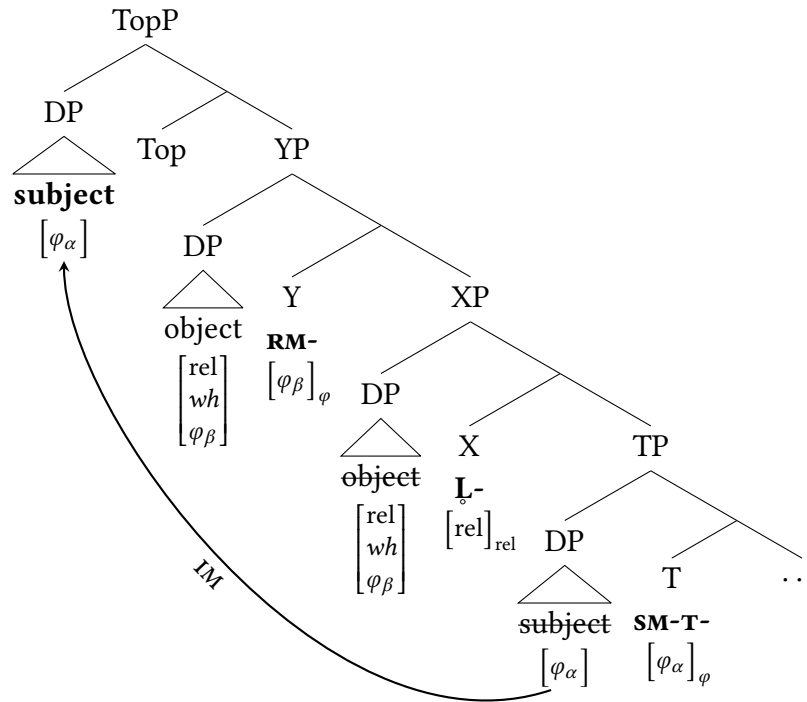
If ForceP is the highest projection in the clause, in whose specifier the relative head will end up, then the Shona relative marker cannot be in the Force head because that would leave no room for a preverbal subject between the extracted non-subject in SpecForceP and the relative marker in Force.

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 φ -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).¹⁷ 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) *Topicalization of overt subject*

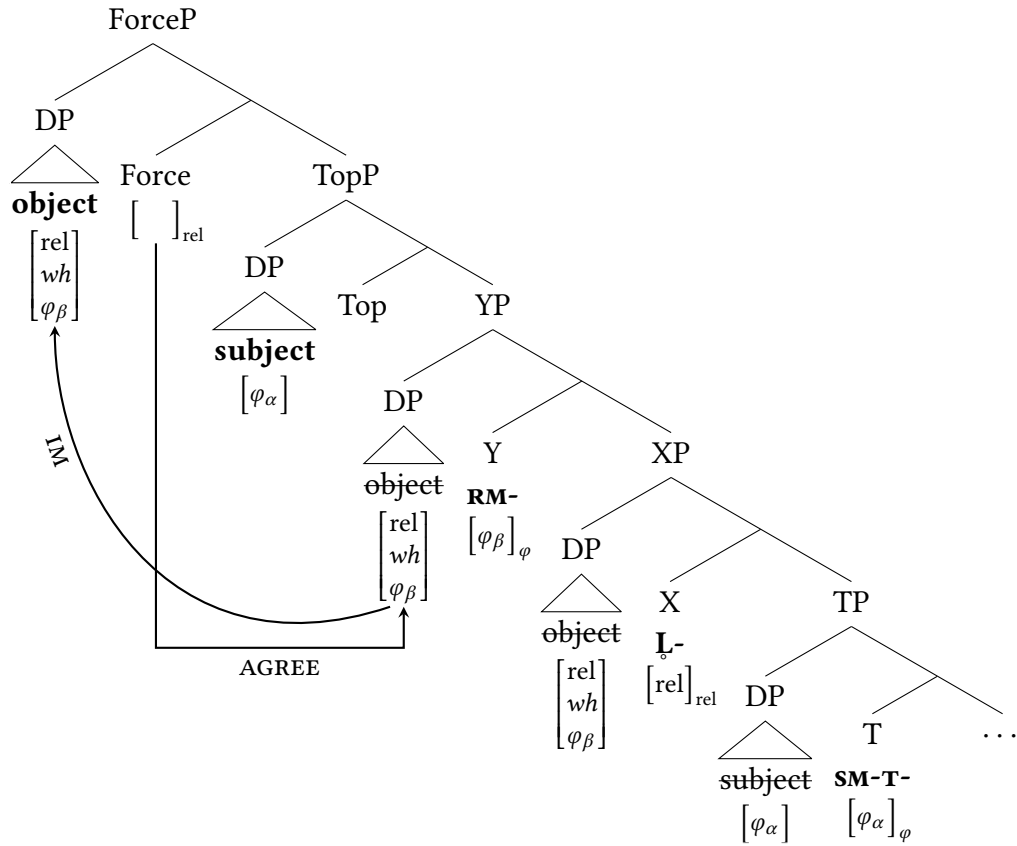


Now the subject is preverbal, but the object is not yet where it needs to be. It needs to c-command the rest of the clause, so I propose that it moves to SpecForceP via another step of [rel]-probing. Then the ForceP is selected by the D head, following Kayne's (1994)

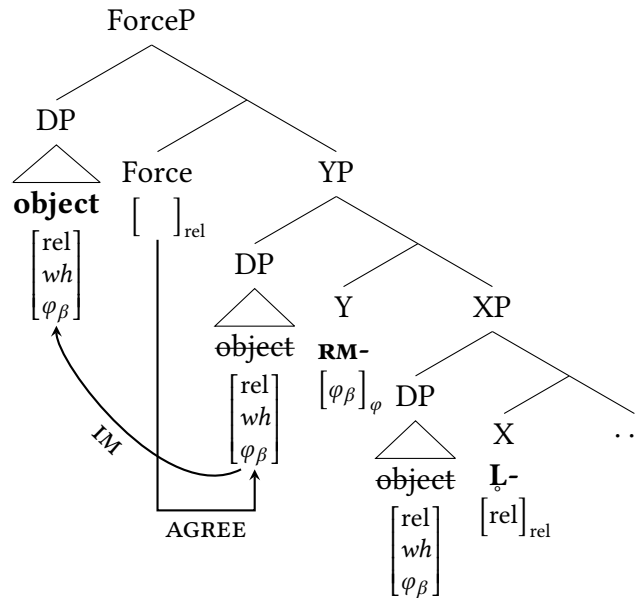
17. If the subject is overt, there must be some reason that T agrees with it rather than the object. I do not have any strong opinions about what ensures this, but whatever it is is likely at work in blocking subject-object reversal in Shona too.

proposal for *that*-relatives.

(3.87) *Non-subject extraction to SpecForceP (preverbal subject)*



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).

(3.88) *Non-subject extraction to SpecForceP (null or postverbal subject)*

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-í cha-aka-teng-a mw-ana ___? [Shona]

NI.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*

Ndi-Ø-ani ___ àka-teng-a Ø-rokwe? [Shona]
NI-1a-who SE.1a.SM.TA-buy-FV 5-dress
 ‘Who bought a dress?’ (2014-06-28-01-TD)

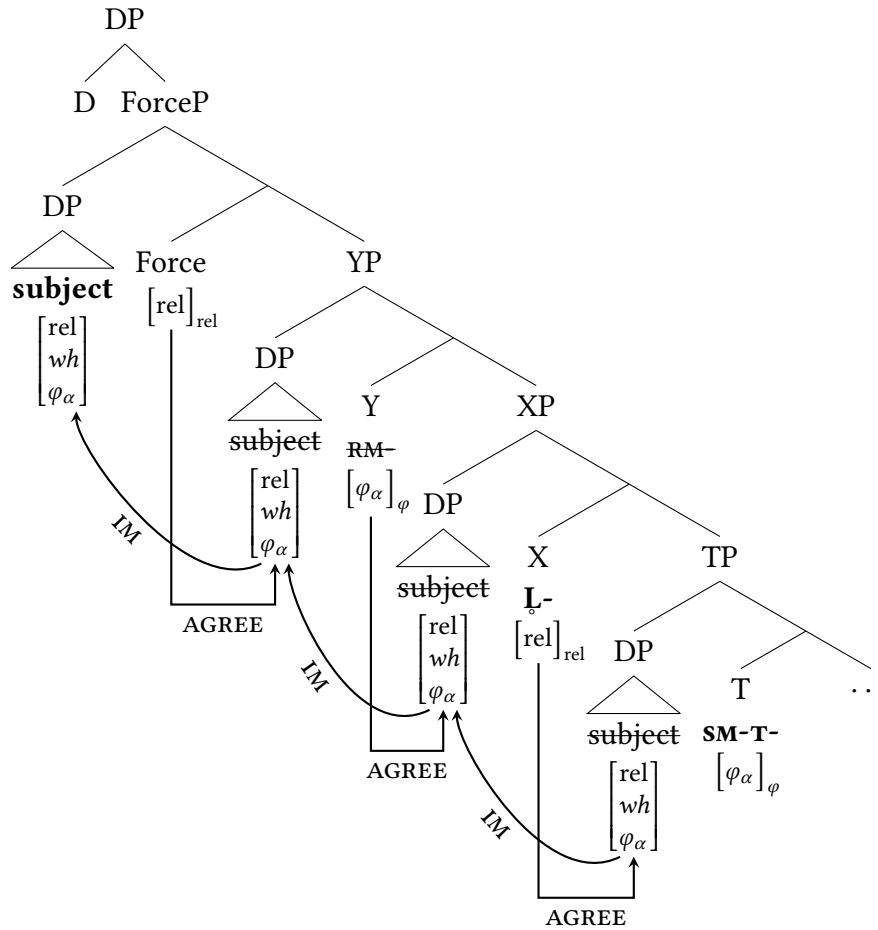
b. *Left-edge ex-situ wh-subject*

Ndi-vana-ani ___ v-àka-uy-a ku-ma-biko? [Shona]
NI-2a-who 2a.SM-SE.TA-come-FV 17-6-feast
 ‘Who (pl.) came to the party?’ (2014-07-16-01-TD)

c. *Left-edge ex-situ wh-subject*

Ndi-Ø-ani ___ à-ri ku-tsvag-a Ø-chi-remba? [Shona]
NI-1a-who SE.1a.SM-be 15-look.for-FV 1a-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).

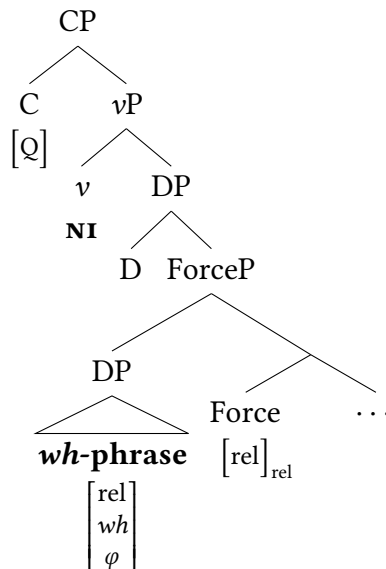
(3.91) *Subject extraction*

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 ϕ -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 ϕ -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) *Copular clause*



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.

(3.93) *Local wh-ex-situ, sentence-final*a. *Right-edge ex-situ wh-subject*

___ Àka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro [Shona]
 SE.1a.SM.TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-store
 nezuro **ndi-Ø-ani?**
 yesterday **NI-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-direct object, null subject*

Cha-v-aka-teng-er-a Ø-Thandi ___ ku-chi-toro nezuro [Shona]
 7.NSE-2.SM-TA-buy-APPL-FV 1a-Thandi 17-7-store yesterday
chí-í?
NI.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)

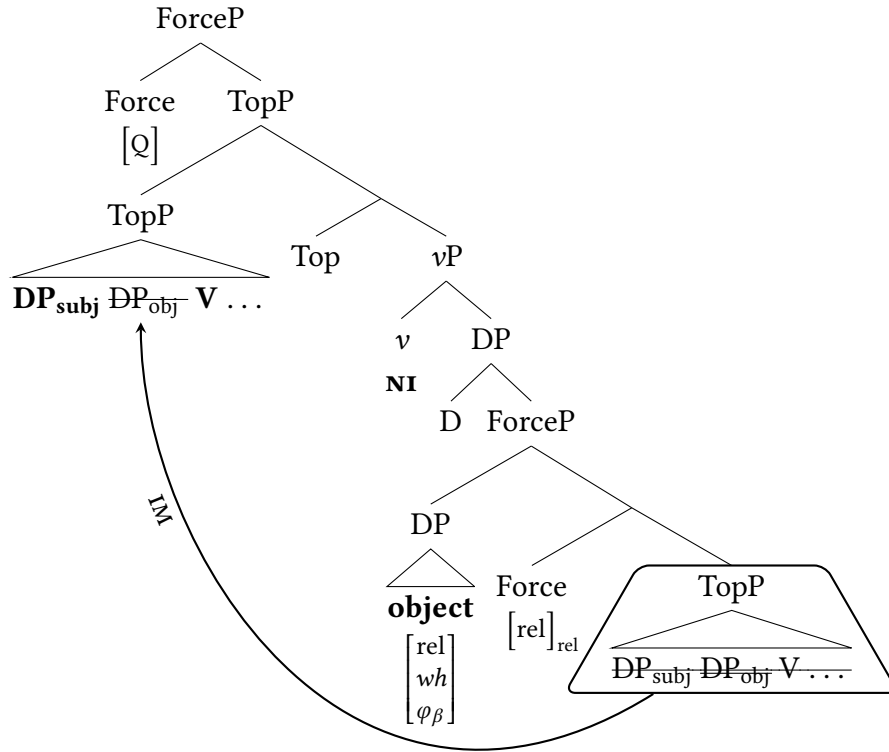
c. *Right-edge ex-situ wh-non-subject, preverbal subject*

Ø-Shumba wa-y-aka-nanzv-a ___ **ndi-Ø-ani?** [Shona]
 9-lion 1a.NSE-9.SM-TA-lick-FV **NI-1a-who**

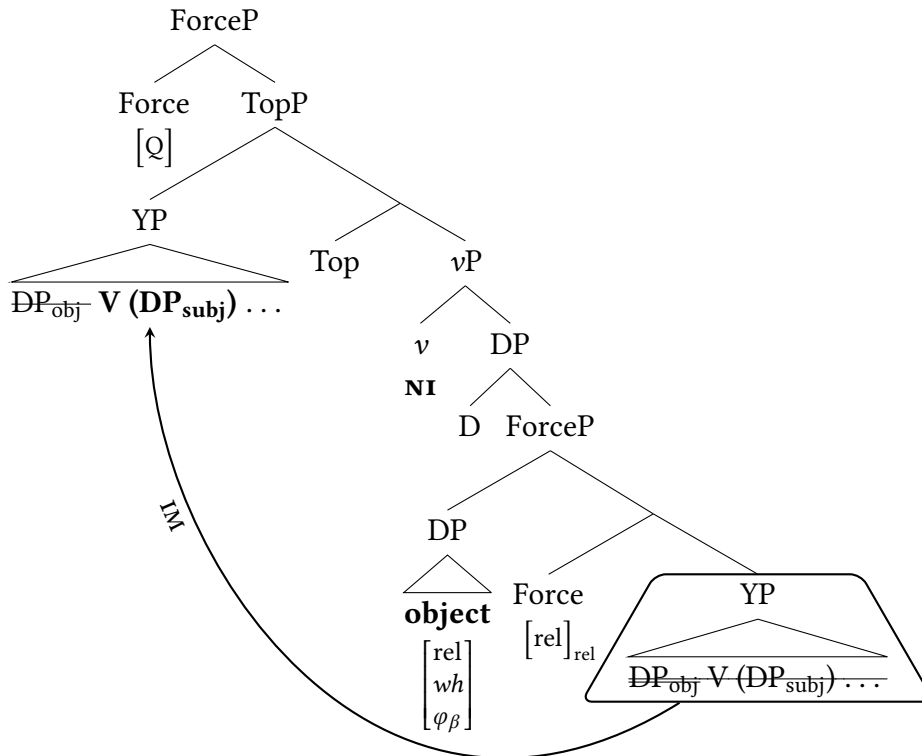
‘Who(m) did the lion lick?’ (lit., ‘That the lion licked it’s who?’) (2015-04-17-TD)

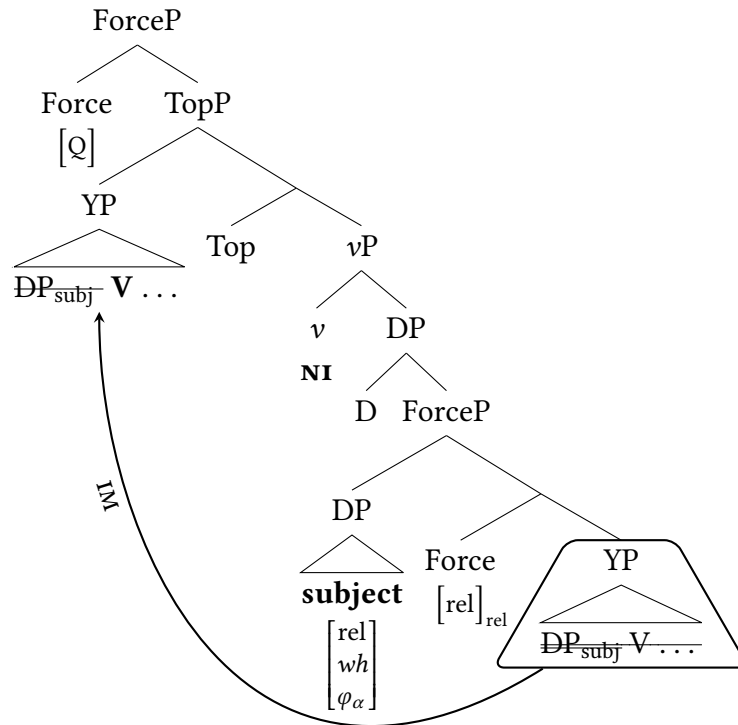
I propose that sentence-final *wh-ex-situ* is derived via disguised movement as discussed in section 2.2.2. Because the *wh*-phrase moves from SpecYP to SpecForceP, as depicted in (3.87–3.91), the YP (or TopP in the case of non-subject extraction with a preverbal subject) is a remnant. This remnant may 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)*



(3.95) *Remnant movement to matrix SpecTopP (null or postverbal subject)*



(3.96) *Remnant movement to matrix SpecTopP (extracted subject)*

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 *v*P 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

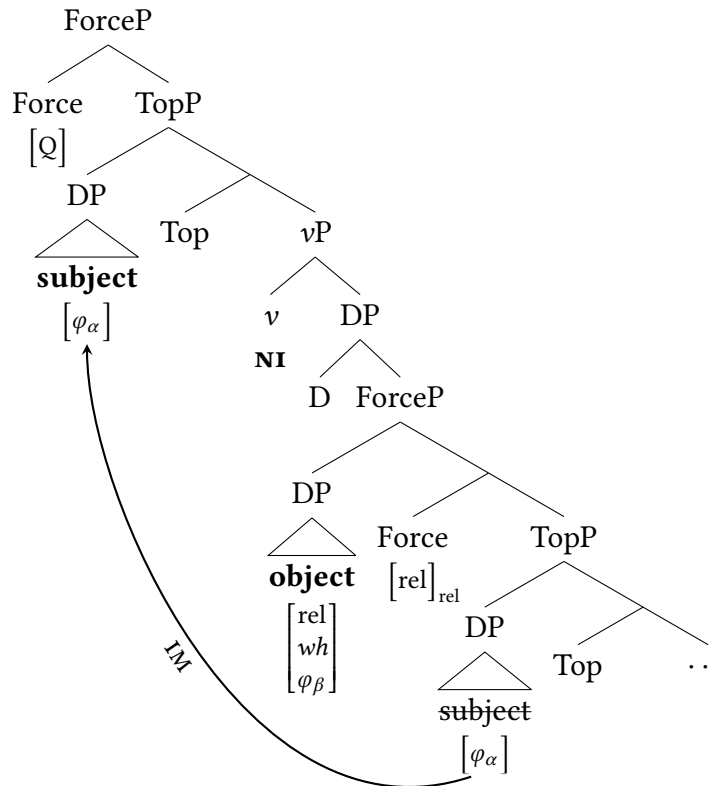
In both Kĩitharaka and Shona, ex-situ *wh*-phrases must appear in the focus/cleft constructions discussed above. Kĩitharaka has an ex-situ *wh*-question strategy that Muriungi (2003, 2011) dubs “intermediate” because the *wh*-phrase stands between the subject and the verb (3.97a). He analyzes this as clause-bounded topicalization of the subject to the SpecTopP above the focused *wh*-phrase in SpecFocP, patterning with (3.97b).

- (3.97) a. *Subject may be topicalized above focus-marked wh-phrase* [Kĩitharaka]
 Nazario **i-mbi**_i a-gũr-ĩr-e *t*_i?
 Nazario **NI-what** 1.SM-buy-PFV-FV
 ‘Nazario, what did he buy?’ (Muriungi 2003: 86 (5a))
- b. *Subject may be topicalized above focus-marked direct object*
 Ĩbuku **i-Maria** a-gũr-ĩ-ĩr-e mw-arĩmũ. [Kĩitharaka]
 5-book **NI-1.Maria** 1.SM-buy-APPL-PFV-FV 1-teacher
 ‘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) *Subject may be topicalized above clefted wh-phrase* [Shona]
 Ø-Shumba **ndi-Ø-ani**_i wa-y-aka-nanzv-a *t*_i?
 9-lion **NI-1a-who** 1a.NSE-9.SM-TA-lick-FV
 ‘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.

(3.99) *Movement of preverbal subject to matrix SpecTopP*

3.3 Outstanding issues

3.3.1 Crosslinguistic variation

The best-studied Bantu languages in terms of *wh*-ex-situ include Kikuyu (Clements 1984, Bergvall 1987, Schwarz 2003, 2007, Yuan 2016), Ikalanga (Letsholo 2002, 2007, 2011, Letsholo & Pires 2003), Akɔɔse (Apuge 2010, 2012, Hedinger 2008, Zentz 2011, 2012), Kîitharaka (Abels 2012a, Abels & Muriungi 2008, Muriungi 2003, 2005, 2011), Kilega (Kinyalolo 1991, Carstens 2005), Kinande (Schneider-Zioga 2007, 2009), Lubukusu (Wasike 2007, Diercks 2010), and Zulu (Sabel & Zeller 2006). Still, there remains much more to be done in order to account for the full range of diversity in *wh*-ex-situ at the Bantu family level.

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-

ing, whether extraction marking involves φ -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: $[\text{CP Op} \quad \dots \quad \overset{\text{canonical}}{\mathbf{wh}} \dots]$
 unselective binding
- b. “Full” *wh*-movement: $[\text{CP Op NI-}[\text{RelCl } \mathbf{wh} \dots \mathbf{wh} \dots]]$
 unsel. binding overt 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), Kĩitharaka (Muriungi 2005, Abels & Muriungi 2008), Gichuka (Muriungi et al. 2014), Lubukusu (Wasike 2007), Ikalanga (Letsholo 2002, Letsholo & Pires

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*

Ó-yw-¹éciiri-á [CP Ngóye a-úy-íre [CP ate **n-óo** ____ [Kikuyu]
 2SG.SM-T-think-T Ngũgĩ 1.SM-say-T that **NI-who**
 o-ɔn-íré Kaanake]]?
 1.AA-see-T Kaanake?

‘Who do you think Ngũgĩ said saw Kanake?’ (Clements 1984: 47 (25c))

b. *Local partial wh-movement of an embedded direct object*

John a-ug-ir-e [CP Pat a-ug-ir-e [CP **i-mbi** [Kĩitharaka]
 1.John 1.SM-say-PFV-FV 1.Pat 1.SM-say-PFV-FV **what**
 Maria a-gúr-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*

Ba-ba-ana ba-a-lom-a [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-1.AA-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*

Neo u-no-alakana [CP kuti **ndi-Ø-ani** Nchidzi [Ikalanga]
 1a.Neo 1a.SM-TA-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))

- 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**
 o-sebenzile]]]?
 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-γw-!éciiri-á [CP **nó.o** Ngóγe a-úγ-íε [CP áte ____ [Kikuyu]
 2SG.SM-T-think-T **NI-who** Ngũgĩ 1.SM-say-T that
 o-ɔn-íré Kaanake]]]?
 1.AA-see-T Kaanake?
 ‘Who do you think Ngũgĩ 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 [Kĩitharaka]
 1.John 1.SM-say-PFV-FV **NI-what** 1.Pat 1.SM-say-PFV-FV
 [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** Mwendé augire [CP kairitu [Gichuka]
 John believe **NI-where** Mwendé said girl
 ni-karugire irio ____]]]?
 NI-cooked food
 ‘Where does John believe Mwendé 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 [CP ____ [Zulu]
 2SG.SM-think that **NI-1a.who** 2.REL-said
 u-sebenzile]]]?
 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-

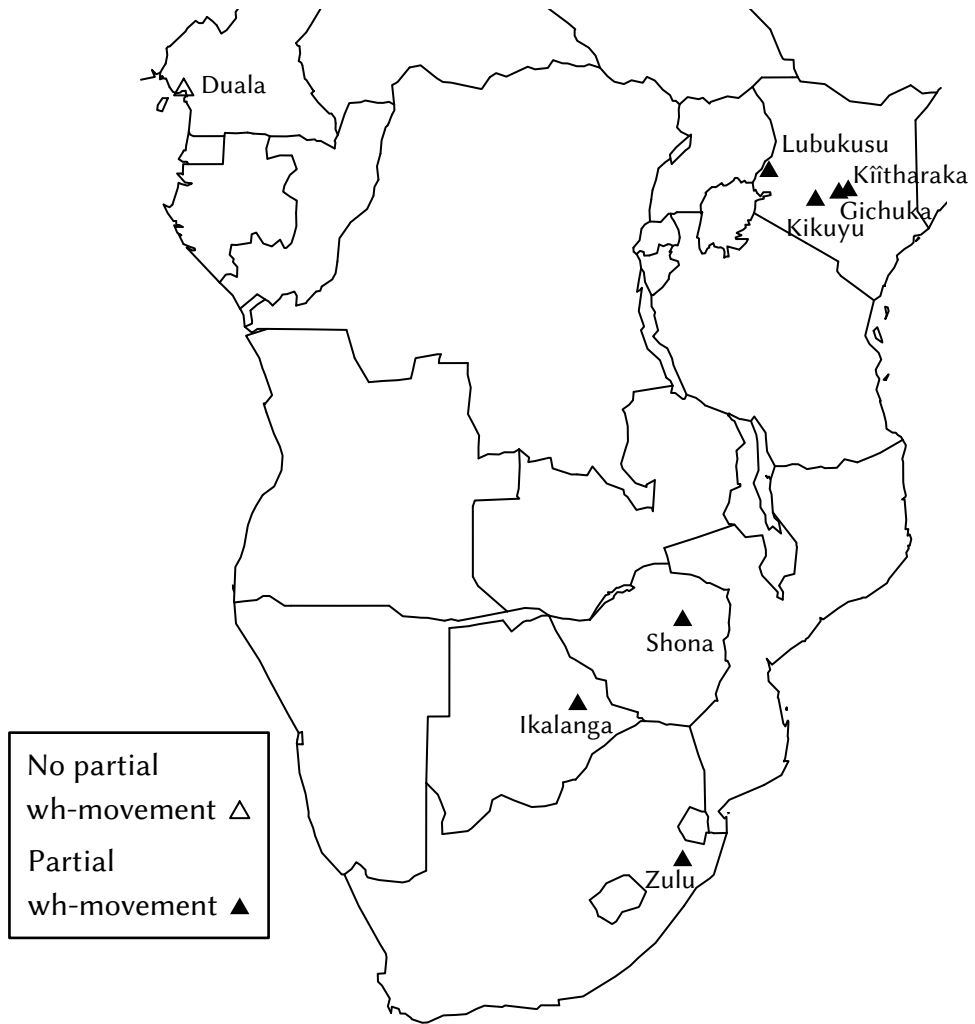


Figure 4.1: Map of Bantu languages with partial *wh*-movement.

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*
 O ta o pula [_{CP} na Ku_o a keke [_{CP} wan-ea [Duala]
 2SG.SM T 2SG.SM want that 1.Kuo 1.SM try bring-APPL
 muna-o **nje**]]?
 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*
Nje o ta n_o o pula [_{CP} na Ku_o a keke [Duala]
what 2SG.SM T NSE 2SG.SM want that 1.Kuo 1.SM try
 [_{CP} wan-ea muna-o ___]]?
 bring-APPL child-1.POSS
 ‘What did you want Kuo to try to bring to his child?’ (Epée 1976a: 159 (23b))
- c. *Local partial wh-movement of an embedded direct object*
 *O ta o pula [_{CP} na Ku_o a keke [_{CP} **nje** [Duala]
 2SG.SM T 2SG.SM want that 1.Kuo 1.SM try **what**
 wan-ea n_o muna-o ___]]?
 bring-APPL NSE child-1.POSS
 ‘What did you want Kuo to try to bring to his child?’ (lit., ‘You wanted that
 Kuo try what to bring his child ___?’) (Epée 1976a: 159 (23c))
- d. *Long-distance partial wh-movement of an embedded direct object*
 *O ta o pula [_{CP} na **nje** Ku_o a keke n_o [Duala]
 2SG.SM T 2SG.SM want that **what** 1.Kuo 1.SM try NSE
 [_{CP} wan-ea muna-o ___]]?
 bring-APPL child-1.POSS
 ‘What did you want Kuo to try to bring to his child?’ (lit., ‘You wanted that
 what Kuo try to bring his child ___?’) (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*

W-ai-fung-a kuti **ndi-Ø-ani** wa-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-1a-who** 1a.NSE-2.SM-TA-buy-APPL-FV
 ___ Ø-rokwe ku-chi-toro nezuro?
 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*

W-ai-fung-a kuti **chí-í** cha-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI.7-what** 7.NSE-2.SM-TA-buy-APPL-FV
 Ø-Thandi ___ ku-chi-toro nezuro?
 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*

W-ai-fung-a kuti **nde-ku-pi** kwa-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-17-where** 17.NSE-2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ___ nezuro?
 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*

W-ai-fung-a kuti **ndi-rinhi** pa-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-when** 16.NSE-2.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro ___?
 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)*

W-ai-fung-a [kuti **ndi-Ø-ani** ___ àka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-1a-who** SE.1a.SM-TA-buy-APPL-FV
 Ø-Thandi Ø-rokwe ku-chi-toro nezuro)?
 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)

b. *Partially moved wh-subject (local)*

W-ai-fung-a [kuti **ndi-vana-ani** ___ v-àka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-2a-who** 2a.SM-SE.TA-buy-APPL-FV

Ø-Thandi Ø-rokwe ku-chi-toro nezuro]?

1a-Thandi 5-dress 17-7-store yesterday

‘Who (PL) did you think bought Thandi a dress at the store yesterday?’

(2014-09-09-01-TD)

c. *Partially moved wh-subject (long-distance)*

W-aka-ti [ndi-Ø-ani w-ai-fung-a [kuti ___ [Shona]
 2SG.SM-TA-say **NI-1a-who** 2SG.SM-TA-think-FV that

àka-teng-er-a Ø-Thandi Ø-rokwe ku-chi-toro nezuro]]?

SE.1a.SM-TA-buy-APPL-FV 1a-Thandi 5-dress 17-7-store yesterday

‘Who did you say you thought bought Thandi a dress at the store yesterday?’

(2014-10-04-01-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 Kĩtharaka, 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).

(4.6) *Island sensitivity in Singaporean Malay (Cole & Hermon 1998)*

- a. *Wh*-in-situ:
$$\begin{array}{c} \text{scopal} \qquad \qquad \qquad \text{canonical} \\ \text{[CP } \dots \text{ [island } \dots \text{ [CP } \dots \text{ } \mathbf{wh} \text{]]]} \\ \text{OK} \end{array}$$
- b. Full *wh*-movement:
$$*\text{[CP } \mathbf{wh} \text{ } \dots \text{ [CP } \dots \text{ [island } \dots \text{]]]}$$
- c. Partial *wh*-movement:
$$*\text{[CP } \dots \text{ [CP } \mathbf{wh} \text{ } \dots \text{ [island } \dots \text{]]]}$$
- d. Partial *wh*-movement:
$$*\text{[CP } \dots \text{ [island } \dots \text{ [CP } \mathbf{wh} \text{ } \dots \text{]]]}$$

(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
 [CP yang telah makan apa]??
 that already eat 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
 [island perempuan yang tinggal ___]??
 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
 [CP dia suka [island perempuan yang beli ___]]??
 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
 [CP apa yang telah makan ___]??
 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 Kîitharaka

In Kîitharaka, 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 if it stays within the island.

(4.8) Island sensitivity in Kîitharaka (Abels 2012a)

- a. *Wh*-in-situ:
$$\left[\text{CP} \left[\dots \left[\text{CP} \left[\dots \left[\text{island} \dots \left[\text{CP} \left[\dots \text{wh} \right] \right] \right] \right] \right] \right] \right]$$
scopal canonical
OK
- b. Full *wh*-movement:
$$*\left[\text{CP} \text{wh} \dots \left[\text{CP} \left[\dots \left[\text{island} \dots \left[\text{CP} \left[\dots \right] \right] \right] \right] \right] \right]$$

X
- c. Partial *wh*-movement:
$$*\left[\text{CP} \left[\dots \left[\text{CP} \text{wh} \dots \left[\text{island} \dots \left[\text{CP} \left[\dots \right] \right] \right] \right] \right] \right]$$

X
- d. Partial *wh*-movement:
$$*\left[\text{CP} \left[\dots \left[\text{CP} \left[\dots \left[\text{island} \dots \left[\text{CP} \text{wh} \dots \right] \right] \right] \right] \right] \right]$$

X

(4.9) Complex DP island (relative clause)

- a. *Wh*-in-situ within a subject relative clause
 Û-rî-thûgan-i-a [CP n-ding-ir-e [island mw-arî [Kîitharaka]
 2SG.SM-PRS-think-CAUS-FV 1SG.SM-hit-PFV-FV 1-girl
 û-ra a-ug-ir-e [CP ati Peter a-gur-ir-e ûû]]?
 1-that 1.SM-say-PFV-FV that 1.Peter 1.SM-marry-PFV-FV who
 '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
 *N-ûû û-kû-thûgan-i-a [CP i-n-ding-ir-e [Kîitharaka]
 NI-who 2SG.SM-PRS-think-CAUS-FV NI-1SG.SM-hit-PFV-FV
 [island mw-arî û-ra n-a-ug-ir-e [CP ati Peter
 1-girl 1-that NI-1.SM-say-PFV-FV that 1.Peter
 n-a-gur-ir-e ___]]]?
 NI-1.SM-marry-PFV-FV
 '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*

*Û-rî-thûgan-i-a [CP n-ûû n-ding-ir-e [Kîitharaka]
 2SG.SM-PRS-think-CAUS-FV NI-who 1SG.SM-hit-PFV-FV
 [island mw-arî û-ra n-a-ug-ir-e [CP ati Peter
 1-girl 1-that NI-1.SM-say-PFV-FV that 1.Peter
 n-a-gur-ir-e ___]]]?
 NI-1.SM-marry-PFV-FV

‘Who do you think I hit the girl who said that Peter will marry ___?’

(Abels 2012a: 71 (10d))

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

*Û-rî-thûgan-i-a [CP n-ding-ir-e [island mw-arî [Kîitharaka]
 2SG.SM-PRS-think-CAUS-FV 1SG.SM-hit-PFV-FV 1-girl
 û-ra a-ug-ir-e [CP ati n-ûû Peter a-gur-ir-e
 1-that 1.SM-say-PFV-FV that NI-who 1.Peter 1.SM-marry-PFV-FV
 ___]]]?
 NI-1.SM-marry-PFV-FV

‘Who do you think I hit the girl who said that Peter will marry ___?’

(Abels 2012a: 71 (10b))

On the basis of data like what was just shown for Singaporean Malay and Kîitharaka, Fanselow (2006) proposes the following generalization:

(4.10) **Fanselow’s (2006) Generalization S4:**

A *wh*-phrase that has undergone (partial) *wh*-movement must not be separated from its scope position by an island for movement.

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 *wh*-movement.

4.3.2 Partial *wh*-movement is an independent construction

In some analyses, partial *wh*-movement is treated as a construction that has a derivational mechanism that is not used for either the *wh*-in-situ and full *wh*-movement strategies. In this sense, partial *wh*-movement is an independent construction.

4.3.2.1 Covert (LF) movement

Cole & Hermon (1998) argue that the lower relation of partial *wh*-movement is overt *wh*-movement, just as in full *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: $[\text{CP}_{\text{scopal}} \text{Op} \dots [\text{island} \dots [\text{CP}_{\text{canonical}} \dots \mathbf{wh}]]]$
unselective binding
- b. Full *wh*-movement: $*[\text{CP} \mathbf{wh} \dots [\text{CP} \dots [\text{island} \dots \mathbf{wh}]]]$
overt *wh*-movement
- c. Partial *wh*-movement: $*[\text{CP} \mathbf{wh} \dots [\text{CP} \mathbf{wh} \dots [\text{island} \dots \mathbf{wh}]]]$
overt *wh*-movement
- d. Partial *wh*-movement: $*[\text{CP} \mathbf{wh} \dots [\text{island} \dots [\text{CP} \mathbf{wh} \dots \mathbf{wh}]]]$
covert *wh*-movement

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

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 Kĩitharaka and Malay. In this sense, then partial *wh*-movement is treated as a separate *wh*-question construction.

(4.12) *Abels's (2012a) analysis of Kĩitharaka*

- a. In-situ: $[\text{CP} \overset{\text{scopal}}{[\text{uWh}\downarrow]} \dots [\text{CP} \dots [\text{island} \dots [\text{CP} \dots \overset{\text{canonical}}{\text{wh}}]]]]$
↓ downward agreement ↑
- b. Full: $*[\text{CP} \text{Op-}\mathbf{wh} \dots [\text{CP} \dots [\text{island} \dots [\text{CP} \dots \text{Op-}\mathbf{wh}]]]]]$
↑ overt focus movement ↓
- c. Partial: $*[\text{CP} \text{Op} \dots [\text{CP} \text{Op-}\mathbf{wh} \dots [\text{island} \dots [\text{CP} \dots \text{Op-}\mathbf{wh}]]]]]$
↑ overt focus movement ↓
- d. Partial: $*[\text{CP} \text{Op} \dots [\text{CP} \dots [\text{island} \dots [\text{CP} \text{Op-}\mathbf{wh} \dots \text{Op-}\mathbf{wh}]]]]]$
↑ overt *wh*-movement ↓

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 Kĩitharaka, 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 Kĩitharaka 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

the *wh*-phrase.

4.4 Shona island data

Just as in Singaporean Malay and Kîtharaka, 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 Kîtharaka, 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*

- a. *Wh*-in-situ:
$$\left[\text{CP} \underbrace{\dots \left[\text{CP} \dots \left[\text{island} \dots \mathbf{wh} \dots \right] \right]}_{\text{OK}} \right]$$
- b. Full *wh*-movement:
$$*\left[\text{CP} \mathbf{wh} \dots \left[\text{CP} \dots \left[\text{island} \dots \right] \dots \right] \right]$$
- c. Partial *wh*-movement:
$$*\left[\text{CP} \dots \left[\text{CP} \mathbf{wh} \dots \left[\text{island} \dots \right] \dots \right] \right]$$
- d. Partial *wh*-movement:
$$\left[\text{CP} \dots \left[\text{CP} \dots \left[\text{island} \mathbf{wh} \dots \right] \dots \right] \right]$$

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

W-ai-fung-a [CP kuti v-aka-foner-a ma-purisa [Shona]
2SG.SM-TA-think-FV that 2.SM-TA-call-FV 6-police

[_{island} nokuti v-aka-on-a Ø-ani]]?
because 2.SM-TA-see-FV 1a-who

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

(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 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]]?
 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)

c. *Partial wh-movement out of a DP's clausal complement*

*W-aka-nzw-a [CP kuti **ndi-Ø-ani** wa-v-aka-ramb-a [Shona]
 2SG.SM-TA-hear-FV that **NI-1a-who** 1a.NSE-2.SM-TA-deny-FV

[_{island} ny-aya ye-kuti y-aka-rum-a ___ pa-Ø-gumbo]]?
 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*

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 **ndi-Ø-ani** wa-y-aka-rum-a ___ pa-Ø-gumbo]]?
 9.of-that **NI-1a-who** 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*

U-no-fung-a [CP kuti a-no-farir-a [_{island} chi-kwata [Shona]
 2SG.SM-TA-think-FV that 1.SM-TA-like-FV 7-team

chì-no-bv-a **ku-pi**]]?
 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*

***Nde-ku-pi** kwa-u-no-fung-a [CP kuti a-no-farir-a [Shona]
NI-17-which 17.NSE-2SG.SM-TA-think-FV that 1.SM-TA-like-FV

[_{island} chi-kwata chì-no-bv-a ___]]?
 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*

*U-no-fung-a [CP kuti **nde-ku-pi** kwa-a-no-farir-a [Shona]
 2SG.SM-TA-think-FV that **NI-17-which** 17.NSE-1.SM-TA-like-FV

[_{island} chi-kwata chì-no-bv-a ___]]?
 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

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*

A-no-farir-a [island chi-kwata cha-u-no-fung-a [Shona]
 1.SM-TA-like-FV 7-team 7.NSE-2SG.SM-TA-think-FV
 [CP kuti chi-no-bv-a **ku-pi**]]?
 that 7.SM-TA-be.from-FV **17-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*

***Nde-ku-pi** kwa-a-no-farir-a [island chi-kwata [Shona]
NI-17-which 17.NSE-1.SM-TA-like-FV 7-team
 cha-u-no-fung-a [CP kuti chi-no-bv-a ___]]?
 7.NSE-2SG.SM-TA-think-FV that 7.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*

?A-no-farir-a [island chi-kwata cha-u-no-fung-a [Shona]
 1.SM-TA-like-FV 7-team 7.NSE-2SG.SM-TA-think-FV
 [CP kuti **nde-ku-pi** kwa-chi-no-bv-a ___]]?
 that **NI-17-which** 17.NSE-7.SM-TA-be.from-FV
 ‘Where does s/he like the team that you think is from ___?’
 (2014-09-20-01-TD)

4.5 A composite derivation

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: $[\text{CP}_{\text{scopal}} \text{Op} \dots [\text{CP} \dots [\text{island} \dots \text{wh} \dots]]]$
unselective binding
- b. “Full”: $*[\text{CP} \text{Op} \text{NI-}[\text{RC} \text{wh} \dots [\text{CP} \dots [\text{island} \dots \text{wh} \dots]]]]$
unsel. binding overt relativization
- c. Partial: $*[\text{CP} \text{Op} \dots [\text{CP} \text{NI-}[\text{RC} \text{wh} \dots [\text{island} \dots \text{wh} \dots]]]]$
unselective binding overt relativization
- d. Partial: $[\text{CP} \text{Op} \dots [\text{CP} \dots [\text{island} \text{NI-}[\text{RC} \text{wh} \dots \text{wh} \dots]]]]$
unselective binding overt rel.

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 *wh*-phrase moves from its base position to its pronunciation site.

4.5.1.1 Island sensitivity

As we saw in section 4.4, the lower relation in partial *wh*-movement is sensitive to islands in exactly the same way as apparent full *wh*-movement is. This follows if both are instances of overt relativization.

4.5.1.2 Presence of the copula

As discussed in section 3.2.4.1, *wh*-phrases that undergo apparent full *wh*-movement must be marked with an allomorph of the copula *ndi-*. Example (4.19) shows that partially moved *wh*-phrases are subject to the same constraint. In this respect, the pronunciation site of partial *wh*-movement is like the pronunciation site in apparent full *wh*-movement and unlike the pronunciation site in *wh*-in-situ.

(4.19) *Wh-phrases marked with NI*

a. *Wh-in-situ cannot have NI*

W-ai-fung-a [CP kuti t-aka-teng-er-a (***ndi**)-Ø-**ani** [Shona]
 2SG.SM-TA-think-FV that 1PL.SM-TA-buy-APPL-FV **NI-1a-who**
 Ø-rokwe]?
 5-dress
 ‘Who(m) did you think we bought a dress (for)?’ (2014-07-30-01-TD)

b. *Apparent full wh-movement requires NI*

*(**Ndi**)-Ø-**ani** wa-w-ai-fung-a [CP kuti t-aka-teng-er-a [Shona]
NI-1a-who 1a.NSE-2SG.SM-TA-think-FV that 1PL.SM-TA-buy-APPL-FV
 ___ Ø-rokwe]?
 5-dress
 ‘Who(m) did you think we bought a dress (for)?’ (2014-07-30-01-TD)

c. *Partial wh-movement requires NI*

W-ai-fung-a [CP kuti *(**ndi**)-Ø-**ani** wa-t-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-1a-who** 1a.NSE-1PL.SM-TA-buy-APPL-FV
 ___ Ø-rokwe]?
 5-dress
 ‘Who(m) did you think we bought a dress (for)?’ (2014-07-30-01-TD)

4.5.1.3 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*

Ndi-Ø-ani ____ {*a-/à-}ka-teng-a Ø-rokwe? [Shona]
NI-1a-who *(SE).1a.SM.TA-buy-FV 5-dress
 ‘Who (lit., It’s who that) bought a dress?’

- b. *Partial wh-movement requires extraction marking*

W-ai-fung-a [CP kuti **ndi-Ø-ani** ____ [Shona]
 2SG.SM-TA-think-FV that **NI-1a-who**
 {*a-/à-}ka-teng-a Ø-rokwe?
 *(SE).1a.SM.TA-buy-FV 5-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 φ -features, in addition to bearing φ -agreement with the subject.¹

(4.21) *Non-subject extraction marking*

- a. *Full wh-movement requires extraction marking*

Ndi-Ø-ani *(wa)-w-ai-fung-a [CP kuti v-aka-teng-er-a [Shona]
NI-1a-who 1a.NSE-2SG.SM-TA-think-FV that 2.SM-TA-buy-APPL-FV
 Ø-rokwe]
 5-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.

- b. *Partial wh-movement requires extraction marking*

W-ai-fung-a [CP kuti **ndi-Ø-ani** *(wa)-v-aka-teng-er-a [Shona]
 2SG.SM-TA-think-FV that **NI-1a-who** **1a.NSE-2.SM-TA-buy-APPL-FV**

Ø-rokwe]?

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.

(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 kuti [DP **mw-ana w-ese**]_i] [Shona]
 2SG.SM-TA-think-FV that **1-child 1-every**
 a-no-kosh-es-a [DP ma-onero a-Ø-ani e-kuti
 1.SM-TA-be.valued-CAUS-FV 6-view 6.of-1a-who 6.of-that
 [a_i]-ka-ngwar-a]]?
 1.SM-TA-be.smart-FV

‘Whose opinion that s/he_i is smart do you think every child_i values?’ (lit., ‘You think that every child_i values the opinion of whom that s/he_i 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 kuti [DP má-onero a-Ø-ani e-kuti] [Shona]
 2SG.SM-TA-think-FV that NI.6-view 6.of-1a-who 6.of-that
 [a_i]-ka-ngwar-a] [DP **mw-ana w-ese**]_i
 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_i is smart do you think every child_i values?’ (lit., ‘You think that it’s the opinion of whom that s/he_i is smart that every child_i values?’)
 (2014-10-04-02-TD)

- c.
- “Full” wh-movement: Quantifier does not c-command highest copy of pronoun*

[DP Má-onero a-Ø-ani e-kuti [a_i]-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 kuti [DP **mw-ana w-ese**]_i]
 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_i is smart do you think every child_i values?’ It’s the opinion of whom that s/he_i is smart that you think every child_i 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.

(4.23) *Lack of Principle C reconstruction with subject binder*a. *Wh-in-situ: Pronoun c-commands highest copy of R-expression*

*W-aka-nzw-a [CP kuti a_i-no-fung-a [CP kuti [Shona]
 2SG.SM-TA-hear-FV that 1.SM-TA-think-FV that
 [DP Ø-wanikidzo ya-Ø-ani ye-kuti (Ø-Taurai_i) aka-ng-e
 9-discovery 9.of-1a-who 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV
 a-teng-es-a Ø-mhete dz-àka-b-iw-a]
 1a.SM.TA-buy-CAUS-FV 10-jewelry 10.SM-SE.TA-steal-PASS-FV
 y-ai-v-e ma-nyepo]]?
 9.SM-TA-become-FV 6-lie

‘Whose discovery that Taurai_i had sold the stolen earrings did you hear that he_i thinks was fabricated?’ (2014-10-04-01-TD)

b. *Local partial wh-movement: Pronoun c-commands highest copy of R-expression*

*W-aka-nzw-a [CP kuti a_i-no-fung-a [CP kuti [Shona]
 2SG.SM-TA-hear-FV that 1.SM-TA-think-FV that
 [DP i-Ø-wanikidzo ya-Ø-ani ye-kuti (Ø-Taurai_i) aka-ng-e
 NI-9-discovery 9.of-1a-who 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV
 a-teng-es-a Ø-mhete dz-àka-b-iw-a] _____
 1a.SM.TA-buy-CAUS-FV 10-jewelry 10.SM-SE.TA-steal-PASS-FV
 y-ài-v-e ma-nyepo]]?
 9.SM-SE.TA-become-FV 6-lie

‘Whose discovery that Taurai_i had sold the stolen earrings did you hear that he_i 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-aka-nzw-a [CP kuti [DP i-Ø-wanikidzo ya-Ø-ani [Shona]
 2SG.SM-TA-hear-FV that NI-9-discovery 9.of-1a-who
 ye-kuti (Ø-Taurai_i) aka-ng-e a-teng-es-a Ø-mhete
 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV 1a.SM.TA-buy-CAUS-FV 10-jewelry
 dz-àka-b-iw-a] ya-a_i-no-fung-a [CP kuti _____
 10.SM-SE.TA-steal-PASS-FV 9.NSE-1.SM-TA-think-FV that
 y-ai-v-e ma-nyepo]]?
 9.SM-TA-become-FV 6-lie

‘Whose discovery that Taurai_i had sold the stolen earrings did you hear that he_i thinks was fabricated?’ (2014-10-04-01-TD)

- d. *Full wh-movement: Pronoun does not c-command highest copy of R-expression*
 [_{DP} i-Ø-wanikidzo ya-Ø-ani ye-kuti (Ø-Taurai_i) aka-ng-e [Shona]
 NI-9-discovery 9.of-1a-who 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV
 a-teng-es-a Ø-mhete dz-àka-b-iw-a]
 1a.SM.TA-buy-CAUS-FV 10-jewelry 10.SM-SE.TA-steal-PASS-FV
 ya-w-aka-nzw-a [_{CP} kuti a_i-no-fung-a [_{CP} kuti ____
 9.NSE-2SG.SM-TA-hear-FV that 1.SM-TA-think-FV that
 y-ai-v-e ma-nyepo]]?
 9.SM-TA-become-FV 6-lie
 ‘Whose discovery that Taurai_i had sold the stolen earrings did you hear that
 he_i thinks was fabricated?’ (2014-10-04-01-TD)
- e. *Full wh-movement with remnant movement: Pronoun does not c-command highest copy of R-expression*
 [_{CP} Ya-w-aka-nzw-a [_{CP} kuti a_i-no-fung-a [_{CP} kuti [Shona]
 9.NSE-2SG.SM-TA-hear-FV that 1.SM-TA-think-FV that
 ____ y-ai-v-e ma-nyepo]]] [_{DP} i-Ø-wanikidzo ya-Ø-ani
 9.SM-TA-become-FV 6-lie NI-9-discovery 9.of-1a-who
 ye-kuti (Ø-Taurai_i) aka-ng-e a-teng-es-a Ø-mhete
 9.of-that 1a-Taurai 1a.SM.TA-AUX-FV 1a.SM.TA-buy-CAUS-FV 10-jewelry
 dz-àka-b-iw-a]?
 10.SM-SE.TA-steal-PASS-FV
 ‘Whose discovery that Taurai_i had sold the stolen earrings did you hear that
 he_i thinks was fabricated?’ (2014-10-04-01-TD)

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**)-w-ai-fung-a [CP kuti (***wa**)-t-aka-teng-er-a [Shona]
1a.NSE-2SG.SM-TA-think-FV that **1a.NSE**-1PL.SM-TA-buy-APPL-FV
 Ø-**ani** Ø-rokwe]?
1a-who 5-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**)-w-ai-fung-a [CP kuti **ndi-Ø-ani** [Shona]
1a.NSE-2SG.SM-TA-think-FV that **NI-1a-who**
 *(**wa**)-t-aka-teng-er-a ___ Ø-rokwe]?
1a.NSE-1PL.SM-TA-buy-APPL-FV 5-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–

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'*

Ø-Taurai **chete** aka-foner-a ma-purisa [_{island} nokuti [Shona]
1a-Taurai **only** 1a.SM.TA-call-FV 6-police because

aka-on-a **Ø-ani**]?
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'*

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)

c. *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)

d. *Negation*

Ø-Taurai **ha-an-a** ku-foner-a ma-purisa [_{island} nokuti [Shona]
1a-Taurai **NEG-AUX-FV** 15-call-FV 6-police because

aka-on-a **Ø-ani**]?
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’*

Ø-Taurai **chete** aka-foner-a ma-purisa [_{island} nokuti [Shona]
 1a-Taurai **only** 1a.SM.TA-call-FV 6-police because

ndi-Ø-ani wa-aka-on-a ____]?

NI-1a-who 1a.NSE-1a.SM.TA-see-FV

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

(2015-01-17-01-TD)

b. *Focus: ‘even’*

Chero Ø-Taurai aka-foner-a ma-purisa [_{island} nokuti [Shona]
even 1a-Taurai 1a.SM.TA-call-FV 6-police because

ndi-Ø-ani wa-aka-on-a ____]?

NI-1a-who 1a.NSE-1a.SM.TA-see-FV

‘Who(m) did even Taurai call the police because he saw ____?’

(2015-01-17-01-TD)

c. *Focus: ‘also’*

Ø-Taurai aka-foner-a=**wo** ma-purisa [_{island} nokuti [Shona]
 1a-Taurai 1a.SM.TA-call-FV=**also** 6-police because

ndi-Ø-ani wa-aka-on-a ____]?

NI-1a-who 1a.NSE-1a.SM.TA-see-FV

‘Who(m) did [Taurai also] call the police because he saw ____?’

(2015-01-17-01-TD)

d. *Negation*

Ø-Taurai **ha-an-a** ku-foner-a ma-purisa [_{island} nokuti [Shona]
 1a-Taurai **NEG-AUX-FV** 15-call-FV 6-police because

ndi-Ø-ani wa-aka-on-a ____]?

NI-1a-who 1a.NSE-1a.SM.TA-see-FV

‘Who(m) didn’t Taurai call the police because he saw ____?’

(2015-01-17-01-TD)

4.5.2.4 Summary

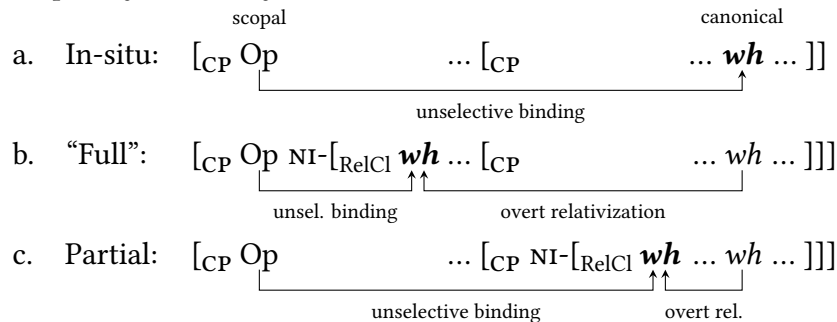
The higher relation in partial *wh*-movement patterns exactly like *wh*-in-situ: it lacks island sensitivity, extraction marking, and intervention effects. This suggests that these two relations are derived via the same mechanism, unselective binding.

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

This lack of sensitivity to islands above the pronunciation site distinguishes Shona from other languages with partial *wh*-movement, such as Singaporean Malay and Kĩtharaka. 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 (Cole & Hermon 1998), overt movement with pronunciation of the lower copy (Richards 2001), or overt movement of a null operator (Abels 2012a). Instead, the Shona facts provide novel support for proposals that posit a non-movement relation between the scopal position and the pronunciation site (Sabel 2000: 441, Sabel & Zeller 2006: 280, Abels 2012a: 155–156).

As argued in section 3.2.6, ex-situ *wh*-phrases are heads of relative clauses which are selected by the copula 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 *wh*-phrases do not undergo A'-movement but only this unselective binding. This is illustrated in (4.27).²

(4.27) *Proposal for Shona (final)*



2. I label the lowest position of the *wh*-phrase in (4.27) as the canonical position. In most cases, the base or thematic position of a *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 *wh*-in-situ as the canonical position but the lowest position of the *wh*-phrase in *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 *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*

W-aka-bvunz-a Ø-Rumbi [_{CP} kuti v-aka-wan-a Ø-ani]. [Shona]
 2SG.SM-TA-ask-FV 1a-Rumbi that 2.SM-TA-find-FV 1a-who
 'You asked Rumbi who(m) they found.' (2014-08-20-01-TD)

b. *In-situ wh-direct object*

W-aka-bvunz-a [_{CP} kuti Ø-Thandi aka-on-a chi-i]. [Shona]
 2SG.SM-TA-ask-FV that 1a-Thandi 1a.SM.TA-see-FV 7-what
 '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 **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

an embedded cleft, which is not nearly as exotic as partial *wh*-movement. David Pesetsky (pers. comm.) has suggested to me that the cleft structure allows for the possibility of these forms of partial *wh*-movement. However, the issue is not as straightforward as that because some of these languages (Kîtharaka and Kikuyu) have been reliably shown to have monoclausal focus-ex-situ and *wh*-ex-situ, not biclausal clefts (see section 3.2.4.3). Perhaps partial *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 *wh*-movement (rather than embedded relativization/clefting) during the grammaticalization from biclausal cleft into monoclausal focus construction. This reanalysis might explain why Kîtharaka has the island pattern of Singaporean Malay and no Shona. However, Michelle Yuan (pers. comm.) has recently found that Kikuyu partial *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 *wh*-movement. In particular, it would be good to look at languages like Kinande that have NI-clefts but can form *wh*-ex-situ with or without them. My hypothesis would predict that partial *wh*-movement would be possible in these languages only with a NI-cleft and not with normal *wh*-movement. Another type of language to check for partial *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 *wh*-movement would be felicitous

Languages seem to vary with respect to which *wh*-movement strategy seems most natural in a neutral context. According to Jason Kandybowicz (pers. comm.), Krachi ([kɛy], Kwa, Ghana) speakers prefer full *wh*-movement, followed by partial *wh*-movement, and then *wh*-in-situ is considered the least natural while still grammatical. In Shona non-subject *wh*-questions, *wh*-in-situ is the most natural, followed by full *wh*-movement and then

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*

W-ai-fung-a kuti v-aka-ti Ø-Taurai aka-teng-a [Shona]
2SG.SM-TA-think-FV that 2.SM-TA-say 1a-Taurai 1a.SM.TA-buy-FV

Ø-rokwe **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*

W-ai-fung-a kuti v-aka-ti **ndi-rinhi** Ø-Taurai [Shona]
2SG.SM-TA-think-FV that 2.SM-TA-say **NI-when** 1a-Taurai

pa-aka-teng-a Ø-rokwe?

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)

- c. *Long-distance partial wh-movement: Two-ways ambiguous*
 W-ai-fung-a kuti **ndi-rinhi** pa-v-aka-ti Ø-Taurai [Shona]
 2SG.SM-TA-think-FV that **NI-when** 16.NSE-2.SM-TA-say 1a-Taurai
 aka-teng-a Ø-rokwe?
 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)
- d. *Full wh-movement: Three-ways ambiguous*
Ndi-rinhi pa-w-ai-fung-a kuti v-aka-ti Ø-Taurai [Shona]
NI-when 16.NSE-2SG.SM-TA-think-FV that 2.SM-TA-say 1a-Taurai
 aka-teng-a Ø-rokwe?
 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)

Given this situation, it is difficult to imagine a context in which partial *wh*-movement would be the preferred strategy to use. Future work should include multiple speakers in a variety of tasks to see if there are natural scenarios where it would be the best choice.

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

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 *wh*-questions in any Bantu language to date, providing a model for future work. Throughout, I have highlighted crosslinguistic diversity in *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 *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 *wh*-in-situ and immediately after the verb (IAV) focus. In chapter 3, I argued that Shona *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” *wh*-movement and partial *wh*-movement as cleft-based *wh*-ex-situ. As shown in (5.1), my proposed derivation for Shona *wh*-ex-situ involves a step of relativization (independently needed for relative clauses) and a step of unselective binding (independently needed for *wh*-in-situ).

(5.1) *Proposal for Shona (final)*

- a. In-situ: $[\text{CP}^{\text{scopal}} \text{Op} \dots [\text{CP} \dots \text{wh} \dots]]$
unselective binding
- b. “Full”: $[\text{CP} \text{Op} \text{NI-}[\text{RelCl} \text{wh} \dots [\text{CP} \dots \text{wh} \dots]]]$
unsel. binding overt relativization
- c. Partial: $[\text{CP} \text{Op} \dots [\text{CP} \text{NI-}[\text{RelCl} \text{wh} \dots \text{wh} \dots]]]$
unselective binding overt rel.

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? [Shona]
 1.SM.TA-see-FV=WH
 ‘What did s/he see?’ (2014-09-23-01-TD)
- b. *Cliticized to verb*
 $[\text{RelCl} \text{Mu-rume} \text{àka-b-ir-e=i} \quad \text{Ø-mhete}] \text{ aka-tiz-a?}$ [Shona]
 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? [Shona]
 2SG.SM-TA-need-FV 9-money=WH
 ‘How much money do you need?’ (2014-09-23-01-TD)

d. *Cliticized to predicate nominal*

I-n-guva=**i**? [Shona]
 NI-9-time=**WH**
 ‘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*

U-no-bv-e=**pi**? [Shona]
 2SG.SM-TA-be.from=**LOC.WH**
 ‘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*

Sei ma-purisa a-chi-fung-a kuti mu-rume aka-b-a [Shona]
why 6-police 6.SM-TA-think-FV that 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)

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(errogative) 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-aana o-w-a-fun-a [Lubukusu]
 9-9-dog 9.SM-PST-bite-FV 1-1-child 1.SE-1.AA-PST-break-FV
 e-n-debe **si-kila si(ina)**]?
 9-9-chair **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 amba-ye [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 *wh*-questions, but it is impossible to front more than one *wh*-phrase to a single clause boundary. This means that testing for superiority violations would require that the object *wh*-phrase be in SpecCP and the subject *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 *kubvunza* ‘to ask’ takes the normal *kuti* ‘that’ complementizer and readily permits extracting *wh*-phrases out of its complement just like out of a declarative complement clause. This means that the only kind of *wh*-island I can construct is by using *wh*-ex-situ, which itself is really a relative clause. So we cannot test *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 *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 *wh*-questions, superiority effects, and *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 *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 *wh*-questions, especially in *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

- Abels, Klaus. 2012a. *Phases: An essay on cyclicity in syntax* (Linguistische Arbeiten 543). Berlin: De Gruyter.
- Abels, Klaus. 2012b. The Italian left periphery: A view from locality. *Linguistic Inquiry* 43(2). 229–254.
- Abels, Klaus & Peter Muriungi. 2008. The focus marker in Kĩtharaka: Syntax and semantics. *Lingua* 118(5). 687–731. <http://dx.doi.org/10.1016/j.lingua.2007.09.003>.
- Abner, Natasha. 2011. WH-words that go bump in the right. In Mary Byram Washburn, Katherine McKinney-Bock, Erika Varis, Ann Sawyer & Barbara Tomaszewicz (eds.), *Proceedings of the 28th West Coast Conference on Formal Linguistics (WCCFL)*, 24–32. Somerville, MA: Cascadilla Proceedings Project.
- Aboh, Enoch Oladé. 2007. Leftward focus versus rightward focus: The Kwa-Bantu conspiracy. In Nancy C. Kula & Lutz Marten (eds.), *Bantu in Bloomsbury: Special issue on Bantu linguistics* (SOAS Working Papers in Linguistics 15), 81–104. London: SOAS.
- Adli, Aria. 2006. French *wh*-in-situ questions and syntactic optionality: Evidence from three data types. *Zeitschrift für Sprachwissenschaft* 25(2). 163–203.
- Aoun, Joseph, Norbert Hornstein & Dominique Sportiche. 1981. Some aspects of wide scope quantification. *Journal of Linguistic Research* 1(3). 69–95.
- Aoun, Joseph & Yen-hui Audrey Li. 1993. *Wh*-elements in situ: Syntax or LF? *Linguistic Inquiry* 24(2). 199–238.
- Apuge, Michael Etuge. 2010. Wh-operators and movement patterns. *Kalilao* 2(3). 155–168.

- Apuge, Michael Etuge. 2012. *The syntax of movement in Akoose*. Buea, Cameroon: University of Buea PhD thesis.
- Aranovich, Raúl. 2015. Realizational morphology beyond the lexicon: Synthetic and periphrastic verbs in Shona. *Language Sciences*. forthcoming. <http://dx.doi.org/10.1016/j.langsci.2015.05.004>.
- Aravind, Athulya. 2015a. Minimality and *wh*-in-situ in Malayalam. Paper presented at the 46th Annual Meeting of the North East Linguistic Society (NELS), Montreal.
- Aravind, Athulya. 2015b. Minimality and *wh*-licensing in Malayalam. Paper presented at Syntax Square in the MIT Department of Linguistics & Philosophy, Cambridge, MA.
- Artstein, Ron. 2002. *Parts of words: Compositional semantics for prosodic constituents*. New Brunswick, NJ: Rutgers, The State University of New Jersey PhD thesis.
- Baier, Nico. 2015. A survey of anti-agreement effects. Dissertation prospectus. Berkeley, CA: University of California.
- Baier, Nico. 2016. Deriving partial anti-agreement. Paper presented at the 90th Annual Meeting of the Linguistic Society of America (LSA 90), Washington, DC.
- Baker, C. L. 1970. Notes on the description of English questions: The role of an abstract question morpheme. *Foundations of Language* 6(2). 197–219.
- Baker, Mark. 1985. The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16(3). 373–415.
- Baker, Mark C. 2003. Agreement, dislocation, and partial configurationality. In Andrew Carnie, Heidi Harley & Mary Willie (eds.), *Formal approaches to function in grammar: In honor of Eloise Jelinek* (Linguistik Aktuell/Linguistics Today 62), 107–132. Philadelphia: John Benjamins.
- Baker, Mark C. 2008. On the nature of the antiagreement effect: Evidence from *wh*-in-situ in Ibibio. *Linguistic Inquiry* 39(4). 615–632.

- Baker, Mark C. & Chris Collins. 2006. Linkers and the internal structure of vP. *Natural Language & Linguistic Theory* 24(2). 307–354. <http://dx.doi.org/10.1007/s11049-005-2235-1>.
- Barss, Andrew. 1986. *Chains and anaphoric dependence: On reconstruction and its implications*. Cambridge, MA: MIT PhD thesis.
- Bax, Anna & Michael Diercks. 2012. Information structure constraints on object marking in Manyika. *Southern African Linguistics & Applied Language Studies* 30(2). 185–202. <http://dx.doi.org/10.2989/16073614.2012.737596>.
- Bayer, Josef. 2006. *Wh*-in-situ. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell companion to syntax*, vol. 5 (Blackwell Handbooks in Linguistics 19), 376–438. Malden, MA: Blackwell.
- Beaudoin-Lietz, Christa, Derek Nurse & Sarah Rose. 2004. Pronominal object marking in Bantu. In Akinbiyi Akinlabi & Oluseye Adesola (eds.), *Proceedings of the 4th World Congress of African Linguistics (WOCAL)*, 175–188. Köln: Köppe.
- Beck, Sigrid. 1996. Quantified structures as barriers for LF movement. *Natural Language Semantics* 4(1). 1–56. <http://dx.doi.org/10.1007/BF00263536>.
- Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14(1). 1–56. <http://dx.doi.org/10.1007/s11050-005-4532-y>.
- Beck, Sigrid & Shin-Sook Kim. 1997. On *wh*- and operator scope in Korean. *Journal of East Asian Linguistics* 6(4). 339–384. <http://dx.doi.org/10.1023/A:1008280026102>.
- Beckman, Jill N. 1997. Positional faithfulness, positional neutralisation and Shona vowel harmony. *Phonology* 14(1). 1–46. <http://dx.doi.org/10.1017/S0952675797003308>.
- Béjar, Susana & Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40(1). 35–73.
- Belletti, Adriana. 2004. Aspects of the low IP area. In Luigi Rizzi (ed.), *The structure of CP and IP* (The cartography of syntactic structures 2), 16–51. Oxford: Oxford University Press.

- Belletti, Adriana, Naama Friedmann, Dominique Brunato & Luigi Rizzi. 2012. Does gender make a difference? Comparing the effect of gender on children's comprehension of relative clauses in Hebrew and Italian. *Lingua* 122(10). 1053–1069. <http://dx.doi.org/10.1016/j.lingua.2012.02.007>.
- Bellusci, David Christian. 1991. *Serialization patterns in Shona verbal morphology*. Calgary, AB: University of Calgary MA thesis.
- Bentea, Anamaria, Stephanie Durrleman & Luigi Rizzi. 2016. Refining intervention: The acquisition of featural relations in object a-bar dependencies. *Lingua* 169. 21–41. <http://dx.doi.org/10.1016/j.lingua.2015.10.001>.
- Bergvall, Victoria Lee. 1987. *Focus in Kikuyu and universal grammar*. Cambridge, MA: Harvard University PhD dissertation.
- Bianchi, Valentina. 1999. *Consequences of antisymmetry: Headed relative clauses* (Studies in Generative Grammar 46). New York: Mouton de Gruyter.
- Bladon, Anthony, Christopher Clark & Katrina Mickey. 1987. Production and perception of sibilant fricatives: Shona data. *Journal of the International Phonetic Association* 17(1). 39–65. <http://dx.doi.org/10.1017/S0025100300003248>.
- Bliss, Heather. 2009. Comparing APPLs and oranges: The syntax of Shona applicatives. In Akinloye Ojo & Lioba Moshi (eds.), *Selected proceedings of the 39th Annual Conference on African Linguistics (ACAL)*, 100–109. Somerville, MA: Cascadilla Proceedings Project.
- Bliss, Heather. 2010. Case asymmetry and information structure in Shona. In Heather Bliss, Meagan Louie & Murray Schellenberg (eds.), *Proceedings of NWLC (Northwest Linguistics Conference) 2009* (University of British Columbia Working Papers in Linguistics 25), 29–40. Vancouver: UBCWPL.
- Bliss, Heather & Dennis Ryan Storoshenko. 2008. Passivization and A'-movement in Shona. *Canadian Linguistic Association (CLA) 2008*. 1–10.

- Bliss, Heather & Dennis Ryan Storoshenko. 2009. Grammaticization of topic in Shona. Paper presented at the 3rd International Conference on Bantu Linguistics (BANTU 3), Tervuren, Belgium, March 24-28. https://sites.google.com/site/drheatherbliss/presentations/BlissStoroshenko_BANTU3.pdf.
- Bobaljik, Jonathan David. 1995. *Morphosyntax: The syntax of verbal inflection*. Cambridge, MA: MIT PhD thesis.
- Bobaljik, Jonathan David. 2002. A-chains at the PF-interface: Copies and ‘covert’ movement. *Natural Language & Linguistic Theory* 20(2). 197–267. <http://dx.doi.org/10.1023/A:1015059006439>.
- Bokamba, Eyamba G. 1976. *Question formation in some Bantu languages*. Bloomington: Indiana University PhD Dissertation.
- Bošković, Željko. 1998. LF movement and the Minimalist Program. *North East Linguistic Society (NELS)* 28. 43–51.
- Bowern, Claire, Patience Epps, Russell Gray, Jane Hill, Keith Hunley, Patrick McConvell & Jason Zentz. 2011. Does lateral transmission obscure inheritance in hunter-gatherer languages? *PLOS ONE* 6(9). e25195. <http://dx.doi.org/10.1371/journal.pone.0025195>.
- Bowern, Claire & Jason Zentz. 2012. Diversity in the numeral systems of Australian languages. *Anthropological Linguistics* 54(2). 133–160. <http://dx.doi.org/10.1353/anl.2012.0008>.
- Brauner, Siegmund. 1995. *A grammatical sketch of Shona: Including historical notes* (Grammatische Analysen afrikanischer Sprachen 4). Köln: Rüdiger Köppe.
- Bresnan, Joan & Sam A. Mchombo. 1987. Topic, pronoun, and agreement in Chicheŵa. *Language* 63(4). 741–782.
- Bresnan, Joan & Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 21(2). 147–185.

- Brown, Lauren, Jason Zentz & Osman Din. 2014. ShelfScan: Streamlining library shelving, expanding quality control. Poster. Yale Day of Data. New Haven, CT. <http://elischolar.library.yale.edu/dayofdata/2014/Posters/10> (15 March, 2016).
- BSN. 2006. *Bhaibheri dzvene (Holy Bible)*. Available at <https://www.bible.com/versions/32-bsn-bhaibheri-dzvene>. Biblica.
- Buell, Leston Chandler. 2005. *Issues in Zulu verbal morphosyntax*. Los Angeles: UCLA PhD dissertation.
- Buell, Leston. 2009. Evaluating the immediate postverbal position as a focus position in Zulu. In Masangu Matondo, Fiona McLaughlin & Eric Potsdam (eds.), *Selected proceedings of the 38th Annual Conference on African Linguistics (ACAL)*, 166–172. Somerville, MA: Cascadilla Proceedings Project.
- Buell, Leston Chandler. 2011. Zulu *ngani* ‘why’: Postverbal and yet in CP. *Lingua* 121(5). 805–821. <http://dx.doi.org/10.1016/j.lingua.2010.11.004>.
- Cable, Seth. 2010. *The grammar of Q: Q-particles, wh-movement, and pied-piping* (Oxford Studies in Comparative Syntax). Oxford: Oxford University Press.
- Carstens, Vicki. 2005. Agree and EPP in Bantu. *Natural Language & Linguistic Theory* 23(2). 219–279. <http://dx.doi.org/10.1007/s11049-004-0996-6>.
- Carstens, Vicki. 2010. Implications of grammatical gender for the theory of uninterpretable features. In Michael T. Putnam (ed.), *Exploring crash-proof grammars* (Language Faculty and Beyond 3), 31–57. Amsterdam: John Benjamins.
- Carstens, Vicki. 2011. Hyperactivity and Hyperagreement in Bantu. *Lingua* 121(5). 721–741. <http://dx.doi.org/10.1016/j.lingua.2010.11.001>.
- Carstens, Vicki. 2016. Delayed valuation: A reanalysis of goal features, “upwards” complementizer agreement, and the mechanics of Case. *Syntax* 19(1). 1–42. <http://dx.doi.org/10.1111/synt.12116>.
- Carstens, Vicki & Michael Diercks. 2013. Parameterizing Case and activity: Hyper-raising in Bantu. *North East Linguistic Society (NELS)* 40(1). 99–118.

- Carstens, Vicki & Loyiso Mletshe. 2015. Radical defectivity: Implications of Xhosa expletive constructions. *Linguistic Inquiry* 46(2). 187–242. http://dx.doi.org/10.1162/LING_a_00180.
- Carstens, Vicki & Loyiso Mletshe. Forthcoming. Negative concord and nominal licensing in Xhosa and Zulu. *Natural Language & Linguistic Theory*. forthcoming. <http://dx.doi.org/10.1007/s11049-015-9320-x>.
- Carter, Hazel. 1956. Stabilization in the Manyika dialect of the Shona group. *Africa* 26(4). 398–405. <http://dx.doi.org/10.2307/1156676>.
- Carter, Hazel & George P. Kahari. 1986. *Kuverenga Chishóna: An introductory Shona reader with grammatical sketch*. 2nd edn. 2 vols. London: School of Oriental & African Studies, University of London.
- Chabata, Emmanuel. 2007. *The Nambya verb with special emphasis on the causative*. Oslo: University of Oslo PhD thesis.
- Chang, Lisa. 1997. *Wh-in-situ phenomena in French*. Vancouver: University of British Columbia MA thesis.
- Cheng, Lisa Lai-Shen. 2006. Decomposing Bantu relatives. *North East Linguistic Society (NELS)* 36. 197–216.
- Cheng, Lisa Lai-Shen. 2009. *Wh-in-situ, from the 1980s to now*. *Language and Linguistics Compass* 3(3). 767–791. <http://dx.doi.org/10.1111/j.1749-818X.2009.00133.x>.
- Cheng, Lisa Lai-Shen & Laura J. Downing. 2009. Where's the topic in Zulu? *The Linguistic Review* 26(2). 207–238.
- Cheng, Lisa Lai-Shen & Laura J. Downing. 2012. Against FocusP: Arguments from Zulu. In Ivona Kučerová & Ad Neeleman (eds.), *Contrasts and positions in information structure*, 247–266. Cambridge: Cambridge University Press.
- Cheng, Lisa L.-S. & Laura J. Downing. 2013. Clefts in Durban Zulu. In Katharina Hartmann & Tonjes Veenstra (eds.), *Cleft structures* (Linguistik Aktuell/Linguistics Today 208), 141–163. Amsterdam: John Benjamins.

- Cheng, Lisa Lai-Shen & Johan Rooryck. 2000. Licensing *wh*-in-situ. *Syntax* 3(1). 1–19. <http://dx.doi.org/10.1111/1467-9612.00022>.
- Cheng, Lisa Lai-Shen & Johan Rooryck. 2002. Types of *wh*-in-situ. Unpublished manuscript. Leiden: Leiden University.
- Chimhundu, Herbert. 1992. Standard Shona: Myth and reality. In Nigel T. Crawhall (ed.), *Democratically speaking: International perspectives on language planning*, 77–88. Salt River, South Africa: National Language Project.
- Chimhundu, Herbert (ed.). 1996. *Duramazwi reChishona*. Harare: ALLEX Project & College Press.
- Chimhundu, Herbert. 2001. *Duramazwi guru reChiShona: Rine zvirungamutauro*. Harare: ALLEX Project & College Press.
- Chimhundu, Herbert. 2002. *Adoption and adaptation in Shona*. Published version of the author's 1983 University of Zimbabwe PhD dissertation. Oslo: ALLEX Project.
- Chimhundu, Herbert. 2005. Doke and the development of standard Shona. In Doke, Clement M. *Report on the unification of the Shona dialects*. Reprint of Doke's 1931 report, with introduction by Chimhundu. Oslo: The ALLEX Project.
- Chimhundu, Herbert & Oddrun Grønvik. 2006. *The ALLEX [African Languages Lexical] Project*. <http://www.edd.uio.no/allex/index.html> (14 March, 2016).
- Choe, Jae W. 1987. LF movement and pied-piping. *Linguistic Inquiry* 18(2). 348–353.
- Chomsky, Noam. 1973. Conditions on transformations. In Stephen R. Anderson & Paul Kiparsky (eds.), *A festschrift for Morris Halle*, 232–286. New York: Holt, Rinehart & Winston.
- Chomsky, Noam. 1977. On *wh*-movement. In Peter W. Culicover, Thomas Wasow & Adrian Akmajian (eds.), *Formal syntax*, 71–132. New York: Academic Press.
- Chomsky, Noam. 1981. *Lectures on government and binding* (Studies in Generative Grammar 9). Dordrecht, The Netherlands: Foris.

- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In Kenneth Hale & Samuel Jay Keyser (eds.), *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger* (Current Studies in Linguistics 24), 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 1995. *The minimalist program* (Current Studies in Linguistics 28). Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89–155. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in language* (Current Studies in Linguistics 36), 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In Robert Freidin, Carlos Peregrín Otero & Maria Luisa Zubizarreta (eds.), *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud* (Current Studies in Linguistics 45), 133–166. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2013. Problems of projection. *Lingua* 130. 33–49. <http://dx.doi.org/10.1016/j.lingua.2012.12.003>.
- Chomsky, Noam. 2015. Problems of projection: Extensions. In Elisa Di Domenico, Cornelia Hamann & Simona Matteini (eds.), *Structures, strategies and beyond: Studies in honour of Adriana Belletti* (Linguistik Aktuell/Linguistics Today 223), 1–16. Amsterdam: John Benjamins.
- Cinque, Guglielmo. 1990. *Types of \bar{A} -dependencies* (Linguistic Inquiry Monographs 17). Cambridge, MA: MIT Press.
- Clements, George N. 1984. Binding domains in Kikuyu. *Studies in the Linguistic Sciences* 14(2). 37–56.
- Cole, Peter & Gabriella Hermon. 1994. Is there LF *wh*-movement? *Linguistic Inquiry* 25(2). 239–262.

- Cole, Peter & Gabriella Hermon. 1998. The typology of *wh*-movement: *Wh*-questions in Malay. *Syntax* 1(3). 221–258. <http://dx.doi.org/10.1111/1467-9612.00009>.
- Déchainé, Rose-Marie, Raphaël Girard, Calisto Mudzingwa & Martina Wiltschko. 2014. The internal syntax of Shona class prefixes. *Language Sciences* 43. 18–46. <http://dx.doi.org/10.1016/j.langsci.2013.10.008>.
- Dembetembe, Norris C. 1974. Three Korekore dialects. *Journal of African Languages* 15. 143–172.
- Dembetembe, Norris Clemens. 1976. *The syntax of sentential complements in Shona*. London: University of London PhD thesis.
- Dembetembe, N. C. 1986. Aspects of negation in Shona. *South African Journal of African Languages* 6(1). 1–10. <http://dx.doi.org/10.1080/02572117.1986.10586642>.
- Dembetembe, N. C. 1987. *A linguistic study of the verb in Korekore*. Supplement to *Zambezia* 13. Harare: University of Zimbabwe, Publications Office.
- Demuth, Katherine & Carolyn Harford. 1999. Verb raising and subject inversion in Bantu relatives. *Journal of African Languages and Linguistics* 20(1). 41–62. <http://dx.doi.org/10.1515/jall.1999.20.1.41>.
- Déprez, Viviane, Kristen Syrett & Shigeto Kawahara. 2013. The interaction of syntax, prosody, and discourse in licensing French *wh*-in-situ questions. *Lingua* 124. 4–19. <http://dx.doi.org/10.1016/j.lingua.2012.03.002>.
- Diercks, Michael. 2009. Subject extraction and (so-called) anti-agreement effects in Lubukusu: A Criterial Freezing approach. *Chicago Linguistic Society (CLS)* 45(1). 55–69.
- Diercks, Michael J. K. 2010. *Agreement with subjects in Lubukusu*. Washington, DC: Georgetown University PhD dissertation.
- Diercks, Michael. 2012. Parameterizing Case: Evidence from Bantu. *Syntax* 15(3). 253–286. <http://dx.doi.org/10.1111/j.1467-9612.2011.00165.x>.
- Dikken, Marcel den. 2006. *Relators and linkers: The syntax of predication, predicate inversion, and copulas* (Linguistic Inquiry Monographs 47). Cambridge, MA: MIT Press.

- Dingemanse, Mark. 2011. *The meaning and use of ideophones in Siwu*. Leiden: Leiden University PhD thesis.
- Doke, Clement M. 1929. *The problem of word-division in Bantu: With special reference to the languages of Mashonaland* (Occasional Paper 2). Salisbury: Dept. of Native Development, Southern Rhodesia.
- Doke, Clement M. 1931a. *A comparative study in Shona phonetics*. Johannesburg: University of the Witwatersrand Press.
- Doke, Clement M. 1931b. *Report on the unification of the Shona dialects*. Hertford, UK: Printed for the Government of Southern Rhodesia by S. Austin.
- Donnelly, Kevin G. 1981. Shona verbal tones. *Studies in African Linguistics* 12(3). 245–275.
- Downing, Laura J. 2006. The prosody and syntax of focus in Chitumbuka. *ZAS Papers in Linguistics* 43. 55–79.
- Downing, Laura J. 2011. Wh-questions in Chewa and Tumbuka: Positions and prosodies. *ZAS Papers in Linguistics* 55. 33–46.
- Downing, Laura J. 2012. On the (non-)congruence of focus and prominence in Tumbuka. In Michael R. Marlo, Nikki B. Adams, Christopher R. Green, Michelle Morrison & Tristan M. Purvis (eds.), *Selected proceedings of the 42nd Annual Conference on African Linguistics (ACAL)*, 122–133. Somerville, MA: Cascadilla Proceedings Project.
- Downing, Laura J. & Bryan Gick. 2001. Voiceless tone depressors in Nambya and Botswana Kalang'a. *Berkeley Linguistics Society (BLS)* 27(1). 65–80. <http://dx.doi.org/10.3765/bls.v27i1.1115>.
- Downing, Laura J. & Larry M. Hyman. 2015. Information structure in Bantu. In Caroline Féry & Shinichiro Ishihara (eds.), *The Oxford handbook of information structure*. Oxford: Oxford University Press.
- Downing, Laura J. & Maxwell Kadenge. 2015. Prosodic stems in Zezuru Shona. *Southern African Linguistics and Applied Language Studies* 33(3). 291–305. <http://dx.doi.org/10.2989/16073614.2015.1108766>.

- É. Kiss, Katalin. 1998. Identificational focus versus information focus. *Language* 74(2). 245–273. <http://dx.doi.org/10.2307/417867>.
- Ebert, Christian & Cornelia Endriss. 2004. Topic interpretation and wide scope indefinites. *North East Linguistic Society (NELS)* 34(1). 203–214.
- Ehret, Christopher & Margaret Kinsman. 1981. Shona dialect classification and its implications for Iron Age history in southern Africa. *The International Journal of African Historical Studies* 14(3). 401–443. <http://dx.doi.org/10.2307/217698>.
- Embick, David & Rolf Noyer. 2007. Distributed Morphology and the syntax/morphology interface. In *The Oxford handbook of linguistic interfaces*, 289–324. Oxford: Oxford University Press.
- Endriss, Cornelia. 2009. *Quantificational topics: A scopal treatment of exceptional wide scope phenomena* (Studies in Linguistics and Philosophy 86). New York: Springer.
- Epée, Roger. 1975. The case for a Focus position in Duala. In Robert K. Herbert (ed.), *Sixth Conference on African Linguistics* (Working Papers in Linguistics 20), 210–226. Ohio State University Working Papers in Linguistics.
- Epée, Roger. 1976a. *Generative syntactic studies in Duala*. Ithaca, NY: Cornell University PhD dissertation.
- Epée, Roger. 1976b. On some rules that are not successive cyclic in Duala. *Linguistic Inquiry* 7(1). 193–198.
- Epps, Patience, Claire Bower, Cynthia A. Hansen, Jane H. Hill & Jason Zentz. 2012. On numeral complexity in hunter-gatherer languages. 16(1). 41–109. <http://dx.doi.org/10.1515/lity-2012-0002>.
- Erickson, Daniel Howard. 1988. *The morphology and syntax of Shona: A lexical approach*. Seattle: University of Washington PhD thesis.
- Erlewine, Michael Yoshitaka. N.d. Anti-locality and optimality in Kaqchikel Agent Focus. *Natural Language & Linguistic Theory*. forthcoming. <http://dx.doi.org/10.1007/s11049-015-9310-z>.

- Fanselow, Gisbert. 2006. Partial *wh*-movement. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell companion to syntax*, vol. 3 (Blackwell Handbooks in Linguistics 19), 437–492. Malden, MA: Blackwell.
- Fanselow, Gisbert & Damir Ćavar. 2001. Remarks on the economy of pronunciation. In Gereon Müller & Wolfgang Sternefeld (eds.), *Competition in syntax* (Studies in Generative Grammar 49), 107–150. Berlin: Mouton de Gruyter.
- Ferch, Elizabeth Ann. 2009. *Number and the scope of indefinites*. Vancouver: University of British Columbia MA thesis.
- Ferch, Elizabeth. 2010. The scope of negation in Shona. In Heather Bliss, Meagan Louie & Murray Schellenberg (eds.), *Proceedings of NWLC (Northwest Linguistics Conference) 2009* (University of British Columbia Working Papers in Linguistics 25), 75–85. Vancouver: UBCWPL.
- Ferch, Elizabeth. 2013. Scopeless quantity words in Shona. *Natural Language Semantics* 21(4). 373–400. <http://dx.doi.org/10.1007/s11050-013-9097-6>.
- Fivaz, Derek. 1970. *Shona morphophonemics and morphosyntax*. Johannesburg: University of the Witwatersrand, Dept. of African Languages.
- Fortune, G. 1955. *An analytical grammar of Shona*. London: Longmans.
- Fortune, G. 1962. *Ideophones in Shona: An inaugural lecture given in the University College of Rhodesia and Nyasaland on 28 April, 1961*. London: Oxford University Press.
- Fortune, G. 1967. *Elements of Shona (Zezuru dialect)*. 2nd. Harare: Longman.
- Fortune, G. 1969. 75 years of writing in Shona. *Zambezia* 1(1). 55–67.
- Fortune, G. 1970. The references of primary and secondary noun prefixes in Zezuru. *African Studies* 29(2). 81–110. <http://dx.doi.org/10.1080/00020187008707322>.
- Fortune, G. 1972. *A guide to shona spelling*. Salisbury: Longman.
- Fortune, G. 1984. *Shona grammatical constructions: Part II*. 3rd edn. Harare: Mercury.
- Fortune, G. 1985. *Shona grammatical constructions: Part I*. 3rd edn. Harare: Mercury.

- Fortune, G. 2004. *Essays on shona dialects*. Herbert Chimhundu & Oddrun Grønvik (eds.). Posthumous republication of course handouts originally compiled by Fortune in the 1970s. Harare: ALLEX Project. <http://www.edd.uio.no/allex/ibooks/fortune/index.html> (14 March, 2016).
- Fox, Danny. 1999. Reconstruction, binding theory, and the interpretation of chains. *Linguistic Inquiry* 30(2). 157–196.
- Franck, Genevieve E. 2014. *Ideophones in Manyika Shona: A descriptive analysis of ideophones and their function in Manyika (Bantu)*. Albany, NY: University at Albany (SUNY) BA honors thesis.
- Frascarelli, Mara. 2007. Subjects, topics and the interpretation of referential *pro*: An interface approach to the linking of (null) pronouns. *Natural Language & Linguistic Theory* 25(4). 691–734. <http://dx.doi.org/10.1007/s11049-007-9025-x>.
- Frascarelli, Mara & Roland Hinterhölzl. 2007. Types of topics in German and Italian. In Kerstin Schwabe & Susanne Winkler (eds.), *On information structure, meaning and form: Generalizations across languages* (Linguistik Aktuell/Linguistics Today 100), 87–116. Amsterdam: John Benjamins.
- Friedmann, Naama, Adriana Belletti & Luigi Rizzi. 2009. Relativized relatives: Types of intervention in the acquisition of a-bar dependencies. *Lingua* 119(1). 67–88. <http://dx.doi.org/10.1016/j.lingua.2008.09.002>.
- Givón, Talmy. 1974. Syntactic change in Lake-Bantu: A rejoinder. *Studies in African Linguistics* 5(1). 117–139.
- Givón, Talmy. 1976. Topic, pronoun and grammatical agreement. In Charles N. Li (ed.), *Subject and topic*, 149–188. New York: Academic Press.
- Givón, T. 2015. On the diachrony of the Bantu copula *ni*. In *The diachrony of grammar*, vol. 1, 99–116. Amsterdam: John Benjamins.
- Gowlett, Derek. 2003. Zone S. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages* (Routledge Language Family Series 4), 609–638. London: Routledge.

- Grohmann, Kleanthes K. 2003. *Prolific domains: On the anti-locality of movement dependencies* (Linguistik Aktuell/Linguistics Today 66). Amsterdam: John Benjamins.
- Güldemann, Tom, Sabine Zerbian & Malte Zimmermann. 2015. Variation in information structure with special reference to Africa. *Annual Review of Linguistics* 1(1). 155–178. <http://dx.doi.org/10.1146/annurev-linguist-030514-125134>.
- Guthrie, Malcolm. 1971. *Comparative Bantu: An introduction to the comparative linguistics and prehistory of the Bantu languages: Bantu prehistory, inventory, and indexes*. Vol. 2. Farnborough: Gregg.
- Halle, Morris & Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In Kenneth Hale & Samuel Jay Keyser (eds.), *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger* (Current Studies in Linguistics 24), 111–176. Cambridge, MA: MIT Press.
- Halpert, Claire. 2012. *Argument licensing and agreement in Zulu*. Cambridge, MA: MIT PhD dissertation.
- Halpert, Claire. 2016. *Argument licensing and agreement* (Oxford Studies in Comparative Syntax). New York, NY: Oxford University Press.
- Hamblin, C. L. 1973. Questions in Montague English. *Foundations of Language* 10(1). 41–53.
- Hamlaoui, Fatima & Emmanuel-Moselly Makasso. 2015. Focus marking and the unavailability of inversion structures in the Bantu language Bàsàá (A43). *Lingua* 154. 35–64. <http://dx.doi.org/10.1016/j.lingua.2014.10.010>.
- Hannan, M. 1984. *Standard Shona dictionary*. Rev. edn. with addendum. Harare: The College Press in conjunction with the Literature Bureau.
- Harford Perez, Carolyn. 1983. Locative pseudo-subjects in Shona. *Journal of African Languages and Linguistics* 5(2). 131–156. <http://dx.doi.org/10.1515/jall.1983.5.2.131>.
- Harford Perez, Carolyn. 1985. *Aspects of complementation in three Bantu languages*. Madison, WI: University of Wisconsin PhD thesis.

- Harford, Carolyn. 1990. Locative inversion in Chishona. In John P. Hutchison & Victor Manfredi (eds.), *Current approaches to African linguistics*, vol. 7 (Publications in African Languages and Linguistics 11), 137–144. Dordrecht: Foris.
- Harford, Carolyn. 1997a. Empty operator raising in Kitharaka. *Studies in African Linguistics* 26(2). 111–129.
- Harford, Carolyn. 1997b. When two vowels go walking: Vowel coalescence in Shona. *Zambezia* 24(1). 69–85.
- Harford, Carolyn & Katherine Demuth. 1999. Prosody outranks syntax: An Optimality approach to subject inversion in Bantu relatives. *Linguistic Analysis* 29(1-2). 47–68.
- Harley, Heidi & Rolf Noyer. 1999. State-of-the-Article: Distributed Morphology. *Glott International* 4(4). 3–9.
- Harley, Heidi & Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78(3). 482–526. <http://dx.doi.org/10.2307/3086897>.
- Harris, Alice C. 2001. Focus and universal principles governing simplification of cleft structures. In Jan Terje Faarlund (ed.), *Grammatical relations in change* (Studies in Language Companion Series 56), 159–170. Amsterdam: John Benjamins.
- Harris, Alice C. & Lyle Campbell. 1995. Processes that simplify biclausal structures. In *Historical syntax in cross-linguistic perspective* (Cambridge Studies in Linguistics 74), 151–194. Cambridge: Cambridge University Press.
- Hartmann, Katharina & Tonjes Veenstra. 2013. Introduction. In Katharina Hartmann & Tonjes Veenstra (eds.), *Cleft structures* (Linguistik Aktuell/Linguistics Today 208), 1–32. Amsterdam: John Benjamins.
- Hawkinson, Annie K. & Larry M. Hyman. 1974. Hierarchies of natural topic in Shona. *Studies in African Linguistics* 5(2). 147–170.
- Hedberg, Nancy. 2000. The referential status of clefts. *Language* 76(4). 891–920. <http://dx.doi.org/10.2307/417203>.

- Hedinger, Robert. 2008. *A grammar of Akɔɔse: A Northwest Bantu language*. Dallas, TX: SIL International & the University of Texas at Arlington.
- Heim, Irene Roswitha. 1982. *The semantics of definite and indefinite noun phrases*. Amherst, MA: University of Massachusetts PhD thesis.
- Heine, Bernd & Mechthild Reh. 1984. *Grammaticalization and reanalysis in African languages*. Hamburg: H. Buske.
- Henderson, Brent. 2006a. Multiple agreement and inversion in Bantu. *Syntax* 9(3). 275–289. <http://dx.doi.org/10.1111/j.1467-9612.2006.00093.x>.
- Henderson, Brent Mykel. 2006b. *The syntax and typology of Bantu relative clauses*. Urbana, IL: University of Illinois PhD dissertation.
- Henderson, Brent. 2007. The syntax of agreement in Bantu relatives. In Frederick Hoyt, Nikki Seifert, Alexandra Teodorescu & Jessica White (eds.), *Texas Linguistics Society 9: Morphosyntax of underrepresented languages*, 167–184. Stanford, CA: CSLI Publications.
- Henderson, Brent. 2009. Anti-agreement: Locality of movement or agreement? *Chicago Linguistic Society (CLS)* 45(2). 89–102.
- Henderson, Brent. 2011a. African languages and syntactic theory: Impacts and directions. In Eyamba G. Bokamba, Ryan K. Shosted & Bezza Tesfaw Ayalew (eds.), *Selected proceedings of the 40th Annual Conference on African Linguistics (ACAL)*, 15–25. Somerville, MA: Cascadilla Proceedings Project.
- Henderson, Brent. 2011b. Agreement, locality, and OVS in Bantu. *Lingua* 121(5). 742–753. <http://dx.doi.org/10.1016/j.lingua.2010.11.002>.
- Henderson, Brent. 2013. Agreement and person in anti-agreement. *Natural Language & Linguistic Theory* 31(2). 453–481. <http://dx.doi.org/10.1007/s11049-013-9186-8>.
- Herrick, Earl M. 1968. A stratificational restatement of a problem in Manyika phonology. *Chicago Linguistic Society (CLS)* 4. 111–119.
- Horvath, Julia. 1986. *Focus in the theory of grammar and the syntax of Hungarian* (Studies in Generative Grammar 24). Dordrecht, The Netherlands: Foris.

- Huang, Cheng-Teh James. 1982. *Logical relations in Chinese and the theory of grammar*. Cambridge, MA: MIT PhD thesis.
- Hyman, Larry M. 1979. Phonology and noun structure. In Larry M. Hyman (ed.), *Aghem grammatical structure: With special reference to noun classes, tense-aspect and focus marking* (Southern California Occasional Papers in Linguistics 7), 1–72. Los Angeles: University of Southern California.
- Hyman, Larry M. 1999. The historical interpretation of vowel harmony in Bantu. In Jean-Marie Hombert & Larry M. Hyman (eds.), *Bantu historical linguistics: Theoretical and empirical perspectives*, 235–295. Stanford, CA: Center for the Study of Language & Information.
- Hyman, Larry M. 2012. Post-verbal subject in the Nzadi relative clause. *jall* 33(1). 97–117. <http://dx.doi.org/10.1515/jall-2012-0004>.
- Hyman, Larry M. & Francis X. Katamba. 2011. The tonology of WH questions in Luganda. *ZAS Papers in Linguistics* 55. 65–82.
- Hyman, Larry M. & Maria Polinsky. 2010. Focus in Aghem. In Malte Zimmermann & Caroline Féry (eds.), *Information structure: Theoretical, typological, and experimental perspectives*, 206–233. Oxford: Oxford University Press.
- Hyman, Larry M. & John R. Watters. 1984. Auxiliary focus. *Studies in African Linguistics* 15(3). 233–273.
- Jaeger, T. Florian. 2004. Topicality and Superiority in Bulgarian *wh*-questions. In Olga Arnaudova, Wayles Browne, María Luisa Rivero & Danijela Stojanović (eds.), *Annual Workshop on Formal Approaches to Slavic Languages (FASL)*, vol. 12: The Ottawa Meeting 2003 (Michigan Slavic Materials 49), 207–228. Ann Arbor, MI: Michigan Slavic Publications.
- Jarosz, Gaja, Shira Calamaro & Jason Zentz. Forthcoming. Input frequency and the acquisition of syllable structure in Polish. *Language Acquisition*. forthcoming.

- Jefferies, Ann A. 1990. *Beyond tone: Functions of pitch in Shona*. Gainesville, FL: University of Florida PhD thesis.
- Jendraschek, Gerd. 2009. Origin and development of the Iatmul focus construction: Subordination, desubordination, resubordination. *Folia Linguistica* 43(2). 345–390. <http://dx.doi.org/10.1515/FLIN.2009.010>.
- Julien, Marit. 2002. *Syntactic heads and word formation* (Oxford Studies in Comparative Syntax). Oxford: Oxford University Press.
- Kadenge, Maxwell. 2010a. Complexity in phonology: The complex consonants of simple CV-syllables in Zezuru. *Southern African Linguistics & Applied Language Studies* 28(4). 393–408. <http://dx.doi.org/10.2989/16073614.2010.548018>.
- Kadenge, Maxwell. 2010b. Hiatus contexts and hiatus resolution strategies in Zezuru. *Southern African Linguistics & Applied Language Studies* 28(1). 1–11. <http://dx.doi.org/10.2989/16073614.2010.488438>.
- Kadenge, Maxwell. 2010c. Some segmental phonological processes involving vowels in Nambya: A preliminary descriptive account. *Journal of Pan African Studies* 3(6). 239–252.
- Kadenge, Maxwell. 2013. Hiatus resolution in Nambya: An Optimality Theory analysis. *Language Matters* 44(1). 94–121. <http://dx.doi.org/10.1080/10228195.2012.716859>.
- Kadenge, Maxwell. 2014a. Comparing nasal-obstruent clusters derived from /mu-/ reduction in Shangwe and Zezuru: An Optimality Theory analysis. *Language Matters* 45(1). 40–62. <http://dx.doi.org/10.1080/10228195.2013.816763>.
- Kadenge, Maxwell. 2014b. When two vowels go walking in Bantu: A comparative analysis of vowel hiatus resolution in chiNambya and chiZezuru. *Southern African Linguistics and Applied Language Studies* 32(1). 55–77. <http://dx.doi.org/10.2989/16073614.2014.925219>.
- Kadenge, Maxwell. 2015. The augment and {mu-} reduction in Bantu: An Optimality Theory analysis. *South African Journal of African Languages* 35(1). 93–104.

- Kadenge, Maxwell & Isaac Mhute. 2014. Subcategories of the Shona subject relation. *Mediterranean Journal of Social Sciences* 5(27). 1621–1627.
- Kadenge, Maxwell & Calisto Mudzingwa. 2011. Diphthong simplification through spreading: An Optimality Theory account. *Language Matters* 42(1). 142–161. <http://dx.doi.org/10.1080/10228195.2011.569740>.
- Kadenge, Maxwell & Silvester Ron Simango. 2014. Comparing vowel hiatus resolution in ciNsenga and chiShona: An Optimality Theory analysis. *Stellenbosch Papers in Linguistics Plus* 44. 105–127.
- Kandybowicz, Jason. 2014. On prosodic variation and the distribution of *wh-* in-situ. Unpublished manuscript. Lawrence, KS: University of Kansas.
- Kandybowicz, Jason & Harold Torrence. 2012. Krachi *wh-* in-situ: A question of prosody. In Jaehoon Choi, E. Alan Hogue, Jeffrey Punske, Deniz Tat, Jessamyn Schertz & Alex Trueman (eds.), *Proceedings of the 29th West Coast Conference on Formal Linguistics (WCCFL)*, 362–370. Somerville, MA: Cascadilla Proceedings Project.
- Kandybowicz, Jason & Harold Torrence. 2014. Are syntax and prosody entangled? Insights from Krachi in-situ interrogatives. Unpublished manuscript. Lawrence, KS: University of Kansas.
- Kandybowicz, Jason & Harold Torrence. 2015. The prosodic licensing of *wh-* in-situ: Evidence from Krachi and Wasa. In Ruth Kramer, Elizabeth Zsiga & One Tlale Boyer (eds.), *Selected proceedings of the 44rd Annual Conference on African Linguistics (ACAL)*, 146–157. Somerville, MA: Cascadilla Proceedings Project.
- Kayne, Richard S. 1994. *The antisymmetry of syntax* (Linguistic Inquiry Monographs 25). Cambridge, MA: MIT Press.
- Kayne, Richard S. 1998. Overt vs. covert movement. *Syntax* 1(2). 128–191. <http://dx.doi.org/10.1111/1467-9612.00006>.
- Kayne, Richard S. & Jean-Yves Pollock. 2001. New thoughts on Stylistic Inversion. In Aafke Hulk & Jean-Yves Pollock (eds.), *Subject inversion in Romance and the theory of Univer-*

- sal Grammar* (Oxford Studies in Comparative Syntax), 107–162. Oxford: Oxford University Press.
- Kinyalolo, Kasangati Kikuni Wabongambilu. 1991. *Syntactic dependencies and the SPEC-head Agreement Hypothesis in KiLega*. Los Angeles: UCLA PhD dissertation.
- Koopman, Hilda & Dominique Sportiche. 1991. The position of subjects. *Lingua* 85(2). 211–258. [http://dx.doi.org/10.1016/0024-3841\(91\)90022-W](http://dx.doi.org/10.1016/0024-3841(91)90022-W).
- Kotek, Hadas. 2014a. *Composing questions*. Cambridge, MA: MIT PhD thesis.
- Kotek, Hadas. 2014b. Intervention out of islands. *North East Linguistic Society (NELS)* 44(1). 233–246.
- Kotek, Hadas & Michael Yoshitaka Erlewine. Forthcoming. Covert pied-piping in English multiple *wh*-questions. *Linguistic Inquiry*. forthcoming.
- Landman, Meredith & Rodrigo Ranero. 2014. The syntax and semantics of Kuria /ne-/. Paper presented at the 45th Annual Conference on African Linguistics (ACAL), Lawrence, KS: University of Kansas.
- Lebeaux, David. 1988. *Language acquisition and the form of the grammar*. Amherst, MA: University of Massachusetts PhD thesis.
- Letsholo, Rose Meleko. 2002. *Syntactic domains in Ikalanga*. Ann Arbor, MI: University of Michigan PhD dissertation.
- Letsholo, Rose. 2004. Clausal and DP-internal agreement in Ikalanga. *Studies in African Linguistics* 33(1). 91–127.
- Letsholo, Rose. 2006a. The role of tone and morphology in the syntax of the Ikalanga DP. *Southern African Linguistics & Applied Language Studies* 24(3). 291–309.
- Letsholo, Rose. 2006b. WH constructions in Ikalanga: A remnant movement analysis. In John Mugane, John P. Hutchison & Dee A. Worman (eds.), *Selected proceedings of the 35th Annual Conference on African Linguistics (ACAL)*, 258–270. Somerville, MA: Cascadia Proceedings Project.

- Letsholo, Rose. 2007. Who is where: Deriving right edge WH phrases in Ikalanga WH constructions. *Lingua* 117(6). 986–1007. <http://dx.doi.org/10.1016/j.lingua.2006.05.005>.
- Letsholo, Rose. 2009. The ‘forgotten’ structure of Ikalanga relatives. *Studies in African Linguistics* 38(2). 131–154.
- Letsholo, Rose. 2011. The syntactic distribution of argument and adjunct question word constructions in Ikalanga. *Journal of African Languages and Linguistics* 32(2). 219–250. <http://dx.doi.org/10.1515/jall.2011.008>.
- Letsholo, Rose. 2012. The copula in Ikalanga. *South African Journal of African Languages* 32(1). 1–9.
- Letsholo, Rose. 2013. Object markers in Ikalanga. *Linguistic Discovery* 11(1). 105–128. <http://dx.doi.org/10.1349/PS1.1537-0852.A.436>.
- Letsholo, Rose & Acrisio Pires. 2003. *Morphology as a reflex of syntactic dependencies: The case of A'-movement in Ikalanga*. Paper presented at the 26th Generative Linguistics in the Old World (GLOW) Colloquium, Lund, Sweden, April 9-11. <http://www.lsa.umich.edu/ling/pires/LetsholoPires03GLOWMorphABarMovt.pdf>.
- Lewis, David. 1975. Adverbs of quantification. In Edward L. Keenan (ed.), *Formal semantics of natural language*, 3–15. Reprinted in Paul Portner & Barbara H. Partee (eds.) (2002), *Formal semantics: The essential readings*, 178–188. Oxford & Malden, MA: Blackwell. Cambridge: Cambridge University Press.
- Lewis, M. Paul, Gary F. Simons & Charles D. Fennig (eds.). 2016. *Ethnologue: Languages of the World*. 19th edn. Dallas, TX: SIL International. <http://www.ethnologue.com/> (14 March, 2016).
- Mabugu, P. R. 2002. *Polysemy and the applicative verb construction in ChiShona*. Edinburgh: University of Edinburgh PhD thesis.
- Mahajan, Anoop Kumar. 1990. *The A/A-bar distinction and movement theory*. Cambridge, MA: MIT PhD thesis.

- Maho, Jouni Filip. 2003. A classification of the Bantu languages: An update of Guthrie's referential system. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages* (Routledge Language Family Series 4), 639–651. London: Routledge.
- Maho, Jouni Filip. 2009. New Updated Guthrie List Online. 2nd edition of the New Updated Guthrie List (Maho 2003). <http://goto.glocalnet.net/mahopapers/nuglonline.pdf> (8 October, 2012).
- Makoni, Sinfrey & Pedzisai Mashiri. 2011. The pragmatic import of pronominal usage in chiShona discourse. *Per Linguam* 19(1). <http://dx.doi.org/10.5785/19-1-87>.
- Manuel, Sharon Yvonne. 1987. *Acoustic and perceptual consequences of vowel-to-vowel coarticulation in three Bantu languages (Zimbabwe)*. New Haven, CT: Yale University PhD thesis.
- Marconnès, Francisque A. 1931. *A grammar of central Karanga, the language of old Monomotapa as at present spoken in central Mashonaland, Southern Rhodesia* (Bantu Studies Supplement 5). Johannesburg: Witwatersrand University Press.
- Marlo, Michael R. 2015. On the number of object markers in Bantu languages. *Journal of African Languages and Linguistics* 36(1). 1–65. <http://dx.doi.org/10.1515/jall-2015-0001>.
- Marlo, Michael & David Odden. 2007. The exponence of TAM in Bakweri. *SOAS Working Papers in Linguistics* 15. 19–31.
- Marten, Lutz & Nancy C. Kula. 2012. Object marking and morphosyntactic variation in Bantu. *Southern African Linguistics & Applied Language Studies* 30(2). 237–253.
- Marten, Lutz, Nancy C. Kula & Nhlanhla Thwala. 2007. Parameters of morphosyntactic variation in Bantu. *Transactions of the Philological Society* 105(3). 253–338. <http://dx.doi.org/10.1111/j.1467-968X.2007.00190.x>.
- Marten, Lutz & Jenneke van der Wal. 2014. A typology of Bantu subject inversion. *Linguistic Variation* 14(2). 318–367. <http://dx.doi.org/10.1075/lv.14.2.04mar>.
- Mathangwane, Joyce T. 1998a. Allomorphy and the morphology-syntax distinction in Ikalanga. In Ian Maddieson & Thomas J. Hinnebusch (eds.), *Language history and lin-*

- guistic description in Africa* (Trends in African Linguistics 2), 217–228. Trenton, NJ: Africa World Press.
- Mathangwane, Joyce T. 1998b. Aspirates: Their development and depression in Ikalanga. *Journal of African Languages and Linguistics* 19. 113–136.
- Mathangwane, Joyce T. 1999. *Ikalanga phonetics and phonology: A synchronic and diachronic study* (Stanford Monographs in African Languages). Stanford, CA: CSLI Publications.
- Mathangwane, Joyce T. 2001. Suffix ordering in the Ikalanga verb stem: A case against the Repeated Morph Constraint. *South African Journal of African Languages* 21(3). 396.
- Mathangwane, Joyce T. & E. Kweku Osam. 2006. Grammatical relations in Ikalanga. *Studies in African Linguistics* 35(2). 189–208.
- Mathieu, Eric. 1999. WH in-situ and the intervention effect. *UCL Working Papers in Linguistics* 11. 441–472.
- Mathieu, Eric André Jean. 2002. *The syntax of non-canonical quantification: A comparative study*. London: University College London PhD thesis.
- Mathieu, Eric. 2004. The mapping of form and interpretation: The case of optional WH-movement in French. *Lingua* 114(9). 1090–1132. <http://dx.doi.org/10.1016/j.lingua.2003.07.002>.
- Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37(1). 69–109. <http://dx.doi.org/10.1162/002438906775321184>.
- May, Robert Carlen. 1977. *The grammar of quantification*. Cambridge, MA: MIT PhD thesis.
- McDaniel, Dana. 1989. Partial and multiple Wh-movement. *Natural Language & Linguistic Theory* 7(4). 565–604. <http://dx.doi.org/10.1007/BF00205158>.
- McDonough, Joyce, Harold Danko & Jason Zentz. 2007. Rhythmic structure of music and language: An empirical investigation of the speech cadence of American jazz masters Louis Armstrong and Jelly Roll Morton. *University of Rochester Working Papers in the Language Sciences (URWPLS)* 3(1). 45–56.

- McWhorter, John. 1992. NI and the copula system in Swahili: A diachronic approach. *Diachronica* 9(1). 15–46. <http://dx.doi.org/10.1075/dia.9.1.03mcw>.
- McWhorter, John. 1994. From focus marker to copula in Swahili. *Berkeley Linguistics Society (BLS)* 20(2). 57–66. <http://dx.doi.org/10.3765/bls.v20i2.1485>.
- Meinhof, Carl. 1899. *Grundriss einer Lautlehre der Bantusprachen nebst Anleitung zur Aufnahme der Bantusprachen*. Leipzig: F. A. Brockhaus.
- Mhute, Isaac. 2011. *The Shona subject relation*. Pretoria: University of South Africa PhD thesis.
- Mhute, Isaac & Maxwell Kadenge. N.d. The Shona subject relation: Some selectional principles. *Mediterranean Journal of Social Sciences* 5(27). 1592–1600. <http://dx.doi.org/10.5901/mjss.2014.v5n27p1592>.
- Mhute, Isaac, Maxwell Kadenge & D. E. Mutasa. 2013. Some syntactic and semantic aspects of the chiShona subject relation. *South African Journal of African Languages* 33(1). 95–103. <http://dx.doi.org/10.2989/02572117.2013.793946>.
- Miyagawa, Shigeru. 2010. *Why agree? Why move? Unifying agreement-based and discourse-configurational languages* (Linguistic Inquiry Monographs 54). Cambridge, MA: MIT Press.
- Mkanganwi, K. G. 1972. The relationships of coastal Ndaui to the Shona dialects of the interior. *African Studies* 31(2). 111–138. <http://dx.doi.org/10.1080/00020187208707377>.
- Mkanganwi, K. G. 2002. Shona (derivational) morphology: An observation in search of a theory. *Zambezi* 24(2). 174–190.
- Morimoto, Yukiko. 2000. *Discourse configurationality in Bantu morphosyntax*. Stanford, CA: Stanford University PhD thesis.
- Mudzingwa, Calisto. 2008. The reciprocal and associative in Shona. *Journal of Literature, Language and Linguistics* 2(1). 1–11.
- Mudzingwa, Calisto. 2010. *Shona morphophonemics: Repair strategies in Karanga and Zezuru*. Vancouver: University of British Columbia PhD thesis.

- Mudzingwa, Calisto. 2013. Hiatus resolution strategies in Karanga (Shona). *Southern African Linguistics & Applied Language Studies* 31(1). 1–24. <http://dx.doi.org/10.2989/16073614.2013.793953>.
- Mudzingwa, Calisto, Rose-Marie Déchaine & Enrico Fulconis. 2015. What Shona ideophones are (really) like: Fortune revisited. Paper presented at the 46th Annual Conference on African Linguistics (ACAL), Eugene, OR, March 26–28.
- Mudzingwa, Calisto & Maxwell Kadenge. 2011. Comparing hiatus resolution in Karanga and Nambya: An Optimality Theory account. *Nordic Journal of African Studies* 20(3). 203–240.
- Mudzingwa, Calisto & Maxwell Kadenge. 2013. An analysis of the ghost augment in chiShona. *South African Journal of African Languages* 33(1). 87–93. <http://dx.doi.org/10.2989/02572117.2013.793945>.
- Mugari, Victor. 2013. Pronoun dropping in ChiShona: A comparative approach. *Studies About Languages* 23. <http://dx.doi.org/10.5755/jo1.sal.o.23.5510>.
- Mugari, Victor, Lovemore Mutonga & Laston Mukaro. 2015. Adpositions in chiShona. In B. Ekanjume-Ilongo, A. Hala-Hala & C. Dunton (eds.), *Recent developments in african linguistics and literature: A florilegium for francina moloi*, 59–80. New York: David Publishing.
- Mukaro, Laston. 2012. *Wh*-questions in Shona. *International Journal of Linguistics* 4(1). 220–236. <http://dx.doi.org/10.5296/ijl.v4i1.1185>.
- Munaro, Nicola. 1999. *Sintagmi interrogativi nei dialetti italiani settentrionali* (Rivista di grammatica generativa. Serie monografica). Padova: Unipress.
- Munaro, Nicola, Cecilia Poletto & Jean-Yves Pollock. 2001. Eppure si muove! On comparing French and Bellunese *wh*-movement. *Linguistic Variation Yearbook* 1(1). 147–180.
- Muringani, Bertha. 2008. The problem of word division in written Shona: A historical survey. *Tsebo Journal of Research* 2(3).

- Muriungi, Peter Kinyua. 2003. *Wh-questions in Kitharaka*. Johannesburg: University of the Witwatersrand MA thesis.
- Muriungi, Peter Kinyua. 2005. *Wh-questions in Kitharaka*. *Studies in African Linguistics* 34(1). 43–104.
- Muriungi, Peter Kinyua. 2008. *Phrasal movement inside Bantu verbs: Deriving affix scope and order in Kĩtharaka*. Tromsø: University of Tromsø PhD thesis.
- Muriungi, Peter. 2011. An anti-locality restriction on subject *wh*-phrases in Kĩtharaka. *Lingua* 121(5). 822–831. <http://dx.doi.org/10.1016/j.lingua.2010.11.007>.
- Muriungi, Peter Kinyua, Miriam Kathomi Mutegi & Mary Karuri. 2014. The syntax of *wh*-questions in Gichuka. *Open Journal of Modern Linguistics* 4(1). 182–204. <http://dx.doi.org/10.4236/ojml.2014.41015>.
- Myers, Scott P. 1987. *Tone and the structure of words in Shona*. Amherst, MA: University of Massachusetts PhD thesis.
- Myers, Scott P. 1990. *Tone and the structure of words in Shona* (Outstanding Dissertations in Linguistics). New York: Garland.
- Myers, Scott. 1994. Epenthesis, mutation, and structure preservation in the Shona causative. *Studies in African Linguistics* 23(2). 185–218.
- Ndambakuwa, Victor. 2015. *Shona dictionary*. VaShona Project. <http://vashona.com/dictionary/> (12 April, 2015).
- Ndayiragije, Juvénal. 1999. Checking economy. *Linguistic Inquiry* 30(3). 399–444.
- Ngonyani, Deo & Peter Githinji. 2006. The asymmetric nature of Bantu applicative constructions. *Lingua* 116(1). 31–63. <http://dx.doi.org/10.1016/j.lingua.2005.03.006>.
- Nishigauchi, Taisuke. 1986. *Quantification in syntax*. Amherst, MA: University of Massachusetts PhD thesis.
- Nsuka Nkutsi, F. 1982. *Les structures fondamentales du relatif dans les langues bantoues*. Tervuren: Musée royal de l’Afrique centrale.

- Nurse, Derek & Gérard Philippson. 2003a. Introduction. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages* (Routledge Language Family Series 4), 1–12. London: Routledge.
- Nurse, Derek & Gérard Philippson (eds.). 2003b. *The Bantu languages* (Routledge Language Family Series 4). London: Routledge.
- Nurse, Derek & Gérard Philippson. 2003c. Towards a historical classification of the Bantu languages. In Derek Nurse & Gérard Philippson (eds.), *The Bantu languages* (Routledge Language Family Series 4), 164–181. London: Routledge.
- Obata, Miki & Samuel David Epstein. 2011. Feature-splitting Internal Merge: Improper movement, intervention, and the A/A' distinction. *Syntax* 14(2). 122–147. <http://dx.doi.org/10.1111/j.1467-9612.2010.00149.x>.
- Obenauer, Hans-Georg. 1994. *Aspects de la syntaxe A-barre: Effets d'intervention et mouvements des quantifieurs*. Paris: Université de Paris VIII PhD thesis.
- Odden, David. 1980. Associative tone in Shona. *Journal of Linguistic Research* 1(2). 37–51.
- Odden, David. 1981a. Evidence for the elsewhere condition in Shona. *Studies in the Linguistic Sciences* 11(1). 145–162.
- Odden, David Arnold. 1981b. *Problems in tone assignment in Shona*. Urbana, IL: University of Illinois PhD thesis.
- Odden, David. 1984a. Formal correlates of focusing in Kimatuumbi. *Studies in African Linguistics* 15(3). 275–299.
- Odden, David. 1984b. Stem tone assignment in Shona. In G. N. Clements & John A. Goldsmith (eds.), *Autosegmental studies in Bantu tone* (Publications in African Languages and Linguistics 3), 255–280. Dordrecht, The Netherlands: Foris.
- Odden, David. 2014. Melodic tones in Karanga Shona. *Africana Linguistica* 20. 331–348.
- 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-

- bjargarson (eds.), *Agreement restrictions* (Interface Explorations 15), 160–180. Berlin: Mouton de Gruyter.
- Ouhalla, Jamal. 1993. Subject-extraction, negation and the Anti-Agreement Effect. *Natural Language & Linguistic Theory* 11(3). 477–518. <http://dx.doi.org/10.2307/4047747>.
- Pei, Sally, Alice K. Hadley, Daniel Jang, Megan E. Corrarino, Brigid M. Davis, Usha B. Chilukuri, Jason A. Zentz, Diallo I. Spears & Eugene R. Fidell. 2012. A pronouncing dictionary of the Supreme Court of the United States. *Green Bag* 15(4). 410–417.
- Pesetsky, David. 1987. *Wh*-in-situ: Movement and unselective binding. In Eric J. Reuland & Alice G. B. ter Meulen (eds.), *The representation of (in)definiteness* (Current Studies in Linguistics 14). Cambridge, MA: MIT Press.
- Pesetsky, David. 2000. *Phrasal movement and its kin* (Linguistic Inquiry Monographs 37). Cambridge, MA: MIT Press.
- Pesetsky, David. 2013. Phrasal movement and its discontents: Diseases and diagnoses. In Lisa Lai-Shen Cheng & Norbert Corver (eds.), *Diagnosing syntax* (Oxford Studies in Theoretical Linguistics), 123–157. Oxford: Oxford University Press.
- Poletto, Cecilia & Jean-Yves Pollock. 2004a. On the left periphery of some Romance *wh*-questions. In Luigi Rizzi (ed.), *The structure of CP and IP* (The cartography of syntactic structures 2), 251–296. Oxford: Oxford University Press.
- Poletto, Cecilia & Jean-Yves Pollock. 2004b. On *wh*-clitics and *wh*-doubling in French and some North Eastern Italian dialects. *Probus* 16(2). 241–272.
- Poletto, Cecilia & Jean-Yves Pollock. 2009. Another look at *wh*-questions in Romance: The case of Mendrisiotto and its consequences for the analysis of French *wh*-in-situ and embedded interrogatives. In Danièle Torck & W. Leo Wetzels (eds.), *Romance Languages and Linguistic Theory 2006: Selected papers from 'Going Romance', Amsterdam, 7-9 December 2006* (Current Issues in Linguistic Theory 303), 199–258. Amsterdam: John Benjamins.

- Poletto, Cecilia & Jean-Yves Pollock. 2015. Arguing for remnant movement in Romance. In Günther Grewendorf (ed.), *Remnant movement*, 135–178. Berlin: Walter de Gruyter.
- Pongweni, A. J. C. 1978. *The phonetics and phonology of the Karanga dialect of Shona as spoken in the Midlands region of Rhodesia*. London: School of Oriental & African Studies, University of London PhD thesis.
- Pongweni, Alec J. C. 1980. Tonal substitution in the stabilization construction in Karanga. *African Studies* 39(2). 197–208. <http://dx.doi.org/10.1080/00020188008707559>.
- Pongweni, Alec J. C. 1981. A study of the spectral properties of Karanga stops. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 34(6). 699–716.
- Pongweni, Alec J. C. 1982. Some word derivational processes: The case of the class 9/10(N) prefix of Shona. *Ajia Afurika gengo bunka kenkyū [Journal of Asian and African Studies]* 24. 106–119.
- Pongweni, Alec J. C. 1983a. An acoustic study of the qualitative and pitch effect of breathy-voice on Shona vowels. *Journal of Phonetics* 11(2). 129–138.
- Pongweni, Alec J. C. 1983b. Does Shona have diphthongs? *Journal of the International Phonetic Association* 13(1). 24–31. <http://dx.doi.org/10.1017/S0025100300005776>.
- Pongweni, Alec J. C. 1990. *Studies in Shona phonetics: An analytical review*. Harare: University of Zimbabwe Publications.
- Posegate, Matt. 2010. Shona wh-movement. Course paper. Columbia, MO: University of Missouri.
- Preminger, Omer. 2011. *Agreement as a fallible operation*. Cambridge, MA: MIT PhD dissertation.
- Preminger, Omer. 2014. *Agreement and its failures* (Linguistic Inquiry Monographs 68). Cambridge, MA: The MIT Press.
- Ranero Echeverría, Rodrigo. 2014. *The syntax and semantics of Kuria /ne-/*. Claremont, CA: Pomona College BA thesis.

- Reeve, Matthew. 2012. *Clefts and their relatives* (Linguistik Aktuell/Linguistics Today 185). Amsterdam: John Benjamins.
- Reintges, Chris H. 2007a. Coptic relative tenses: The profile of a morpho-syntactic flagging device. In Enoch Oladé Aboh, Katharina Hartmann & Malte Zimmermann (eds.), *Focus strategies in African languages: The interaction of focus and grammar in Niger-Congo and Afro-Asiatic* (Trends in Linguistics 191), 187–220. Berlin: Mouton de Gruyter.
- Reintges, Chris H. 2007b. Variable pronunciation sites and types of *wh*-in-situ. In Norbert Corver & Jairo Nunes (eds.), *The copy theory of movement* (Linguistik Aktuell/Linguistics Today 107), 249–287. Philadelphia: John Benjamins.
- Reintges, Chris H., Philip LeSourd & Sandra Chung. 2006. Movement, *wh*-agreement and apparent *wh*-in-situ. In Lisa Lai-Shen Cheng & Norbert Corver (eds.), *Wh-movement: Moving on* (Current Studies in Linguistics 42), 165–194. Cambridge, MA: MIT Press.
- Rezac, Milan. 2004. Agree and merge. Unpublished manuscript. Leioa, Spain: University of the Basque Country. <http://ling.auf.net/lingbuzz/000041>.
- Richards, Marc D. 2007. On feature inheritance: An argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38(3). 563–572. <http://dx.doi.org/10.2307/40071403>.
- Richards, Norvin. 2001. *Movement in language: Interactions and architectures*. Oxford: Oxford University Press.
- Richards, Norvin. 2010. *Uttering trees* (Linguistic Inquiry Monographs 56). Cambridge, MA: MIT Press.
- Riedel, Kristina. 2009. *The syntax of object marking in Sambia: A comparative Bantu perspective*. Leiden: Leiden University PhD dissertation.
- Rizzi, Luigi. 1990. *Relativized minimality* (Linguistic Inquiry Monographs 16). Cambridge, MA: MIT Press.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar: Handbook in generative syntax* (Kluwer International Handbooks of Linguistics 1), 281–337. Dordrecht: Kluwer.

- Rizzi, Luigi. 2001. On the position “Int(errogative)” in the left periphery of the clause. In Guglielmo Cinque & Giampaolo Salvi (eds.), *Current studies in italian syntax: essays offered to lorenzo renzi*, 287–296. Amsterdam: Elsevier.
- Rizzi, Luigi. 2004. Locality and left periphery. In Adriana Belletti (ed.), *Structures and beyond* (Oxford Studies in Comparative Syntax: The cartography of syntactic structures vol. 3), 223–251. Oxford: Oxford University Press.
- Rizzi, Luigi. 2006. On the form of chains: Criterial positions and ECP effects. In Lisa Lai-Shen Cheng & Norbert Corver (eds.), *Wh-movement: Moving on* (Current Studies in Linguistics 42), 97–134. Cambridge, MA: MIT Press.
- Rizzi, Luigi. 2007. On some properties of Criterial Freezing. *Studies in Linguistics* 1. 145–158.
- Rizzi, Luigi. 2013. Locality. *Lingua* 130. 169–186. <http://dx.doi.org/10.1016/j.lingua.2012.12.002>.
- Rizzi, Luigi & Uri Shlonsky. 2006. Satisfying the subject criterion by a non subject: English locative inversion and Heavy NP shift. In Mara Frascarelli (ed.), *Phases of interpretation* (Studies in Generative Grammar 91), 341–362. Berlin: Mouton de Gruyter.
- Rizzi, Luigi & Uri Shlonsky. 2007. Strategies for subject extraction. In Uli Sauerland & Hans-Martin Gärtner (eds.), *Interfaces + recursion = language?: Chomsky’s minimalism and the view from syntax-semantics* (Studies in Generative Grammar 89), 115–160. New York: Mouton de Gruyter.
- Rooth, Mats. 1985. *Association with focus*. Amherst, MA: University of Massachusetts PhD thesis.
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1(1). 75–116. <http://dx.doi.org/10.1007/BF02342617>.
- Ross, John Robert. 1967. *Constraints on variables in syntax*. Cambridge, MA: MIT PhD thesis.

- Sabel, Joachim. 1998. *Principles and parameters of wh-questions*. Frankfurt am Main: Goethe University Frankfurt Habilitation thesis.
- Sabel, Joachim. 2000. Partial *wh*-movement and the typology of *wh*-questions. In Uli Lutz, Gereon Müller & Arnim von Stechow (eds.), *Wh-scope marking* (Linguistik Aktuell/Linguistics Today 37), 409–446. Amsterdam: John Benjamins.
- Sabel, Joachim. 2006. Typologie des W-Fragesatzes. *Linguistische Berichte* 206. 147–194.
- Sabel, Joachim & Jochen Zeller. 2006. *Wh*-question formation in Nguni. In John Mugane, John P. Hutchison & Dee A. Worman (eds.), *Selected proceedings of the 35th Annual Conference on African Linguistics (ACAL)*, 271–283. Somerville, MA: Cascadilla Proceedings Project.
- Saddy, Douglas. 1991. *Wh*-scope mechanisms in Bahasa Indonesia. In Lisa Lai-Shen Cheng & Hamida Demirdache (eds.), *More papers on wh-movement* (MIT Working Papers in Linguistics 15), 183–218. Cambridge, MA: MITWPL.
- Safir, Ken. 1999. Vehicle change and reconstruction in \bar{A} -chains. *Linguistic Inquiry* 30(4). 587–620. <http://dx.doi.org/10.1162/002438999554228>.
- Safir, Kenneth J. 2004. *The syntax of (in)dependence* (Linguistic Inquiry Monographs 44). Cambridge, MA: MIT Press.
- Safir, Ken. 2015. The A-/A'-distinction as an epiphenomenon. Unpublished manuscript. New Brunswick, NJ: Rutgers University. <http://ling.auf.net/lingbuzz/002799>.
- Sauerland, Uli. 2003. Unpronounced heads in relative clauses. In Kerstin Schwabe & Susanne Winkler (eds.), *The interfaces: Deriving and interpreting omitted structures* (Linguistik Aktuell/Linguistics Today 61), 205–226. Amsterdam: John Benjamins.
- Schellenberg, Murray. 2009. Singing in a tone language: Shona. In Akinloye Ojo & Lioba Moshi (eds.), *Selected proceedings of the 39th Annual Conference on African Linguistics (ACAL)*, 137–144. Somerville, MA: Cascadilla Proceedings Project.
- Schneider-Zioga, Patricia. 1995. Specifier/head agreement in Kinande. *Cahiers Linguistiques d'Ottawa* 23. 67–93.

- Schneider-Zioga, Patricia. 2007. Anti-agreement, anti-locality and minimality: The syntax of dislocated subjects. *Natural Language & Linguistic Theory* 25(2). 403–446. <http://dx.doi.org/10.1007/s11049-006-9014-5>.
- Schneider-Zioga, Patricia. 2009. Wh-agreement and bounded unbounded movement. In José M. Brucart, Anna Gavarró & Jaume Solà (eds.), *Merging features*, 46–59. Oxford: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780199553266.003.0003>.
- Schneider-Zioga, Patricia. 2015a. Linking, predication, and symmetry: On the syntax of the linker in Kinande. In *WCCFL 32: Proceedings of the 32nd West Coast Conference on Formal Linguistics*, forthcoming. Somerville, MA: Cascadilla Proceedings Project.
- Schneider-Zioga, Patricia. 2015b. The linker in Kinande re-examined. In Ruth Kramer, Elizabeth Zsiga & One Tlale Boyer (eds.), *Selected proceedings of the 44rd Annual Conference on African Linguistics (ACAL)*, 264–276. Somerville, MA: Cascadilla Proceedings Project.
- Schneider-Zioga, Patricia & Philip Nguessimo Mutaka. 2014. *Linkers and relators in Kinande*. Afranaph Technical Report 12. The Afranaph Project. <http://dx.doi.org/http://www.africananaphora.rutgers.edu/technical-reports-mainmenu-199>. (26 November, 2014).
- Schwarz, Florian. 2003. Focus marking in Kikuyu. *ZAS Papers in Linguistics* 30. 41–118.
- Schwarz, Florian. 2007. *Ex-situ* focus in Kikuyu. In Enoch Oladé Aboh, Katharina Hartmann & Malte Zimmermann (eds.), *Focus strategies in African languages: The interaction of focus and grammar in Niger-Congo and Afro-Asiatic* (Trends in Linguistics 191), 139–159. Berlin: Mouton de Gruyter.
- Shlonsky, Ur. 2012. Notes on WH-in-situ. In Laura Brugé, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro & Cecilia Poletto (eds.), *Functional heads* (Oxford Studies in Comparative Syntax 7), 242–252. Oxford: Oxford University Press.
- Simango, Silvester Ron. 1995. *The syntax of Bantu double object constructions*. Columbia, SC: University of South Carolina PhD thesis.

- Simango, Silvester Ron. 2006. Verb agreement and the syntax of ciNsenga relative clauses. *Southern African Linguistics & Applied Language Studies* 24(3). 277–290.
- Simpson, Andrew & Tanmoy Bhattacharya. 2003. Obligatory overt *wh*-movement in a *wh*-in-situ language. *Linguistic Inquiry* 34(1). 127–142. <http://dx.doi.org/10.1162/002438903763255940>.
- Spuy, Andrew van der. 1993. Dislocated noun phrases in Nguni. *Lingua* 90(4). 335–355. [http://dx.doi.org/10.1016/0024-3841\(93\)90031-Q](http://dx.doi.org/10.1016/0024-3841(93)90031-Q).
- Starke, Michal. 2001. *Move dissolves into Merge: A theory of locality*. Geneva: University of Geneva PhD thesis.
- Stevick, Earl W. 1959. Inflection of the Manyika verb. *Nada: The Southern Rhodesia Native Affairs Department Annual* 36. 30–45.
- Stevick, Earl W. 1960. The implosive-explosive contrast in Manyika. *African Studies* 19(2). 88–95. <http://dx.doi.org/10.1080/00020186008707104>.
- Stevick, Earl W. 1966. The substantive paradigms of Manyika. *African Studies* 25(3). 115–138. <http://dx.doi.org/10.1080/00020186608707236>.
- Storoshenko, Dennis Ryan. 2009. Investigating the Shona reflexive *zvi*. In Akinloye Ojo & Lioba Moshi (eds.), *Selected proceedings of the 39th Annual Conference on African Linguistics (ACAL)*, 42–55. Somerville, MA: Cascadilla Proceedings Project.
- Storoshenko, Dennis Ryan. 2010. The syntactic and semantic status of the reflexive and reciprocal in Shona. In Heather Bliss, Meagan Louie & Murray Schellenberg (eds.), *Proceedings of NWLC (Northwest Linguistics Conference) 2009* (University of British Columbia Working Papers in Linguistics 25), 218–226. Vancouver: UBCWPL.
- Sudo, Yasutada. 2010. Metalinguistic semantics for echo questions. Unpublished manuscript. Cambridge, MA: MIT.
- Tailleur, Sandrine. 2013. *The French wh interrogative system: Est-ce que, clefting?* Canada: University of Toronto PhD thesis.
- Takahashi, Shoichi. 2006. *Decompositionality and identity*. MIT PhD thesis.

- Takahashi, Shoichi & Sarah Hulsey. 2009. Wholesale late merger: Beyond the A/ \bar{A} distinction. *Linguistic Inquiry* 40(3). 387–426. <http://dx.doi.org/10.1162/ling.2009.40.3.387>.
- Toews, Carmela. 2009. The expression of tense and aspect in Shona. In Akinloye Ojo & Lioba Moshi (eds.), *Selected proceedings of the 39th Annual Conference on African Linguistics (ACAL)*, 32–41. Somerville, MA: Cascadilla Proceedings Project.
- Torrence, Harold. 2013. A promotion analysis of Wolof clefts. *Syntax* 16(2). 176–215. <http://dx.doi.org/10.1111/synt.12000>.
- Torrence, Harold & Jason Kandybowicz. 2015. *Wh*-question formation in Krachi. *Journal of African Languages and Linguistics* 36(2). 253–285. <http://dx.doi.org/10.1515/jall-2015-0011>.
- Tran, Thuan. 2009. *Wh-quantification in Vietnamese*. Newark, DE: University of Delaware PhD thesis.
- Uribe-Etxebarria, Myriam. 2002. In situ questions and masked movement. *Linguistic Variation Yearbook* 2(1). 217–257.
- Wal, Guenever Johanna van der. 2009. *Word order and information structure in Makhwua-Enahara*. Leiden: Leiden University PhD thesis.
- Wal, Jenneke van der. 2006. The disjoint verb form and an empty Immediate After Verb position in Makhwua. *ZAS Papers in Linguistics* 43. 233–256.
- Wal, Jenneke van der. 2015. Evidence for abstract Case in Bantu. *Lingua* 165. 109–132. <http://dx.doi.org/10.1016/j.lingua.2015.07.004>.
- Wal, Jenneke van der & Jacky Maniacky. 2015. How 'person' got into focus: Grammaticalization of clefts in Lingala and Kikongo areas. *Linguistics* 53(1). 1–52. <http://dx.doi.org/10.1515/ling-2014-0033>.
- Wasike, Aggrey Khaoya. 2007. *The left periphery, wh-in-situ and A-bar movement in Lubukusu and other Bantu languages*. Ithaca, NY: Cornell University PhD dissertation.
- Watanabe, Akira. 1992. Subjacency and S-structure movement of *wh*-in-situ. *Journal of East Asian Linguistics* 1(3). 255–291. <http://dx.doi.org/10.1007/BF00130554>.

- Watanabe, Akira. 2001. *Wh*-in-situ languages. In Mark R. Baltin & Chris Collins (eds.), *The handbook of contemporary syntactic theory* (Blackwell Handbooks in Linguistics), 203–225. Oxford: Blackwell.
- Watters, John Robert. 1979. Focus in Aghem: A study of its formal correlates and typology. In Larry M. Hyman (ed.), *Aghem grammatical structure: With special reference to noun classes, tense-aspect and focus marking* (Southern California Occasional Papers in Linguistics 7), 137–197. Los Angeles: University of Southern California.
- Yoneda, Nobuko. 2011. Word order in Matengo (N13): Topicality and informational roles. *Lingua* 121(5). 754–771. <http://dx.doi.org/10.1016/j.lingua.2010.11.008>.
- Yuan, Michelle. 2016. Subordinate clause types and the left periphery in Kikuyu. Paper presented at the 90th Annual Meeting of the Linguistic Society of America (LSA 90), Washington, DC.
- Zaenen, Annie. 1983. On syntactic binding. *Linguistic Inquiry* 14(3). 469–504.
- Zanuttini, Raffaella & Laurence R. Horn (eds.). 2014. *Micro-syntactic variation in North American English*. (Oxford Studies in Comparative Syntax). Oxford: Oxford University Press.
- Zeller, Jochen. 2006a. On the relation between noun prefixes and grammaticalisation in Nguni relative clauses. *Studia Linguistica* 60(2). 220–249. <http://dx.doi.org/10.1111/j.1467-9582.2006.00138.x>.
- Zeller, Jochen. 2006b. Raising out of finite CP in Nguni: The case of *fanele*. *Southern African Linguistics & Applied Language Studies* 24(3). 255–275.
- Zeller, Jochen. 2008. The subject marker in Bantu as an antifocus marker. *Stellenbosch Papers in Linguistics* 38(11). 221–254.
- Zeller, Jochen. 2013. In defence of head movement: Evidence from Bantu. In Lisa Lai-Shen Cheng & Norbert Corver (eds.), *Diagnosing syntax* (Oxford Studies in Theoretical Linguistics), 87–111. Oxford: Oxford University Press.

- Zentz, Jason. 2011. Morphological evidence for a movement analysis of adverbial clauses. *Chicago Linguistic Society (CLS)* 47(1). 373–385.
- Zentz, Jason. 2012. *Movement in adverbial clauses: Evidence from Akɔ̀ɔ̀se wh-agreement*. Paper presented at Generative Initiatives in Syntactic Theory (GIST) 5: Generalizing relative strategies, Ghent, Belgium, March 22-23. Ghent, Belgium.
- Zentz, Jason. 2013. Morphological reflexes of syntactic movement in Bantu. Dissertation prospectus. New Haven, CT: Yale University.
- Zentz, Jason. 2015. Bantu *wh*-agreement and the case against probe impoverishment. In Ruth Kramer, Elizabeth C. Zsiga & One Tlale Boyer (eds.), *Selected proceedings of the 44rd Annual Conference on African Linguistics (ACAL)*, 290–301. Somerville, MA: Cascadilla Proceedings Project.
- Zerbian, Sabine. 2006a. *Expression of information structure in the Bantu language Northern Sotho*. Berlin: Humboldt University PhD thesis.
- Zerbian, Sabine. 2006b. Questions in Northern Sotho (Bantu). *Linguistische Berichte* 206. 385–405.
- Zivenge, William, Gift Mheta & Maxwell Kadenge. 2010. The effects of Shona language change on monolingual lexicography: The need for a revised alphabet. *Lexikos* 20(1). 708–715. <http://dx.doi.org/10.4314/lex.v20i1.62747>.