THE SYNTAX AND TYPOLOGY OF BANTU RELATIVE CLAUSES

BY

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Abstract

This thesis is concerned with examining and explaining the commonalities and differences found across complementizer-type relative clauses in the Bantu languages, focusing on strong correlations between points of variation. The facts I discuss concern co-variation between agreement in the C-T domain and subject-verb inversion as well as co-variation between object agreement and resumption and complementizer agreement and resumption in object relative clauses. It is argued that agreement variation in the C-T domain can be explained by appeal to universal syntactic principles governing agreement and two morphological parameters that define the location of features in functional heads of clause structure. It is also argued that correlations between agreement and resumption result from differing derivational strategies languages employ to avoid violating general conditions on chain formation. The specific system argued for includes a derivational system of syntax in which only unvalued features are probes, probes are unrestricted with regard to the direction of probing, and the locality of syntactic relations is a dynamic evaluative procedure. Languages discussed include Swahili, Kirundi, Dzamba, Lingala, Zulu, Swati, Chichewa, Shona, Sesotho, and others.

To Valerie, my greatest discovery
To Elijah, my greatest creation

Acknowledgements

My interest in the African continent goes back to a summer trip to Kenya at the age of 15 where I helped build a home in the Lake Baringo district and learned a few Njemp words from local children my age. The next year in high school my English teacher Grace Brown gave me a copy of Steven Pinker's *The Language Instinct*, initiating a fascination with language and the mind that has yet to fade. I studied linguistics and Swahili at the University of Florida from 1996-1999 under the mentorship of Haig Der-Houssikian and then spent an invaluable academic year at the University of Dar Es Salaam in Tanzania becoming fluent in Swahili and reading every linguistics dissertation in their library. For that year I am indebted to Clagett Taylor, The Rotary Clubs of Highland County, Florida, and the Rotary International Ambassadorial Scholars program.

I arrived at the University of Illinois, Urbana-Champaign in August of 2000, attracted by a strong program in linguistics and African languages as well as the offer of a Foreign Language Area Studies fellowship to study Lingala. Some of the fruits of that study as well as a summer study of Zulu taught by Tholani Hlongwa can be seen in this thesis. My work on Bantu morpho-syntax could not have reached the level it has were it not for the rich linguistic environment provided by the African Language program and the international character of UIUC more generally.

The ideas presented in this thesis have developed piece-meal over the past six years and it has been a pleasant surprise to see them come together in a cohesive manner in the writing of this work. My initial work concerned relative clauses in Swahili and was presented at the first (and so far last) North American Syntax Conference at Concordia University, Montreal in 2003. Later work on Swahili relatives was also presented at

NELS 2003 at SUNY Stonybrook and the 2003 meeting of the LSA in Boston. My work on the left periphery and variation in agreement in Bantu was presented at the 2005 meeting of the LSA in Oakland as well as the Texas Linguistic Society 2005 meeting hosted by the University of Texas, Austin. Other aspects of the work in this thesis were presented at NELS 2005 at the University of Massachusetts, Amherst and at the 2006 LSA meeting in Albuquerque, NM. I thank the organizers of all of these events and the attendants of the talks. In particular, I would like to thank David Bobaljik, Andrew Nevins, Michael Wagner, Asaf Barach, Leston Buell, Martha McGinnis, Hamid Ouali, Julie Legate, Sam Mchombo, Kyle Johnson, and Lisa Cheng for attending one or more of the talks listed above and offering insightful comments and questions.

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One of the most formative experiences in my understanding of linguistics was attending SyntaxFest 2004 held at Indiana University in Bloomington. Lectures by Cedric Boeckx, Juan Uriagereka, and Norvin Richards were especially impacting. I thank the IU students and faculty for organizing the event.

Every researcher stands on the shoulders of others and there are some linguists without whose work the present work would not have been possible. This is particularly true with regard to Bantu syntax, an area where only a few have not feared to tread. The work of Joan Bresnan, Sam Mchombo, Vicki Carstens, Jochen Zeller, Katherine Demuth,

Eyamba Bokamba, Caroline Harford, Deo Ngonyani, and Nikki Keach has laid the foundation this thesis is built upon. Though this thesis takes issue with some of the accounts offered by these linguists, I hope all criticism will be taken as a sincere form of flattery.

During the academic year 2005-2006 I have had the pleasure to serve as adjunct faculty in the linguistics department at the University of Chicago, a post for which I thank especially Jason Merchant and Amy Dahlstrom. I wish to also thank Alan Yu, Anastasia Giannakidou, John Goldsmith and Tom Weir for their hospitality and support. This thesis has benefited greatly from my interactions at U Chicago, and in particular from the opportunity to teach a seminar course on Bantu Syntax attended by Max Bane, Nikki Adams, Younglee You, and Suwon Yoon. Nikki Adams deserves special mention for asking challenging questions I seldom had good answers to.

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It is difficult to image a more supportive advisor than Abbas Benmamoun. At every step he has forced me to develop my own ideas about how linguistics works, never once pushing me to accept his views as my own. For every fact I uncovered, Abbas offered me half a dozen ways to look at it and half a dozen papers I should read. If there is any originality in this thesis, it is due to his encouragement.

Besides the value of the influence of his own work on my own, Eyamba Bokamba has been a source of constant support as well as a source of valuable information on Bantu linguistics. His recommendations on where in which language to look for things never failed to produce results. James Yoon must be thanked for never pulling a punch in telling me what works and what doesn't as well as for suggesting ways to fix things. Cedric Boeckx taught at the University of Illinois during my second year of graduate school and attending his syntax seminars was key in forming how I think about the goals of linguistic theorizing. Since that year, Cedric has replied to every e-mail I have sent him and has given me insightful comments on every paper I have written. His advice on getting papers published as well as navigating the job market has also been extremely valuable. Karlos Arregi arrived at UIUC during my third year. Since then he has been my sounding board for theoretical ideas and has become my good friend. Many of my ideas have been formed and refined over coffee he purchased or through the fog of his second-hand smoke standing outside the Foreign Language Building.

Finally, it is impossible to express my gratitude for the many sacrifices quietly made by my wife Valerie throughout my grad career and our marriage. Six years ago she willingly left the warm Florida sun for Midwestern winters only six weeks after we were married. Since then she has supported me in every way and there have been many times

when her faith in me was the only thing that preventing me from giving up on an academic career altogether. She'll never know the extent to which she is responsible for any success I have achieved.

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List of Abbreviations

SA	subject agreement	PRO	pronoun
AGR	agreement	APP	applicative
NEG	negation	CAUS	causative
COMP	complementizer		
T	tense		
PST	past tense		
PERF	perfect aspect		
IMP	imperfect aspect		
FUT	future tense		
PRES	present tense		
FV	final vowel		
IND	indicative		
SBJ	subjunctive		
DEM	demonstrative		
SUBJ	subject		
OBJ	object		
DO	direct object		
IO	indirect object		
OM	object marker		
RS	relative suffix		
REL	relative marker		
RP	resumptive pronoun		

Chapter 1

Introduction

In this thesis I will be concerned with examining the generalizations and differences found across *that*-type relative clauses in the Bantu languages. I have two broad goals in mind. The first is to provide an empirical resource for future researchers interested in the syntax of Bantu languages. While a good deal of work has been done on a handful of these languages in recent years, to my knowledge a broad comparative work in the generative linguistics tradition has not been penned since Bokamba's theses written in the late 1970s. An exception has been the highly successful work completed on the so-called symmetric/asymmetric properties of double object constructions (Marantz 1993, Bresnan and Moshi 1993, among others). This work has recently reached a culmination in Pylkannen's (2002) thesis and two papers by McGinnis (2001, 2002) which demonstrated convincingly that a number of object (a)symmetries result from differing argument structure possibilities in the grammars of these languages, together with general restrictions on movement. I will not discuss this topic in this thesis. Rather, I will focus on differences across the Bantu languages that have received less attention, such as agreement and object marking, inversion, and resumption. I demonstrate that Bantu languages differ systematically with regard to these phenomena and that very often there are interesting correlations between empirical generalizations. In particular, I will show that empirical generalizations concerning agreement correlate with other generalizations concerning inversion, object marking, and resumption, suggesting that a proper

understanding of the syntactic relations underlying agreement are central to a full understanding of a variety of seemingly unrelated phenomena. This thesis strives to demonstrate these correlations so that they may be clarified or supported by future work on these languages.

Merely stating and discussing generalization is not enough, however, if the broader goals of linguistic investigation are to be accomplished and if we wish to understand not only what language is and what it does, but how it works and why it works that way. For that we need well-defined linguistic theories that can model our data accurately, constrain possible variation to that which is attested, and that are based on simple, elegant principles that do not themselves require further justification or explanation. The second goal of this thesis is to contribute to such a theory. This will be done in the tradition of the principles and parameters approach to syntax, as I discuss below. I will argue for a particular way of thinking about syntactic relations such as agreement, movement, and case checking which is somewhat unique and appeals to the simplest possible principles. While I do not deviate from my specified empirical domain too often, my arguments for this system are quite general and should be taken to apply to all natural languages. It is hoped that this will be taken as a challenge by other researchers to refute or refine the systems I argue for here.

I have titled this thesis 'The Syntax and Typology of Bantu Relatives' because I believe that both in-depth empirical study and sound theoretical reasoning are equally essential if our quest for a unified theory of human language is to ever reach its culmination. The latter must be based firmly upon the former. Comparative work, or typology, is centrally important here because work in this vein tells us about the breadth

and limits of syntactic variation. It informs us of the various shapes that underlying interacting principles may take on the surface and thus indirectly tells us about the form of the principles themselves. Blindfolded, we won't know there's an elephant in the room if we only feel its trunk or its leg or its ear; but if we can grasp all three at once, we might have a chance.

A particular typological approach that has met with great interest and success in recent years is what has been called the microparametric approach, the practice of comparing closely related languages or dialects. This methodology allows us to approximate as much as possible an ideal scientific experiment. Though physicists and chemists can create experiments under laboratory conditions, controlling for all mitigating factors, linguists must take languages as we find them in the real world with all of their diversity, complexity and historical baggage. Controlling for all other differences in order to examine a single point of variation is a challenging exercise. By comparing closely related or highly similar languages, however, we can attempt to minimize external factors in order to observe variation and its possible causes. Richard Kayne, perhaps the linguist most associated with the microparametric approach, summarizes the goal of this approach:

> "To the extent that one can find languages that are syntactically extremely similar to one another, yet clearly distinguishable and readily examinable, one can hope to reach a point such that the number of observable differences is so small that one can virtually see one property co-varying with another." (Kayne 1996)

This thesis will be an exercise in the microparametric approach, having as one of its primary goals the discovery of points of co-variation between closely related languages.

1.1. General Approach

The theoretical framework I will be assuming is the school of generative grammar known as the Principles and Parameters (P&P) tradition. The common understanding of the P&P approach is that the innate knowledge that underlies language form and acquisition (Universal Grammar, or UG) consists of a universal set of linguistic principles. Furthermore, at least some of these principles come with a well-defined set of options that give rise to aspects of language variation. In this line of thinking, the task of the linguist is to determine the nature of these principles of UG and determine which principles or parts of principles allow for variation and to what extent.

The most recent instantiation of the P&P tradition is known as the Minimalist Program (MP), embodied by Chomsky (1993, 1995) and much subsequent work. While the MP has the same basic goals stated above, its focus goes beyond constructing a well-defined set of linguistic principles that adequately describe linguistic knowledge. Rather, the MP makes demands on the form of those principles, giving a great deal of weight to notions like economy, simplicity, elegance, and naturalness. To satisfy the demands of the MP, linguistic principles must not only describe linguistic phenomena accurately, but they must also be the simplest and most natural principles possible. The motivation behind these requirements is essentially a drive for explanation. Whenever principles of any theory are not the simplest principles possible, one may always ask the question 'why.' Why are things the way they are and not some other way? Only when principles

have been reduced to the level of the logically necessary can things be said to be truly explanatory. Of course, we may still ask "why this way and not some other way," but the answer will be "because all other ways require stipulation."

That said, there has been substantial variation in how syntacticians have understood the goals of the MP and what those goals mean for the shape of syntactic theories. Thus, while this thesis is in the tradition of the MP, it is important to note that the MP is a program for research and not a specific syntactic theory. Linguists differ widely on their specific interpretations of its goals as well as how far the general reductionist flavor of the program can or should be taken. The principles I assume in this thesis, therefore, may be very different from what some other work in the minimalist tradition have assumed or will assume.

In my understanding of the MP, the minimalist demands for syntactic theory translate to a restricted view of where motivation for syntactic principles may come from. In particular, syntactic principles may only be motivated by the most basic requirements of the grammar: either by the phonological interface (since sentences must be pronounced), the semantic interface (since sentences must have meaning), or by the mechanics of narrow syntax (since sentences must be constructed).

One may wonder where parameters fit in here. This has in fact been a point of confusion and argumentation within the P&P tradition (see, for example, the exchange between Newmeyer (2004) and Roberts and Holmberg (2005)). Some have assumed that parameters are syntactic principles that are underspecified for a value in some way. From the acquisition standpoint, this is a nice idea since it entails that children come 'pre-

programmed' with such principles and merely need to fill in the under-specified parts in order to acquire the language they hear spoken around them.

In my view, however, this way of thinking about parameters is not very minimalist since the choices built into an underspecified principle are determined only by linguistic observation and research itself. These kinds of parameters thus run the risk of merely restating observed variation rather than explaining it. As an example, let us consider what we might call the Headedness Principle, taken to be underspecified with regard to the directionality of headedness

(1) Headedness Principle: Syntactic projections must be [right / left] headed.

In (1) we have a principle that all syntactic projections must be headed. The principle is underspecified in a way that allows languages to choose for their projections to be left-head (head-intial) or right-headed head-final. From the acquisition standpoint, children know that projections have to be headed, but have to figure out whether their language is head-initial or head-final. This understanding of the head parameter, however, quickly runs into problems, perhaps the largest being that there are many languages that seem to have 'mixed' head directionality, allowing some projection categories (say NP) to be head-initial while others (say, VPs) are head-final. Moreover, the principle as stated in (1) merely restates observed variation that phrases may indeed be right or left headed.

What I would like to point out is that the choices in the underspecification of the Headedness Principle (the Head Parameter) really do not need to be explicitly stated at all as a part of UG principles. If indeed projection (and therefore headedness) is a universal

syntactic principle and if binary branching is also a universal syntactic principle, then it follows logically that all projections must be either head initial or head-final automatically.[1] The Head Parameter is fully defined by the invariant universal principles at work and does need to be defined separately. More importantly, it does need to be posited as an independent part of Universal Grammar. Rather, Universal Grammar need only consist of the principles of projection and binary branching and other invariant principles. This understanding also frees the Head Parameter from the criticism that languages are rarely fully head-final or fully head-initial. If the headedness of projections is determined merely by the necessity of being headed and not by some pre-defined statement of variation applying to projections generally, then the fact that there could be variation in headedness within a language is not unexpected.

Generally speaking, this understanding of parameters moves underspecification from the domain of individual principles to the system as a whole. Invariant principles interact, determining a finite set of underspecified options that individual languages have to 'fill in' due to the requirements of the interfaces.[2] It seems to me that this is a very minimalist way of understanding parameters and that many proposed parameters can be dealt with in this way. Rather than proposing universal UG principles with pre-defined options, the options should be left undefined and determined only by the logically possible options allowed by the interaction of the invariant principles of UG. Let us take

[1] One could perhaps go one step further as Cedric Boeckx (p.c.) has suggested and eliminate the Headedness Principle altogether by letting syntactic principles of projection, merger and Spell-Out do all the work. In that view, headedness itself is a consequence of requirements of the PF interface (constructions must be linearized for pronounciation) and does not exist in narrow syntax per se.

[2] It may be that parametric variation is limited to being motivated by the phonological interface. Chomsky (2005) suggests that language may be optimally designed for the LF interface, but not for the PF interface. Under this view, linguistic variation could be understood as instantiating various ways that LF-optimal structures are made compatible with PF interface requirements.

another prominent example, namely the position of the verb in a language's clause structure. Since at least Pollock (1989), it has been observed that languages differ with regard to which projection's head a verb resides in. While in English, the verb is standardly taken to reside low in the clause (typically in V), in French the verb is taken to raise higher, at least to T. Now, the fact that a verb is a head and that it must reside in some head of the clause presumably follow from a universal invariant syntactic principle. We might therefore say that this principle is underspecified with regard to which head is chosen: V or T (or AGR or C or X or Z depending on how many functional heads we include in our architecture). We might call this the verb raising parameter and propose it as a parametric principle of UG:

(2) Verb Raising Parameter: Verbs reside in V or raise to T, AGR, or C

My contention is that postulating (2) as a part of UG is unnecessary. Rather, the invariant principles that verbs are heads and that they reside in some head of the clause structure are a part of UG and it merely follows from those principles that verbs must reside in *some* head of the clause, whatever it might be. The options of which head which language will choose are defined by the heads that a verbal extended projection projects. This is the understanding of syntactic parameters that I will adopt in this paper.

Note that this view of parameters essentially eliminates parameters from UG altogether (or at least aims for that). Rather, parameters are properties of the linguistic system as a whole. This implies, however, another point with regard to parametric variation that at first glance seems almost anti-thetical to the minimalist view of things I

have been advocating here. Since parametric possibilities are not directly specified by UG, neither are the parametric choices a particular language decides upon. In other words, parametric variation need not be explained, only defined. This is, I believe, the original insight of the principles and parameters approach. Principles are the things that we seek to define and explain. Parameters are that which we do not need to and probably cannot explain; they are rather a side effect of the principles of UG. Universal, invariant principles interact to define the logically possible differences languages may display; however, the choices for those differences are completely free and random, chiefly the results of historical accident. There is no principled reason why French raises its verbs to T and English does not, nor should there be. Given that the interacting principles of UG, together with lexical variation, leave a well-defined set of logical possibilities open for some linguistic phenomena, we expect each of those options to be exercised by some languages and we do not expect there to be principled reasons for which option is chosen.

Though it has seldom been stated this way, it seems to me that this view has actually been quite common in the literature, embodied in *ad hoc* linguistic tools like weak and strong features of functional heads or, more recently, the EPP. Allow me to elaborate on the latter for a moment. Chomsky (2000) breaks from previous work on checking theory in proposing that local checking configurations need not be created by movement, even if the checker and checkee are not in a selection relation. Rather, feature checking relations take place under a general *Probe-Goal* relation in which the features of some syntactic object enter a feature checking relation with another syntactic object in its c-command domain. This system is consistent with minimalist goals since it eliminates the need for independently-defined checking domains, in most cases taking

that concept to be equivalent to the c-command domain, the latter a notion that comes "for free" in a derivational system of phrase structure. A consequence of this conceptual move, however, is that movement of the type traditionally taken to be associated with feature checking now lacks any theoretically necessary motivation. I am thinking in particular of movement of some element to another element's specifier in order for feature checking between the two to take place, the so-called Spec-Head Hypothesis. This hypothesis is based on the observation that in many languages, movement is very often associated with feature checking. To compensate, Chomsky (2000) invokes an EPP feature.[3] Though it is unclear whether the EPP is meant to be a feature in the technical sense, its function is to require that an EPP-endowed head have a filled specifier. Where a probe-goal feature checking relation is concerned, the result is movement of the goal to the probe's specifier. What I would like to point out is that the EPP property of a particular probe is an unprincipled stipulation. While in one language a probe-goal relation between head Y and goal XP will result in XP moving to Y's specifier, in another language XP may remain in-situ. EPP movement associated with feature checking, then, is a point of parametric language variation just like the position of the verb in a clause. Again, the parameters underlying this variation needn't be taken to be actual parameters defined in UG. Rather, the option of having EPP movement associated with a particular probe-goal relation or not is afforded by the options of logical necessity created by universal principles of UG: given a dependency between two positions in clause structure, an element may be pronounced and/or interpreted in one position or the

[3] I am thinking here of the EPP feature of Chomsky (2000) that can be checked, for instance, by merger of an expletive in SpecTP and not the P(erphieral)-feature which gives rise to successive-cyclic movement in the phase system, though the two ideas are collapsed in Chomsky (2001) to a 'generalized EPP' feature.

other. The EPP simply encodes when a language chooses to pronounce/interpret that element in the structurally higher position and its absence encodes the other option. Some languages employ the EPP for nearly every probe-goal relationship. Others rarely do or do so selectively. There is no principled reason why this should be so. It is my position that there needn't be.

It may seem here that I wish to disregard language variation in defining universal linguistic principles. This is far from the case. Indeed, variation amongst languages is our primary tool for discovering the nature of invariant linguistic principles. This is so because no principle ever acts on its own. Rather, principles interact. Principles of projection may interact with principles of movement; principles of agreement may interaction with principles of selection or projection. What is important here is that each interaction often represents a narrowing of the parametric possibilities that any one principle might allow on its own. Abstractly, let's say that Principle Y of UG allows the logically possible options *a*, *b*, and *c* while Principle Z of UG allows options *b*, *c*, and *d*. Taken separately, a total of four options are logically possible (*a*, *b*, *c*, or *d*) and there may be languages where all options are allowed. However, when the two principles interact in the same language, the range of possible outcomes is limited to the possibilities allowed by both principles, namely *b* and *c* alone. Languages which require such an interaction can tell us something important about these individual principles; namely that there is something about Principle Z which disallows the option of choosing a for Principle Y while there is something about Principle Y that does not allow Principle Z to choose option *d*.

Thus language variation is in fact central to linguistic study and it is essential to fully document the empirical generalizations one finds across the world's languages as well as any correlations between such generalizations. This is the central goal of what has traditionally been called typology. However, this alone is not enough if we wish to arrive at well-defined universal linguistic principles. To accomplish that goal, we must use the results of typological study as a means to define the options allowed by principles of UG and their interactions in the composition of linguistic structure. It is hoped that this study can contribute to that goal.

1.2 Theoretical Assumptions

In this section, I outline my basic theoretical assumptions in a brief manner. More thorough discussion and justifications will be provided in the main body of the thesis as the need arises.

1.2.1 Merge

The most basic principle of narrow syntax is that syntactic objects must be combinable into larger objects. Were this not the case, syntactic structure would be impossible. The simplest assumption is that only two such items (the minimum possible) may be combined at a time, yielding the familiar binary branching character of most modern phrase structure trees. If we take this fact about language to be procedural in nature, that is if we take it to describe sentence construction rather than only representation, we are led to a very derivational way of thinking about clause structure. In this view, phrase

structure is built from the bottom up by the iterative application of combining two syntactic objects at a time (see Epstein 1999).

In the MP, these ideas have been formalized as *Merge*, the syntactic relation that combines two elements to form one larger element. In this thesis, I will assume Merge to be the basic mechanism of structure building. I will also take the standard assumption that given Merge(X, Y), either X or Y must project and whichever does is considered the "head" of the resulting phrase.

1.2.2 The Probe-Goal System and Basic Syntactic Relations

Throughout this dissertation, I will adopt the probe-goal view of syntactic relations put forth in Chomsky (2000, 2001) and outlined above. The general probe-goal system is motivated by the fact that in some cases syntactic relations seem to be established 'at a distance' without any local relation between the elements involved. Take, for instance, the familiar expletive-associate constructions in English like that in (3). Here the copula agrees with the post-verbal associate subject.

(3) a. There is/*are a man in the room.

b. There ?is/are three men in the room.

As Chomsky argues, the simplest assumption is that the agreement features of the verb are valued by the associate in situ. The conclusion is that movement of the associate into a local relation with the verb is not required for agreement to take place. Rather, the features of the verb that must be checked (here agreement or phi-features) can "probe" its

c-command domain for appropriate "goals" and use such goals to undergo checking/ valuation 'at a distance.'

Along with the probe-goal view, Chomsky assumes three basic syntactic relations. The first two are the basis for feature checking. In order for feature checking to take place, it must first be determined that the sets of features involved are of the same type. This relation is known as *Match*. Once a match relation has been established, checking/ valuation of the uninterpretable/unvalued features can take place.[4] This procedure, necessarily parasitic on Match, is known as *Agree*. A third relation, *Move*, relies on feature checking, but is not a necessary consequence of it. Whether or not Move results from an Agree relation is dependent upon whether the probing feature is 'strong' in the sense of Chomsky (1993) or has an EPP property in the sense of Chomsky (2000). As discussed above, I take the matter of which probing features of triggering Move to be a matter of unprincipled parametric variation across languages.

(4) For any probe feature P and goal feature G:

a. Match (P,G) if P and G are features of the same type.

b. Agree (P,G) if P a feature of P is valued by G and Match (P,G) obtains.

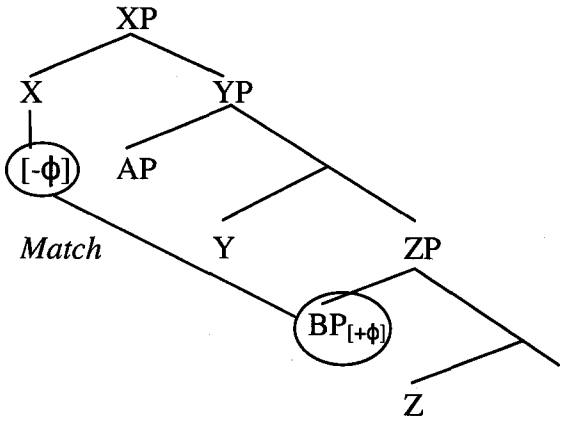
c. Move (P, G) if P moves to the specifier of G and Agree (P,G) obtains.

It may be helpful to explicate how the present system works with regard to a particular instance of feature checking. I will use agreement since this is the primary phenomenon

[4] Chomsky (2000) introduces the valued/unvalued distinction in addition to the interpretable/ uninterpretable distinction of Chomsky (1995) and claims a direct correlation between them, largely for

discussed in this thesis. In agreement, a set of unvalued phi-features enters the derivation as a feature set of some functional head. These features probe their c-command domain, looking for other sets of phi-features with matching sets of features. When such a set is found, a Match relation is established between the phi-features of the probe and the phi-features of the goal.

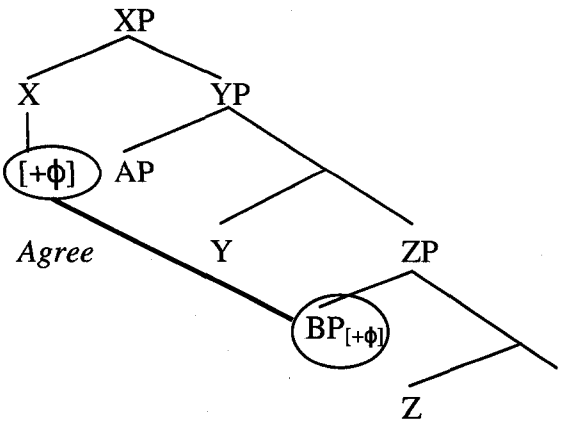
(5)



Given that the phi-features of the goal have a value, the Match relation in (5) becomes an Agree relation, valuing the phi-features of the probe based upon the values of the goal.

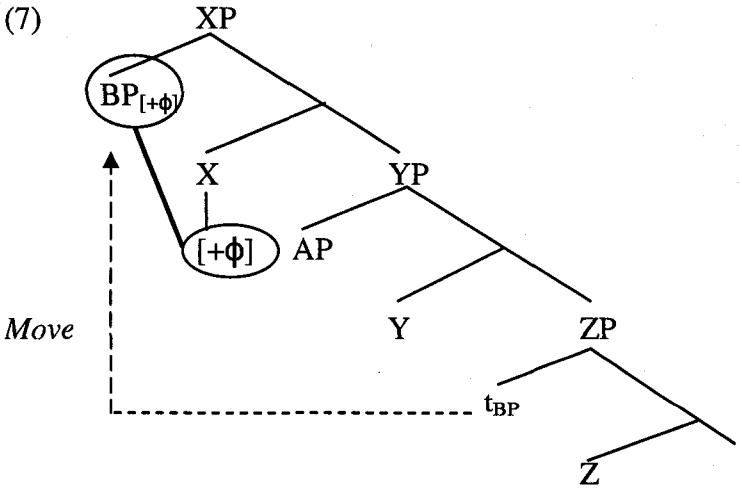
conceptual reason. In this thesis, I favor the valued/unvalued terminology though nothing crucially relies on

(6)



If the probing phi-features are strong features, the goal will move to the probe's specifier as in (7). As we will see, the Bantu languages show a strong preference for movement where agreement is involved. It has long been observed that agreement in Bantu requires a spec-head configuration (Kinyalolo 1991). In the present system, this should be interpreted as the claim that in Bantu unvalued phi-feature probes are always strong features.

(7)



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the distinction.

Here I have demonstrated how the probe-goal system, together with the basic syntactic relations in (4), work with regard to an instance of phi-feature agreement. As I will show in the next section, however, things are more complicated when instances of multiple feature checking are considered, necessitating a substantial refinement of the understanding of the probe-goal procedure outlined so far.

1.3 Theoretical Claims

The probe-goal system as described so far is general enough that we should expect all instances of feature checking to behave similarly. As several researchers have observed, however, this is not the case. In the A-domain in particular, it has been observed that when situations of multiple feature checking are examined, case checking relations seem to differ from phi-feature checking relations in a fundamental way. Below I offer a simple argument for this position based on ditransitive constructions in Swahili. The argument is basically the same as the one made on the basis of Japanese Object Honorification in Boeckx & Niinuma (2004) and Boeckx (2003b). Other arguments for this position appear in Hiraiwa (2005).

1.3.1 The Nature of Feature Checking: Agreement in Ditransitives

Though whether or not Bantu languages have true object agreement is in general controversial (a topic I take up in detail in Chapter 4), at least one Bantu language is known to have object agreement in some contexts. In Swahili, a verb obligatorily agrees with animate object NPs.

(8) a. Bahati a – li – **m** - beba mtoto jana *Swahili*

B. 3SG-PST-**1OM**-carry 1child yesterday

'Bahati carried the child.'

b. *Bahati a-li-beba mtoto jana.

In ditransitive constructions the same holds true, except object agreement must be with the indirect object, adjacent to the verb, and cannot be with the direct object. This seems to be a fact about object agreement quite generally. Dryer (1986), for instance, documents a number of such cases.

(9) a. Bahati a – li – **wa** – pa wazazi wake mtoto *Swahili*

B. 3SG-PST-**2OM**-give 2parents 2her 1child

'Bahati gave her parents the child.'

b. *Bahati a – li – **m** – pa wazazi wake mtoto

B. 3SG-PST-**1OM**-give 2parents 2her 1child

It is even the case that an inanimate indirect object (which does not trigger obligatory object agreement on the verb) creates an intervention effect for object agreement with an animate direct object.[5]

(10) a. Bahati a – li – pa dunia mtoto *Swahili*

B. 3SG-PST-give 9world 1child

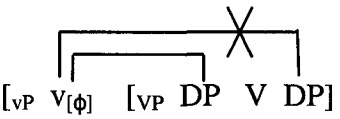
'Bahati gave the world a child.'

b. *Bahati a – li – **m** – pa dunia mtoto

B. 3SG-PST-**1OM**-give 9world 1child

As a probe-goal relation, then, agreement seems to be restricted to a one-to-one relation and to be restricted to minimality. Assuming that the phi-features associated with object agreement are features of little v, these features may only enter an Agree relation with the higher indirect argument and not with the lower direct object.

Agreement:

(11) 

Case checking, on the other hand, does not seem to work this way. Chomsky (1995) argues that both the dative and accusative objects in a ditransitive construction are checked by the same head, namely little v. Indeed, there seems to be no empirical reason to doubt that both of the objects in the Swahili ditransitives above have structural case. Neither is obliquely marked in any way and as we saw in (8a) the accusative direct object can trigger object agreement just as well as the dative indirect object in (9a). This is

[5] It is possible for the verb to agree with the inanimate DO in (6a) yielding the verb form *a-li-i-pa.*

significant since in general it is structurally (as opposed to inherently) case marked arguments that are able to trigger agreement on the verb.

Case checking relations, then, unlike agreement relations, do not seem to be restricted to a one-to-one relation. Case checking can be one-to-many; little v is able to check the case of both objects in a ditransitive construction:

Case:

(12) $[_{vP}\ v\ [_{VP}\ DP\ V\ DP]]$

The idea that probe-goal relations may be one-to-many has been proposed recently by Hiraiwa (2001, 2005) and picked up by many authors. As Hiraiwa points out, it is a stipulation that probes may only enter syntactic relations with one goal in their c-command domain. Unless there is strong evidence that a one-to-one correlation between probes and goals exists, it should be assumed that probes can enter syntactic relations with *all* of the goals in their c-command domain. Here we have seen such evidence with regard to phi-feature checking, which seems to be one-to-one and subject to minimality, but not for case feature checking, which is one-to-many. This state of affairs will be one of the central claims defended in this thesis.

The question that immediately arises is why this asymmetry between particular Agree relations should exist and how it should be understood and/or formalized. As Boeckx (2003b) suggests, an answer may lie in another asymmetry inherent in the

---

However, this is not required and yields a definiteness/specificity effect on the interpretation of the IO.

assumption adopted in section 1.2.1 above, namely that syntactic structure is built from the bottom up in a step by step fashion. Below I develop this idea in a particular way with the goal of capturing the dichotomy above with a single uniform Agree operation and avoiding unnecessary stipulations in the probe-goal system.

1.3.2 Refining the Probe-Goal System

Though I believe the principle of feature checking without movement is all that is entailed in the probe-goal understanding of syntactic relations, in practice probe-goal systems have been taken to be more restricted in a couple of ways. First, most researchers have taken the probe-goal system to entail that syntactic relations are defined under the c-command relation. That is, a probe can only enter syntactic relations with goals in its c-command domain. Second, it has largely been assumed that probe-goal relations are always one-to-one, restricted by locality considerations. That is, probes only relate to the closest goals in their c-command domains. Below, I will challenge both of these assumptions, arguing that they are unnecessary restrictions on the probe-goal system. First, however, I must define what kinds of things I take to be potential probes and goals.

Probes and Goals. Researchers differ on the kinds of heads or features that they take to be potential probes and/or goals. In this thesis I will take probes to be only those features which are unvalued and which therefore must be valued in the course of the derivation. The assumption is based on the intuition that unvalued features need to 'find' a value in the course of the derivation. Therefore only these features need be probes. On the same logic, I take potential goals to be sets of valued features. These features need not be

valued in the derivation, and therefore they need not search their syntactic environments for matching feature sets.

Probes are able to obtain a value in two necessarily sequential steps: (i) 'searching' the syntactic environment for features capable of valuing their features (*Match*); and (ii) valuing their features with the goal(s) that are located (*Agree*). Note that, necessarily, Agree is parasitic on Match. With regard to the phenomena of agreement and case checking, central to this thesis, I take two complementary sets of features to be involved, following the work of Pesetsky and Torrego (2001, 2004). The phenomenon known as agreement concerns an unvalued set of phi-features residing the functional heads T (for subject agreement) or v (for object agreement). These features must be valued against a set of valued phi-features, typically with a nominal element.[6] Case checking, on the other hand, involves the unvalued tense feature of a nominal argument. These features must be valued against an element with valued tense features. I take these two heads to be T and v, valued for tense and aspect features respectively.

This view results in a kind of symmetry in feature checking between verbal heads and arguments. Arguments have their case valued by the tense features of T and v while T and v have their phi-features valued by arguments.

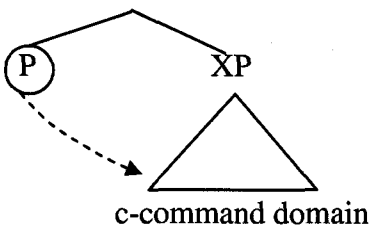
(13) T/v [-ϕ, +T]

DP [+ϕ, -T]

[6] In section 3.5 I argue that verbal phi-features may also be valued against the valued phi-features of another verbal head.

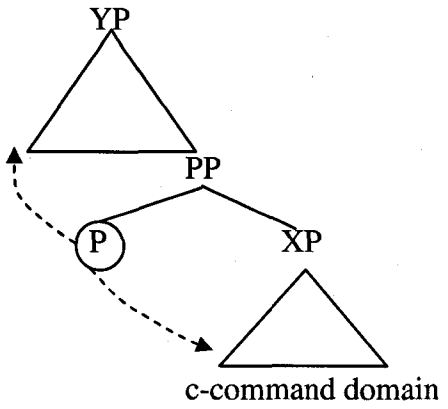
Probes and C-command. The majority of researchers have assumed that probes may only enter syntactic relations with goals in their c-command domains. Note, however, that this assumption is largely a product of the assumption of derivational Merge. If we are concerned about the point in the derivation at which a probe is introduced into the structure, then it is a natural consequence that it will probe only its c-command domain since this consists of the structure built before its merger.

(14)



Naturally, the probe will find matching goals and value its unvalued features as quickly as possible (the Earlyness Principle of Pesetsky 1989) if such goals are available. Consider the possibility, however, that there are no potential goals for P in the c-command domain XP in (14). In that case, the derivation will continue and P will still be a probe, its features still unvalued. Having found no available goal in its c-command domain, it is natural to assume that in such cases the probe will now begin searching the materials added to the derivation as it proceeds (cf. Rezac 2003).

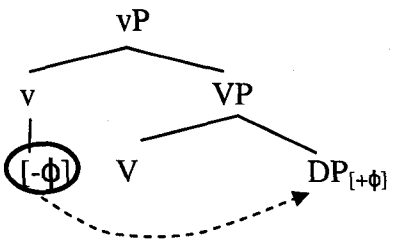
(15)



The view here is that probe-goal relations are not inherently restricted to the c-commanding domain of the probe. The fact that probes so often are valued by goals in their c-command domain is rather a conspiracy of three distinct factors; namely derivational Merge, the Earlyness Principle, and the fact that potential goals are often merged to the derivation before the probes that require them (more on this below). Probe-goal relations are inherently symmetric, unrestricted with regard to whether probing targets the syntactic environment probes can search. It is rather the asymmetry inherent in the system of derivational structure building that lends asymmetry to probe-goal relations.

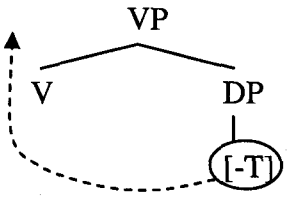
The idea that probes are unrestricted in this way is crucial when we consider the claim made above that it is unvalued features which are probes. When considering unvalued phi-features, the assumption that probes are restricted to their c-command domain has little consequence. Since the inherently valued phi-features of arguments are merged in the derivation before the unvalued phi-features of v or T, the latter features will always find potential goals in their c-command domain immediately when they are merged to the derivation.

(16)



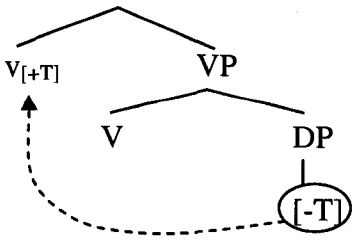
This is not the situation for case features on the DP argument in (16), however. Recall the assumption that case features on arguments are unvalued tense features. They must therefore be considered probes. At the point in the derivation in which the object argument in (17) has been introduced, there are no potential goals present in the syntactic structure. The probing [-T] feature of the DP therefore begins probing the structure above it, waiting for some potential goal to be introduced into the structure.

(17)



When little v is introduced into the structure in (17) with its [+T] aspectual feature, the DP can value its [-T] case feature via an Agree relation.

(18)



We thus have an asymmetry between phi-feature and case feature checking that results from the asymmetry of when arguments and inflectional heads are introduced into the derivation. In the standard cases, unvalued phi-features will be valued by goals in their c-command domains while unvalued case-features will be valued by goals merged above them in the derivation.[7]

Agree and Minimality. Recall the discussion of object agreement with Swahili ditransitives from the previous section. There I concluded that while a single head (little v) may check the case of both objects in its c-command domain, it may only agree with one of them, in particular only the closest one. If in both the case checking and agreement situations, we take little v to be the probe, this dichotomy is mysterious and we will be forced to the position that case feature checking and phi-feature checking involve distinct types of Agree relations. This is clearly an undesireable conclusion. If possible, we would like to maintain a single Agree procedure for feature checking.

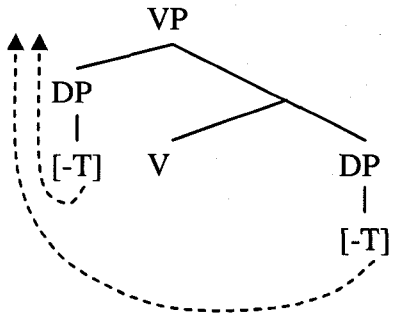
Note this goal is especially attractive for the current system in which case features are taken to be unvalued tense features. In this understanding, both phi-feature checking and case feature checking involve a matching procedure followed by a valuation procedure. A single type of Agree procedure can only be maintained, however, if the asymmetry between agreement and case checking observed for ditransitives can be made to follow from something else. Interestingly, in the system developed so far an asymmetry between case and agreement checking has already been observed with regard

[7] If nothing more is said, the present system predicts that the case of subject arguments merged in SpecvP will be checked by the tense feature of little v since this head is in its c-command domain. Like Pesetksy

to the vP domain: while unvalued phi-features probe down into their c-command for goals, the case features of objects probe up to look for goals. Here I show that the one-to-one minimality restriction on agreement follows from this asymmetry.

As the structure is built from the bottom up, argument DPs will enter the derivation as part of the verb's argument structure. Beginning with the internal argument domain, at the point in the derivation in (19), there is nothing in the structure to value the case features of the object DPs. They are thus stuck probing the domain above them, waiting for an element to be added to the derivation that can value their case features.

(19)



At this point, the syntactic head v is merged to the derivation, carrying two feature sets. One is an interpretable tense feature capable of valuing the uninterpretable case features of the arguments waiting below. The other is an unvalued set of phi-feature which immediately begins probing its c-command domain. In (20) two things happen simultaneously. One is that the unvalued tense features of the object DPs are valued by v. The other is that the unvalued phi-features of v are valued by the first DP the probing features encounter.

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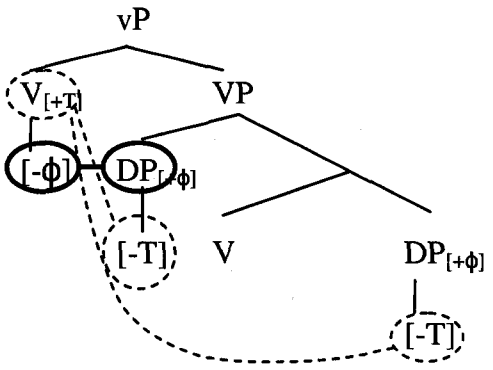
and Torrego (2004), I am forced to conclude that the tense features associated with T and (nominative)

(20)



Note the asymmetry. Since both object arguments are introduced in the derivation before any element that can value their case features, both are probing the same domain when v is introduced. Thus both probe v at the same time, getting their case features valued simultaneously. This gives the appearance that the Agree relation underlying case checking is not subject to minimality.[8] On the other hand, both objects together with the inherently valued phi-features are present in the derivation when the unvalued phi-features of v are introduced. These features immediately probe the existing structure, getting valued by the phi-features of the closest object DP.

The result is that the minimality restriction on feature checking is obvious for the valuation of the phi-features of v, but not for the case checking relations of the object DPs. From another perspective, the asymmetry when the DPs and v are merged in the structure results in phi-feature checking being a one-to-one relation while case checking is a many-to-one relation.[9]

To sum up the claims I have made with regard to the probe-goal system:

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subjects is of a different nature than the tense features associated with little v and object arguments.

[8] This understanding assumes that a set of unvalued features cannot count as an intervener for minimality. Thus, unvalued tense feature of the c-commanding indirect object in (20) does not prevent the direct object from entering an Agree relation with little v.

(21) a. Only unvalued features are probes; only valued features are goals.

b. Probes are unrestricted with regard to the direction of probing.

c. Probes are unrestricted with regard to how many goals they may enter (Match) relations with (probe-goal relations are one-to-many).

d. Agree relations are subject to minimality while Match relations are not (probes are valued by the closest goal).

e. Case features are unvalued tense features on arguments.

Note that of these claims only (21e) is a theoretical stipulation that has not been independently justified.[10] (21b) and (21c), rather than being stipulations, are statements that actually remove stipulations from previous understandings of the probe-goal system. (21a) is a default assumption. The alternative, that valued features can be probes, is unjustified on the grounds that the very reason probing exists as a syntactic procedure is to value unvalued features. Finally, with regard to the claim in (21d) that Agree is subject to minimality, this has been justified in the discussion of object agreement in ditransitive above. The claim that Match is not subject to minimality follows from (21c).

The system outlined here is essentially derivational in that it assumes derivational Merge to be the basis for syntactic construction. However, the syntactic relations themselves are essentially representational. The dynamics of the system all derive from the fact that some syntactic objects are introduced into the derivation later or earlier than others. One question that arises in a system like this is whether or to what extent further

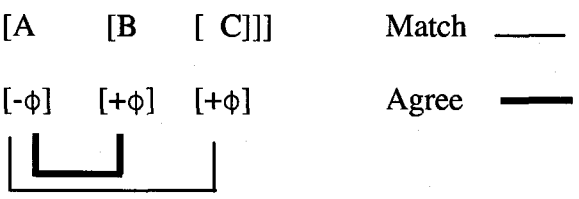
[9] I hasten to reiterate that I have been concerned here only with feature-checking (Agree) relations and not with Match relations. Unlike Agree relations, Match relations are never sensitive to minimality and are completely symmetric.

derivational computation affects the representation of established syntactic relations. I address this in the following section.

1.3.3 Locality is Derivationally Dynamic

In conjunction with the probe-goal system developed above, I will also argue for the idea that in a derivational system like that adopted by many proponents of the MP, locality is a dynamic concept. To illustrate, let's take three syntactic objects A, B, and C that each have a set of phi-features where A's features are unvalued. Given that all three of these objects are in the proper configuration (say, A c-commands B and B c-commands C), Match relations will be established between them. Furthermore, Agree relations may only be established between the most local objects. In the present configuration, one consequence of this is that A will be able to have an Agree relation with B, but not with C. Note, however, that A will have a Match relation with C since Match relations (no matter what sorts of features are involved) are not subject to locality and are always one-to-many.

(22)

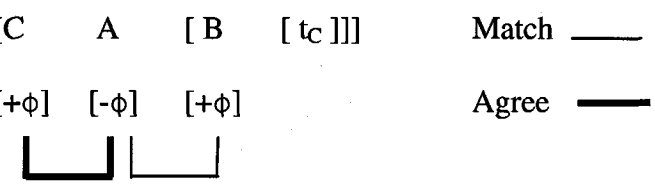


The configuration in (22) expresses possible and impossible Agree relations based on minimality. My claim, however, is that in a derivational system, (22) has little meaning

[10] Such justification is presented in Pesetsky and Torrego (2001, 2004) where it is shown that this

outside of its derivational context. That is, the syntactic relations in (22) may only hold for some point in the derivation T. At some later point in the derivation T+1 the configuration may be altered. For instance, C may undergo Move to SpecA, perhaps under an Agree relation distinct from the phi-feature relations in (22). In that case, at T+1 C may be more local to A than B. The Agree relation will thus be altered, holding at T+1 for A and C, but not for A and B (though again the Match relation between A and B will be maintained).

(23)



With this dynamic view of locality, what matters is not the most local relation at any given point in the derivation, but only what the most local relations are at the point in the derivation at which the resulting structure is spelled-out and sent to the interface levels. I assume that this point is the end of the derivation.[11] Of course, the Match relations in (22-23), which are not sensitive to minimality, will not be affected by structural ordering changes in the derivation.

In summary, the syntactic relations of Match and Agree are essentially representational notions. However, the process of sentence construction, taking place

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assumption derives a wide variety of facts concerning the distribution of syntactic categories.

[11] Chomsky (2000, 2001, 2005) adopts a system of phase-based spell-out along with the probe-goal system. As I discuss in section 3.4.1, previous authors have taken a phase system to be necessary to circumvent some of the locality issues that arise in some of the constructions I will be concerned with in this thesis. However, I do not assume a phase system or any cyclic view of spell-out. For a detailed critique of the

under Merge, is essentially derivational. Syntactic relations are therefore dynamic throughout the course of the derivation to the extent that these relations are sensitive to sentence structure. This is certainly the case with regard to minimality, a restriction on Agree relations, since minimality makes crucial use of the notion of 'closest,' a relational notion that can be affected by the way in which syntactic objects are added to the derivation.

This view of minimality, together with the probe-goal system outlined above, will be the system adopted in this thesis. In Chapter 3 I will discuss how it allows for a novel account of so-called OVS constructions in some central Bantu languages. In Chapter 4, the assumptions here will be crucial in accounting for resumption facts in other Bantu languages.

One final point with regard to Move is worth discussing briefly. Locality has always been taken to play a role in movement dependencies. Simply stated in derivational terms, it is standardly assumed that moved elements may not skip potential landing sites between their point of origin and their final position. In a word, movement must be local (or successive-cyclic to use the literary term). However, note that this locality may have a very different source than the locality I have been considering here with regard to sets of phi-features. Some have argued that the locality of movement arises from the nature of phrase structure, or that movement is simply local by nature (Takahashi 1994). In any case, I take the successive-cyclic nature of movement to have a distinct source from the local nature of feature-relations as in the Agree relation adopted here.

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notion of phases and arguments that a probe-goal system need not be paired with phasal spell-out, see Boeckx and Grohmann (to appear).

Further discussion of this system will take place as it is applied to the data I take up in this thesis. That data will come from a family of languages widely known for their rich and ubiquitous agreement systems, making them the perfect testing ground for the understanding of agreement outlined above.

1.4 Empirical Domain

1.4.1 The Languages Under Study

There are between 400 and 600 Bantu languages and varieties across sub-Saharan Africa. Thus, the survey of Bantu relatives examined in this thesis cannot be exhaustive. Rather I strive for geographic diversity among the languages considered here in the hopes that the analyses I offer for the particular languages I look at can be extended to their closest kin. Reflecting this expectation, I may often speak of generalizations holding of Eastern, Southern, or Central Bantu languages. These categories should not be taken to designate well-defined geographical areas or even a well-defined system of linguistic categorization. It is merely a reflection of the fact, hopefully demonstrated throughout this thesis, that Bantu languages in each of these general geographic areas have in common certain typological features that are important for the issues treated in this work. The analyses given for particular languages, it is hoped, can at least provide for a sound theoretical jumping off point for the study of geographically close or closely related languages. It may be the case that this extrapolation is unjustified and it is almost certainly the case that exceptions to my generalizations exist. I hope the reader will keep this in mind as I take languages like Zulu, Xhosa, Sesotho and Swati to be representative of Southern Bantu languages, languages like Dzamba, Lingala, Kinyarwanda, and

Kirundi to represent Central Bantu, and languages like Swahili, Shona and Chichewa to represent Eastern Bantu languages. I also should note that this study does not consider all sub-families of the Bantoid classification, but restricts attention to the so-called Narrow Bantoid sub-family to which the majority of Bantu languages belong. Minority Bantoid sub-families, including the West Grassfields sub-family, are excluded here.

About half of the data in this thesis comes from secondary sources such as dissertations, books and articles and appropriate citations have been given. Whenever possible, this data has been confirmed first hand with other native speakers. Much of the remainder of the data, in particular data from Lingala, Swahili, Kirundi and Zulu, has been originally elicited from native speakers.

1.4.2 General Characteristics of Bantu Languages

I often hear linguists (and even Bantuists!) say that once you have seen one Bantu language, you have seen them all. Of course, one of the larger goals of this thesis is to prove that sentiment wrong, or at least to add an addendum: only if you don't look close enough! That aside, the Bantu languages are indeed known for their remarkable similarities in structure, which lends them nicely to the microparametric methodology for comparative syntax. Here I present a very basic sketch of the structure of Bantu languages for the simple purpose of familiarizing them to those who haven't had the pleasure to study them before.

Verbal Morphology. The verb forms of Bantu languages are highly inflected. There are typically distinct morphemes for inflectional categories such as subject agreement, tense,

negation, aspect, and object agreement. In addition, there are highly productive derivational morphemes to indicate the causative, applicative, reciprocal, stative, and potential. In the majority of cases, one-to-one relationships can be drawn between morphological elements and semantic function. A general template appears below (NEG = negation, SA = subject agreement; T = Tense; OA = Object Agreement; DS = derivational suffixes; FV = final vowel):

(24) NEG – SubjAGR – T – ObjAGR – **Verb Root** – DS - FV

Of the morphemes in (24), the most variable in terms of its templatic position is tense, appearing as a prefix in many languages, but as a suffix in others. The category known in the literature as the 'final vowel' generally indicates the aspectual mood of the verb (Myers 1990), often distinguishing the indicative from the negative and/or subjunctive. Consider the final vowel alternations in the following Swahili examples, for instance:[12]

(25) a. Juma a – na – som – **a** kitabu Indicative
Juma 3SG-PRES-read-**IND** 7book
'Juma is reading a book.'

b. Juma ha – a – som – **i** kitabu Negative
Juma NEG-3SG-read-**NEG** 7book
'Juma is reading a book.'

c. Juma a – som – **e** kitabu Subjunctive

Juma 3SG-read-**SBJ** 7book

'Juma should read a book.'

A verb form that fully articulates all of the possible morphology in (25) is given below:

(26) Walimu ha – wa – ta – m – som – esh – a mwanafunzi kitabu

2teachers NEG-3PL-FUT-1OM-read-CAUS-IND 1student 7book

'The teachers will not make the student read a book.'

Noun Classes and Agreement. Perhaps the most distinguishing feature of the Bantu languages is an extensive classification system into which all nominals are organized. Languages vary in how many noun classes they employ. Luganda is claimed to use twenty-one noun classes (the highest reported) while urban dialects of Lingala seem to have an extremely reduced system, distinguishing only between +human and –human nouns. Ten to fourteen classes is more typical.

Though groups of nouns with similar semantic features often fall into the same class, noun classes cannot be defined semantically. Rather, they are defined morphologically in two ways, one more complete than the other. One is a system of prefixes marked on the nouns to signify their noun class membership. Thus in many cases each noun in a certain noun class begins with the same prefix. Examples from class 1 and

[12] Foir space considerations, in the remainder of this thesis I leave the final vowel unglosses in the indicative unless it is essential to the discussion.

class 7 from Swahili are given below. All the members of class 1 begin with the *m-* prefix while all the members of class 7 begin with the *ki-* prefix:

(27) Class 1: mtoto (child), mtu (person), msichana (girl), mfalme (king)
Class 7: kitabu (book), kisu (knife), kichwa (head), kiti (chair)

Though noun prefixes distinguish many of the Bantu noun classes, some classes lack prefixes altogether. In addition, a language may have more than one noun class with the same prefix. Observe that in Swahili class 3 also has the *m-* prefix while neither class 5 nor class 9 have any prefix at all:

(28) Class 3: mti (tree), mto (river), mlima (mountain), msitu (forest)
Class 5: jengo (building), darasa (class), wingu (cloud), nyota (star)
Class 9: nyumba (house), siku (day), gazeti (newspaper), rafiki (friend)

These facts demonstrate that noun classes are not wholly defined by the system of the prefixes they often exhibit. Rather, they are defined by the system of agreement associated with them. Although words in class 1 and class 3 in Swahili both begin with the prefix *m-*, the form of subject-verb agreement they trigger is different.

(29) a. Mtoto **a**-li-anguka *Swahili*
1child **3SG**-PST-fall
'the child fell'

b. Mti **u**-li-anguka

3tree **3SA**-PST-fall

'the tree fell'

Similarly, though class 5 and class 9 both lack prefixes, when they are subjects of a sentence they trigger distinct agreement morphemes on the verb:

(30) a. Jengo **li**-li-anguka *Swahili*

5tree **5SA**-PST-fall

'the tree fell'

b. Nyumba **i**-li-anguka

9house **9SA**-PST-fall

'the house fell.'

In sum, noun classes in Bantu are defined by the agreement they trigger on verbs and other elements (including demonstrates and possessive pronouns). Such agreement indicates person, number, and gender if the latter is taken to be equivalent to the concept of 'noun class.' Throughout this thesis, I will indicate agreement coindixation as I have in the examples above. For class 1 and 2 (the human singular and plural classes, respectively), I will gloss agreement with the appropriate person and number distinctions. For other noun classes, I will gloss agreement with the appropriate noun class next to the

letters SA for subject agreement, AGR for other kinds of agreement, or simply by the number alone.

Like many languages with rich morphological subject-verb agreement, Bantu languages allow subjects to be null as long as they trigger agreement on the verb. Agreement generally indicates the noun class of the dropped subject. In addition, languages may designate one noun class to be used as 'default' agreement if the proper noun class of a subject cannot be determined. For Swahili, this is class 9. While (31a) indicates that some known object that belongs to class 5 must have fallen, (31b) does not necessary indicate the noun class of the fallen object.

(31) a. Li – li – anguka *Swahili*

5SA-PST-fall

'It (something in class 5) fell'

b. I – li – anguka

9SA-PST-fall

'It fell.'

In the verbal domain, the agreement system of the noun classes is not only involved in marking the subject on the verb, but in marking the object on the verb as well. In Chapter 4, I will discuss variation in object marking in the Bantu languages extensively. Here, however, I would like to note the basic characteristics of object marking that all Bantu languages have in common.

In general, object marking on the verb is not obligatory (though see section 4.2.1 for important exceptions). However, all Bantu languages allow an object to be marked on the verb when that object is right or left dislocated or is null:

(32) a. Juma a – li – soma kitabu *Swahili*

Juma 3SG-PST-read 7book

'Juma read the book.'

b. Kitabu, Juma a – li – **ki** – soma .

7book, Juma 3SG-PST-**7OM** read

'The book, Juma read it.'

c. Juma a – li – **ki** – soma

Juma 3SG-PST-**7OM**-read

'Juma read it.'

Word Order. The usual word order for sentences in Bantu languages is SVO. However, subject-verb agreement on the verb allows the subject to be right dislocated, yielding VOS word order. Furthermore, when the object is marked on the verb as discussed above, the object may also be right or left dislocated. Together these two factors allow for any ordering of the constituents subject, verb and object given the appropriate discourse context. These facts have been discussed extensively by Bresnan and Mchombo (1987).

This brief sketch of the Bantu languages should familiarize the reader with some of the grammatical systems characteristic of this language family. Other grammatical factors as well as points of grammatical variation will be introduced as they are considered.

1.4.3 Types of Relatives

One of the most interesting things about relativization in any language is that there is often more than one way to do it. This may result merely from considerations of morphology and tense or it may reflect very different derivational strategies. It is widely accepted that there are two general schemas for relativization. One involves pronominal elements that are taken to be coindexed in some sense with the noun phrase that is being modified by the relative. English wh-relatives are typical of this kind of relative. The proper derivation of pronoun-strategy relatives is controversial. All that is important at this point, however, is that the relative pronoun is generally not taken to head a functional projection within the clausal architecture, but is rather understood to be part of a nominal DP or perhaps a DP itself:

(33) Thomas spotted the [boy$_i$ [who$_i$ [he hated ___$_i$]]]

The second general relativization strategy does not involve relative pronouns like the wh-phrases in (33), but instead employs a complementizer that introduces the relative clause. These are often called '*that*-relatives' after their typical English examples. Standard

analyses assume that in these types of relatives a null operator or the relative head itself moves from its clause-internal position to become the relative head of the clause:

(34) a. Thomas spotted the [dog$_i$ [that he wanted ___$_i$]]

b. Thomas spotted the [dog$_i$ [*Op*$_i$ that he wanted ___$_i$]]

The difference between wh- and that-relatives is not a trivial one from a syntactic perspective. While wh-pronouns and complementizers may function similarly in relating a noun phrase to its relative clause modifier, the syntactic mechanism behind the relations may be different. For this thesis, the most important difference is that that-type relatives employ complementizers. Complementizers are heads and therefore a part of the functional projection of clause structure. Depending upon their feature structure, they may act as probes, interacting with XPs or other heads in the derivation in ways that require a Match or Agree relation. Wh-pronouns, on the other hand, are not a part of functional clause structure. They are either XPs or possibly they head a projection within DP. We therefore expect them to be goals for external probes or to interact with other elements within the DP. This thesis wishes to deal exclusively with that-type relatives since its chief concern is the interaction of features which reside in functional heads of the clause structure. Thus, it is important to have some criteria to differentiate relatives employing complementizers from those employing wh-pronouns.

Unfortunately, such criteria are not easy to come by. This turns out to be especially true for the Bantu languages where the traditional term 'relative marker' is still used by authors to avoid the complementizer/pronominal controversy. The difficulty in

telling wh- from *that*-relatives arises from the fact that both relative complementizers and relative pronouns often arise from a common grammatical source. For Bantu this source is demonstratives. Consider, for example, the data in (35-37). In these languages, relative markers are identical to demonstratives used productively in the language:

(35) a. mukanda **muye** Poso a – tind – aki *Lingala*
5letter **5REL** Poso 3S-send-PST
'the letter that Poso sent'

b. mukanda **muye**
5letter **5DEM**
'this letter'

(36) a. setulo **seo** basadi ba – se – rek – ile – ng *S. Sotho*
7chair **7REL** 2women 3PL-5OM-buy-PERF-RS
'the chair which the women bought today' (Zeller 2002)

b. setulo **seo**
7chair **7DEM**
'this chair'

(37) a. buku **leyi** munhu a yi hlaya-ka *Tsonga*

9book **9REL** 1person 1SA 9OM read-RS

'the book that the person is reading' (Zeller 2002)

b. buku **leyi**

9book **9DEM**

'this book'

Furthermore, the demonstratives in (35b), (36b) and (37b) have the status of full pronominal arguments. They may stand alone as pronominals or serve as the head of relaive clauses:

(38) a. **muye** Poso a – tind – aki *Lingala*

5REL Poso 3SG-send-PAST

'the one that Poso sent'

b. muye

5DEM

'this one'

(39) a. **seo** basadi ba – se – rek – ile – ng *S. Sotho*

7REL 2women 3PL-7OM-buy-PERF-RS

'the one which the women bought today'

b. seo

7DEM

'this one'

(40) a. **leyi** munhu a yi hlaya-ka *Tsonga*

9REL 1person 1SA 9OM read-RS

'the one that the person is reading'

b. leyi

9DEM

'this one'

Zeller (2002) takes the fact that these relative markers are homophonous with determiners and can stand alone as pronouns as evidence that they are in fact relative pronouns. However, this is conjecture at best. Consider that elements which are uncontroversially complementizers, such as English *that*, are also commonly homophonous with determiners. While English *that* cannot stands as a pronominal argument, this is likely a function of its inability to display rich agreement, resulting in the impossibility of a null complement. One might just as well take the opposite of Zeller's stance. Indeed, it is on analogy with the English demonstrative/complementizer *that* that Demuth and Harford (1999) assume Bantu relative markers to be uniformly complementizers.

The real root of the difficulty lies with the fact that there seems to be a Jespersonian-type cycle of linguistic change that causes relative pronouns to be

reanalyzed as complementizers over time. It is well-known, for instance, that the wh-pronoun *which* has been largely reanalyzed as a complementizer in most dialects of contemporary American English. Similarly, as Gelderen (2004) shows, *that* was once employed as a relative pronoun in English before becoming a complementizer.

Unfortunately, there doesn't seem to be any concrete criteria on which to judge the relative markers in (35-37) with regard to their pronominal or complementizer status. In this thesis, I will assume that they are in fact relative pronouns, though nothing crucial depends on this. More important for the current work is criteria for determining what kinds of relatives can reliably be classified as *that*-relatives. Fortunately, such a criteria is more readily available. Many Bantu languages employ relative markers that, while often obviously derived from demonstratives, appear in non-homophonous reduced forms. Here it is difficult to label such markers as pronouns since they only appear in relative contexts and cannot stand alone as arguments. Often these markers constitute a single syllable consisting of a vowel and agreement features only. In some cases, a lexical tone is employed as the only marker of relativization. Along with, or possibly as a result of, their reduced form, such relative markers typically appear as clitic-like elements affixed to a verb or other element in the clause. A good example is Shona. Here the relative marker agrees with the relativized NP and is prefixed to the verb form, followed by agreement with the subject:

(41) Mbatya **dza** – v – aka – son – era vakadzi mwenga *Shona*

10clothes **10REL**-3PL-PST-sow-APP 2women 1bride

'the clothes which the women sowed for the bride' (D&H 1999)

The relative marker *dza* in (41) is not homophonous with a demonstrative in the language, though it may be historically related. While the demonstrative in (42) can stand alone as a pronominal, the relative marker *dza* in (41) cannot.

(42) Mbatya **idzo** ***Shona***

10clothes **10DEM**

'those clothes'

I take the fact that relative markers like *dza* are not homophonous with demonstratives and cannot stand alone as pronominals as well as the fact that they are morphologically dependent to be evidence that they have the status of functional heads, namely relative complementizers. Throughout this thesis, I will attempt to only include relative clauses that can be determined to employ that-type relatives as determined in this way.

1.5 Conclusion

In this chapter, I have outlined the basic theoretical approach I am taking in this thesis and briefly spelled out the system of syntactic relations I wish to argue for. I have also made an attempt to define the empirical domain I will tackle, including the languages under study and the types of relative clauses I will mostly be discussing. In the next chapter, I will briefly note the points of typological difference between these languages and their relative clauses, sticking to empirical assumptions only.

Chapter 2

A Typology of Bantu Relatives

The primary concern of this dissertation is to examine and explain various typological patterns found across Bantu relative clauses, some of which have been largely ignored until now. Though on the surface each pattern concerns apparently distinct components of the grammar, in section 2.5 I note several correlations between them, suggesting that these patterns are in fact related, arising from the interaction of general syntactic principles. Chapters 3 and 4 of this thesis will be concerned with accounting for the typological patterns I briefly describe in this chapter.

2.1 Relative Inversion

Perhaps the most widely noted attribute of Bantu relative clauses is that in many languages non-subject relatives are accompanied by subject-verb inversion. Linguistic work on the subject in the generative tradition goes back over thirty years (Meeusen 1971, Givon 1972, Bokamba 1979, among others). The most basic observation is that while some Bantu languages require such inversion, others do not. Consider, for example, the contrast between Chishona and Sesotho (examples from Demuth and Harford 1999):

(43) a. setulo seo basadi ba – se - rek - ile - ng kajeno *Sesotho*
7chair 7REL 2women 3PL-7OM-buy-PERF-RS today
'the chair which the women bought today'

b. mbatya dza - v - aka - son - era vakadzi mwenga *Chishona*

10clothes 10REL-3PL-T-sew-APP 2women 1bride

'clothes which the women sewed for the bride'

In surveying languages that require relative inversion and those that do not, Givon (1972) noticed that there is strong tendency for relatives showing inversion to have relative markers that are bound affixes (as in (43b)) whereas relatives without inversion (as in (43a)) tend to have prosodically-independent relative marker. Givon formulated this tendency as the Universal Pronoun Attract Principle, or UPAP, a principle requiring relative pronouns to be adjacent to their antecedents. In this understanding, if the relative marker is an inflectional affix on the verb form and if the subject intervenes between the relativized NP and the verb form, then the subject must be post-posed, making the relativized NP and the verb form containing the relative marker adjacent.

More recently, Demuth and Harford (1999) have revised Givon's analysis, altering it to fit a morphology-in-syntax view of the grammar. Relative markers, they argue, are complementizers residing in C in all Bantu languages.[13] However, languages differ as to whether these complementizers have the morpho-phonological properties of full words or whether they must be affixed to another head in the structure. When the latter is the case, D&H argue, verb movement to C must take place to support the relative marker morphologically or phonologically. Thus in (43a) the relative marker is a full prosodic word and no inversion in required. In (43b), on the other hand, the relative marker is a verbal prefix; therefore verb movement to C must take place to support it.

[13] Objections to this assumption were discussed in section 1.4.3.

While D&H claim that their analysis derives Givon's UPAP, their analysis actually makes some predictions that Givon's does not. Recall that for Givon verb movement took place to satisfy some referential requirement of the pronoun-antecedent relationship. For D&H, however, verb movement to C is motivated by morpho-phonological deficiency of the relative marker. Note that any case of the relative marker not immediately following the relativized NP would be a counter-example to Givon's UPAP, but not necessarily to D&H's analysis. If such a relative marker happened to be morpho-phonologically deficient, its deficiency could be met trivially if, say, the relative marker followed the subject and was immediately followed by the verb. Such relatives can be found. In the Luganda relative in (44a), an independent relative marker follows the subject and precedes the verb. Note, however, that it agrees with the relativized NP though it is not adjacent to it. In two other cases, the relative marker is separated from the relativized NP by an overt subject, though the relative marker displays no agreement with the relativized NP. In the Kirundi examples in (44b), the relative marker is a lexical high tone on the verb. In the Zulu example in (44c) the relative marker is the verbal prefix /a-/.

(44) a. omusajja Petero **gwe** o – la – ye musomesa *Luganda*
1man 1aPeter **1REL** 1aSA-pres-buy 1teacher
'the man that Peter has seen is a teacher' (Walusimbi 1996)

b. ibitabo Yohani a – a – somyé *Kirundi*
8books John 3SG-PST-read.PERF
'the books that John read' (Ndayiragije 1999)

c. incwadi isitshudeni **a** – isi – yi – funda – yo *Zulu*

9letter 7student **REL**-7SA-9OM-read-RS

'the letter that the student is reading'

These examples rule against the account of Bantu inversion in terms of referential requirements of relative markers and their referents. In their light, Givon's UPAP can only be seen as a linguistic tendency (probably resulting from the fact that the CP domain is the locus both of relative markers and relativized NPs) and not as a rule of the grammar. On the other hand, the data in (44) are consistent with the suggestion of D&H that subject-verb inversion is motivated by morphological requirements. In the examples in (44) the relative marker is not separated from the verb form by the subject. Therefore, there is no reason for subject-verb inversion to take place.

One possibility that D&H do not consider is that the variation between relatives with inversion and those without may be related to the possibility of having a wh-pronoun relativization strategy vs. a complementizer pronoun strategy. Since Bantu languages have highly inflected verb forms, it would be expected that relative complementizers would be affixal in nature whereas pronouns would be more likely to have full-word prosodic status. As discussed in 1.4.3, I take wh-pronouns in Bantu relatives to be homophonous with full demonstrative forms. If I am right about this, then the independent relative markers in Sesotho (43a) and Luganda (44a) above are in fact relative pronouns. On the other hand, all of the other affixal relative markers above can be taken to be complementizers.

This understanding of wh- vs that-type relatives does not diminish D&H's claims that morpho-phonological conditions may motivated subject-verb inversion. However, just being a *that*-type relative with a phonologically-deficient relative complementizer does not seem to be sufficient to motivate subject-verb inversion. In Zulu, for instance, "strategy 2" relatives employ such a complementizer, but inversion does not occur. Rather, the complementizer surfaces as a pro-clitic on the overt subject. Without an overt subject, it prefixes to the verb form. Compare this with Chishona in which this structure is not allowed. Rather, subject-verb inversion must take place.

(45) a. umuntu **o** – zandhla zake zi – mhlope *Zulu*
1person **1REL**-5hand 5his 5SA-is.white
'the person whose hand is white'

b. Mbatya **dza** – v – aka – son – era vakadzi mwenga *Shona*
10clothes **10REL**-3PL-PST-sow-APP 2women 1bride
'the clothes which the women sowed for the bride' (D&H 1999)

It seems, then, that morphology plays as strong a role as phonology does in deriving the word orders here. In order to trigger subject-verb inversion, a complementizer must be phonologically deficient and also must have a morphological requirement that it be an affix of the verb form. Shona has this latter requirement while Zulu does not. Rather, in

Zulu the morphological requirements of the relative complementizers are less restricted, allowing affixation to verb forms as well as subjects.[14]

My conclusion is that while a phonologically-deficient relative complementizer does motivate inversion in the languages that have it, there are languages with such complementizers that do not display inversion such as Kirundi and Zulu. Note that this description is agnostic so far as to the mechanisms underlying subject-verb inversion in the relative clauses that have it. Moreover, it is not the whole story. Amongst relatives that display inversion, there is an interesting point of variation with regard to agreement. I discuss this in the next section.

2.2 Agreement

Rich morphological agreement is ubiquitous in Bantu languages and relative clause constructions are no exception. However, in examining that-type relatives, one finds interesting variation with regard to subject-verb and relative NP-complementizer agreement. While some of the facts here have been discussed (especially the facts of the OVS relative constructions in Central Bantu, discussed below), to my knowledge the whole paradigm has not been noted or discussed as a typological pattern in need of explanation.

The pattern is a three-way typology. Many Bantu relatives display subject-verb agreement with an overt or null subject. At the same time, the relative complementizer

[14] Zeller (2003) characterizes the relative prefix in strategy 2 Zulu relatives as a phrase-level affix, arguing that it is prefixed to the entire relative clause rather than to the subject while the relative concord in strategy 1 relatives is a word-level affix prefixed to the verb form.

displays agreement with the relativized NP. The Chishona, Swahili, and Zulu relatives below all illustrate this pattern:[15]

(46) a. Mbatya **dza** – **v** – aka – son – era vakadzi mwenga *Shona*
10clothes **10REL**-**3PL**-PST-sow-APP 2women 1bride
'the clothes which the women sowed for the bride' (D&H 1999)

b. kitabu **a** – li – **cho** - soma Juma jana *Swahili*
7book **3SG**-PST-**7REL**-read Juma yesterday
'the book that Juma read yesterday'

c. umuntu **o** – zandhla zake **zi** – mhlope *Zulu*
1person **1REL**-5hand 5his **5SA**-is.white
'the person whose hand is white'

On the other hand, many Bantu languages, particularly in Southern Bantu, display agreement only with the subject.[16] Though an affixal relative marker is present in the verb form, it does not agree with the relativized NP. The relatives in Zulu and Swati below illustrate this pattern:

[15] In section 4.3 I will suggest that Swahili relatives do not in fact display agreement with the relativized NP. For now, however, I keep to the standard assumption that the marker *cho* in (27b) is an agreeing relative complementizer.

(47) a. incwadi isitshudeni a – **isi** – yi – funda – yo *Zulu*

9letter 7student REL-**7SA**-9OM-read-RS

'the letter that the student is reading'

b. umfati tintfombi le – **ti** – m – elekelela - ko *Swati*

1woman 10girl REL-**10SA**-1OM-help-RS

'the woman whom the girls help'

The third type of relative is those that display agreement only with a relativized NP, but not with the subject. Such relatives are commonly found in Central Bantu languages and have received extensive discussion in the literature. Dzamba, Lingala, and Kirundi illustrate these well:[17]

(48) a. imundondo **mú** - kpa - aki omoto *Dzamba*

5jug **5AGR**-took-PST 1person

'the jug which the person took' (Bokamba 1976)

b. mukanda **mú** – tind - aki Poso *Lingala*

5letter **5AGR**-send-PST Poso

'the letter that Poso sent'

[16] An exception to this geographic generalization is Kirundi, a Central Bantu language, which also seems to allow relatives of this type.

[17] The OVS construction in both relatives and main clauses seems to be on the decline in Lingala as that language has become the first language of many speakers in urban Kinshasha. Most young speakers I interviewed whose first language was Lingala found these construction unacceptable. Older speakers, however, allow them freely.

In Chapter 3 I will argue that this three-way typology results from interactions between the agreement features of inflection and complementizers in the CP-IP domains. For now, however, it stands on its own as a general descriptive pattern, one that I do not believe has been discussed prior to Henderson (2005a).

2.3 Object Marking

All Bantu languages allow the verb to inflect for morphology agreeing with an object. This occurs in some relative contexts as well. However, the syntax of object markers in relative contexts cannot be fully discussed without an account of object markers more generally. For that reason, I must also address variation with regard to object marking in non-relative contexts. There are several points of variation, some of which have received attention in the literature, with regard to whether object markers can co-occur with full NPs, when such marking is obligatory, and whether more than one object may be marked on the verb. I review these below.

2.3.1 Object Marking in Relatives

Bantu languages vary as to whether or not they mark an object on the verb when that object has been extracted. This variation has not received much attention. Some languages, such as Luganda, Kirundi, Dzamba, and Lingala, disallow object marking in relative contexts:[18]

[18] It is not the case that these languages disallow object markers in general in relative contexts. In double object constructions, e.g., the non-relativized object can be marked on the verb:

(i) imukanda imu-ba-tomel-aki banga *Dzamba*
5letter 5REL.SA-2OM-sent.to them

(49) a. omusajja Petero gwe o – la - (*__mu__) - bye musomesa *Luganda*

1man 1aPeter 1REL 1aSA-PRES-**1OM**-see teacher

'the man that Peter has seen is a teacher' (Walusimbi 1996)

b. ibitabo Yohani a – a – (*__bi__)- somye *Kirundi*

7books John 3SG-PST-**7OM**-read:PERF

'the books that John read' (Ndayiragije 1999)

c. imundondo mú - (*__mu__)- kpa - aki omoto *Dzamba*

5jug 5AGR-**5OM**-took-PST 1person

'the jug which the person took' (Bokamba 1976)

d. mukanda mú – (*__mu__)- tind - aki Poso *Lingala*

5letter 5AGR-**5OM**-send-PST Poso

'the letter that Poso sent'

In other languages, such as Swahili, this marking appears to be optional, though it is obligatory in some contexts, such as with animate objects as seen in (50b).

(50) a. kitabu amba-cho Juma a – li - (__ki__) - soma jana *Swahili*

7book *amba*-7REL Juma 3SG-PST-**7OM**-read yesterday

'the book that Juma read yesterday'

'the letter which we sent to them' (Bokamba 1976: 76)

b. Msichana amba-ye Juma a – li - *(**m**) - kutana jana

1girl *amba*-1REL Juma 3SG-PST-**1OM**-meet yesterday

'the girl that Juma met yesterday'

In still other languages, such as Zulu, Sotho, and Tswana, object marking is always obligatory in non-subject relatives:

(51) a. incwadi isitshudeni a – isi - *(**yi**) – funda – yo *Zulu*

9letter 7student REL-7AGR-**9OM**-read-RS

'the letter that the student is reading'

b. setulo **seo** basadi ba – *(**se**) - rek - ile - ng kajeno *Sesotho*

7chair 7REL 2women 3PL - **7OM**-buy-PERF-RS today

'the chair which the women bought today'

c. dikwelo tse ke *(**di**) bone-ng *Tswana*

10books 10REL 1SG.PST **10OM** see-RS

'The books which I saw …' (Marten, Kula, & Thwala 2005)

Though it has received no theoretical treatment in the literature, object marking in relative contexts has traditionally been referred to as an instance of resumption with object markers themselves analyzed as resumptive pronouns (Mchombo 2005). This goes along with the traditional assumption that object markers are incorporated pronominal

elements, much like clitics in the Romance languages (Bresnan and Mchombo 1987). In section 4.1 I will argue against these assumptions. For now, however, I would like to note that if object markers are indeed resumptive pronouns, it is an odd fact that the Bantu languages, otherwise so similar, should be so different with regard to requiring, allowing, or disallowing resumption in precisely the same context (namely, simple object relatives). Either a parallel parametric difference must be found between these three language types that can condition the (lack of) need for resumption, or another explanation must be found.

2.3.2 OM-NP Co-occurrence

While no Bantu language completely rules out the presence of a full NP with an object marker, some languages require a full NP to be absent or dislocated from the rest of the clause when a corresponding object marker is present on the verb. The latter is indicated by a sharp break in intonation and by the fact that the full NP must be peripheral to the clause. Languages with this restriction include many Central Bantu languages such as Dzamba, Lingala, Kirundi, Kinyarwanda, and Chaga. The restriction is best illustrated in double-object constructions. Illustrated for Dzamba below, object marking of the indirect object is impossible if the latter occurs between the verb and the direct object (data from Bokamba 1976: 75):

(52) a. Na – tomel – aka oPoso mwenzi yana *Dzamba*

1SG-send.to-PST 1Poso 5message yesterday

'I sent a message to Poso yesterday.'

b. Na – **mu** – tomel – aka mwenzi yana

1SG-**1OM**-send.to-PST 5message yesterday

'I sent a message to him/her yesterday.'

c. *Na – **mu** – tomel – aka *oPoso* mwenzi yana

1SG-**1OM**-send.to-PST *1Poso* 5message yesterday

'I sent a message to Poso yesterday.'

On the other hand, languages like Swahili, Zulu, and Chichewa allow such co-occurrence. The equivalent of (52c) is fine in these languages:[19]

(53) a. Juma a – li – **m** - somea *mtoto* kitabu *Swahili*

Juma 3SG-PST-**1OM**-read.to 1child 7book

'Juma read a book to/for the child.'

b. Ndi – na – **wa** - patsa *alenje* mphatso dzulo *Chichewa*

1SG-PST-**2OM**-give *2hunters* gift yesterday

'I gave the hunters a gift yesterday.'

c. isitshudeni isi – **yi** – funda *incwadi* *Zulu*

5student 5AGR-**9OM**-read *9letter*

'the student is reading the letter.'

2.3.3 Obligatory OM-NP Co-occurrence

Among the languages that allow the OM-NP co-occurrence, some languages require the OM to be present in certain contexts. Swahili, for example, requires an OM with animate objects. When an OM co-occurs with inanimate objects as in (54b), the objects receive an obligatory definite interpretation.

(54) a. Juma a – li - *(**wa**) - kutana *walimu* *Swahili*
Juma 3SG-PST-**2OM**-meet *2teachers*
'Juma met the teachers.'

b. Juma a – li – **ki** - soma *kitabu*
Juma 3SG-PST-**7OM**-read *7books*
'Juma read *a/the book."

2.3.4 Multiple Object Marking

Some languages allow more than one object to be marked on the verb. Chaga, Dzamba, Kirundi, and Kinyarwanda all allow double (and sometimes triple) object-marking. I illustrate with Chaga:

(55) a. Mangí n – á – lé - zríká mchílyí nyáma *Chaga*
1chief FOC-3SG-PST-send 1messenger 9meat
'The chief sent with the messenger the meat.'

[19] This is not an uncontroversial claim with regard to Zulu and especially Chichewa. I discuss the facts

b. Mangí n – á – lé – **í** – **m** - zríká

chief FOC-3SG- PST-**9OM-1OM**-send

'The chief sent with the messenger the meat.' (Moshi 1998)

In contrast, languages such as Swahili, Chichewa, Chishona, and Lingala do not allow multiple object marking. I illustrate with Swahili:

(56) a. Juma a-li-tum-ia mama yake barua *Swahili*

1Juma 3SG-PST-send-APP 1mother 1his 9letter

'Juma sent his mother a letter.'

b. *Juma a – li – **m** – **i** – tum – ia.

Juma 3SG-PST-**1OM-9OM**-send-APP

'Juma sent her it.'

2.4 The /-o/ of Reference

Finally, I would like to note a point of variation amongst Bantu relatives previously undiscussed in the literature. Many Bantu languages require or allow the presence of what the traditional literature refers to as the '/-o/ of reference' in relative contexts. Typically, it is suffixed to a verbal form. Languages that have such a marker include Swahili, Zulu, and Chichewa. In Swahili and Chichewa, the marker agrees with the extracted NP. In Zulu the marker bears agreement (class 9), but does not vary with the

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more thoroughly in section 4.1.

class of the extracted NP.[20] Previous analyses usually gloss these /-o/ markers simply as "relative markers" or, as in the case of Zulu and Chichewa, a "relative suffix" (RS). I will adopt the latter term here for descriptive purposes only:

(57) a. kitabu a – soma – **cho** Juma *Swahili*
7book 3SG-read-**7RS** Juma
'the book that Juma reads'

b. incwadi isitshudeni a – isi – yi – funda - **yo** *Zulu*
9letter 5student REL-5SA-9OM-read-**RS**
'the letter that the student is reading'

c. Mbúzí mw – á – gúlá – **zo** *Chichewa*
10goat 2SG-PST-buy-**10RS**
'the goats that you bought'

Other languages, however, never display this kind of marking. These include languages like Kirundi, Dzamba, and Lingala. I refer the reader to previous examples in this chapter which simply demonstrate that no suffixal marker like the /-o/ marker is present in these languages.

[20] When a morpheme does not display productive agreement with the relative suffix, I gloss the suffix simply as RS without indicating the class of its default agreement.

Interestingly, some languages that allow more than one relativization strategy allow the /-o/ to be presence in one strategy while disallowing it in others. Both Chichewa and Zulu have this property:

(58) a. Inja umfana o – wa – yi – thenga - (**yo**) in-hle *Zulu*

9dog 1boy REL-1SA-9OM-buy-**RS** 9SA-good

"The dog which the boy bought is good."

b. Inja e-mfana wa – yi – thenga - (***yo**) in-hle.

9dog 9REL-1boy 1SA-9OM-buy-**RS** 9SA-good

'The dog which the boy bought is good.'

(59) a. Mbúzí a-lendé á – ná – gúla – **zo** *Chichewa*

10goats visitors 3PL-PRES-buy-**10RS**

'the goats that the visitors bought'

b. Mbúzí zi-méné a-lendé á – ná – gúla - (***zo**)

10goats 10REL visitors 3PL-PRES-buy-**10RS**

'the goats that the visitors bought'

In Chapter 4 I will examine this contrast in detail. For now, however, note that the difference between the relatives that allow the /-o/ marker and those that disallow it has to do with the relative marker. In both (58a) and (59a) /-o/ is present and the relative

complementizer is either absent (as in Chichewa) or does not display agreement (as in Zulu). In (58b) and (59b), however, an agreeing complementizer is present and the /-o/ marker is disallowed. This correlation suggests that the principles underlying agreement somehow interact with the principles that determine present of the relative suffix markers.

2.5 Correlations

In addition to the points of variation observed above, I would like to point out two sets of correlations between the empirical generalizations I have delineated here. The first set has to do with agreement and inversion and will be treated in Chapter 3:

(60) a. Relatives that show agreement only with the relativized NP always display inversion.

b. Relatives that show agreement only with the subject never display inversion.

c. Relatives that show agreement with both the subject and the relativized NP vary as to whether or not they display inversion.

A second set of correlations has to do with object marking and resumption. I will treat these correlations extensively in Chapter 4.

(61) a. Languages that do not allow NP-OM cooccurrence do not allow object markers in relative clauses.

b. Languages that do allow NP-OM coccurrence allow or require object markers in relative clauses.

c. Languages that do not allow NP-OM cooccurrence do not display the 'o of reference' in relative clauses.

d. Relatives with a complementizer that agrees with the relativized NP never display the 'o of reference' in relative clauses.

2.6 Summary

In this chapter I have laid out the empirical domain for the chapters to follow, describing several points of variation between Bantu relative clauses and related constructions and drawing correlations between them. While I will take the generalizations made in this chapter to be robust, I hasten to repeat that the Bantu language family consists of between 400 and 600 distinct languages. It may very well be that there are exceptions to the generalizations I have made or even that these generalizations will turn out to say more about the need for empirical investigation into the Bantu language family than they will about the family itself. However, to the extent that further empirical investigation bears out these generalizations, the need for offering principled explanations for them will be even more pronounced. To date, attempts along these lines have been few and limited in

scope. It is hoped that this thesis will serve as a starting point for future efforts to further clarify the empirical generalizations made here and refine the explanations offered herein.

Chapter 3

Agreement and Inversion

As discussion in section 2.1 and 2.2 in the previous chapter, Bantu relatives differ with regard to agreement and inversion. In section 2.5, I stated correlations that suggest these differences are related. In this chapter I explore those correlations more fully arguing that the agreement differences arise from variation in the CP domain in the relevant structures. I also argue that inversion in Bantu relatives has two potential sources: one a morpho-phonological source discussed briefly in section 2.1, and the other a syntactic source.

3.1 The Typology of Agreement and Inversion.

Recall that Bantu *that*-type relatives vary as to their agreement properties. Agreement may be displayed exclusively with the relativized NP, exclusively with the subject, or with both. Relatives also vary as to whether or not they display subject-verb inversion.[21] Though these two points of variation create the logical possibility of six types of languages, only four are observed, suggesting that the two phenomena are not completely independent. I describe each in turn and then attempt to explain the gaps.

[21] Here I take inversion to have two relevant properties: (1) obligatory V-S order; (2) the subject precedes other material in the clause. This qualification is required because most Bantu relatives that show agreement with the subject allow the subject to be right-dislocated in which case it appears at the end of the clause preceded by an intonational break.

Type 1: *Agreement with Subject and NP; Subject Inversion.* These languages are exemplified by the so-called "prefixed" relative in Swahili or by Shona relatives.[22] In these relatives a relative complementizer agrees with the relativized NP while the verb form also displays agreement with the subject. Though the subjects in most of my examples are overt, subjects may be null in Bantu languages whenever subject agreement is displayed.

(62) a. kitabu a – li – cho - soma Juma jana *Swahili*
7book 3SG-PST-7REL-read Juma yesterday
'the book that Juma read yesterday'

b. mbatya dza – v – aka – son – era vakadzi mwenga *Shona*
10clothes 10REL-3PL-PAST-sow-APP 2women 1bride
'the clothes which the women sowed for the bride'
(Demuth and Harford 1999)

In addition to displaying two distinct instances of agreement, these languages also require their subjects to be post-verbal. Inversion is obligatory.

(63) a. *kitabu Juma a – li – cho - soma jana *Swahili*

[22] I reiterate that I am following the standard assumption that the relative marker (here *cho*) in Swahili is indeed a relative complementizer as assumed in Barrett-Keach (1986) as well as everywhere else in the

b. *Mbatya vakadzi dza-v-aka-son-era mwenga *Shona*

Type 2: *Agreement with Subject and NP; No Subject Inversion.* Type 2 languages are exemplified by the so-called "strategy 2" relatives in Zulu as well as by the *amba*-type relatives in Swahili. In these relatives agreement is displayed with both the relativized NP and with the subject just as in Type 1. However, here the subject precedes the verb form and the relative marker precedes the subject.

(64) a. kitabu amba-cho Juma a – li – soma jana *Swahili*
7book amba-7REL Juma 3SG-PST-read yesterday
'the book that Juma read yesterday'

b. umuntu o-zandhla zake zi-mhlope *Zulu*
1person 1REL-3hand 3his 3SA-is.white
"the person that his hand is white'

In (64b) the relative marker is composed of the relative prefix /a/ combined with an agreement morpheme for third person singular /u/. This creates a well-documented phonological effect involving vowel omission and coalescence (see Mischke 1998 for the full details). The result prefixes to the subject. In (64a) the relative marker is a suffix on an epenthetic element *amba*, derived from the complementizer *kwamba* (see Ngonyani 1999 or Henderson 2003b for a detailed analysis of Swahili relatives).

Swahili literature. In chapter 4, I will challenge this assumption.

Type 3: *Agreement with Subject only; No Subject Inversion.* "Strategy 1" relatives in Zulu as well as relatives in Swati exemplify Type 3 languages. In (65a) the uninflected relative marker /a/ prefixes to the verb form which is inflected for agreement with the subject only.[23] No agreement is displayed with the relativized NP and the subject precedes the verb form. Similarly for (65b) in which the invariant relative marker is /la/.

(65) a. incwadi isitshudeni a – isi – yi – funda – yo *Zulu*
9letter 7student REL-7SA-9OM-read-RS
'the letter that the student is reading'

b. umfati tintfombi la-ti-m-elekelela-ko *Swati*
1woman 10girl REL-10SA-1OM-help-RS
'the woman whom the girls help' (Zeller 2002)

Type 4: *Agreement with NP only; Subject Inversion.* Type 4 languages are typical of Central Bantu languages like Dzamba and Lingala. Here subject-verb inversion is obligatory. Furthermore, the verb displays no agreement with the subject, agreeing only with the relativized NP. The relative marker in these languages is typically a lexical high or low tone resting on either the first or final syllable of the verb form. In both Dzamba and Lingala it is a high tone on the initial syllable.

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[23] In (65a) the combination of the relative complementizer and the subject agreement morpheme is known in the literature as the *relative concord.* Mischke (1998) demonstrates that the concord arises by two sequential phonological processes. First, the complementizer *a* undergoes assimiliation with the vowel of subject agreement. Second, if the subject agreement morpheme begins with a vowel, it is dropped. The

(66) a. imukanda mú-tom-aki omwana. *Dzamba*

5letter 5AGR-send-PST 1child

"The letter, the child sent it."

b. mukanda mú – tind - aki Poso *Lingala*

5letter 5AGR-send-PST 1Poso

'the letter that Poso sent'

Note also that in Type 4 relatives the overt subject is obligatory. It cannot be null:

(67) *Imukanda mú -tom-aki *pro* *Dzamba*

5letter 5AGR-send-PERF pro

'The letter, he sent it."

Summary. The discussion above is summarized in Table 1. Again, the two major points of syntactic variation are whether or not inversion is obligatory and whether agreement is displayed with the relativized NP, the subject, or both. Table 1 shows that there are strong correlations between the possibility of inversion and the agreement relations manifested in the construction. While relatives that display agreement with both the relativized NP and the subject may show inversion or not (Type 1 vs Type 2), relatives that display agreement only with the subject never seem to display inversion (Type 3) while relatives that agree only with the relativized NP always do (Type 4).

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result for (65a) is the relative concord *esi.* In my examples, I will separate the two morphemes, ignoring

	Agree: NP and SUBJ	Agree: NP only	Agree: SUBJ only
Inversion	Type 1: Shona, Swahili (prefixed)	Type 4: Dzamba, Lingala	NONE
No Inversion	Type 2: Swahili (*amba*), Zulu (strategy 2)	NONE	Type 3: Zulu (strategy 1), Swati

Table 1: Agreement and Inversion

Table 1 raises an explanatory question, as any typology does. Namely, what is the proper understanding of the two points of variation above such that the restricted possibilities of this variation would give rise to the observed four language types, but exclude the two language types in Table 1 for which there is no evidence? I attempt to answer this question below. Furthermore, it is well-known that Bantu languages show limited variation with regard to syntactic structure. It is therefore desirable to explain the maximum amount of variation with appeal to the minimal amount of underlying variation. My explanation to follow makes the strongest attempt to conform to this ideal.

3.2 Explaining the variation

Since the advent of the principles and parameters approach, much work on variation has centered around the role of functional heads. At issue is whether the inventory of functional heads is universally present in all languages and whether these heads always

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these phonological processes for morpho-syntactic clarity.

play the same role (or have the same features) in every language. This thesis follows this work in assuming that the source of much cross-linguistic variation is to ultimately be found in interactions between and the morphological feature structure of functional heads, the latter expressed as features and their strengths, specifications which may differ across languages. Focusing only on the presence of phi-features, the formal features giving rise to morphological agreement, I argue for two parameters, the Comp Parameter and the Infl Parameter, that define the possible structural locations of phi-features in Bantu languages. We will see that the constrained variation allowed by these two parameters explains much of the variation observed above. First, however, I make a brief argument that at least some aspects of functional projection should be considered universal. In particular I argue that Rizzi's (1997) complex left periphery, designed based on the study of Indo-European languages, is also present in Bantu relatives.

3.2.1 The Need for a Complex CP Domain

Taking the standard assumption that relative markers belong to the CP domain (rather than the IP domain), it is a surprising fact that in many Bantu languages relative markers follow overt subjects. Zulu, Ikalanga, and Luganda are all such languages:[24]

(68) a. incwadi isitshudeni **a** – isi – yi – funda – yo *Zulu*
9letter 7student REL-7SA-9OM-read-RS
'the letter that the student is reading'

[24] Relatives in Luganda and Ikalanga are not accounted for in this thesis because they appear to use relative pronoun strategies for relativization according to the criteria outlined in section 1.4.3. However, assuming

b. nlume *Neo* **wa** a ka bona *Ikalanga*

1man 1aNeo 1REL 1aSA PST see

'the man that Neo saw' (Letsholo 2002)

c. omusajja *Petero* **gwe** a-labye *Luganda*

1man 1aPeter 1REL 1aSA-see.PERF

'the man that Peter saw' (Walusimbi 1996)

The logical explanation for these facts is that overt subjects in Bantu do not reside in the IP domain, but in the CP domain, a conclusion also reached by Letsholo (2002). This is consistent with the view, going back to Bresnan and Mchombo (1987), that subjects in Bantu have a topic status. It is also consistent with Alexiadou and Anagnostopolou's (1998) view that arguments that trigger strong agreement on the verb do not reside in canonical Spec-IP subject positions, but are dislocated in an adjoined or left peripheral position. I therefore take it to be the case that overt subjects in Bantu are topics in the CP domain and that the true subjects of Bantu clauses are null arguments (*pro*) that are licensed by rich morphological agreement. The same conclusion is reached by Schneider-Zioga (to appear) based on independent arguments from Kinande.

Note that adopting this view leads to the necessity of a complex CP domain consisting of more than one projection. This must at least be the case for the languages in (68) where more than one CP domain specifier is required to accommodate both the

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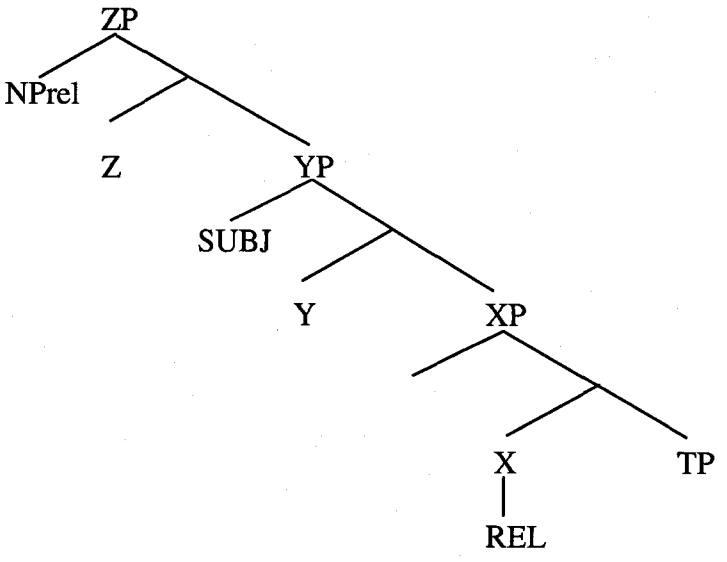
these relative pronouns reside in the CP domain, these languages are relevant for establishing the need for a complex left periphery in Bantu relatives.

relativized NP and the overt subject.[25] Actually, three CP domain projections are required. Take the Zulu example in (68a). First, a topmost projection is required to accommodate the relativized NP. Below that, a projection is required to host the topic-like overt subject. Finally, a third projection is required whose head hosts the relative marker /a/. The required complex CP domain is schematized in (69).

(69)

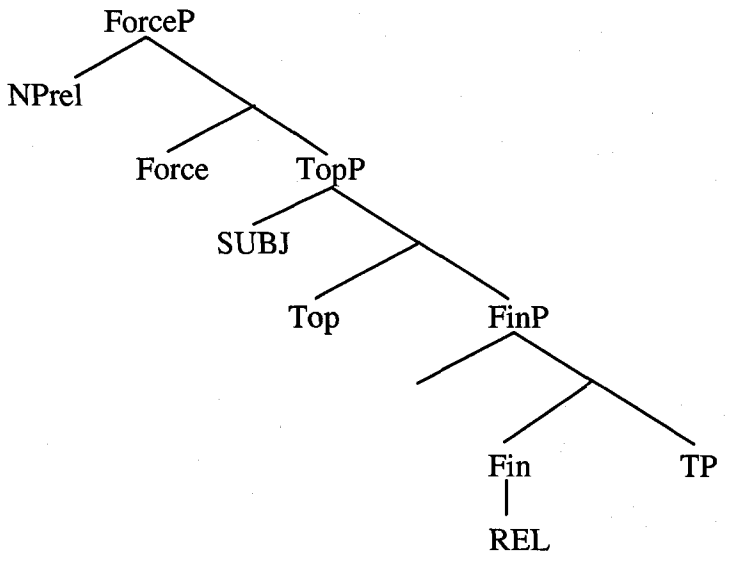


As for the labels of these projections, there seem to be no problems in adopting Rizzi's (1997) schema for Indo-European languages. Rizzi argued for four possible CP projections: a topmost projection ForceP which is, among other things, the source for relative operator semantics; a bottommost projection FinP which interacts with the inflectional domain; and intermediate, optional projections TopP and FocP which may

[25] This assumes that a theory of multiple specifiers cannot accommodate both of these XPs. Since their semantic functions are distinct, I assume this possibility is unavailable and adopt the standard view that each must be associated with a distinct head.

host topic and focus XPs in their specifiers. Applying these labels to (69), we arrive at (70):

(70)



The fact that a complex CP domain of the exact nature argued by Rizzi for Indo-European can also be found in Bantu suggests that this schema reflects a linguistic universal and is available in all languages. I will therefore take it to be generally available in all of the languages under consideration here.[26]

3.2.2 Morphological Variation in the CP Domain

While the order (and presumably the semantic force) of the heads in the CP domain are fixed, the morphology realized by these heads may vary. Just as some languages realize a verb form in T whereas other languages realize the verb in V or AGR, we may expect

[26] Though other factors may come into play, reducing the structure from its fully articulated form. In section 3.2.4 I argue that when the subject position is an A-bar position, the left periphery is reduced to a simple CP domain due to an anti-locality effect.

that languages similarly vary as to which head of the CP domain may realize a morphological head such as a complementizer. This observation is not new. Szczegielniak (2005), for instance, notes that in Polish two complementizers are often present in subordinate clauses: one preceding a topicalized NP and one following it:

(71) On wie ze ksiazke zes kupil a nie Maria *Polish*
He knows that book that-2nd.sg. bought but not Mary
'You bought a book and not Mary'

Szczegielniak's analysis is that the invariant complementizer preceding the topic in (71) heads the topmost CP projection (Force in Rizzi's terms) whereas the complementizer following the subject in (71) heads the lowest projection Fin. The fact that complementizers may realize the head Force or Fin (or both) provides the first point of parametric variation that we have observed in Bantu languages. I state this in (72) as the Comp Parameter.

(72) COMP Parameter: Complementizers may reside in Force or Fin or both.[27]

[27] I have found only one Bantu language which may employ both Fin and Force in relative clauses. Lamba allows two relative markers, both agreeing with the relative NP, to be present simultaneously:

(i) Umuntu **uyo uyu** mbona *Lamba*
1person 1REL 1REL 1SG.see
'the person whom I saw' (Doke 1938)

However, it is not clear to me to what extent relative pronouns rather than complementizers are involved. I therefore do not consider Lamba nor the possibility of multiple complementizers in my typology. I also assume that the cross-linguistic rarity of languages employing both CP heads is simply due to an economic tendency to use only one relative marker rather than two.

In the next subsection we will see how appeal to the Comp Parameter, along with other assumptions, explains much of the variation seen in section 2.0.

3.2.3 Type 2 and Type 3: Zulu as a Case Study

The adoption of a complex CP domain and the idea that relative complementizers may head ForceP or FinP brings us part of the way in explaining some of the variation above by allowing an explanation for the fact that in some Bantu relatives the complementizer precedes in the subject while in others, it follows it. More is required, however. Consider the variation we observed above with regard to Zulu. Zulu has two relativization strategies that differ in two respects. In (73a) the relative marker precedes the subject and agrees with the relativized NP. In (73b) the relative complementizer follows the subject and no agreement with the relativized NP is displayed.

(73) a. inja **e** - mfana wa – yi - thenga in – hle *Zulu*
9dog **9REL**-1boy 1SA-9OM-buy 9SA-good
'The dog which the boy bought is good.'

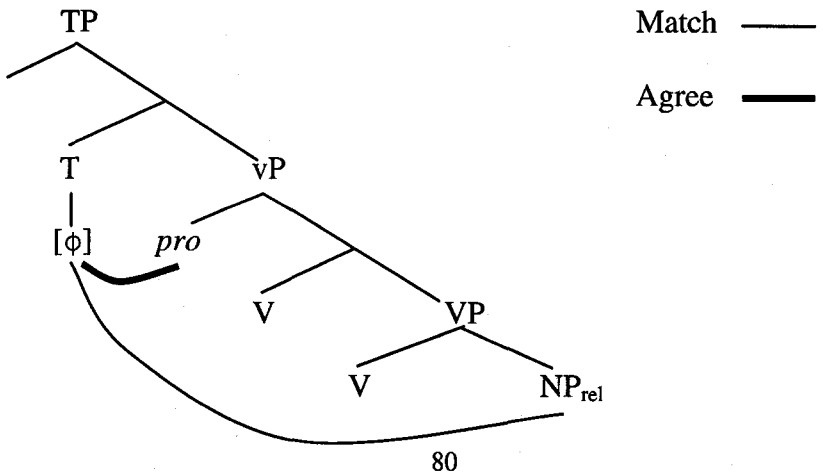
b. inja umfana **o**-wa – yi – thenga-(yo) in – hle
9dog 1boy **REL**-1SA-9OM-buy-RS 9SA-good
'the dog that the boy bought is good'

Part of this variation can be explained by the parameter in (72). In both constructions the subject resides in SpecTopP. However, in (73a) the relative marker heads the projection

ForceP and thus precedes the subject; in (73b) the relative comp heads FinP and thus follows the subject. While appeal to the Comp Parameter explains the word order differences in (73), however, it does not explain the variation with regard to agreement: why does the relative marker display agreement in (73a) but not in (73b)?

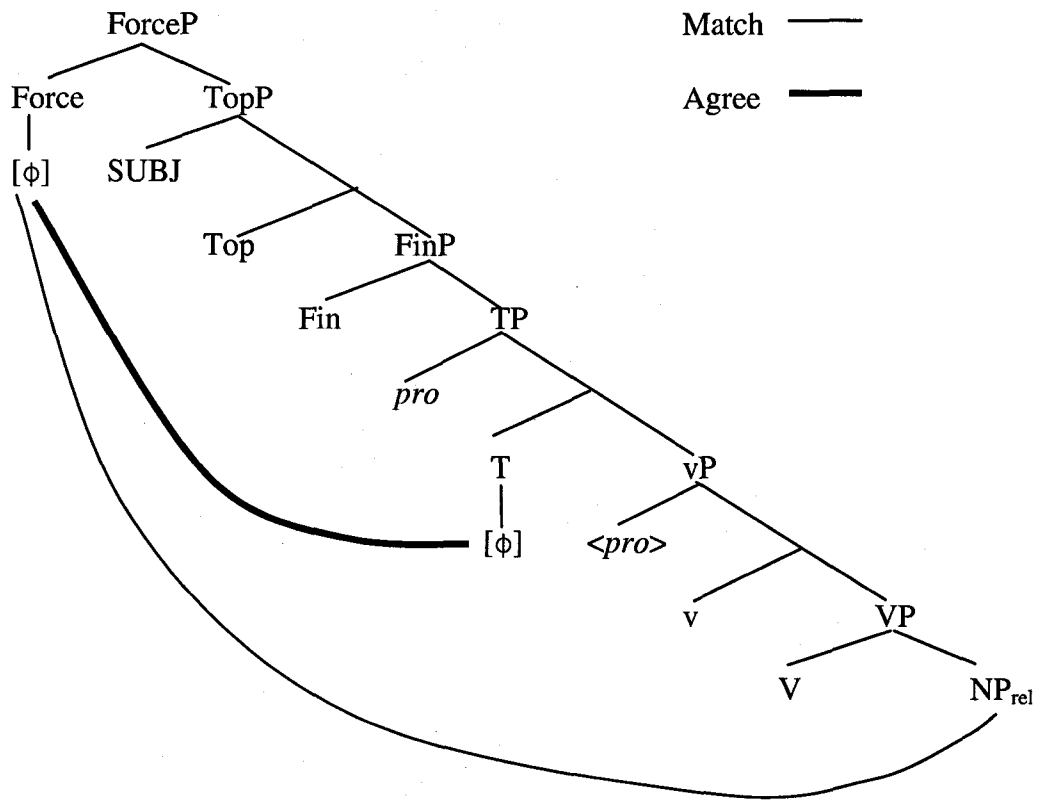
Before we answer this question, it will be useful to demonstrate how the Match/ Agree/Move system I outlined in Chapter 1 will work in a derivation in which two sets of phi-features are involved. The Zulu strategy 2 relative clause in (73a) is a perfect chance to see the system in action. Let us assume that the phi-features associated with subject-verb agreement reside in T while the phi-features associated with relativization reside in Force. When the derivation has reached the TP level, the phi-features in T probe the existing structure and enter Match relations with the subject (here taken to be *pro* in line with the observation that overt subjects in Zulu are left peripheral topics) as well as with the object since both have sets of phi-features. Of these two relationships, the subject is the most local. Therefore, it is only the Match relationship with the subject that can become an Agree relationship. This relationship is established; subsequently, the subject undergoes EPP movement to SpecTP:

(74)



As the derivation continues, the level of ForceP is reached. The head of ForceP has its own set of phi-features which probe the existing structure, establishing Match relations. As (74) illustrates, a problem arises. The most local Match relation between the phi-features of Force and another set of phi-features involves the valued phi-features of T.[28] Therefore, only this relation can result in an Agree relationship.

(75)

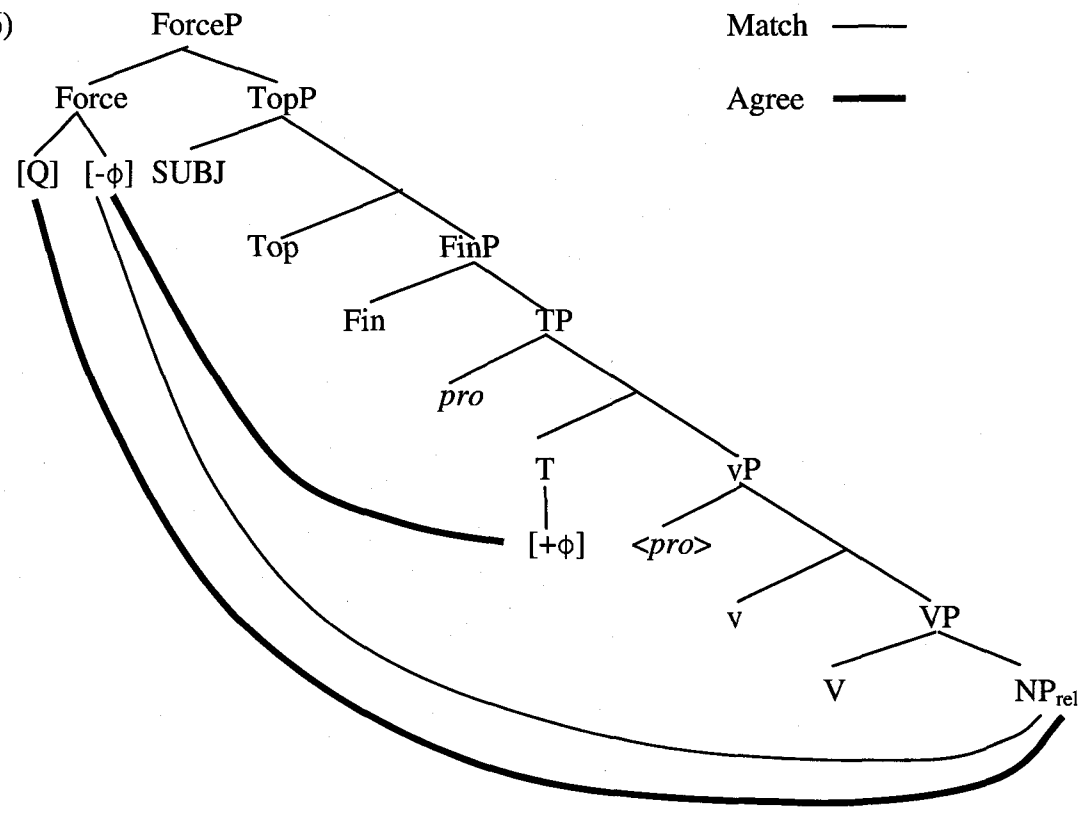


However, phi-features are not the only probing features that are a part of Force. Force also contains an operator feature (here designated [Q]) which must enter a relationship with the relative operator (here taken to be the relativized NP itself). This feature also

[28] This assumes that the overt subject as well as *pro* are not potential goals due to the fact that they are not 'syntactively active,' having no unchecked case features (Chomsky 2000, 2001). However, nothing changes if this assumption is abandoned.

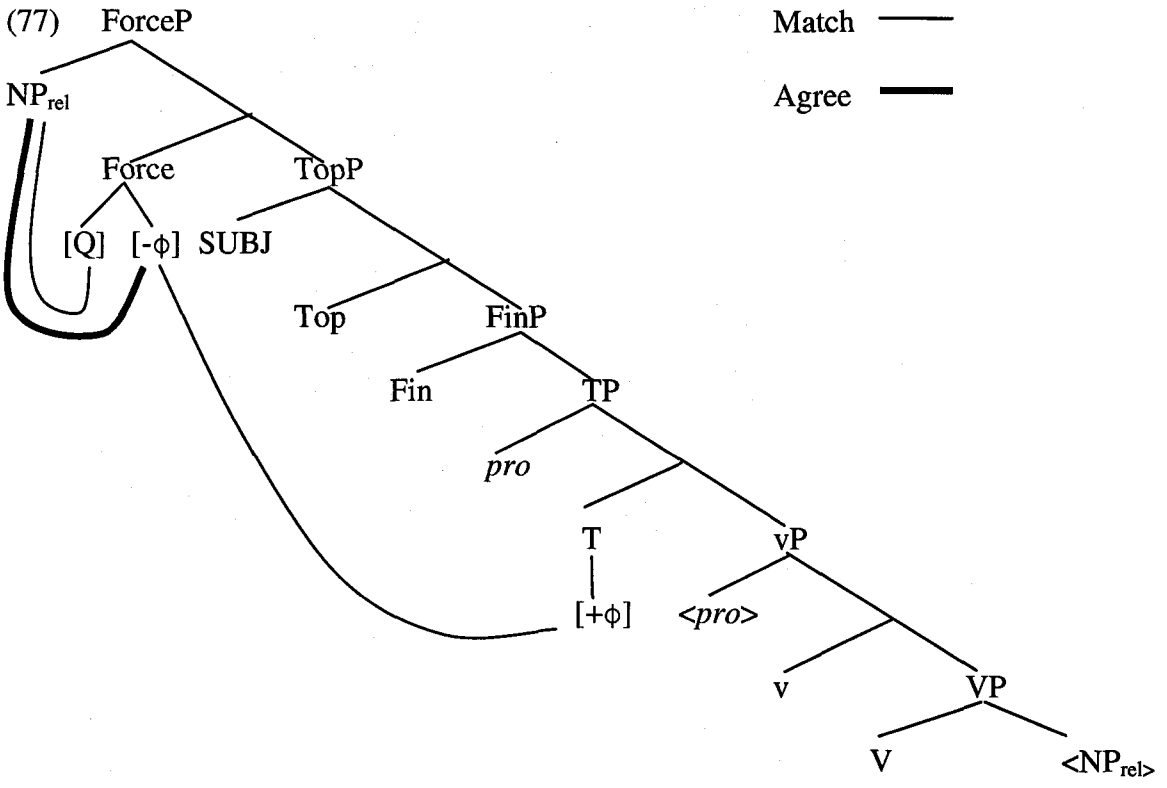
probes the existing structure, establishing a Match and then an Agree relation with the object, the only NP in the clause that has the matching [Q] feature.

(76)



Notice that in (76) the Agree relation still exists between the phi-features of Force and the valued phi-features of T. Also note, however, that the existence of this Agree relation does not preclude the continued existence of the Match relation between the phi-features of Force and the relative operator NP, still in situ. Since Match relations can be one-to-many and are not subject to locality, there is not reason not to assume they do not continue to exist in (76). Moreover, there is no reason to assume that subsequent

movement operations would destroy these relationships once they are established.[29] With this in mind, consider (77) in which the relativized NP has undergone Move under the Agree relations with [Q] to SpecForceP. In (77) it is the Match relationship between the relativized NP and the phi-features in Force that is now the most local Match relation for Force. It is therefore only this relation that can become an Agree relation. The relation between Force's phi-features and the subject is now simply a Match relation. Since this is the end of the derivation, the relations will remain as in (77):



[29] The idea that Move does not destroy Match relationships is analogous to Hiraiwa's (2005:37) idea that Move does not destroy Agree relationships, formulated as the "Conservation Law of Agree." Obviously, my instantiation differs from his since he claims that once an Agree relationship is established, Move cannot alter it. I am in fact claiming the opposite: Move may affect some Agree relationships if they are subject to locality. This is an illustration of a more general difference between Hiraiwa's approach and my

(77) gets the agreement and word order facts of the Zulu relative in (73a) correct. The complementizer resides in Force, preceding the overt subject and agreeing with the relativized NP. The verb agrees with the subject, here assumed to be *pro.*[30] But what about the "strategy 1" relatives like the one in (73b)? Recall that these relatives differ in two respects: the relative marker follows the subject rather than preceding it, and the relative marker does not display agreement.

(78) inja umfana o-wa – yi – thenga-(yo) in – hle *Zulu*

9dog 1boy REL-1SA-9OM-buy-RS 9SA-good

'the dog that the boy bought is good'

Recall we postulated that the word order part of this variation involves a shift in position of the relative marker from Force to Fin. To account for the lack of two sets of agreement features, we might simply propose that the relative marker has no phi-features when it is found in Fin:

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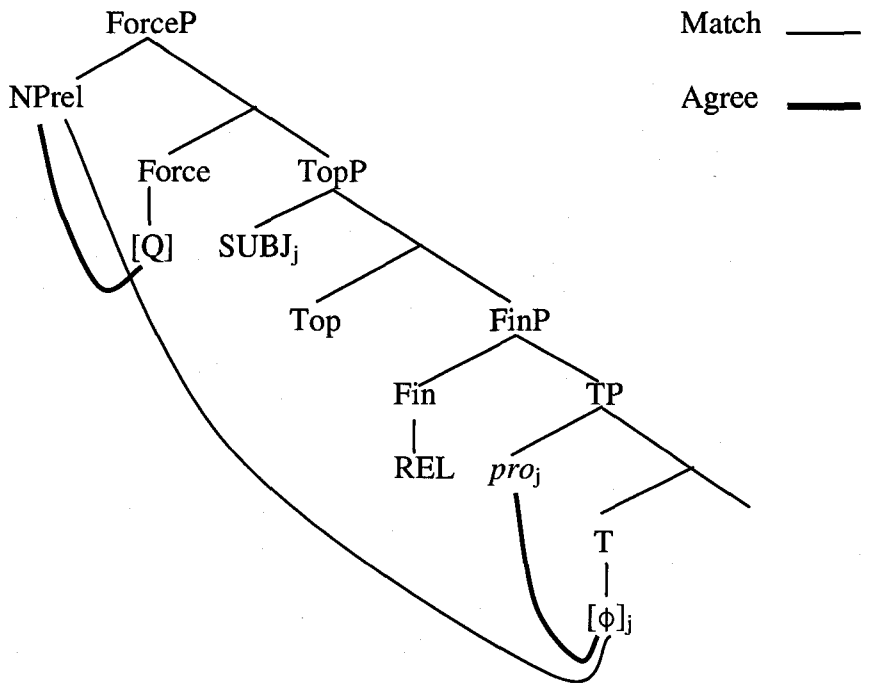
own. While Hiraiwa takes Agree to basically be synonymous with feature checking, I differentiate between local and non-local Agree relations.

[30] There is a technical question here with regard to the valuation of the phi-features of the complementizer in (77). The question is whether these features are valued after the valuation of the [Q] feature in Force or whether valuation with the subject in (77) actually takes place only to be 'over-ridden' by the later valuation relation with the object that has moved to SpecForceP. The second approach seems to the most favorable since it does not require that we introduce an ordering component for feature valuation. One might protest that the second approach requires that valued sets of features retain their probe status for further computation, but this is not the case. The (Match) relation between the phi-features of Force and the relative NP in (77) was established before the phi-features received a value. The shift from the derivation in

(79)



The derivation in (79), however, leaves crucial questions unanswered. In particular, why would relative strategies differ in this way with regard to phi-features? Rather than accepting (79), we should ask if there is any possible relation between the relative marker's presence in Fin and the loss of the second set of agreement features. Let us consider what the derivation would look like if we assume that the phi-features associated with the relative complementizer are also present when the complementizer is in Fin. These features will enter Match relations with all potential goals upon entering the derivation. Unlike in (78), however, at the end of the derivation the most local Match relation will not be with the relativized NP. It will instead be with the valued phi-features of T which have been valued by the subject *pro* and are accessible to Fin through the selection relation between Fin and TP.

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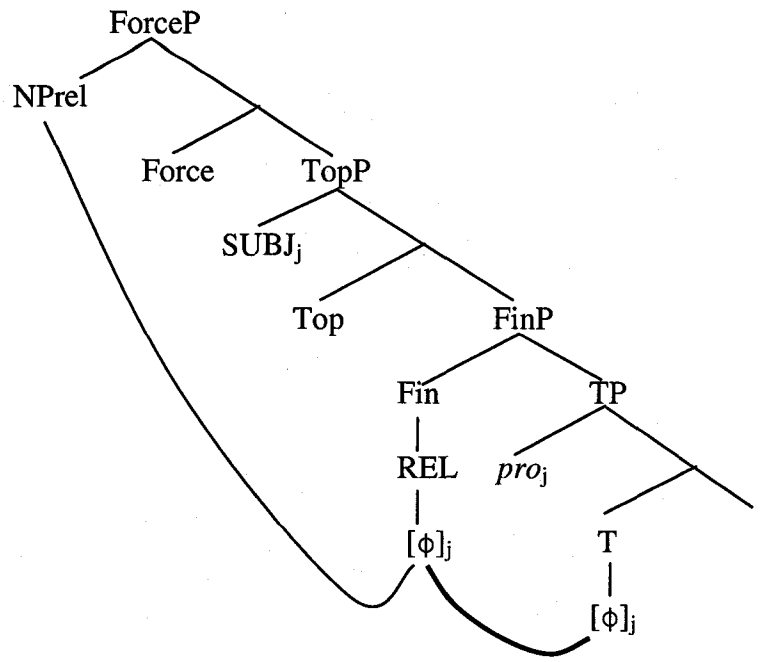
(76) to that in (77) is therefore merely a shift in the valuer of these phi-features and does not involve a

(80)



In (80) both sets of phi-features have the same goal and therefore receive the same value. The fact that both sets of phi-features are not expressed morphologically is likely a reflection of the fact that the verb and the complementizer not only have the same value, but also occur adjacent to one another. In this way, the understanding of the universal Match/Agree system argued for in this thesis, together with the COMP Parameter, accounts for the variation in Zulu relatives.

The analysis in (80) is essentially the same as that proposed by Carstens (2003) for complementizer agreement in West Germanic languages such as that seen in West Flemish (Haegeman 1992):

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continued probing operation.

(81) Kpeinzen *dan-k* (ik) morgen goan. *West Flemish*

1SG-think that-1SG (I) tomorrow go

'I think that I'll go tomorrow.'

Carstens argues that an Agree relation exists between a set of phi-features in C and the subject in SpecTP, arguing that this approach is superior to T-to-C movement accounts of complementizer agreement (Zwart 1993, 1997). [31] The only difference between the West Flemish clause in (81) and the Zulu strategy 1 relative in (78), then is that in West Flemish the phi-features of the complementizer are spelled out whereas in Zulu they are not. Presumably this is related to the fact that in West Germanic agreement on the verb is impoverished whereas in Bantu it is very rich allowing complementizer agreement to be fully predicted by the agreement marked on the verb.

Carstens (2005) expands her analysis of complementizer agreement to Bantu relatives that display agreement with the relativized NP. Carstens argues that Bantu and West Germanic are similar in have sets of phi-features in C, but differ in that phi-features in Bantu must be associated with an EPP feature whereas those in West Germanic need not be (see also Baker 2002). Therefore, complementizer phi-features in Bantu show agreement with a relativized NP whereas those in West Germanic show agreement with the subject. In the current approach, however, the difference between complementizer agreement with a relative operator or a subject lies not in an EPP property, but in the locus of the complementizer: whether it is in Fin or Force. On this view, it is predicted

[31] This makes Carstens' approach minimally different from the one adopted here, requiring that she adopt the idea that arguments remain active for syntactic computation even after their case features have been

that complementizers that show subject agreement in West Germanic must reside in Fin and not Force.

Of the two approaches, the current one seems to account for the attested variation more fully since it provides a principled explanation for the variation between Zulu strategy 1 and strategy 2 relatives. Carstens' account, relying on the idea that phi-features in Bantu always have an EPP property, is unable to provide such as explanation. I return to this conclusion below in section 3.5.

To conclude, I hasten to add that there is no claim here that any information like that stated in the COMP Parameter in (72) should be taken to be an actual part of UG. Rather, the COMP Parameter is merely an explicit statement of the options afforded to the grammar by the universal principles of a complex left periphery like that argued for above and by the logical necessity that complementizers, as functional heads, must reside in some head of that periphery. The COMP Parameter is thus in line with the view of the grammar put forth in Chapter 1[32]

We can now begin to revise our typology chart according to the Comp Parameter. Note how the parameter translates into empirical generalizations: anytime a relative shows agreement with the subject and a relativized NP, its complementizer must be in

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checked (at least until a given point in the derivation). Since in (80) above the agree relation is between the phi-features of Fin and the valued phi-features of T, this additional assumption is not required.

[32] Though as Karlos Arregi (p.c.) has pointed out to me, this conflicts with Rizzi's (1997) claims about heads in the left periphery. For Rizzi, heads residing in Force or in Fin are taken to be members of distinct categories. While some markers heading Force or Fin may indeed be members of distinct categories associated with the functions of those two heads, the fact that in both Zulu and Polish the same marker can head either Force or Fin without a shift in semantic function suggests that at least a sub-category of left-peripheral lexical elements (call them 'subordinators') are not limited with regard to which head they may reside in. This may have a functional explanation. Though Force and Fin have some distinct functions, it may be that their functions overlap in one area, namely subordination.

Force; on the other hand, when agreement is with the subject only, its complementizer phi-features must be in Fin.

	Relative phi-Fs in Force	Relative phi-Fs in Fin
Inversion	Type 1: Shona, Swahili (prefixed)	NONE
No Inversion	Type 2: Swahili (*amba*), Zulu (strategy 2)	Type 3: Zulu (strategy 1), Swati

Table 2: Agreement and Inversion, 1st Revision

The analysis proposed here makes a very strong cross-linguistic prediction with regard to agreement and complementizer position. Namely, complementizers that agree with the subject should head FinP while (relative) complementizers that agree with relativized NPs should head ForceP.[33] This position receives initial support from languages like Polish and Irish. As noted above, some varieties of Polish allow two complementizers to be present in a subordinate clause. The first precedes a topic and is uninflected. The second is inflected and shows agreement with the subject (Szczegielniak 2005):[34]

[33] Note that the predictions are not as strong for complementizers that do not display morphological agreement. It may be that such complementizers do have phi-features but head FinP and do not spell them out (as in the Zulu strategy 1 case) or that they simply have no phi-features at all. In the latter case, such complementizers may head ForceP or FinP.

[34] The subject agreement on the complementizer in (82) is a cliticized auxiliary copula as Szczegielniak shows. The inflected complementizer results from T-to-Fin movement.

(82) On wie ze ksiazke zes kupil a nie Maria *Polish*

He knows that book that-2nd.sg. bought but not Mary

'You bought a book and not Mary'

Given that TopP resides between ForceP and FinP, the two possible hosts for complementizers, it must be that in (82) *zes* heads FinP, the expected position for a complementizer that agrees with the subject under the current approach.

As extensively discussed in McCloskey (1990, 2001), Irish has a complex system of complementizers. In basic relative contexts, an interesting alternation arises. The complementizer *aN* introduces a relative with resumption (84) while the complementizer *aL* must introduce a relative without resumption (83):

(83) an ghirseach **a** ghoid na síogaí ___ *Irish*

the girl **aL** stole the fairies

`the girl that the fairies stole away'

(84) an ghirseach **ar** ghoid na síogaí **í**

the girl **aN** stole the fairies **her**

`the girl that the fairies stole away' (McCloskey 2001)

Harlow (1981) argues that the complementizer *aL* (along with its literary Welsh counterpart *a*) is a complementizer that agrees with the relativized NP. Completely independent of these claims, McCloskey (2001) makes the case that *aL* heads ForceP

rather than FinP.[35] This is exactly the position we expect an agreeing complementizer to occur in under the present account.

3.2.4 Type 4 relatives

Missing from Table 2, are Type 4 relatives such as those found in Dzamba, Lingala, and Kirundi. Recall that these relatives display agreement only with a relativized NP and not with the subject:

(85) a. imundondo mú - kpa - aki omoto *Dzamba*
5jug 5AGR-took-PST 1person
'the jug which the person took' (Bokamba 1976)

b. mukanda mú – tind - aki Poso *Lingala*
5letter 5AGR-send-PST Poso
'the letter that Poso sent'

I propose that languages with Type 4 relatives differ from languages with Type 1, 2, or 3 relatives in two important ways, stated in (86).

[35] McCloskey's specific proposal is more complex, involving movement of *aL* from Fin to Force and then

(86) a. Type 4 languages have an A-bar subject position[36]

b. Type 4 languages have a simplex CP domain.

Below I attempt to relate these two differences to a single underlying parameter. For now, however, I will take them as stipulations and discuss their implications for the syntax of Type 4 relatives.

Recall that in Type 4 relatives the subject is always post-verbal and never triggers agreement on the verb, yet it is not obliquely marked in any way. We must therefore assume, as previous authors have, that the subject is the external argument of the verb and resides in its argument position, SpecvP.[37] One difference between SVO sentences and Type 4 relatives, then, is that in the former the subject raises to the subject position while in the latter this fails to occur. The fact that the subject fails to raise to SpecCP in relatives follows from the assumptions in (86) above if we also adopt the assumption that each projection allows only one specifier position. (86a) entails that CP defines the grammatical subject position (the function of FinP), but C also encodes the force of the clause (the function of ForceP). Thus in relatives both the subject and the relative operator compete for the same single specifier position, SpecCP. Since relative operator

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phonological lowering to T after spell-out.

[36] The issue of an A-bar syntax for subjects in certain languages is not new. Claims have been made for A-bar subjects in languages like Tagalog and Malagasy (Pearson 2005) and the issue is hotly debated for Germanic (see Branigan 1996 for interesting arguments). Alexiadou and Anagastopolou (1998) offer evidence that a variety of languages employ A-bar subject positions, including Greek.

[37] Ndayiragije (1999) actually assumes rightward movement of the subject to a focus position above VP. I discuss this proposal below in section 3.4.2.

movement must occur for relativization to take place at all, the relative operator wins and the subject cannot raise.[38]

Let us see how the derivation plays out with regard to agreement. Given that there is a single active functional head C, there is little reason to assume more than one set of phi-features in these constructions.[39] At the CP layer, the phi-features of C will enter Match relations with the interpretable sets of phi-features in the clause:

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[38] Schneider-Zioga (to appear) interprets the fact that only one operator may occupy the CP domain in Kinande differently. Assuming an articulated CP domain, she follows Aoun and Benmamoun (1998) in arguing that a dislocated subject in the CP domain prevents movement of some other XP to a position above it since this would create an intervention effect in the configuration [Wh_j [$SUBJ_k$ [pro_k [....t_j...]]]]. However, languages like Luganda would seem to challenge this understanding since here an extracted object precedes a subject which itself precedes a focus marker. Since the equivalent of this focus marker in Kinande is taken by Schneider-Zioga to reside in the CP domain, the conclusion is that both the moved object as well as the subject are in the CP domain in (i):

(i) omusajja Petero **gwe** a – labye — Luganda
1man 1aPeter 1REL 3SG-see — (Walusimbi 1996)
'(It is) the man that Peter saw'

The Luganda facts thus seem to argue against Schneider-Zioga's account and in favor of the present analysis. More work is needed, however.

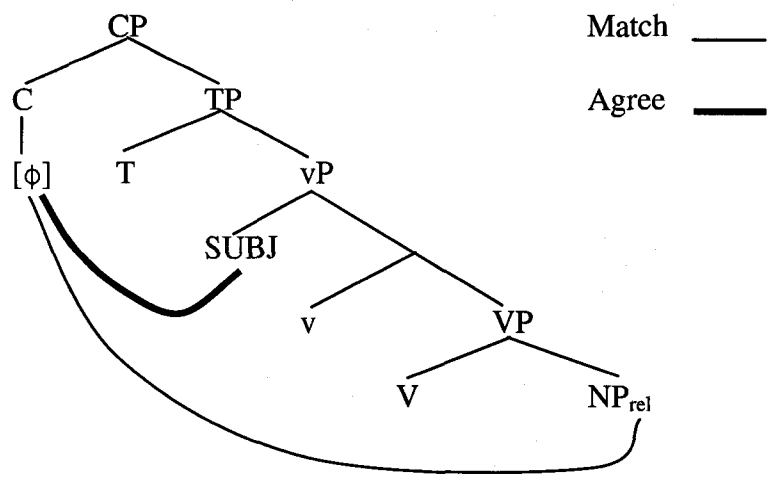
[39] Though there is some evidence to suggest that both the COMP and INFL set of phi-features may be present in C since in at least one language they can be teased apart morphologically. Though in positive relatives, Dzamba shows only one set of agreement features, negating the clause reveals two instances of agreement straddling the negative morpheme:

(i) omoto **ó** - kpa - aki imundondo — *Dzamba*
person 1AGR-took-IMP jug
'the person who took the jug'

(ii) o-mo-to **ó** - ta - **ò** - kpa - aki imundondo emba
1person 1REL-NEG-1SA-took-IMP jug NEG
'the person who did not take the jug' (Bokamba 1976)

See also Carstens' (2005) discussion of similar facts in KiLega from Kinyaolo (1991).

(87)

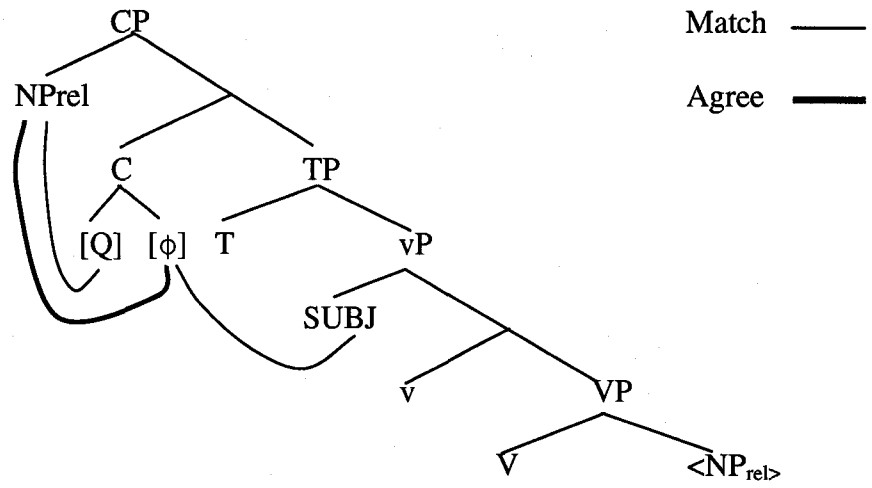


As (87) shows, there is a locality problem here. Since phi-features are sensitive to locality, only the Match relations between C and subject can result in an Agree relation. However, this problem is obviated under the present approach if we consider the possibility that locality is a dynamic rather than a static concept as argued for Zulu strategy 2 relatives above: what matters is not what relation is the most local at any given point of the derivation, but rather what relation is the most local at SpellOut, here taken to be synonymous with the end of the clause.

The possibility of this dynamic view of locality arises due to the fact that in the present system Move is not solely dependent upon Agree taking place with the phi-features in (87), but may take place under any Agree relation. Consider that in (87) the head C also contains a feature [Q] that enters an Agree relation with the relative operator NP. This relation results in a Move relation because of an EPP character of [Q], moving the relativized NP to SpecCP. Note that after this movement has taken place, the most local Match relation involving [ϕ] is with the relative operator and no longer with the subject. Therefore, at this stage in the derivation, this relation becomes the Agree

relation. Since this is the end of the derivation, [ϕ] will be spelled out with values supplied by NPrel.

(88)



In section 3.4 below, I will offer more discussion of OVS relatives and their main clause counterparts which have received much attention in the literature, turning attention to previous accounts as well as matters relating to case. For now, I allow (88) to stand alone as demonstrating how the system I have adopted in this thesis accounts for Type 4 relatives in a natural way.

The derivation in (88) depends upon both assumptions in (86) above being true generalizations about languages with Type 4 relatives. The situation is conceptually undesireable since ideally we would like the differences between types of Bantu relatives to follow from simple single parametric choices rather than from multiple underlying differences. If indeed (86a) and (86b) are basic parametric options, we expect a much

larger typology than the one we find.[40] However, I would like to suggest that the two claims in (86) are co-variants that follow from a single underlying parameter.

So far we have considered only that the phi-features associated with the CP domain may shift position depending on the language, appearing in Force or in Fin. However, as Rizzi (1997) argues, the head Fin is responsible for interactions between the CP domain and the inflectional (IP/TP) domain, and many authors have claimed a role for Fin in inflectional agreement and checking the case of subjects, both IP domain phenomena. It is therefore reasonable to propose that just as variation may occur between Force and Fin with regard to feature composition, similar variation may occur between T and Fin. That is, features associated with T in languages like English or Zulu or Swahili may be associated with Fin in other languages.[41] This parameter is stated in (89):

(89) Infl Parameter: Infl phi-features may reside in Fin or T.

We have seen languages with INFL phi-features in T. We must now ask what it means for a language to have its INFL phi-features in Fin. This simple parametric difference turns out to have drastic consequences for clause structure. This is because TP and FinP belong to different structural domains, or what Grohmann (2000) calls Prolific Domains. Grohmann observes that clause structure has a tri-partite nature. Each part of clause structure has its own syntactic and interpretative functions:

[40] In particular, we expect there to be languages with an A-syntax for subject, but with a simplex CP layer and those with an A-bar syntax for subjects, but a complex CP domain.

(90) Prolific Domains:

a. θ-domain: the part of the derivation where theta relations are created

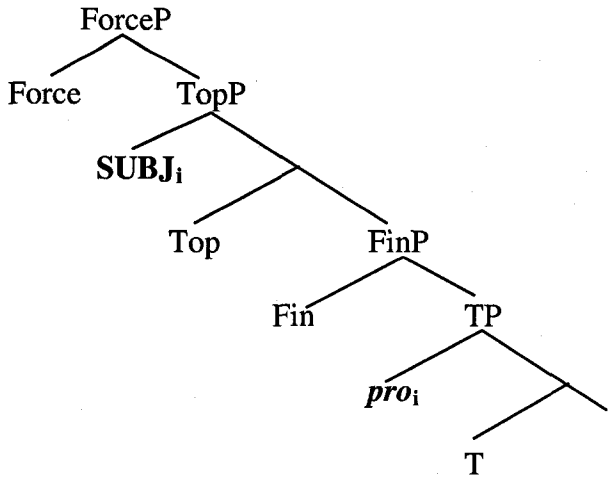
b. ϕ-domain: the part of the derivation where agreement properties are licensed

c. ω-domain: the part of the derivation where discourse information is established

These domains line up with syntactic projections, namely VP (the theta domain), TP (the phi-domain) and CP (the ω-domain). Coming back to the INFL parameter in (89), FinP is a part of the CP ω-domain while TP is a part of the phi-domain. That subjects may be members of either of these two domains or even both is unsurprising. Indeed, we have already seen this ambiguous nature of subjects for Bantu, embodied in the assumption that overt subjects in Bantu reside in the CP domain while we have taken the SpecTP position to be filled by a null coindexed element *pro*:

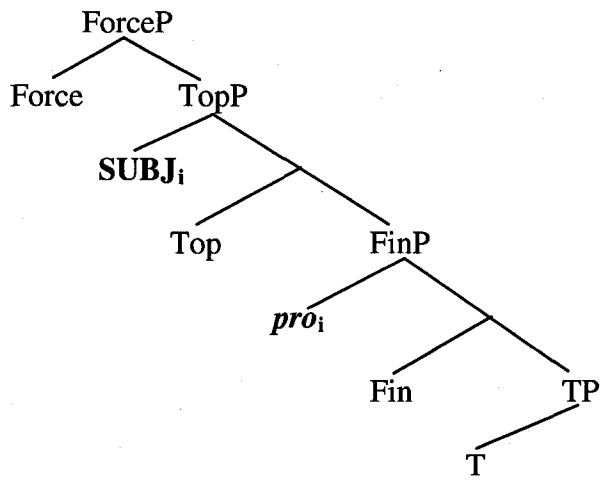
[41] More recent proposals such as Hiraiwa (2005, Chapter 2) and Chomsky (2005) argue that inflectional features are always properties of C and merely transmitted to T upon selection. If this is the case, it is an even stronger possibility that in some languages these features could remain solely in C as I propose here.

(91)



Given (91), under the INFL parameter, we might simply propose that the location of the inflection phi-features in Fin will result a small shift in the subject position of the clause in which *pro* is licensed. Rather than being SpecTP, the subject position will be SpecFinP:

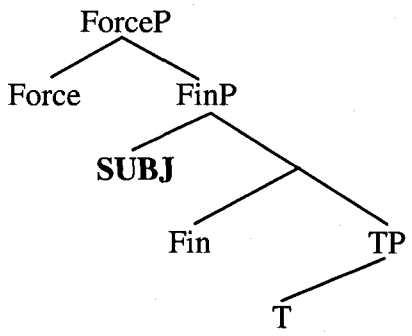
(92)



I would like to propose, however, that (92) is ruled out by the grammar due to the fact that in (92) a single domain contains both the overt subject and its coindexed null

counterpart. I take this to be a case of what Grohmann refers to as an anti-locality violation. Put simply, Grohmann's contention is that while it is true that syntactic dependencies must be local, they must not be too local. Specifically, dependencies must not obtain within a single prolific domain. In (92), this restriction on locality is violated since the overt subject binds its null counterpart within the same domain.[42] As a result, I propose that overt subjects and *pro* may not both be present in the derivation when INFL features occur in Fin instead of T. Rather, if an overt subject is present, it functions as both the grammatical subject (checking the phi-features in Fin) and as the discourse topic:

(93)

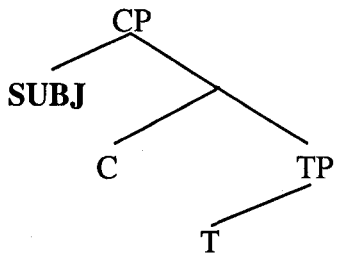


Notice that in (93) the projection TopP is no longer present. This is consistent with Rizzi's (1997) view that such projections are optional and only arise when required by the derivation. The representation in (93) requires one more revision, however. Rizzi (1997) also proposes that when intermediate projections like TopP and FocP are not present, ForceP and FinP may collapse into a single projection layer, the more traditional

[42] This is an extension of Grohmann's proposals which are primarily concerned with ruling out movement within a single prolific domain. The claim here is that any syntactic dependency between some XP and a coindexed null category in a single domain (be it a trace copy of XP or *pro*) is ruled out by anti-locality.

CP. In this representation, the features both of Force and Fin reside in the same syntactic head, namely C.

(94)



The preceding discussion provides a way in which the assumptions from (86) required to derive Type 4 relatives both follow from a single underlying parametric choice, namely the INFL parameter. I conclude that Central Bantu languages like Dzamba and Lingala differ from Eastern and Southern Bantu languages in having an A-bar subject position, namely SpecCP. This allows a full account of the agreement variation we have across Bantu relatives.[43] The variation arises from two simple parameters: the Comp Parameter in (72) and the Infl Paramter in (89). Revising the typology table to reflect this, we arrive at Table 3:

[43] Focusing on subject-extraction, Schneider-Zioga (to appear) and Cheng (2005) also argue that Grohmann's anti-locality plays a role in the derivation of Bantu relative clauses.

	Comp Fs in Force; Infl Fs in T	Comp and Infl features in C	Comp Fs in Fin; Infl Fs in T
Inversion	Type 1: Shona, Swahili (prefixed)	Type 4: Dzamba, Lingala	NONE
No Inversion	Type 2: Swahili (*amba*), Zulu (strategy 2)	NONE	Type 3: Zulu (strategy 1), Swati

Table 3: Agreement and Inversion, 2nd Revision

In addition to explaining the agreement variation among these four types of relatives, we have also partially explained the variation with regard to subject inversion. The subject post-position in Type 4 languages, I argued, is due to the fact that a *pro* subject is unlicensed in relatives in these languages. Therefore, subjects must be overt and must reside in their theta positions in SpecvP. They cannot raise to check the Infl features in the derivation since this would prevent relative operator movement to SpecCP, crucial for the derivation to converge. This also explains the typological gap in Table 3 for languages that have the same feature structure as Dzamba and Lingala, but do not have inversion. In order for a subject to be preverbal, it would have to occupy SpecCP, preventing a relative operator from moving to this position and crashing the derivation. It still remains, however, to explain the variation in inversion between Type 1 and Type 2 relatives. I turn to this in the next section.

3.2.5 Two Sources of Inversion

While the assumptions made so far explain the obligatory post-position of the subject in languages like Dzamba and Lingala, they do not explain the variation in inversion between Type 1 and Type 2 languages. Both sets of languages have relative complementizers that agree with the relativized NP and therefore reside in Force as well as having verbs that agree with the subject. There is therefore no reason to assume that subjects in Type 1 relatives (which require inversion) remain in their theta positions in SpecvP as they do in Type 4 relatives. In this section, I will argue that Type 1 and Type 2 relatives do indeed have the same syntactic derivation, but that phonological requirements of Type 1 relatives require that overt subjects be pronounced in a post-verbal position. Crucially this means that inversion in Type 1 relatives has a very different source than inversion in Type 4 relatives. A comparison of Type 1 and Type 2 relatives may help us discover this source. Consider the variation between Type 2 relatives from Zulu and Type 1 relatives from Shona in (95) as well as the variation between Type 2 and Type 1 relatives from Swahili as seen in (96):

(95) a. umuntu **o** – zandhla zake **zi** – mhlope *Zulu-Type 2*
1person **1REL**-5hand 5his **5SA**-is.white
'the person whose hand is white'

b. Mbatya **dza** – v – aka – son – era vakadzi mwenga *Shona-Type 1*
10clothes 10REL-3PL-PST-sow-APP 2women 1bride
'the clothes which the women sowed for the bride' (D&H 1999)

(96) a. kitabu amba-**cho** Juma **a** – li - soma *Swahili–Type 2*

7book amba-7REL Juma 3SG-PST-read

'the book that Juma read'

b. kitabu **a** – li – **cho** - soma Juma jana *Swahili–Type 1*

7book 3SG-PST-7REL-read Juma yesterday

'the book that Juma read yesterday'

As discussed briefly above, the variation between Zulu and Shona in (95) seems to be the result of morphological specification. While the relative marker in Zulu allows it to cliticize to a nominal, the relative marker in Shona requires that it be a verbal prefix. Since the subject would get in the way of this prefixation, the subject must be pronounced post-verbally. The same seems to be true for the Swahili variation in (96). The two relatives in (96) are completely equivalent semantically. This variation has received much attention in the literature; as Keach first showed, tense markers like /li/ in Swahili have independent syntactic status, residing in T and undergoing T-to-C movement in relative like (96b).[44] The verb root remains lower in the clause, most likely as the head of an aspectual projection (see Myers 1998).

Barrett-Keach (1986) offers two chief pieces of evidence for her conclusion. First, stress in Swahili is assigned to the penultimate syllable of each word. Verb forms, however, also display a secondary stress. Barrett-Keach demonstrates that the target of

[44] In the current approach, both Type 1 and Type 2 relatives have their relative complementizer in Force and their verb-related phi-features in T. However, in this section I will assume a simple CP layer since considerations of multiple CP projections do not seem to be relevant.

secondary stress assignment can only be predicted if the verb root and its suffixes are taken to be one stress assignment domain while the tense marker and its prefixes are taken to be another. In that case, stress is assigned to the penultimate syllable of each domain. Barrett-Keach (as well as Ngonyani 1999 and Henderson 2003a) takes this to be evidence that the two domains have independent status in the syntax:

(97) [$_{IP}$ Mwanafúnzi à-li- [$_{AspP}$ sóma [$_{vP}$....kitábu]]] *Swahili*
1student 3SG-PST read 7book
'The student read the book.'

A second piece of evidence comes from what Barrett-Keach calls *ku insertion.* In imperatives, monosyllabic verbs are expanded by an epenthetic syllable /ku/ which receives primary stress as seen in (98). Verbs with more than one syllable do not require /ku/ insertion as demonstrated in (99).

(98) Kímbia!
run
'Run!'

(99) a. Kú-la!
ku-eat
'Eat!'

b. *La!

Interestingly, finite verbs also require /ku/ insertion when their verb root is monosyllabic. In (100a) /ku/ is required in order for primary stress to be assigned. It cannot be assigned to /li/.

(100) a. Mwanafunzi à – li – kú - la ndizi *Swahili*
1student 3SG-PST-*ku*-eat 10bananas
'The student ate bananas.'

b. *Mwanafunzi a-lí-la ndizi

The data in (98-100) is evidence that the tense marker and its prefixes are not considered with the verb root as a single word for the purposes of stress assignment or *ku* insertion. The conclusion is that we really have two separate 'words' in the Swahili verb form. The analysis is confirmed in relative clause variation if we take the relative marker *cho* to reside in C. In that case, the inverted relative in (96b) can be understood as involving T-to-C movement of the tense marker (together with its agreement prefix) where it left-adjoins to *cho.* The proper analysis of the verb form in (96b) is that in (101):

(101) [$_{CP}$ kitabu ali–cho [$_{TP}$ t_T [$_{AspP}$ soma [$_{vP}$...]]] *Swahili*
7book 3SG-PST-7REL - read
'the book that he/she read'

Though the two parts of the verb form are separate in syntax, they join together at the level of phonology via PF Merger (or Morphological Merger in Bobaljik's (1995) terms). While this analysis for Swahili verb forms has been assumed and argued for on a number of occasions, no one has yet discussed the position of an overt subject under this analysis. Consider that the subject, though it is pronounced post-verbally in (102), still triggers agreement on the verb:

(102) kitabu **a** – li – **cho** - soma Juma jana *Swahili*
7book 3SG-PST-7REL-read Juma yesterday
'the book that Juma read yesterday'

Given the strong generalization that agreement requires a spec-head relation in Bantu, this is evidence that the subject in (102) has raised to SpecTP where it has triggered agreement on the verb (see Demuth and Harford 1999). Adding the subject to (102), we arrive at (103):

(103) [$_{CP}$ kitabu a – li – cho [$_{TP}$ **Juma** t_T [$_{AspP}$ soma [$_{vP}$...]]] *Swahili*
7book 3SG-PST-7REL Juma -read
'the book that he/she read'

Clearly, (103) presents a problem since the subject now intervenes between the two parts of the verb form that need to under PF Merger after spell-out. Fortunately, there is a way out. In any movement chain, it is standard to assume that the element forming the chain is

pronounced in the chain's highest position. However, Bobaljik (1995; 2002) and Boskovic (2001) both argue elements may not be pronounced in the highest position if that is prevented by phonological or morphological requirements. When that happens, the element is pronounced in a lower link in the chain. This idea has found a natural implementation in the copy theory of movement where each link in the chain consists of a copy of the element itself. 'Pronounce lower copy,' then, is something allowed by the grammar under certain morpho-phonological conditions.

I propose that the derivation of Swahili relative forms as seen in (103) meets the conditions for pronounce lower copy to take place. Since morphology/phonology requires the two parts of the verb form to undergo PF Merger, the subject cannot be pronounced in the position it has raised to, namely SpecTP. Instead, a lower copy is pronounced, the copy in SpecvP:

(104) [$_{CP}$ **kitabu ali–cho** [$_{IP}$ <mwanafunzi> t_I [$_{AspP}$ **soma** [$_{vP}$ **mwanafunzi ..**]]]

7book 3SG-PST-7REL 1student read 1student

'the book that the student read'

Consider again the Swahili Type 1 relatives which do not require inversion. Here the tense marker remains in T with an epenthetic element *amba* appears in C to lend morphological support to the relative marker *cho*.

(105) [$_{CP}$ kitabu amba-cho [$_{TP}$ Juma a-li- [$_{AspP}$ soma...]]] *Swahili*

7book amba-7REL Juma 3SG-PST -read

'the book that Juma read'

The conclusion is that though Swahili Type 1 and Type 2 relatives have identical derivations with regard to agreement relations and the position of the subject, they have different PF realizations because of the different morphophonological requirements of each derivation. Type 1 relatives do not require that the subject be pronounced in a lower position while Type 2 relatives do.

With this conclusion in mind, let us return to Type 4 relatives, the other relatives with inversion. Recall the conclusion from section 3.2.4 above that these relatives display inversion simply because the subject never raises out of SpecvP.

(106) [$_{CP}$ Ibitabo **bi** – a – somye [$_{TP}$ … [$_{vP}$ abana…]]] *Kirundi*

8books 8AGR-PST-read:PERF 2children

'the books that the children read'

Thus, though both Type 2 and Type 4 relatives display inverted V-S word orders, the latter's reasons for displaying inversion are syntactic in nature while the formers' are purely morpho-phonological. That is, though both types pronounce the subject in the same position (SpecvP), the LF position of the subject is different in Type 2 relatives than in Type 4 relatives. If this is correct, we should expect to see some semantic asymmetries between these relative types. I offer two such asymmetries below, confirming the current

analysis. I use Swahili and Kirundi as representatives of Type 2 and Type 4 relatives, respectively.

Old vs New Information. Though a unified formalization has never been proposed, it is a well-documented fact that post-verbal or VP-internal material in Bantu languages often receives a new information or focus interpretation (Givón 1972, Bokamba 1976, 1979, Bresnan & Mchombo 1987, Machobane 1987; Demuth & Mmusi 1997). On the other hand, preverbal material such as subjects tends to be interpreted as old information and function as topics.

If the analysis above is on the right track, we should see this difference in the way that subjects are interpreted in pre- and post-verbal positions in Kirundi. This prediction is born out. In addition to the OVS relatives described above, Kirundi also allows SVO relatives. In the latter, the subject may function as old information as seen in (107a). However, in OVS relatives the subject is obligatorily interpreted as new information or as a focused element as indicated in the gloss in (107b). (107b) would be an appropriate response an echo question such as "the books that who read?" or to correct a statement such as "the books that the parents read."

(107) a. Ibitabo abana ba – a – somye *Kirundi*
8books 2children 3PL-PST-read:PERF
'the books that the children read'

b. Ibitabo bi – a – somye abana

8books 8AGR-PST-read:PERF 2children

'the books that the children (not the parents) read'

In Swahili, on the other hand, we do not expect to see this difference between pre- and post-verbal subjects since we have claimed that the subject in Swahili occupies the same LF position in inverted and non-inverted structures. This prediction is also born out. Like Kirundi, Swahili also allows non-inverted relatives. The subject in both the SVO and OVS relatives below has the same interpreted. In fact, the two structures have complete semantic equivalence:

(108) a. kitabu amba-cho mwanfunzi a – li – soma *Swahili*

7book amba-7REL 1student 3SG-PST-read

'the book that the student read'

b. kitabu a – li – cho - soma mwanafunzi

7book 3SG-PST-7REL-read 1student

'the book that the student read'

The interpretation facts thus bear out the analysis from sections 2 and 3 that though both Kirundi and Swahili display inversion, in the latter it is merely a phonological effect which does not affect semantic interpretation.

Scope Interpretation. I have claimed that inverted subjects in Swahili raise to SpecTP while in Kirundi they remain within the vP. If this is the case, we expect to see a difference in scope interpretation in case these subjects contain quantifiers. In particular, subjects in Kirundi that remain within the vP should have narrow scope under negation while those in Swahili, which have raised to SpecTP, should have wide scope over negation.[45] This prediction is born out. The subject in (109a) cannot receive wide scope while the subject in (109b) cannot receive narrow scope.

(109) a. igitabo nti-gi-a-somye umuntu numwe *Kirundi*
7book NEG-7AGR-PST-read 1person 1one
'the book that not one person read'
'*the book that one person didn't read'

b. kitabu a – si – soma – cho mtu mmoja *Swahili*
7book 3SG-NEG-read-7REL 1person 1one
'the book that one person didn't read'
'*the book that not one person read'

These facts substantiate the claim that subjects in Kirundi and Swahili occupy different LF positions.

The facts of topic/focus and scope interpretation presented above confirm the conclusion that Type 2 and Type 4 relatives have very different sources of surface

[45] Thanks to Kyle Johnson for pointing me toward this argument.

inversion, differing in the LF positions of their subjects. This is due to particular morpho-phonological considerations with regard to the Swahili verb form which require its subject to be pronounced in a lower position than that to which it has raised. Swahili thus provides evidence for the possibility of lower copy pronunciation. It also provides a cautionary tale for analysis: that syntactic effects like agreement and the semantic facts of interpretation must be trusted above word order and pronunciation when it comes to determining the structural location of linguistic elements. A secondary conclusion is that Type 1 and Type 2 relatives have identical syntactic derivations with regard to subject raising and agreement relations, though they differ in whether or not inversion occurs. The only difference between Type 1 and Type 2 relatives is whether there is a morpho-phonological requirement that the relative complementizer which precedes the subject and the verb form that follows the subject undergo PF Merger. Swahili Type 2 relatives have this requirement while Type 1 relatives do not. Similarly, Shona has this requirement while Zulu does not. In Shona, the relative complementizer must prefix to the verb form; thus, a lower copy of the subject is pronounced post-verbally. In Zulu, however, the relative complementizer is free to prefix either to the verb or to the subject. Thus the topmost copy of the subject is free to be pronounced.

(110) a. kitabu amba-cho Juma a – li - soma *Swahili-Type 1*

7book amba-7REL Juma 3SG-PST-read

'the book that Juma read'

b. kitabu a – li – cho - soma Juma jana *Swahili-Type 2*

7book 3SG-PST-7REL-read Juma yesterday

'the book that Juma read yesterday'

(111) a. mbatya dza – v – aka – son – era vakadzi mwenga *Shona-Type 2*

10clothes 10REL-3PL-PAST-sow-APP 2women 1bride

'the clothes which the women sowed for the bride'

(Demuth and Harford 1999)

b. Inja e-mfana wa-yi-thenga(*yo) in-hle. *Zulu-Type 1*

9dog 9REL-1boy 1SA-9OM-buy-RS 9SA-good

'The dog which the boy bought is good."

Adopting the conclusion that inversion can result from pronounce lower copy or from leaving the subject in SpecvP, we can update our typology table once again:[46]

[46] Note there is a third 'kind' of inversion in which a subject raises and T-to-C movement takes place, but nothing requires a lower copy of the subject to be pronounced. This is what is standardly assumed to occur in English in sentences like "Will John __ attend the party?" Presumably, such relatives should exist in Bantu if we could find a language that has a verb root that raises all the way to T and that has T-to-C movement. However, I have been unable to find such a language.

	Comp Fs in Force; Infl Fs in T	Comp Fs and Infl Fs in C	Comp Fs in Fin; Infl Fs in T
PF Inversion	Type 1: Shona, Swahili (prefixed)	NONE	NONE
Syn. Inversion	NONE	Type 4: Dzamba, Lingala	NONE
No Inversion	Type 2: Swahili, Zulu (strategy 2)	NONE	Type 3: Zulu (strategy 1), Swati

Table 4: Agreement and Inversion, 3rd Revision

The approach adopted in this paper explains the four-way typology of Bantu *that*-relatives in Table 4. It also partially explains the typological gaps. First, since inversion in Type 4 relatives is the result of a language having an A-bar position for subjects (and a simplex CP layer), it will never be observed in a language in which Infl features reside in T. Second, since inversion in Type 1 relatives occurs as a result of having an intervening subject between the relative marker and the verb, this will never occur in languages with a single CP layer and an A-bar position for subjects. Third, inversion will always occur in a language with a single CP layers and an A-bar subject position since a preverbal subject will never be licensed by agreement in these constructions.

It is not altogether clear, however, that relatives do not exist which have Comp features in Fin, Infl features in T, and display PF Inversion. These relatives would look

just like the Zulu strategy 1 relative in (112), but would have a post-verbal subject. The crucial difference between the Zulu relative and these unattested relatives would be the position of the overt subject. Recall that in Zulu we took the subject of the clause to be *pro* and the overt subject to reside in SpecTopP as a left peripheral topic:

(112) [$_{ForceP}$ incwadi [$_{TopP}$ isitshudeni [$_{FinP}$ **a-** [$_{TP}$ *pro* isi-yi-funda-yo...]]]] *Zulu*

9letter 5student REL- *pro* -5SA-9OM-read-RS

'the letter that the student is reading'

However, if the overt subject actually were to reside in SpecTP, it would intervene between the relative marker and the verb form. If this imaginary language had a requirement (like Shona's, for instances), that the relative marker and the verb form a phonological unit, then the SpecTP subject would be pronounced lower in the clause:

(113) [$_{CP}$ **NPrel REL-** [$_{TP}$ <SUBJ> **AGR-V**...[vP **SUBJ**....]]]]

Nothing in principle rules out the existence of this kind of relative clause. However, I would like to note the strong tendency for overt subjects in Bantu to be left-peripheral topics. If in most Bantu languages the actual subject in SpecTP is *pro*, then we do not expect to see inversion in relatives of this type since *pro* never counts as an intervener.

Note, however, that above I assumed that at least one Bantu language does indeed have overt subjects in SpecTP, namely Swahili.[47] I assumed this without much discussion, but the assumption is crucial for the idea that inversion in Swahili Type 1 relatives is an instance of pronounce lower copy. If indeed overt subjects in Swahili were always left-peripheral topics merged directly in SpecTopP, then there would be no copy of the subject in SpecvP to pronounce, only a copy of null *pro*. The question is whether this is merely a theoretical/mechanical problem or a true parametric difference found amongst Bantu languages. Independent evidence suggests that the latter is the case.

Demuth (1995) observes that while in general Bantu languages employ a wh-in situ strategy for questions, subjects generally cannot be questioned in situ.

(114) a. Thabo ó-pheh-ílé éng? *Sesotho*
Thabo 3SG-cook-PERF what
'What did Thabo cook?'

b. Thabo ó-bón-é máng?
Thabo 3SG-cook-PERF who
'Who did Thabo see?'

c. *Mang o-pheh-ile dijo?
Who 3SG-cook-PERF 8food
'Who cooked the food?' (Demuth 1995)

[47] This must also be true for Shona. However, I have been unable to obtain the relevant facts for this

Demuth's conclusion about why this is so is basically a functional one that follows Bresnan and Mchombo (1987): overt subjects in Bantu are topics. Since question words are inherently focused elements, and since an element cannot be both a topic and be focused, the subject must move from its topic position to one suitable for focused elements.[48] Typically this involves making the subject post-verbal by a locative expletive construction (115a) or by clefting (115b):

(115) a. Ho-phéh-ílé máng *Sesotho*
17SA-cook-PERF 1who
'It was who that did the cooking?'

b. Ké máng yá-pheh-ílé-ng dijó
COP 1who REL.SA-cook-PERF 8food
'It was who that cooked the food?' (Demuth 1995)

The conclusion provides a relevant diagnostic for the position of the subject in the current approach: if a subject cannot be question in-situ, it is in the left peripheral SpecTopP position. This true for Zulu and Dzamba and is discussed by Demuth (1995) for Sesotho.

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language.

[48] Schneider-Zioga (to appear) gives structural content to these proposals, arguing that Grohmann's (2000) version of anti-locality is behind the ban on local subject extraction. Given the conclusion that subjects in Bantu languages are canonically left-periphal topics in the CP domain, they cannot be extracted to another position in the CP domain since this would be movement within a single (prolific) domain, exactly the sort of movement ruled out by anti-locality.

(116) a. *__Ubani__ u-banga lowo msindo? *Zulu*

1awho 3SG-cause 3DEM 3noise

'Who is making that noise?'

b. Ng-__ubani__ o-banga lowo msindo?

COP-1awho 1aREL-cause 3DEM 3noise

'Who is it that is making that noise?' (Sabel & Zeller 2005)

(117) a. *Nzanyi a-tom-el-áki mwenzi loome? *Dzamba*

1Who 3SG-send-APP-PST 5message today

'Who sent Poso a letter today?'

b. (oMoto) ó-tom-el-áki mwenzi loome a-ba- áki nzanyi?

1person 1AGR-send-APP-PST 5message today 3SG-be-PST 1who

'the person who sent the letter today was who?

(adapted from Bokamba 1976:163)

However, it is not true for Swahili. Subjects in Swahili can be questioned in situ. Clefting or post-position is not required:

(118) **Nani** a-li-soma kitabu? *Swahili*

Who 3SG-PST-read 7book

'Who read the book?'

I take this as evidence that subjects in Swahili, unlike in most Bantu languages, are not left peripheral topics residing in SpecTopP, but are (or at least can be) true subjects residing in SpecTP. It is therefore possible that we could find another Bantu language with a true overt subject in SpecTP like Swahili, but which has a relative complementizer in Fin (rather than Force, like Swahili) that has to undergo PF Merger with the rest of the verb. In that case, we would expect a complementizer that lacks agreement with the relatived NP and affixes to the verb, and we would expect a post-verbal subject that has raised to SpecTP.

3.3 Summary

This chapter has so far has demonstrated that variation across Bantu *that*-relatives can be explained by the adoption of the Match/Agree system from Chapter 1 as well as two morphological parameters (the Comp and Infl parameters) that affect the feature composition of functional heads in the CP and IP domains. Along with independent principles of the grammar, these assumptions not only explain the variation under consideration, but also explain why most of the other constructions logically predicted by these assumptions are unattested.

While this accomplishes the chief goals of this chapter, there are two other issues I would like to address more fully. One involves the Type 4 relatives above in which a

relative verb agrees with the relativized NP and the subject remains in situ in SpecvP. While these relatives have not received much attention in the literature, their main clause counterparts have and the analysis argued for above in (88) is quite different from all previous analyses. I therefore find it necessary to discuss these structures in more detail and involve a full discussion of (at least some) previous accounts. I do this in the next section. The derivation in (88) also turns out to have interesting implications for case checking which I discuss in section 3.4.3. Finally, I wish to address inversion in so-called compound tense constructions found in several Bantu languages as discussed in Carstens and Kinyalolo (1989) and Carstens (2001). Both of those works have taken the agreement facts of these constructions as evidence that they must receive a raising analysis. In section 3.5 I discuss inversion facts that suggest a raising analysis is not the best approach and instead argue for an analysis in line with the current theoretical assumptions.

3.4 On OVS in Bantu

In section 3.2.4 it was proposed that Type 4 relatives have an A-bar syntax for subjects. If this is on the right track, then we expect to see some evidence for this in main clauses as well since we do not expect relatives and main clauses to differ with regard to whether subjects are A- or A-bar elements. This prediction is born out. All of the languages that allow Type 4 relatives also allow very similar constructions in main clauses. Though I do not believe this robust correlation has been noted before, main clause OVS constructions have often been discussed in the literature. I will simply call these 'OVS constructions,' though they have been variously referred to as subject-object inversion, inverse, or object-subject reversal constructions. Analyses go back nearly thirty years and come from

a variety of theoretical backgrounds (Bokamba 1976, 1979, 1985, Carstens 2005, Demuth and Harford 1999, Givon 1979, Kimenyi 1980, Kinyalolo 1991, Morimoto 2000, Ndayiragije 1999, Ura 1996, 2000, Whaley 1996). Like their relative counterparts, OVS main clause constructions involve OVS word order in which the verb agrees with a fronted argument that is not the subject. It is rather an object that functions as the topic of the clause. Furthermore, though not discussed above for relatives, the post-verbal subject in these constructions received an obligatory focused/new information interpretation. I indicate this by underlining in the gloss in the examples below:[49]

(119) a. Imukanda mú-tom-aki omwana. *Dzamba*
5letter 5AGR-send-PST 1child
'The letter, <u>the child</u> sent it.'

b. Igitabo cyi – ra – som - a umuhuungu *Kinyarwanda*
7book 7AGR-*ra*-read-ASP 1boy
'The book, <u>the boy</u> read it.' (Kimenyi 1980)

c. Ibitabo bi-á-guze Petero. *Kirundi*
8books 8AGR-PST-buy 1aPeter
"The books, <u>Peter</u> bought them."

[49] Ndayiragije (1999) claims that the focus interpretation of the subject in OVS is obligatorily contrastive in Kirundi. Speakers I have consulted do not share this intuition, though they allow the contrastive

The glosses I have provided clearly demonstrate both the topic and focus qualities of OVS constructions; however, it should be noted that these glosses are different from those given in many previous works. Since Givon (1979), OVS sentences have often been classified as a type of passive and glossed accordingly. Such glosses have contributed to a misunderstanding of the facts about OVS. However, as analyses by Bokamba (1979, 1980) and Ndayiragije (1999) have pointed out, OVS constructions differ from passives both in their interpretation and grammatical form. For one thing, passive verb forms differ from their active counterparts in containing a passive morpheme. There is no such morphological difference between the verbs the OVS structures in (120) and their SVO counterparts:

(120) a. Omwana a - tom - aki mukanda. *Dzamba*
1child 3SG-send-PERF 5letter
'The child sent a message.' (Bokamba 1979)

b. Umuhuungu a - ra - som - a igitabo. *Kinyarwanda*
1boy 3SG-*ra*-read-ASP 7book.
'The/a boy is reading a/the book.' (Kimenyi 1980)

c. Petero a - á - ra - guze ibitabo. *Kirundi*
1aPeter 3SG-PST-*ra*-buy 8books
'Peter bought books.' (Ndayiragije 1999)

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interpretation. Here I do not differentiate between contrastive focus and new information or presentational

Furthermore, OVS constructions also differ from passives in that the post-verbal subject in OVS constructions is not an oblique argument situated in a by-phrase. Rather, it remains an agentive argument of the verb. Moreover, OVS constructions are not used as alternative constructions for passive constructions. All of the languages under consideration allow passives freely.

Across the Bantu languages that allow them, OVS constructions have several things in common, all of which I will attempt to account for. These are listed in (121):

(121) a. Word order is OVSX (where X may be an adverb or another object)[50]

b. The preverbal object induces subject agreement on the verb.

c. The preverbal object is a topic, allowing only a definite/old information interpretation.

d. The post-verbal subject allows only a focused/new information interpretation.

e. All languages that allow OVS in main clauses allow similar structures in relative clauses where the verb agrees with the relativized NP.[51]

All of these facts are demonstrated in the examples and glosses above. Previous accounts have often chosen to focus on a subset of the properties in (121) to motivate analyses.

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focus.

[50] Kirundi is an acception. As discussed by Ndayiragije (1999), Kirundi order is typically OVXS where X may be an adverb, another object, or a non-finite clause with a controlled subject.

[51] Whaley (1996) reports that this is not the case for Kinyarwanda and that preverbal objects cannot undergo clefting or relativization in this language. Speakers I have consulted find his examples acceptable, however, given proper context.

However, none has focused on the property in (121e). Most previous accounts have focused exclusively on OVS main clauses with only a passing aside to the fact that a nearly identical structure occurs in relative clauses.[52] Clearly a satisfactory account of OVS main clauses should be naturally extendable to OVS relatives if the correlation in (121e) is to receive an explanation; that is, accounts of both should follow from the same general principles. Furthermore, a satisfactory account must also allow for a natural account of the variation in Bantu relatives I have discussed above.

Below I discuss previous accounts, focusing exclusively on Ura (1996, 2000), Ndayiragije (1999) and Carstens (2005) since these accounts are also couched in the minimalist framework. I argue that Ura and Ndayiragije's accounts do not have a natural way to explain the OVS relative-main clause correspondence, and that while Carstens can explain the correspondence, her account is too restricted and is unable to account for the variation across Bantu relatives.

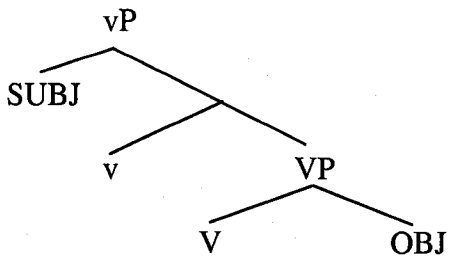
3.4.1 Previous Analyses

Both Ura (1996, 2000) and Ndayiragije (1999) assume the same general strategy for deriving OVS main clauses. First, both authors claim that unmarked SVO clauses begin with a standard VP with the standardly assumed theta relations:[53]

[52] To my knowledge, the only difference between main clause OVS and relative clause OVS in all of the language looked at here is a lexical tone in relative OVS that marks the verb, indicating a relative clause. This homogeneous way of marking relatives across all of the languages with OVS is an interesting similarity that has no obvious explanation to me.

[53] Ndayiragije (1999) actually does not assume a small vP layer, but this is irrelevant for the discussion at hand.

(122)



Declarative SVO clauses are derived, they claim, by movement of the verb to T and subsequent movement of the subject to SpecTP. The subject triggers agreement on the verb, deriving the structure. When it comes to OVS derivations, both authors also make a similar claim: OVS is derived by movement of the object rather than the subject to SpecTP where it can trigger agreement on the verb. The problem for both authors, then, is one of locality. How can the features of T attract the object argument when the subject is closer to the attracting head? Ura explains this via a notion of Equidistance: when the verb raises to T, he claims, the subject and object are considered equidistant from T (both being in specifiers of vP), making it possible to raise either argument to SpecTP. Ndayiragije, on the other hand, dispenses with the notion of equidistance altogether, claiming instead that subjects have a focus feature which induces rightward focus movement to a specifier position above VP. With the subject out of the way, the object then undergoes A-movement to SpecTP.

There are several conceptual and empirical problems with this general approach, however. For one, in Ndayiragije's account the topic and focus properties of the object and subject respectively are in principle independent: the subject has an interpretable focus feature that is attracted by the head of FocP while the object is attracted by the EPP

features of TP.[54] Yet it is a fact that in all OVS construction, preverbal objects function as topics and post-verbal subjects are focused. Therefore, one must necessarily derive the other.

The inadequacy I would like to focus on here, however, is the inability of these accounts to explain the parallelism between OVS main clauses and OVS relatives. As stated in (121e) and demonstrated in the previous section, languages that allow one always allow the other. One would therefore expect them to have similar derivations, both made available by the same general principles. Yet extending the OVS main clause analysis assumed by Ura and Ndayiragije to relatives is not at all straightforward. If indeed OVS is derived by A-movement of the object to SpecTP as these (and other) authors claim, then why must a verb in a relative clause agree with an A-bar moved relativized object rather than the subject? One solution, put forth by several authors, is that the grammar requires the relativized NP to stop in SpecTP on its way to its A-bar position. This is the view taken by Demuth and Harford (1999), for example. Central Bantu, these authors claim, only allows extraction from subject position. Therefore, NPs must become subjects before they can be relativized.

At first glance this idea would seem to find some support in the literature in the form of Keenan and Comrie's (1977) famous Accessibility Hierarchy (AH). There it is claimed that the grammatical functions of NPs form a hierarchy according to which they are accessible for extraction. Subjects are at the top of the hierarchy. All relativization strategies, it is claimed, at least allow relativization of subjects and some strategies allow relativization of subjects exclusively.

[54] Ura does not discuss the focus properties of the post-verbal subjects.

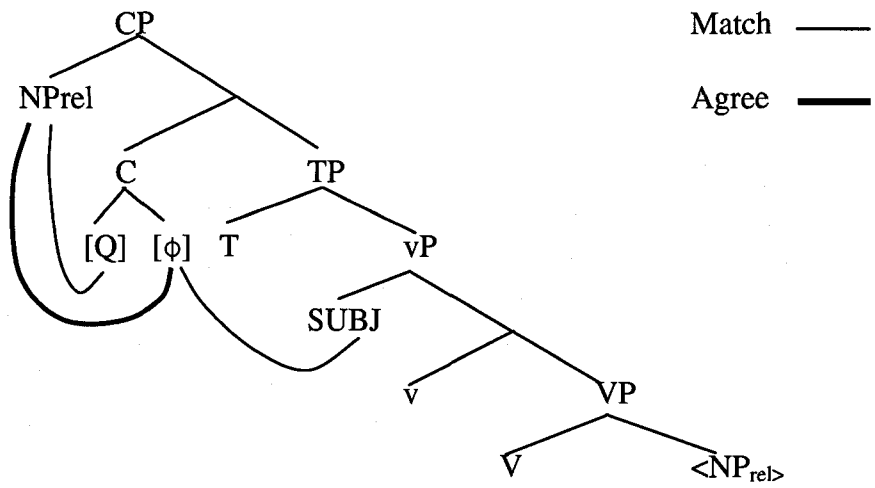
Nevertheless, there are strong conceptual arguments against this "subject-only" view of OVS relatives. First, it is important to realize that Keenan and Comrie's hierarchy was never meant to be a statement about NP positions in syntactic structures, but was rather a descriptive statement about the grammatical functions of NPs in different languages. To apply it as previous authors have in claiming that relativization in Central Bantu (or other language groups, such as Austronesian) is only available from subject position is therefore a misuse of the terminology. Second, understood as the generalization that extraction from SpecTP is generally more available than extraction from other positions, the AH would clearly be wrong from a cross-linguistic perspective. It is a well-known generalization about language that extraction is most readily available from complement position, not subject position. Many languages easily allow extraction of objects while disallowing or complicating the extraction of subjects (as seen in familiar that-trace and anti-agreement effects, e.g.; see Boeckx 2003a for an organization of data from Richards 2001 that illustrates this point nicely). Thus if anything, the AH would have to be reversed if applied to syntactic structural positions: the lowest argument in the clause is the most readily extractable, not the highest.

Putting this critique of the AH aside however, the main objection to the Ura/Ndayiragije approach is clear: an analysis of OVS main clauses that relies on A-movement requires *an additional* stipulation (that relativized NPs must first move through SpecTP) in order to derive the fact that all languages that have OVS main clauses also have them in relative clauses. Under their account, it is a complete accident that the same languages that allow OVS main clauses also have OVS in relative clauses. In other words, (121e) has no explanation. Clearly this is undesirable. If an alternative theory can

be found that would instead explain the fact in (121e), it would clearly be preferred over previous accounts. The approach developed in this thesis in section 3.2.4 above is such an account.

Recall the analysis I proposed in (88) above, repeated here. In (123) the position to which relative operators as well as subject move is SpecCP, an A-bar position. However, since only one specifier position is available, movement of the relative operator takes precedes. Since the phi-features associated with subject-verb agreement also reside in C in (123), these features enter an Agree relations with the relativized NP since once it has moved to SpecCP, the Match relation with this NP is the most local Match relation the phi-features are involved in:

(123)



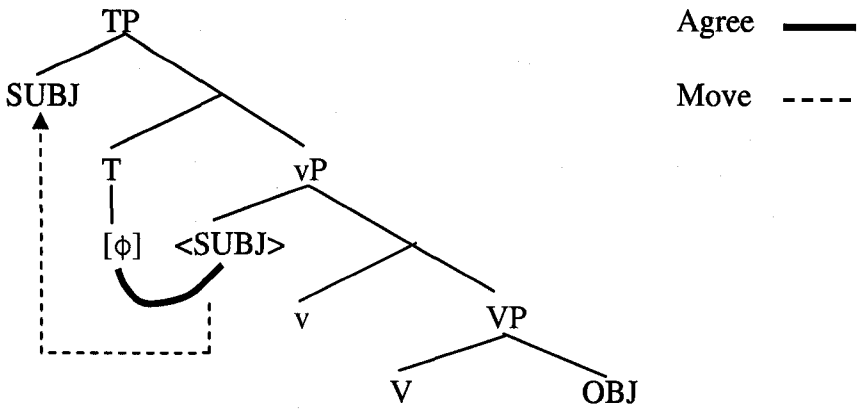
The analysis in (123) for OVS relatives does not rely on any stipulative dependence of A-bar extraction on A-movement to SpecTP nor need it invoke the accessibility hierarchy. Furthermore, it extends naturally to OVS main clauses. Recall that these clauses are a type of topicalization construction (see especially Bokamba 1979). We can therefore

postulate a topic feature [Top] in C in main clause OVS structures that will do the same work [Q] does in (123). Thus the present account requires no additional stipulations to extend an account of OVS relatives to OVS main clauses or vice versa. Rather, the analysis of both springs from the same general principles and analysis. We therefore expect that languages that allow one should allow the other, deriving the generalization in (121e).

Like Ura and Ndayiragije, Carstens (2005) also assumes that relativized NPs move through SpecTP on their way to SpecCP, though without invoking a subject-only restriction on extraction. Rather, Carstens claims that both C and T have sets of unvalued phi-features that must be valued in the course of the derivation. Furthermore, she claims that phi-features in Bantu always have an EPP character (a claim also made in Baker 2002). That is, whatever values the phi-features of a particular head in Bantu must move to that head's specificer.

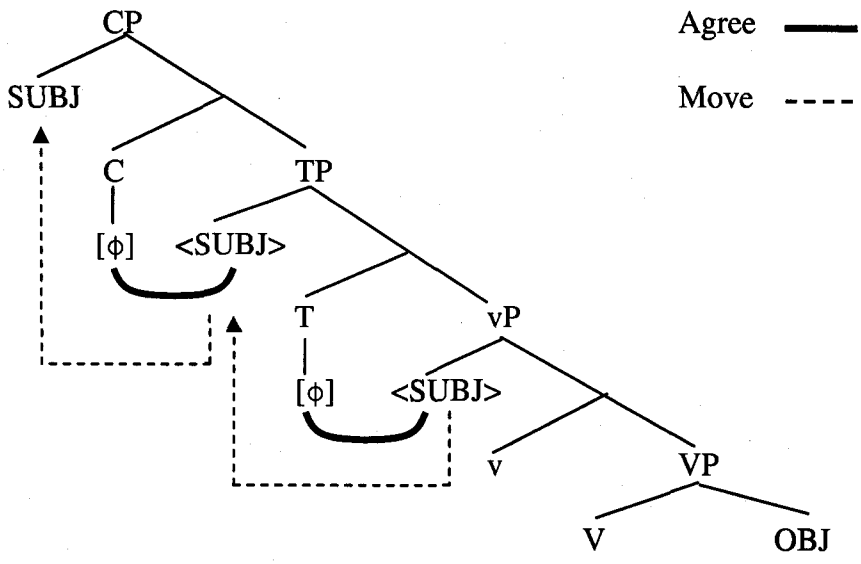
With these assumptions in place, Carstens examines the derivation of relative clauses in KiLega. OVS is forced, she claims, by the locality restrictions on phi-feature checking. In unmarked SVO clauses there is only one set of phi-features, namely those in T. As the closest argument, the subject values these features and moves to SpecTP:

(124)



In subject relatives, an additional step takes place in which C with phi-features is merged to (124). In (125), the phi-features of C enter an Agree relationship with the subject and it is extracted to SpecCP.

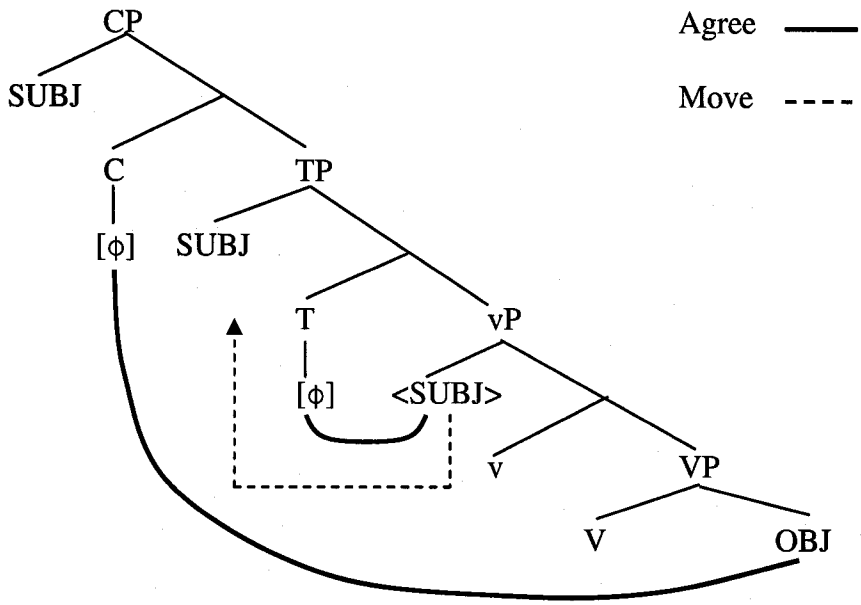
(125)



Carstens observes that under these assumptions, a locality issue arises in non-subject relatives. Namely, if the subject is allowed to raise to SpecTP as in (125) above, the phi-

features associated with C will not be able to agree with the object since the subject counts as an intervener.[55]

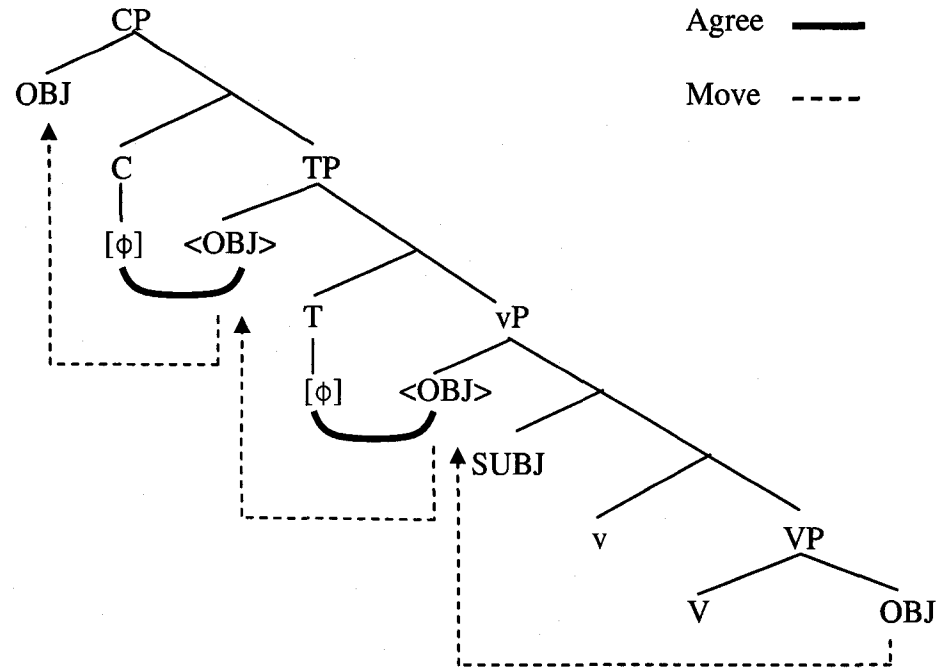
(126)



The only solution to the problem is for the object rather than the subject to raise to SpecTP in (126). Once this occurs, the object will be accessible to the phi-features of C and agreement with and movement of the object can take place. Carstens accomplishes this through movement of the object to an outer specifier of vP via an optional EPP feature of the type proposed by Chomsky (2001):

[55] Carstens assumes that though the subject has had its case checked in (126), its case feature is not deleted

(127)



There is a conceptual objection to Carstens' approach, namely that it involves a global economy comparison: when the TP level is reached, the derivation must somehow 'know' not to raise the subject to SpecTP in object relatives. However, a more severe difficulty lies in the restricted nature of the analysis. The claim that phi-features are obligatorily associated with EPP features excludes the possibility of a Bantu language where the relative complementizer agrees with a relativized NP while the verb still agrees with the subject. In other words, Carstens' account predicts that *all* Bantu languages with agreeing complementizers should be OVS languages. Yet as we have seen many Bantu languages do not allow OVS main clause constructions. Furthermore, languages such as Shona and Zulu clearly have two distinct sets of phi-features in C and T, each agreeing

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until the end of the phase, leaving it active for further syntactic computations.

with a different element. Carstens' approach seems to be unable to allow for this variation.[56]

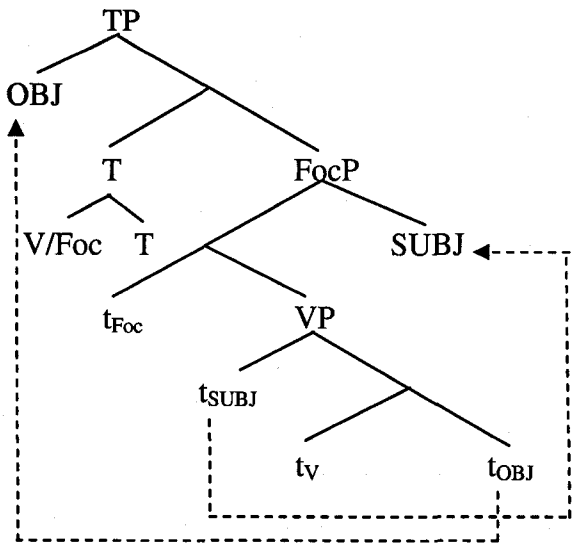
The present account, on the other hand, accounts for this variation nicely by claiming that variation across Bantu languages follows from a limited number of simple parametric options. While I take this analysis to be more conceptually and empirically satisfying than previous accounts, Ndayiragije (1999) contains detailed empirical arguments for his analysis that objects in OVS constructions move to SpecTP as well as arguments that the subject in these constructions moves to a right-branching focus position (SpecFocP) just above the VP. It is therefore necessary that I address his arguments in detail in order for my alternative account to be taken seriously. I undertake this in the next section. I also present an alternative to Ndayiragije's account of the focus interpretation of the subject in OVS constructions, the single generalization from (121) not directly derived under my account.

3.4.2 Ndayiragije (1999)

The analysis presented by Ndayiragije is seen in (128). The subject undergoes rightward A-bar movement to SpecFocP while the object undergoes A-movement to SpecTP becoming the grammatical subject and triggering agreement on the verb:

[56] Carstens notes that 70 of the languages examined in Nsuka (1982) fall under the OVS type and supposes that other kinds of languages may be employing relative pronoun rather than complementizer strategies for

(128)



When comparing this analysis to my own, there are two main sources of contention. First, Ndayiragije provides several arguments that preverbal objects in OVS clauses reside in SpecTP and that this position is an A-position. Second, he argues that the overt subject in OVS clauses undergoes rightward A-bar movement to the specifier of a focus position situated above vP. Below I argue against the first claim and offer an alternative for the second.

Preverbal objects are in SpecTP. Ndayiragije has several arguments to support his claim about the SpecTP position of the object. I do not have space here to present each argument in detail. Rather, I will briefly describe the arguments in (129), noting how my own analysis also captures the facts naturally.

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relativization. This explanation would not seem to work for Shona or Zulu, however, which I have argued

(129) a. Fronted objects in OVS may undergo pro-drop just like subjects in SVO.

b. Fronted objects in OVS may be dislocated just like subjects in SVO.

c. OVS clauses employ the same negation marking as SVO sentences. This marking is different from the negation marking used in embedded and relative clauses.

d. OVS sentences display the same cross-over effects as passives. Therefore, both are instances of A-movement to SpecTP.

e. Fronted objects in OVS trigger nominal rather than accusative agreement on the verb. Therefore, they have nominative case just like subjects.

f. Multiple agreement occurs with SVO, passives, and OVS, but not with relative clauses.

g. Adjuncts cannot be fronted as objects can in OVS structures, though they can be wh-moved as in clefts.

The arguments in (129a,b) can be dismissed out of hand, since they are not really about whether or not the object moves to SpecTP, but rather about whether the object in OVS moves to the same position as the subject in SVO (no matter what that position might be). On that account, Ndayiragije's account and my own are in agreement, though he takes this position to be SpecTP while I take it to be SpecCP.

As for (129c), the relevant data appear in (130). The negative marker /nti-/ occurs with SVO and OVS clauses as seen in (130) where it precedes the agreement morpheme

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employ true complementizers which agree with relativized noun phrases.

in the verb. This negative marker cannot be used in verb forms in relative clauses, however, as (130) demonstrates.[57]

(130) a. Yohani **nti** – a – a – somye ivyo bitabo.
John **NEG**-3SG-PST-read:PERF 8those 8books
'John didn't read those books.'

b. Ivyo bitabo **nti** – bi – a – som – **u** – ye na Yohani.
8those 8books **NEG**-8AGR-PST-read-PASS-PERF by John
'Those books were not read by John.'

(131) a. Ibitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani a – **ta** – a – somye t$_i$]] . . .
8books John 3SG-**NEG**-PST-read:PERF
'Books that John didn't read . . .'

b. *Ibitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani **nti** – a – a – somye t$_i$]] . . .
8books John **NEG**-3SG-PST-read:PERF

Ndayiragije takes this as evidence that OVS constructions involve A-movement since they pattern with SVO sentences. However, there is no obvious reason why constructions involving A- or A-bar movement would require distinct negation strategies. It is therefore

[57] Kirundi allows both OVS and non-OVS relatives. Ndayiragije only discusses non-OVS relatives; however, to my knowledge the choice between these constructions is optional, conditioned by discourse.

possible that the variation in (130-131) has nothing to do with the type of movement involved, but has another source. I suggest one below.

It is well-known that many Bantu languages require T-to-C movement in relative clauses (see Demuth and Harford 1999). In fact, we saw this with regard to Swahili in section 3.2.5 above. However, the presence of NegP between T and C can block this inversion (see Henderson (2003a), Ngonyani (1999) for Swahili as well as footnote 78 for Lingala). In those cases, relatives with inversion cannot be negated. Rather, either a distinct negation or relativization strategy must be used. I illustrate this in (132) for Swahili. In (132a) T-to-C movement has taken place, resulting in subject-verb inversion. (132b) demonstrates that such relatives cannot be negated. However, (132c) demonstrates that the negation strategy employing the marker /si/ is fine in inverted structures.

(132) a. kitabu a – li – cho - soma Juma jana
7book 3SG-PST-7REL-read Juma yesterday
'the book that Juma read yesterday'

b. *kitabu ha – ku – cho – soma Juma jana
7book NEG-PST.NEG-7REL-read Juma yesterday

c. kitabu a – si – soma – cho Juma
7book 3SG-NEG-read-7REL Juma
'the book that Juman doesn't read'

I propose that the same thing is responsible for the differing negation strategies in Kirundi in (130-131). The only difference is that in the Kirundi relative in (131a), no subject-verb inversion results from T-to-C movement of the relative verb due the fact that subjects in Kirundi reside in the CP domain. The T-to-C movement can be detected, however, by the fact that in (131b) the relative verb cannot be negated by the /nti/ negation strategy.

Notice that this understanding of the distribution of negative markers in Kirundi has nothing to do with the fact that relative clauses involve A-bar movement while other clauses involve A-movement. It thus removes argument (129c) against an A-bar movement account of OVS constructions.

Ndayiragije's next argument (129d) is based on weak crossover effects. He demonstrates that OVS main clauses pattern with passives in that raising an NP containing a pronominal over its antecedent leads to ungrammaticality. Based on this, he concludes that OVS clauses, like passives, involve A-movement:

(133) a. Umunyeshule weese$_i$ a – a – ra – kunda umwarimu wiwe$_i$ *SVO*
1student 1every 3SG-PRES-*ra*-like 1teacher 1his
'Every student$_i$ likes his$_i$ teacher.'

b. *Umwarimu wiwe$_i$ a – a – kunda umunyeshule weese$_i$. *OVS*
1teacher 1his 3SG-PRES-like 1student 1every
'Every student$_i$ likes his$_i$ teacher.'

c. *Umwarimu wiwe$_i$ a – a – kund – ua na umunyeshule weese$_i$. *Passive*

1teacher 1his 3SG-PRES-like-PASS by 1student 1every

'His$_i$ teacher is liked by every student$_i$.'

However, Ndayiragije does not discuss relative clauses with regard to crossover effects. It turns out relative clauses, whether they are OVS or not, are also ungrammatical when the displaced NP contains a bound pronoun:

(134) a *igitabo ciwe$_i$ gi – a – kunda umunyeshule weese$_i$ *OVS Rel*

7book 7his 7AGR-PRES-like student every

'His$_i$ book that every student$_i$ likes'

b. *igitabo ciwe$_i$ umunyeshule weese$_i$ ya-a-kunda *non-OVS Rel*

7book 7his 1student 1every 3SG-PRES-like

'His$_i$ book that every student$_i$ likes'

The fact that relative clauses, OVS main clauses, and passives all pattern together in (133-134) demonstrates that whatever the source of the ungrammaticality of these clauses, it is unlikely to have anything to do with whether the constructions involve A- or A-bar movement. (133) therefore does not constitute an argument for object movement to SpecTP.

The fifth argument in (129e) is that objects in OVS structures have nominative rather than accusative case. Ndayiragije claims this can be discerned by examining the

form of the agreement markers on the verb. Accusative objects, he notes, have a different agreement system than nominative subjects. For example, the third person singular agreement marker for subjects is *a-* whereas the third person singular object marker is *mu*. The contrast is illustrated in the active and passive pair below:

(135) a. Abanyeshule ba – á - ra – **mu** - bonye.
2students 3PL-PST-*ra*-**1OM**-see:PERF
'Students saw him/her.'

b. Uwo mwarimu **a** - á -ra-bon – **u** - ye na abanyeshule.
1that 1teacher **3SG**-PST-*ra*-see-PASS-PERF by students
'That teacher was seen by students.'

In an OVS clause with a third person singular object, *a-* is used and not *mu*:

(136) a. Uwo mwarimu ***a*** – á - bonye abanyeshule.
1that 1teacher **3SG**-PST-see:PERF 2students
'That teacher, the students saw him.'

b. *Uwo mwarimu á – **mu** – bonye abanyeshule.
1that 1teacher PST-**1OM**-see:PERF 2students

Therefore, Ndayiragije concludes, objects in OVS clauses must be nominative subjects. Note, however, that this argument rests on the assumption that Case is reflected in the shape of agreement markers. This is not a necessary assumption, especially if the checking of Case and agreement features involves independent operations (as I argued in section 1.3 above). Under such assumptions, there is no reason that the checking of a Case feature by a particular head should influence the shape or value of the phi-features being checked on that head. Furthermore, if we take the standard assumption that the phi-features of subject and object agreement reside in distinct heads (presumably T and v), there is also no reason why the particular morphological shape of subject and object agreement should not be different. Since arguments in Bantu do not carry overt case markers, I conclude there is no way to determine the case of an object in an OVS structure by examining the form of the agreement it triggers on the verb. This argument therefore does not go through.

The argument presented by Ndayiragije seen in (121f) involves multiple agreement. In clauses with more than one verb, each verb must agree with the subject of the clause. Ndayiragije shows that this is also the case for OVS clauses as in (137b).

(137) a. Abana **ba** – á – riko **ba** – soma igitabo.
2children **3PL**-PST-be **3PL**-read:IMP 7book
'Children were reading a book.'

b. Igitabo **ki** – a – riko **ki** – soma abâna.

7book **7SA**-PST-be **7SA**-read:IMP 2children

'The book, children were reading it.'

Ndayiragije then shows that multiple agreement does not hold for clauses involving A-bar movement. (138) shows that multiple agreement is controlled by the subject in an object relative clause and not by the relativized NP.

(138) a. igitabo abana **ba** – á – riko **ba**-soma

7book 2children **3PL**-PST-be **3PL**-read:IMP

'the book that children were reading'

b. *Igitabo abana **ki**-á-riko **ki**-soma

Therefore, he concludes, the object in OVS clauses must be in an A-position (such as SpecTP) and not an A-bar position (in the left periphery) since it can trigger multiple agreement. However, Ndayiragije fails to discuss OVS relative clauses. As we have seen, Kirundi allows them freely. If the relative clause in (138b) is inverted, multiple agreement with the relativized NP is required:

(139) igitabo **ki** - á - riko **ki** – soma abana

7book **7AGR**-PST-be **7AGR**-read:IMP 2children

'the book that children were reading'

The example in (139) illustrates that multiple agreement can hold for A-bar extracted elements, contra Ndayiragije's claim. In light of (139), the only way to maintain the claim that multiple agreement only holds for A-moved elements would be to claim that relative NPs must be A-moved before being A-bar extraction – a position I argued explicitly against above.[58] I conclude that multiple agreement in Kirundi is not sensitive to an A- vs A-bar distinction and Ndayiragije's argument does not hold.

Finally, the seventh argument put forth in (121g) involves the claim that adjuncts cannot appear in the object position of OVS sentences whereas they can undergo A-bar movement as in cleft constructions. Therefore, Ndayiragije concludes, the position of the fronted object in OVS must not be an A-bar position. But this analogy does not go through. First, though adjuncts can be clefted, they cannot be relativized outside of a cleft, another operation involving A-bar movement:

(144) *Buhorobuhoro Yohani a - á - tambutse

slowly John 3SG-PST-walk:PERF

'slowly that John walked'

[58] See section 3.5 below for empirical arguments that compound tense structures with multiple agreement are not derived via raising.

It therefore seems to be something special about clefts that they allow adjuncts rather than some general property of A-bar movement that allows them. Most likely this is due to the fact that adjuncts cannot generally serve as arguments, a property required of both relativized NPs outside of clefts and fronted objects in OVS structures.

To conclude that Ndayiragije's (1999) arguments that objects in OVS are in SpecTP do not hold up. Rather, I propose that OVS main clauses are analogous to the object relatives that agree with relativized NPs described above. Both involve A-bar extraction of a non-subject to the CP domain accompanied by syntactic inversion.

The Subject Moves Rightward to SpecFocP. Recall that in both OVS topic and relative constructions, the post-verbal subject obligatorily receives a focused/new information interpretation. Ndayiragije (1999) argues that this interpretation is the result of rightward A-bar movement of the subject to a right-branching specifier of a focus projection FocP located between TP and VP. A conceptual argument against this approach has already been stated: the focus interpretation of the post-verbal subject is obligatory as a side effect of topicalization/relativization of the object in OVS structures. Therefore, whatever may trigger this interpretation of the subject, it must be a necessary result of the movement of the object. In Ndayiragije's account, however, movement of the subject to SpecFocP and movement of the object to the subject position are completely independent. Were this the case, one would expect a possible derivation whereby the subject remains in SpecvP while the object still raises to SpecTP, yielding an OVS clause without a focused interpretation on the subject. This is impossible, however.

In this section, I would like to briefly present an alternative to his proposal, namely that subjects receive a 'default' focus interpretation by virtue of the fact that they remain within the VP in OVS constructions. In this section, I would like to argue that the distribution of the so-called 'anti-focus' marker in Kirundi suggests my analysis is on the right track.

As Ndayiragije points out, unmarked SVO sentences in Kirundi such as (145a) do not have a focus interpretation on any element in the clause. Placing focus on post-verbal elements is possible, however. In (145b) the object has been focused. Notice that with this change the verb form has also changed. The so-called 'anti-focus' marker /ra/ is absent.

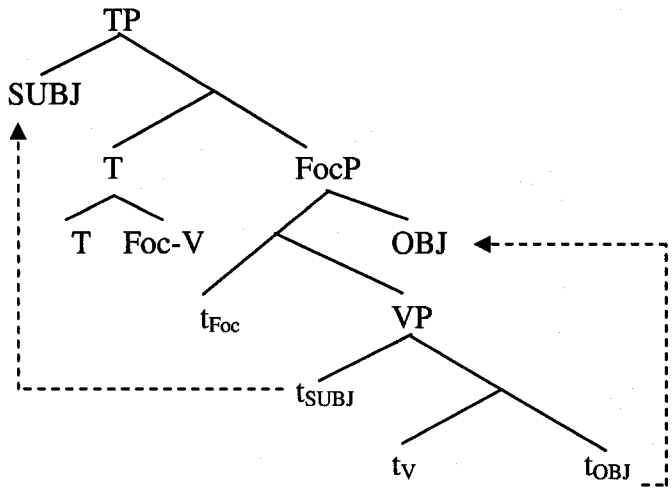
(145) a. Abâna ba - á - **ra** – nyo – ye amatá.
2children 3PL-PST-**ra**-drink:PERF 5milk
'Children drank milk.'

b. Abâna ba - á - nyoye amatá.
2children 3PL-PST-drink:PERF 5milk
'Children drank milk.'

Ndayiragije interprets these facts as follows: /ra/ heads a projection between TP and vP whose interpretative purpose is to encode the force of the clause. When that force is unmarked declarative, /ra/ is present. In constructions like (145b), however this projection is replaced by FocP, a projection with a null head. It is to the right-branching

specifier of this projection that any focused XP must move. Thus (145b) is derived as in (146).

(146)



Under my analysis that focus is the result of VP-internal interpretation, however, (146) cannot be correct. Recall from section 4 that I interpreted focus on postverbal subjects as indicative of the fact that subjects have not raised out of the VP in OVS structures. Here, then, it must be that in normal declarative sentences like (145a), the object has moved out of the VP whereas in clauses with focus on the object like (145b), the object remains within VP. One piece of evidence for this line of thinking comes from the position of the objects in relation to a VP-adjoined adverbial. When there is no focus on the object (and it has therefore moved out of the VP), it must precede such adverbs:

(147) a. Yohani a - **á** - **ra** - oógeje imiduga néezá
John 3SG-PST-**ra**-wash:PERF 4cars well
'John washed cars well.'

b. *Yohani a - **á** - **ra** - oógeje néezá imiduga

John 3S-PST-**ra**-wash:PERF well 4cars

Similarly, subjects left in-situ must follow VP-adjoined adjuncts in OVS structures:

(148) a. Imiduga yi-a - oogeje neeza Yohani.

4cars 4SA-PST-wash:PERF well 1John

'John washed cars well.'

b. *Imiduga yi-a-oogeje Yohani neeza

This set of facts, however, are also consistent with Ndayiragije's view that focused XPs undergo rightward movement to SpecFocP. Another set of facts, however, allows us to tease the two analyses apart. Ndayiragije reports that in SVO focus constructions, either the object or the adverb may receive focus interpretation depending on the order of the elements. This is demonstrated in (149):

(149) a. Yohani a – á – oógeje néezá imiduga.

1John 3SG-PST-wash:PERF well 4cars

'John washed cars well (not trucks).'

b. Yohani a – á – oógeje imiduga néezá.

1John 3SG-PST-wash:PERF 4cars well

'John washed cars well (not badly).'

Ndayiragije accounts for this variation by claiming that both adverbials and objects may move to the focus position. Thus in (149a) the object has moved to the rightward-branching specifier of FocP while in (149b) the adverb has moved into the SpecFocP position. Were this the case, however, we would expect this same variation to be possible with subjects in OVS constructions. This is not the case, however, as (148) above demonstrated. Indeed, it seems that Ndayiragije's account is unable to account for the impossibility of (148b). On the other hand, the present account handles this fact by claiming that subject in OVS simply remain in SpecvP, thus occurring below VP-adjoined adverbs. Objects, on the other hand, raise out of the VP in non-focus constructions like (145a) and remain within the VP when the object is in focus as in (145a). In (149b), the object moves out of the VP, removing itself from the focus domain. However, since the adverbial is still within the VP (adjoined to it), it is focused.

Assuming this approach is on the right track and the focus properties of an argument are determined by whether or not it has raised out of the VP, the question arises as to what accounts for the distribution of the marker /ra/ in Kirundi. Recall that /ra/ is present when nothing in the clause in focused (or in intransitive clauses) and obligatorily absent whenever an element in the clause is focused:

(150) a. Abâna ba - á - **ra** – nyoye amatá.

2children 3PL-PST-**ra**-drink:PERF 5milk

'Children drank milk.'

b. Abâna ba - á - nyoye amatá.

2children 3PL-PST-drink:PERF 5milk

'Children drank milk.'

Under my interpretation of the facts, however, /ra/ is present when post-verbal elements have moved out of the VP and absent when material remains within the VP. Interestingly, this interpretation brings the distribution of /ra/ in line with analysis of a similar morpheme /-ya/ found in Zulu, another Bantu language. The basic distribution of this marker is well-known: it always occurs with intransitive present tense verbs and never with verbs that take an object:[59]

(151) a. Abaculi ba – **ya** – cula *Zulu*

2singers 3PL- **ya**-sing

'Singers sing.'

b. Lo - mculi u - (***ya**) – cula ingoma enhle

1DEM-1singer 3SG-**ya**-sing 9song 9pretty

'That singer's singing a pretty song.' (Buell 2005)

[59] Other forms of verb extension occur with other tenses such as the –e/-ile altneration in the past tense.

This has earned the morpheme the traditional label 'verbal extender' since it seems to have no other purpose than to expand the verb by one syllable when nothing follows it in the clause. However, the precise distribution of /ya/ in Zulu is not simply one of a transitive/intransitive distinction. In the most recent work on the subject, Buell (2005) has shown (152) to be the correct generalization:

(152) Verbal extension takes place when the verb is the final element within the constituent it heads.

Thus intransitive verbs display verbal extension because they are the final element within their constituent (assumed by Buell to be AgrSP). Transitive verbs have an object following the verb within AgrSP; therefore, they cannot undergo verbal extension.

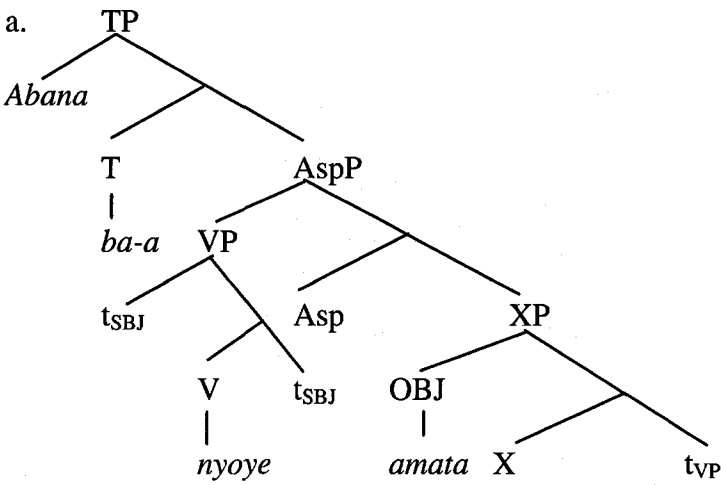
I propose that the distribution of the /ra/ marker in Kirundi can also be described by (152). This assumption actually lends support to my analysis above. Recall the basic SVO contrast from above:

(153) a. Abâna ba - á - **ra** – nyoye amatá.
2children 3PL-PST-**ra**-drink:PERF 5milk
'Children drank milk.'

b. Abâna ba - á - nyoye amatá.
2children 3PL-PST-drink:PERF 5milk
'Children drank <u>milk</u>.'

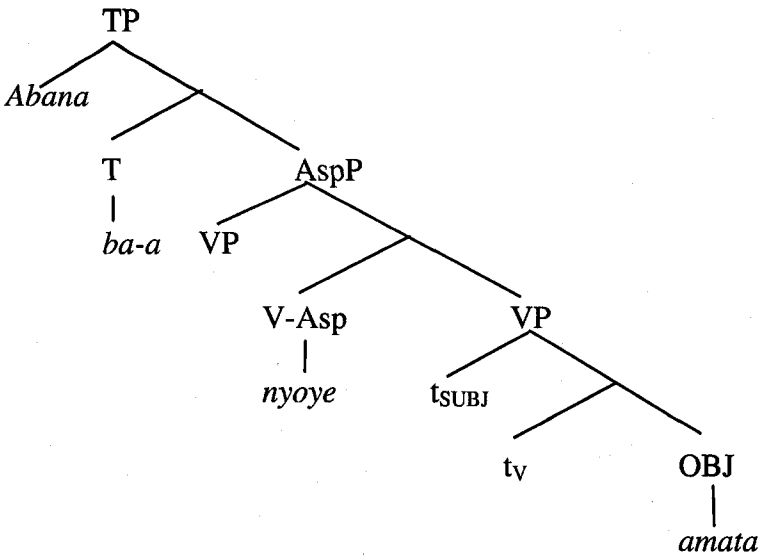
In the declarative sentence in (153a), the object has moved out of the constituent headed by the verb. This has two effects: it prevents the in-situ focus interpretation of the object and makes the verb the final element in its constituent, triggering verbal extension and the presence of /ra/. In (153b), on the other hand, the object has failed to raise out of the VP. It is therefore still within the constituent headed by the verb. This has two effects: the object receives a focus/new information interpretation and verbal extension cannot take place. Thus, /ra/ is not present on the verb. Assuming that the relevant constituent is VP, the derivation of these two clauses proceeds as in (154). In (154a) the object moves out of the VP to some higher projection XP, after which the remnant of the VP moves to the specifier of a higher functional head, here assumed to be AspP.[60]

(154) a.



[60] Remnant movement is also shown by Buell to be required to account for the distribution of verbal extenders in Zulu. In (154a) I assume remnant movement is required for morphological reasons. In (154a) the head X blocks head movement of V to Asp, a head whose information carried by the final vowel of

b.



(154a-b) derive the facts of focus interpretation and the presence/absence of /ra/ in a principled manner without resort to rightward movement or a focus projection between TP and vP.[61]

I conclude that the present account of OVS clauses in Bantu languages and in Kirundi specifically is able to account for all the facts listed above in (121). Furthermore, this account is superior to previous accounts since it allows for a straightforward account of (121e), lacking in the accounts discussed here. Before fully concluding the discussion of OVS structures, however, I would like to briefly explore the implications of these structures for case checking.

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verb forms in many Bantu languages (see Myers 1998). In (154b), on the other hand, there is no X. Therefore, head movement is possible and remnant movement is not required.

3.4.3 Implications for Case

The analysis of OVS constructions presented above in section 3.2.4 was solely concerned with the agreement and word order properties of these structures. The question arises, however, how the case of the arguments involved is checked in the derivation. This question is relevant given the long-standing intuition that case checking and agreement relations in syntax are related. This has been formalized by Chomsky's (2000, 2005) position that case checking occurs as a kind of side effect of phi-feature checking, a position challenged by Carstens (2001) and Boeckx (2003b), among others, who argue that case checking and phi-feature checking relations are distinct in the syntax.

If indeed case checking and agreement are distinct relations in the grammar, we must ask and answer the question why they correlate so often; to be more specific, why is it that nominative arguments so often trigger agreement on the verb? Furthermore, we must look for some instances where the two relations can be teased apart. In this section, I would like to offer the OVS constructions in Bantu as such a case, arguing that they constitute evidence that agreement and case checking relations must be divorced as syntactic relations. Morever, I will argue that these two types of feature checking relations differ in a fundamental way as outlined in Chapter 1.

Recall that in OVS construction the object triggers morphological agreement on the verb while the subject does not. Given the assumption that case and agreement checking are two aspects of the same syntactic relation, one is forced to conclude, as Ndayiragije (1999) does, that objects in these constructions receive nominative case. If that is true, however, it is not clear how the case of the subject is checked. Since the verbs

[61] A similar analysis could be employed to describe Ndayiragije's facts concerning control structures. I

in OVS constructions are clearly transitive, the most natural assumption is to conclude that subjects in OVS receive accusative case.

While there is no overt morphological evidence that this is not the case (Bantu languages do not generally inflect for case), there are strong reasons to doubt this conclusion. As discussed by Bokamba (1976: 74-75) the post-verbal subject in OVS structures does not have the properties of a structural object. For instance, while objects in Bantu languages can be marked on the verb as in (155b), post-verbal subjects cannot as demonstrated in (155c). The data below is from Dzamba:

(155) a. imwenzi mu – tom – el - aki oPoso bana loome
5message 5AGR-send-APP-PST 1Poso 2children today
'the message, Poso sent (it to) the children today'

b. imwenzi mu – **ba** – tom – el – aki oPoso loome
5message 5AGR-**2OM**-send-APPL-PST 1Poso today
'the message, Poso sent (it to) them today'

c. *imwenzi mu – **mo** – tom – el - aki bana loome
5message 5AGR-**1OM**-send-APPL-PST 2children today
'the message, she sent (it to) the children today'

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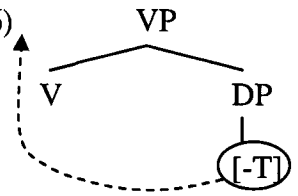
omit this here for space considerations.

It seems clear, then, that post-verbal subjects in OVS are not structural objects with accusative case.

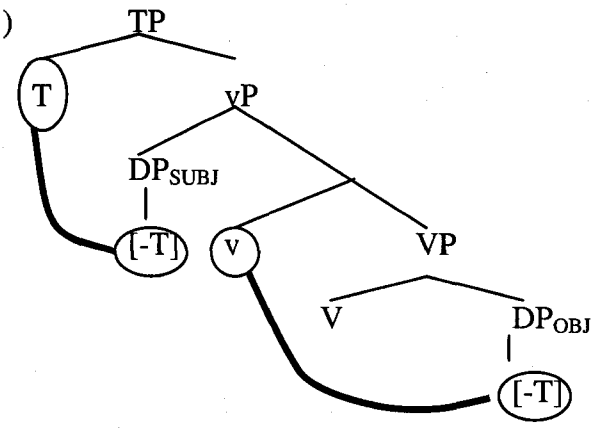
If phi-feature checking and case checking are formally divorced, however, then there is no problem in postulating that in OVS constructions, just as in SVO constructions, the subject recives nominative case while the object receives accusative case. Recall the arguments from Chapter 1 about the mechanics of case checking. There I proposed that probes be unrestricted with regard to their search domains. While a probe introduced into the derivation immediately searches its c-command domain for potential goals, if none are found it may also search the edge of the tree structure as more material is added to the derivation. This state of affairs is particularly relevant for unvalued probing case features (taken to be uninterpretable tense features) since there is typically no potential valuer for these features when DP arguments are introduced into the derivation.

(156)



In this manner, the accusative case of an object DP will be checked the moment v enters the derivation. Simiarly, the nominative case of a subject DP will be checked the moment T enters the derivation.

(157)



Notice that, with regard to the account of OVS offered above, both the case checking operations in (157) take place before the phi-features associated with NP-Verb agreement even enter the derivation since these features are located in C in OVS languages. The case checking relations between the subject and object with the [+T] functional heads in the derivation (T and little v) are completely independent of any syntactic relations between the unvalued phi-features of C and either the subject (in SVO) or the object (in OVS).

OVS languages are, of course, fairly a-typical in locating their phi-features in C rather than T. However, were the phi-features located in T in (157) above, nothing about the case checking relations in (157) would change (though it would make OVS as it occurs in Bantu impossible). Were the phi-features in T, however, the same two elements, namely the subject and T, would be involved in two distinct syntactic relations, the subject having its case feature valued by T and T having its phi-features valued by the subject. It is this structural conspiracy that leads to the strong descriptive generalization that nominative case and subject verbal agreement so often go hand-in-hand. The situation arises because the subject is the final argument to be introduced in the theta-

domain and therefore the highest structural argument of the clause. It is thus always (initially, at least) the closest argument to C or T; the unvalued phi-features of C or T will always initially pick out the subject. Unless other factors come into play (as in the Bantu OVS constructions), the subject will be the most local goal of the C/T phi-features.

3.5 Inversion and Agreement with Compound Tense

Finally in this chapter, I would like to briefly discuss the facts of inversion and agreement in compound tense constructions (CTCs). Such constructions occur in many languages and consist of an auxiliary verb marked for tense followed by one or more verbs marked for aspect. Two examples from Swahili taken from Carstens (2001) exemplify these structures:

(158) a. Juma **a** – li – kuwa **a** – me – pika chakula *Swahili*
Juma 3SG-PAST-be 3SG-PERF-cook food
'Juma had cooked food.'

b. (Mimi) **ni**-li-kuwa **ni** – ngali **ni** – ki – fanya kazi. *Swahili*
(I) 1SG-PAST-be 1SG-still 1SG-PERF-do work
'I am still working.'

The most significant property of CTCs like those in (158) for the present discussion is that each verb in the CT sequence displays full agreement with the subject. There are two issues here. One is the suggestion by Chomsky (2001) that case on an argument is

checked when that argument values a 'complete' set of phi-features on a verbal head. This system of phi-complete case checking is an instantiation of the idea that case checking and agreement (or phi-feature checking) are two sides of the same syntactic relation; specifically, that case checking is a sort of side effect of phi-feature valuation. The problem is that very often in language the same argument triggers agreement on more than one very in a clause, though presumably the case of that item is checked only once. Chomsky observes, however, that when this occurs it is most often the case that the agreement realized on the topmost verb is richer or 'more complete' than agreement realized on the lower verbs. He therefore proposed that arguments may value phi-features on lower verbs without getting their case checked so long as those sets of phi-features are not complete sets. When a subject values the features of the highest auxiliary, however, its case gets checked since this verb has complete agreement.

As Carstens (2001) points out, however, this system is clearly based on a tendency and not an absolute generalization. French, for instance, does not display complete phi-feature agreement on either verb in a CT sequence, having person and number on auxiliaries and number and gender on lower verbs:

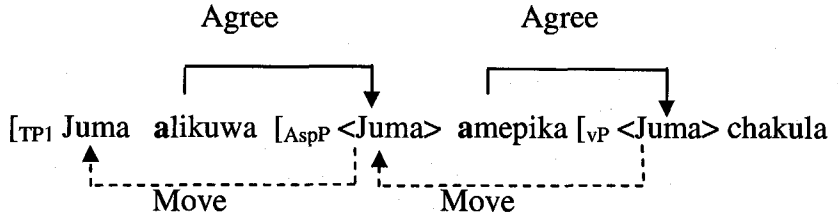
(159) Elle est morte. *French*
She be.3.SG dead.FEM.SG
'She is dead.'

Carstens discusses the possibility that case checking is instead a side effect of checking person or person + number features, but dismisses this possibility based on the Swahili

data in (158) above. Here both verbs display the exact same agreement; furthermore, this agreement can involve person and number (in the case of human subjects) or person and gender (in the case of non-human subjects). There is therefore no sense in which one verb has more complete agreement than the other and the phi-complete case checking system is doomed. Rather, she argues, we need a system in which agreement and case checking relations are divorced in the syntactic derivation.

While I agree with Carstens that agreement and case checking must be divorced (as I argued in section 3.4.3 above), her conclusion is based upon a particular analysis of CTCs, namely that they are raising constructions in which a subject raises through the specificer of each verb head on its way to its final A-position. Her analysis is presented in (160), an updated version of the analysis first put forth in Carstens and Kinyalolo (1989):

(160)



'Juma had cooked the food.'

The analysis is consistent with the well-known generalization that Agree relations in Bantu always require (or, in the framework at hand, result in) spec-head relations (Kinyalolo 1991, Baker 2002, among others). This view of agreement for CTCs, then, is quite narrowly cyclic: multiple instances of morphological agreement imply multiple Agree relations which imply multiple movements and spec-head relations.

I would like to suggest an alternative account. Given the system of one-to-many probe goal relations, it is possible that the phi-features of the lower verbs in CTCs are valued not by direct Agree relationships with the subject, but rather by Agree relationships with other verbs. This seems especially possible if we adopt the assumption, put forth by Hiraiwa (2005) and Chomsky (2005) that the features of T cannot become probes unless T is selected by C (what Chomsky refers to as 'T with tense'). In that case, lower verbs in CTCs may have uninterpretable phi-features, but these features do not act as probes since these verbs are not selected by C. Rather, they head aspectual projections ('T without tense,' in Chomsky's terms). The only probing phi-features in the derivation will be those in T selected by C. In (161) the probing phi-features of the auxiliary verb enter Match relations with both the lower verb and with the subject. Now, recall that Agree relations must in local. In (161), however, the phi-features of the aspectual verb are unvalued. They therefore cannot value the phi-features of the auxiliary nor can they create an intervention effect. Rather, an Agree relation is established between the auxiliary verb and the subject, the most local element with valued phi-features. The subject undergoes Move under Agree directly to SpecTP.[62]

(161) Match —— Agree——

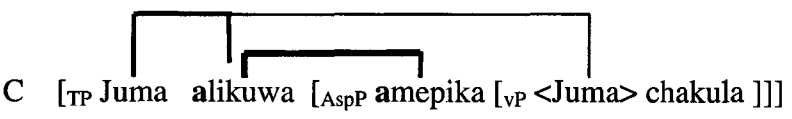
C [$_{TP}$ Juma alikuwa [$_{AspP}$ amepika [$_{vP}$ <Juma> chakula]]]

'Juma had cooked the food.'

[62] Alternatively, it may be that movement of the subject to SpecTP is parasitic on the Agree$_{T}$ relationship between the unvalued tense features of the subject and T. This must be the case if the unvalued phi-features

Once the features of the auxiliary are valued by the subject, I propose that the features of the aspectual verb of the CTC can be valued in a transitive manner by the now-valued features of T.

(162) Match —— Agree ▬▬



Notice that the Agree relation between the subject and the phi-features of T in (162) (a spec-head relation) is just as local as the relation between the heads T and Asp (a selection relation), so there is no conflict here with the idea that Agree only obtains with the most local Match relations. Morevoer, since the Agree relation between the phi-features of T and Asp does not obtain until after the subject raises to SpecTP, Asp is not an intervener for the relation between T and the subject.

Importantly, the competing analysis of Raising and Multiple Agree make distinct and testable predictions. Since the raising analysis relies on a cyclic view of agreement and multiple spec-head relations, we should find evidence that the subject has raised through SpecAspP in CTCs if this analysis is correct. On the other hand, in the Multiple Agree approach, movement of the subject through SpecAspP is impossible. This is because Move requires a prior probe-goal relation and in (162) no such relation exists since neither the features of Asp nor the features of the subject are probes. In the next two

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of the participle verb are taken to be a case of defective intervention. Both analyses seem to account for the same facts, however.

sections, I present two pieces of evidence from inversion in relative clauses that in fact there is no copy of the subject in SpecAspP.

3.5.1 Adjacency in Inversion

As we have seen, many Bantu languages, including Swahili, require inversion in some relative clause constructions:

(163) a. Juma a – li – pika chakula leo
1Juma 3SG-PST-cook 7food today
'Juma cooked food today.'

b. chakula a – li – cho – pika Juma leo
7food 3SG-PST-7REL-cook Juma today
'the food that Juma cooked today'

As I argued in section 3.2.5, the inversion in (163b) results from the fact that T-to-C movement has taken place over the subject in SpecTP, leaving the subject intervening between the two parts of the verb that must undergo PF Merger to form a cohesive phonological unit. Since the subject would prevent if it were pronounced in SpecTP, a lower copy of the subject is pronounced:

(164) $[_{CP}$ chakula ali–cho $[_{TP}$ <Juma> t_T $[_{AspP}$ pika $[_{vP}$ **Juma**...]]] *Swahili*

This same analysis should hold for CTCs as well. However, if the raising analysis is on the right track, the lower copy of the subject that gets pronounced should be the copy in SpecAspP since this is the next highest copy in the raising chain and nothing about the morphology or phonology of CTCs would prevent this. However, this is impossible. The subject cannot be pronounced in the position between the verbs in CTCs:

(165) *[$_{CP}$ **chakula alicho** [$_{TP}$ <Juma> t_T [$_{AuxP}$ **kuwa** [$_{AspP}$ **Juma amepika** [$_{vP}$ <Juma>]

(166) [$_{CP}$ **chakula alicho** [$_{TP}$ <Juma> t_T [$_{AuxP}$ **kuwa** [$_{AspP}$ **amepika** [$_{vP}$ **Juma** ...]

Rather, the verbs in the CTC sequence must remain adjacent and the subject must be pronounced following the enter verb sequence, in SpecvP. This is consistent with the view that there is no copy of the subject in SpecAspP as predicted by the Multiple Agree account. Since the Multiple Agree analysis accounts for the fact that verbs in a CTC sequence must remain adjacent under inversion and the Raising analysis cannot, the former must be preferred.

3.5.2 OVS with CTCs

We have seen that in some languages the verbs in relative clauses agree with the relativized NP rather than with the subject, the Type 4 relatives discussed in section 3.2.4 above. Interestingly, some of these languages also display CTCs with multiple agreement, such as Kirundi.

(167) abana **ba** – a - riko **ba**-soma igitabo *Kirundi*
2children 3PL-PST-be 3PL-read:IMP book (Ndayiragije 1999)
'the children were reading a book'

In relative clauses with inversion, we find not only the strict adjacency between verbs as seen for Swahili, but also that every verb in the sequence must agree with the relativized NP:

(168) a. igitabo **ki**-a-riko **ki**-soma abana *Kirundi*
7book 7SA-PST-be 7SA-read:IMP 2children
'the book that children were reading'

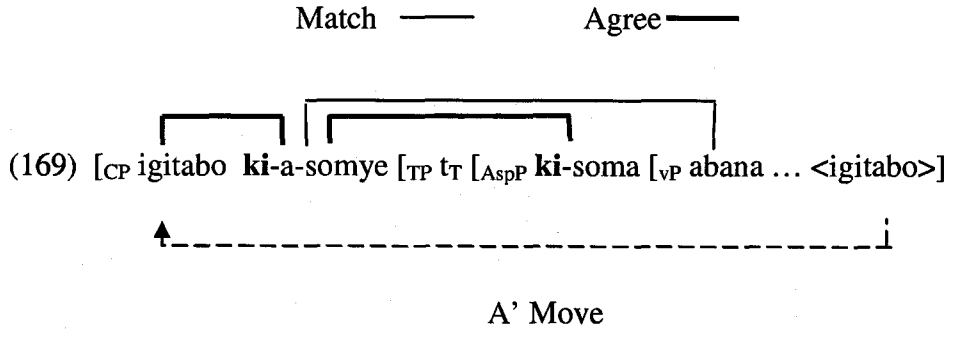
b. *igitabo **ki**-a-riko abana **ba**-soma

c. *igitabo **ki**-a-riko abana **ki**-soma

d. *igitabo **ki**-a-riko **ba**-soma abana

The only way to derive the facts in (168) via raising is to claim that the relativized NP moves cyclically via A-movement through the specifiers of SpecAsp and SpecTP before being extracted to SpecCP. However, recall that I argued extensively against this position in section 3.2.4, noting that it requires the stipulative move of requiring an instance of A-bar movement to be dependent upon instances of A-movement. Instead, I argued that

languages like Kirundi have an A-bar position that is occupied by subjects in SVO clauses and by the topicalized or relativized NP in OVS clauses. Under this A-bar account, however, there is no way for the subject in (168a) to enter a spec-head relation with the lower verb in the CT sequence since SpecAspP is not an A-bar position. I conclude that the subject does not enter a spec-head relation with the lower verb in (168a) and that a raising account cannot be correct. However, the Multiple Agree account proposed above accounts for these facts straightforwardly. The phi-features in C enter Match relations with the subject and the relative NP as well as with the lower verb in the CT sequence. The probe feature [Q] in C also enters a Match relation with the relative operator. Once the relative NP undergoes Move under Agree with [Q] to SpecCP, it enters an Agree relation with the phi-features in C, valuing them. The unvalued phi-features of the lower verb in the CT sequence are then valued transitively via a relation with the auxiliary verb.



To conclude, relative inversion facts present evidence against a raising analysis for Bantu CTCs as argued in Carstens and Kinyalolo (1989) and Carstens (2001). However, the

understanding of the syntactic relations Match and Agree adopted in this thesis have no problem accounting for the facts in a natural way.

3.6 Summary

In this chapter, I have argued that the principles governing agreement and inversion in Bantu relative clauses interact in a number of ways giving rise to substantial but limited variation. In particular, I have argued that constrained variation in the feature structure and projection of functional heads amongst Bantu languages interactions with the local character of the syntaction relation Agree to produce typological patterns of agreement and inversion in both the A and A-bar domains.

Chapter 4

Object Marking and Resumption

In sections 2.3 and 2.4, I briefly noted several points of variation amongst Bantu languages with regard to object marking and the presence of the so-called '/-o/ of reference.' In this chapter, I offer an understanding of object marking and resumption that explains this variation to a great degree.

4.1 OMs: Agreement Affixes or Pronominal Clitics?

All Bantu languages have in common the fact that they allow objects, like subjects, to be marked on the verb by markers whose features agree with the argument they reference. Unlike subject agreement, however, which is overwhelmingly obligatory[63], object marking is nearly always optional. While we will see a variety of variations amongst Bantu languages with regard to object marking, marking an object on the verb has one universal property in Bantu: it allows the full NP object to be dislocated in a number of positions (depending on the particular clause involved) or to be absent altogether. This is demonstrated below for Chichewa:

(170) a. Njuchi zi-na-luma alenje *Chichewa*
10bees 10SA-PST-bit 2hunters
'The bees bit the hunters.'

b. Njuchi zi – na – **wa** - luma, (alenje)

10bees 10SA-PST-**2OM**-bit 2hunters

'The bees bit them, (the hunters).'

The data above are adapted from Bresnan and Mchombo (1987) (henceforth B&M), the landmark work on object marking in Bantu languages.[64] Also examining subject marking, B&M also observe that subjects in Chichewa can be local or non-local, yeidling either SVO or VOS order. Based on this fact and others, they conclude that subject markers in Bantu are ambiguous between what they label grammatical agreement and anaphoric agreement. The latter they take to be synonymous with a pronominal status of the subject marker. Object markers, on the other hand, are not taken to be ambiguous. Rather, they always represent anaphoric agreement. In their words, 'the OM is unambiguously used for anaphoric interpretation. In other words, it is not an agreement marker at all, but an incorporated object pronoun.' This conclusion is based on a variety of evidence which I will review below.

First, B&M observe that the presence of the OM on the verb allows Bantu languages a much freer constituent order with regard to objects. While Chichewa adheres to a strict V-O word order without the object marker, when the object marker is present the object may appear in a number of positions:

[63] An exception seems to be Kiyaka where subject agreement can be omitted in certain contexts. See Kidima (1987) for some examples.

(171) Word Orders in Chichewa

(i)	Without OM:	SVO, VOS, *OVS, *VSO, *SOV, *OSV
(ii)	With OM:	SVO, VOS, OVS, VSO, SOV, OSV

Since the OM can license this kind of non-local behavior for the object, B&M conclude that OMs are anaphoric pronouns. A corollary conclusion is that when the object argument is present in the clause when the OM is marked on the verb, the full NP must have adjunct status. Again, quoting from B&M:

> "The OM is unambiguously used for anaphoric agreement. It is never a grammatical agreement marker, but is always an incorporated object pronoun. Therefore, from the uniqueness condition, it follows that an overt object NP can only be an argument of the verb when there is no OM on the verb. The apparent co-occurrence of an object NP with an OM is explained as the anaphoric binding of an object pronoun by a topic NP."

B&M back up this claim with interesting phonological evidence. In Chichewa, phrase-finality is correlated with a phenomenon of tonal retraction. In particular, final high tones retract to the pentultimate syllable. This yields a high tone if the penultimate syllable is already marked with high tone, or a rising tone if it is a low tone. In (172) below, the subjunctive suffix *–e* has a high tone when followed by an object of the verb; when

[64] Though work on the subject goes back much further. See Byarushengo, Hyman and Tenenbaum (1976) for some relevant early research.

occurring in isolation, however, tone retraction occurs, resulting in a rising tone on the penultimate syllable in (172b).

(172) a. Ndi-kufuna kuti ana anga [a-pitiriz-é phúnziro]
1SG-want COMP 2children 2my 3PL-continue-SBJ 5lesson
'I want my children to continue the lesson.'

b. Ndi-kufuna kuti [a – pitiřz –e] ana anga
1SG-want COMP 3PL-continue-SBJ 2children 2my
'I want my children to continue.'

Since the OM is a pronoun which occupies the object argument position of the verb, B&M predict that tone retraction should occur in case the NP object is marked by an OM on the verb, even if the NP appears to occur in its base position. This prediction is correct:

(173) Ndi - kufuna kuti anaanga [a – li – pitiřz – e] phúnziro.
1SG-want COMP 2children 2my 3PL-5OM-continue-SBJ 5lesson
'I want my children to continue the lesson.'

B&M then offer a syntactic argument for their position. Again, given that the OM is a pronoun in an argument position, a coreferential NP must be an adjunct. Since adjuncts do not occur within the VP, B&M predict that the NP must be outside of the VP. Double

object constructions offer evidence for this position. While canonical word order in Chichewa is S V IO DO, when the IO is marked on the verb by an OM, the preferred word order is S V DO IO. B&M take this as evidence that the IO is located outside of the VP in (175b):[65]

(174) a. Ndi-kufuna kuti [mu – pats – é alenje mphatso]
1SG - want COMP 2SG-give-SBJ 2hunters 3gift
'I want you to give the hunters a gift.'

b. Ndi-kufuna kuti [mu – wa – pats – é mphatso] alenje
1SG - want COMP 2SG-2OM-give-SBJ 3gift 2hunters
'I want you to give the hunters a gift.'

c. ??Ndi-kufuna kuti [mu – wa – pats – é alenje mphatso]
1SG - want COMP 2SG-2OM-give-SBJ 2hunters 3gift
'I want you to give the hunters a gift.'

I would like to note here that the example in (174c) is not completely ruled out by B&M and speakers I have consulted produced such examples spontaneously. B&M acknowledge this by their use of ?? for the example (and by footnote 12). If such examples are acceptable, they surely present a problem for B&M's account. A more general problem arises, however, when we consider the position of the indirect object in

[65] Tone retraction does not occur in (174b) since the DO remains within the VP.

the uncontroversially acceptable example in (174b). While B&M claim it is in an adjoined position, they do not show this. Rather, they only show that an object coreferential with the OM is located in a position outside of the VP. This is not unexpected under the account of phrase-final phonological phenomena taken by Buell (2005) and discussed in section 3.4.2 above. Given that phi-features in Bantu are typically linked to an EPP feature, the interpretation of the OM as an agreement morpheme could also explain the facts in (173-174) above if we assume that an agreed-with object moves to a position outside the VP.

That there is a contrast between an NP argument and an NP adjunct when the NP is marked on the verb is easily demonstrated using adverbials. In (175b) below, the NP occurs in clause-final position, following a temporal adverb. The dislocated adjunct status of the NP is clearly demonstrated by a clear intontational break in the prosodic of the utterance. In (175a), on the other hand, the NP precedes the adverb and no such intonational break occurs. Here, though the NP is not located within the VP, it is clearly not discloated, but is included in the clausal architecture.

(175) a. Ndi-na-funa kuti mu – wa – pats – é mphatso alenje dzulo
1SG-PST-want COMP 2SG-2OM-give-SBJ 3gift 2hunters yesterday
'I wanted you to give the hunters a gift.'

b. Ndi-na-funa kuti mu – wa – pats – é mphatso dzulo, alenje
I–PST-want COMP 2SG-2OM-give-SBJ 3gift yesterday 2hunters
'I wanted you to give them a gift, the hunters.'

The facts in (175) weaken B&M's account significantly. For (175a) at least, it is entirely possible that the OM is an agreement marker and that the object NP has simply risen out of the VP as a response to checking the phi-features associated with the OM. In fact, (175a) is evidence that the OM is an agreement marker by one of B&M's own diagnostics, locality. Anaphoric (pronominal) agreement relations, they claim, can be non-local while grammatical agreement relations must be local where the locality domain is taken to be the clause. In (175a) the object is a clause-mate with its coindexed OM, placing them in a local relation by B&M's definition. The OM must therefore be considered a grammatical agreement marker in (175a). At the very least, then, we must conclude that OMs in Chichewa, like subject markers, are ambiguous between anaphoric and grammatical agreement markers. Ths is the same conclusion reached by Keach (1995) for OMs in Swahili, based on the fact that OMs are obligatory with local animate object NPs in that language.

Before moving on, however, there is a conceptual issue here which must be addressed. In examining the behavior of the subject and object marker in Chichewa, B&M (quite naturally) take the behavior associated with argument marking to tell us something about the nature of those markers themselves (whether they are agreement markers or pronouns). Because the markers seem to display the behavior of both kinds of elements, they conclude that the markers are ambiguous; that they may be agreement markers or pronouns, depending upon the context. It is possible (and, I believe, desireable), however, to define these argument markers in a consistent manner and explain their differential behavior in another way. In the generative tradition, it has been assumed for some time that (in particular rich) agreement morphology is able to license a

null pronominal argument, known in the literature as little *pro*. Thus in the case of a null subject, it is assumed that *pro* is the subject of the clause, licensed in some way by agreement on the verb

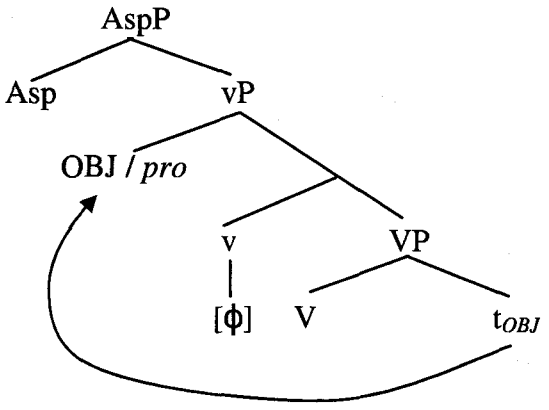
(176) *pro* a – li – soma kitabu *Swahili*

pro 3SG-PST-read 7book

'She/he read the book.'

If *pro* is taken to be available for subject agreement, there is no reason it should not be available for object agreement as well. Thus phi-features located in v could be checked by an overt NP or by *pro* if the NP is absent or in an adjoined position:

(177)

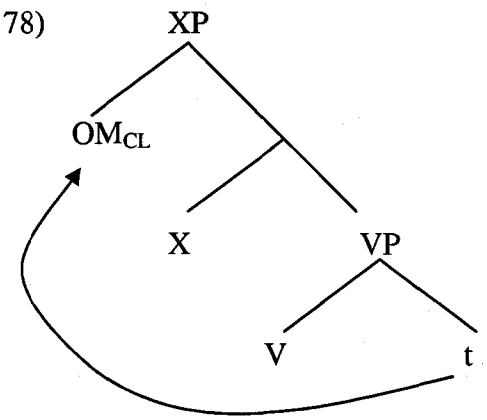


The fact that either the overt object or *pro* can check the phi-features in v in (177) allows us to explain the the fact that the presence of the OM on the verb results in the object either raising out of the VP (as in (175a) above) or being in an adjoined position (as in (175b) above) without positing an ambiguous nature of the OM itself. In (177), whether

the object NP is merged in its argument position or whether it binds *pro* from some adjoined or dislocated position, the OM is still a grammatical agreement marker.

The alternative view – that the OM is an incorporated pronominal – does not allow this kind of flexibility. This derivation is given in (178):

(178)



Here the OM occupies the internal argument position of the verb. For phonological reasons (because the OM is a clitic), the OM raises to a higher position where it may adjoin to the verb root. As B&M correctly note, since the OM occupies the argument position in (178), this position will be unavailable for an overt coreferential NP (by the Uniqueness Condition of LFG). Any such NP present in the utterance must therefore be in an adjoined position.

I have argued above that OMs in Chichewa must be taken to be agreement markers rather than pronominal clitics based on the fact that they can in fact co-occur with overt NPs in a local configuration. As Keach (1995) shows, the same is true for OMs in Swahili. Swahili requires object markers with animate objects, as discussed in section 2.3.3. Animate objects are required to occur in a local configuration with their

coreferential OMs and are not forced to have an anaphoric or topic-like reading. They may be indefinite and non-specific. They may even be question words, as illustrated in (179c):[66]

(179) a. *Bahati a – li - linda mtoto
Bahati 3SG-PST-care.for 1child
'Bahati cared for the child.'

b. Bahati a – li – m - linda mtoto
Bahati 3SG-PST-1OM-care.for 1child
'Bahati cared for the/a/some child.'

c. Bahati a – li – m – linda nani
Bahati 3SG-PST-1OM-care.for 1who
'Who did Bahati care for?'

For Swahili, then, it is clear that the object marker cannot be understood as a pronominal clitic with the structure in (178) since in certain contexts it is required to be in a local relation with an over NP object.[67] Yet the presenc of the OM can license a non-local occurrence (or non-occurrence) of the object NP which then takes on topichood status.

[66] B&M show that the OM in Chichewa correlates with a topic-like reading on a coindexed full NP and cannot be coindexed with wh-question words. In the present account, I taken this reflect differences in the conditions under which object agreement may/must be realized in Swahili and Chichewa.
[67] One could say that the OM is a pronoun when it is used anaphorically and an agreement marker when it is not, as Keach (1995) does. As discussed above, however, this is undesireable since it merely restates the problem, claiming two kinds of OMs, one for each kind of behavior.

(180) a. Kitabu, Hassan a-li-ki-soma

7book Hassan 3SG-PST-7OM-read

'The book, Hassan read it."

b. Hassan alienda dukani ili kununua **kitabu**. Halafu, alirudi nyumbani na ali**ki**soma.

'Hassan went to the store in order to buy a book. Afterwards, he returned home and he read it.'

The fact that the OM in Swahili can be licensed in a local relation or non-local relation with the overt NP and that it may be associated with pronominal semantics but needn't be leads us to the conclusion that OMs are agreement markers in Swahili and to the structure in (177).

While we have seen evidence that OMs are grammatical object agreement markers in Chichewa and Swahili, a broader examination of object marking in Bantu reveals that some languages do indeed display the kind of behavior we expect if OMs are pronominals. Recall B&M's claims that as pronouns OMs occupy an argument position, making that position unavailable for a full object NP. We therefore expect the OM and full NP to be in complementary distribution: whenever the OM is present on the verb, the full NP must be external to the clause or absent altogether. Languages like Dzamba, Kirundi, and Lingala display this kind of behavior. Unlike Chichewa, Swahili and Zulu, when an OM is present on the verb, the full NP may not occur anywhere in the clause

structure. It may only occur if it is dislocated, separated from the rest of the clause by a strong intonational break:

(181) a. Munganga a-kumb-áki mwana lelo *Lingala*
1doctor 3SG-carry-PST 1child today
'The doctor carried the child today.'

b. Munganga a-(*mo)-kumb-áki mwana lelo
1doctor 3SG-1OM-carry-PST 1child today
'The doctor carried the child today.'

c. Munganga a-mo-kumb-áki lelo
1doctor 3SG-1OM-carry-PST today
'The doctor carried him/her today.'

To reiterate, languages like Swahili, Chichewa, and Zulu do allow an overt NP to cooccur with an object marker on the verb:[68]

(182) a. Juma a – li – ki – soma kitabu jana *Swahili*
Juma 3SG-PST-7OM-read book yesterday
'Juma read a book yesterday.'

[68] As noted by B&M, in Chichewa (and in some dialects of Zulu) the order V DO IO is preferred when object agreement is with the indirect object. See the discussion in this section for evidence that this word order shift is not synonymous with dislocation.

b. Mu – na – wa – patsa mphatso alenje dzulo *Chichewa*

2SG-PST-2OM-give 9gift 2hunters yesterday

'You gave the hunters a gift yesterday.'

c. Abafana ba – si – dlal – ela i-salukazi ibhola *Zulu*

2children 3PL-5OM-ball-APP 5old.woman 9ball

'The children played ball for the old woman'

Based on the reasoning above, the conclusion seems clear. While it is true that OMs are pronominal clitics in some Bantu languages (such as those in (181)), it is also true that OMs are agreement affixes in other Bantu languages (such as those in (182)). This dichotomous view is not new and was in fact argued for by Bergvall (1985) in a comparison of Kikuyu, which is a pronoun-type language, and Swahili, which we have seen is an agreement-type language.

One might question whether it is desirous to have two divergent analyses to account for the morphosyntax of OMs in Bantu since across these languages OMs display strong morphological similarity and appear to occupy the same position in every instance. My reply is that though the two analyses in (181) and (182) lead to quite distinct syntactic possibilities, from the standpoint of language change they are only minimally different. For over a century historical linguists have noted the connection between pronominal markers and agreement affixes, the dominant view being that the latter have developed from the former through grammaticalization. Structurally, we can think of this as the

reanalysis of a pronominal argument to a functional morpheme. Given that there are between 400 and 600 different Bantu languages, then, it is not surprising to find that languages are at different stages in the grammaticalization process. Indeed, given the geographical breadth and the number of languages involved, it would be quite surprising if both pronominal and agreement type languages *did not* both exist in the Bantu family. I therefore take the possibility of two distinct structures for OMs in Bantu as entirely plausible, and given that the structures I have proposed fully account for the presence and/or lack of OM-NP cooccurrence restrictions in Bantu, I accept them as the correct approach.

The dichotomy drawn for Bantu above finds support in geographic distrubtion. Surveying the literature for twenty-three Bantu languages, one finds that pronoun-type languages are largely spoken in central and central eastern Africa while agreement-type languages are spoken in south eastern and southern Africa. Examining the specific property of whether a language allows, disallows, or requires an OM in object relatives, a survey of twenty three Bantu languages produced the distribution below:

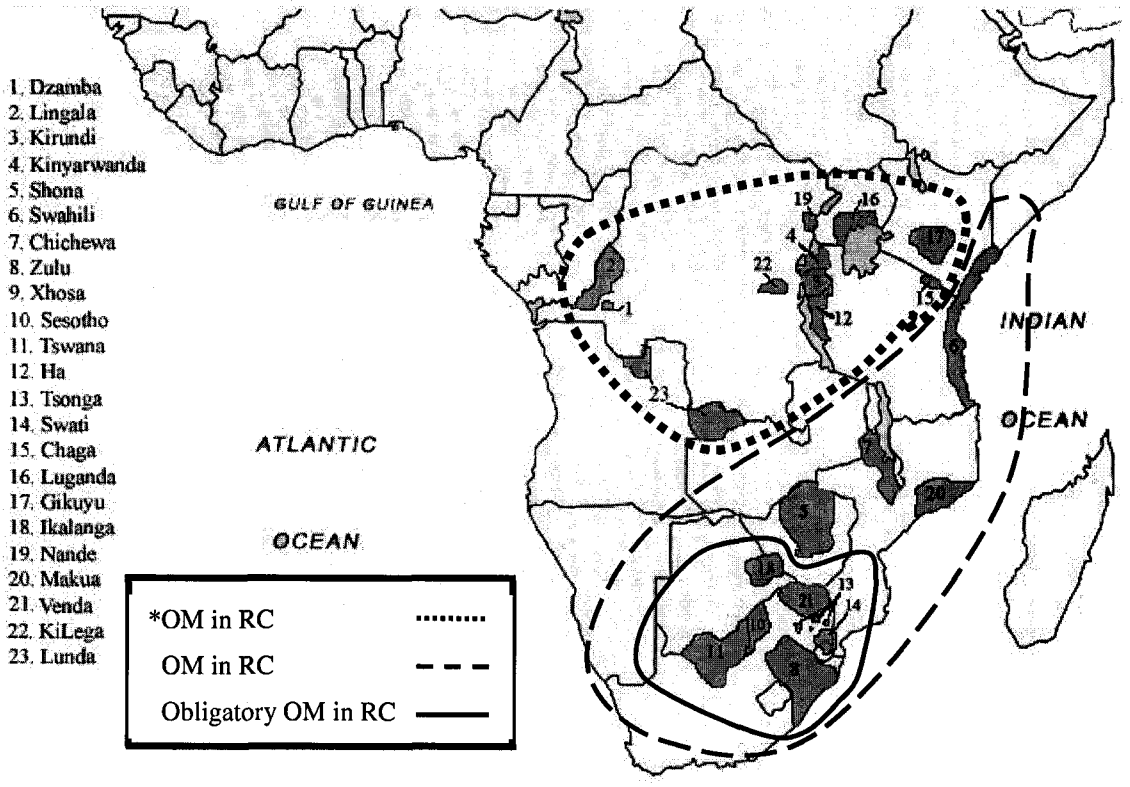


Figure 1: Object Marking in Bantu Object Relatives

4.2 Supporting Evidence

I have argued above that OMs are agreement markers in some Bantu languages (Swahili, Chichewa, Zulu), but pronominal clitics in others (Dzamba, Lingala, Kirundi). If this is true, then we expect to see certain systematic differences in how object arguments and OMs behave in these two kinds of languages. In this section, I explore several empirical generalizations concerning variation across Bantu languages and argue that these differences are explained by the singular distinction argued for in section 4.1 with regard to the nature of object marking.

4.2.1 Obligatory Object Marking

One typical property of agreement is that it is can be obligatory. This is certainly the case for subject agreement in the Bantu languages: whether an overt subject NP is present or absent, subject agreement morphology must be present on finite verb forms. Indeed, subject agreement is overwhelmingly obligatory for nearly all of the natural languages that employ it. Object agreement, on the other hand, tends to vary cross-linguistically. While in some languages it is always present, in others it is only obligatory in well-defined contexts (see Comrie 1981, Croft 1988, 1990, Woolford 1999).

If indeed OMs in some Bantu languages are truly agreement markers, then we should find at least some contexts where this marking is obligatory. Moreover, such obligatory marking should only occur in languages which allow OM-NP co-occurrence since this is the criteria from section 4.1 on which we diagnosed the OM as an agreement marker.

As noted above, the most discussed example of obligatory object marking in Bantu languages is the case of Swahili, a language which does indeed allow OM-NP co-occurrence. In Swahili, animate objects obligatorily trigger the presence of an OM on the verb. In (183), the absence of the object marker results in ungrammaticality.

(183) a. *Bahati a – li - linda mtoto
Bahati 3SG-PST-care.for child
'Bahati cared for the child.'

b. Bahati a – li – m - linda mtoto

Bahati 3SG-PST-1OM-care.for 1child

'Bahati cared for the/a/some child.'

While the animacy-triggered presence of an OM on the verb in (183b) seems to be rare in Bantu (though it has been attested for Makua; see Stucky (1983)), it is quite common for NPs with a certain semantic import to trigger obligatory OM marking. The exact nature of NP semantics required has been the subject of much discussion. Grammars have often claimed the relevant property to be definiteness (Driever 1976; Hinnebusch 1979; Wilson 1970); other work has claimed it to be referentiality. However, instances can be found where elements that are both definite and referential do not trigger the presence of the OM in specific languages. I do not have time for a full investigation of these facts here (see Allan (1983), Seidl and Dimitriadis (1997), and references therein for some discussion). Rather, I will follow Allan's (1983) arguments that the relevant property is "giveness" or "topicality," however that is to be precisely defined. The effect can be seen in (184) for Swahili.

(184) a. Juma a – li - soma kitabu jana *Swahili*

Juma 3SG-PST-read 7book yesterday

'Juma read a/the book yesterday.'

b. Juma a – li – ki – soma kitabu jana

'Juma read *a/the book yesterday.'

Again, reference can be made to Bresnan and Mchombo (1987) where this fact was observed, though in quite different terms. B&M remarked that marking the object on the verb with an OM gave the object the functional status of a topic. But as discussed in the previous section, this functional characterization has led to unjustified syntactic assumptions as many authors have claimed that when an object is marked on the verb, it is necessarily dislocated or in an adjoined position. As I demonstrated in the previous section, however, this is not the case. A further argument for this position not noted above comes from ditransitives in Swahili where word order is typically V IO DO whether the IO is marked on the verb or not, even with non-animates where OM-NP co-occurrence correlates with a 'givennes' reading on the object NP. If indeed being marked on the verb implied syntactic dislocation or adjunction, one would expect the only possible order to be that in (185b).

(185) a. Juma a – li – i - pa dunia mtoto *Swahili*
Juma 3SG-PST-9OM-give 9world 1child
'Juma gave the world a child.'

b. ?Juma a – li – i - pa mtoto dunia
Juma 3SG-PST-9OM-give 1child 9world
'Juma gave the world a child.'

Together with the arguments from the previous section, this demonstrates that OM marking on the verb of a [+given] object NP is independent of the NP's position in the

clause. To put it another way, it is not the case that the presence of the OM gives the object NP its given semantics; rather, it is the given semantics of the object NP that triggers the presence of OM on the verb.

4.2.2 Multiple Object Marking

The assumption that OMs are pronominal clitics in some Bantu languages, but agreement markers in others makes another prediction with regard to multiple object marking. Cross-linguistically, it is quite rare for languages to allow for object agreement with more than one object; that is, languages which have object agreement tend to allow it with only one object. On the other hand, languages with pronominal clitics often allow more than one object to be replaced by a clitic in a given clause. For example, in Spanish both the dative and accusative object in a ditransitive construction may be clitics that have raised to precede the verb:

(186) Juan se lo dio *Spanish*
Juan 3-DAT 3-ACC gave-3SG
'Juan gave it to her.'

Recall again that the criterium for distinguishing OM pronoun languages from OM agreement languages in Bantu is OM-NP cooccurrence. Given the cross-linguistic generalizations just discussed, we expect that at least some languages that disallow OM-NP co-occurrence should allow more than one object to be expressed by a pronominal clitic, resulting in multiple OMs on the verb. Moreover, we do not expect languages that

do not allow co-occurrence to allow multiple object markers. Both predictions seem to be born out. Languages such as Ha, Chaga and Kinyarwanda which allow multiple object marking do not allow co-occurrence.

(187) a. Ya – wu – mú – haa – ye *Ha*

3SG.PST-3OM-1OM-give-PERF

'She gave it to him.' (Harjula 2004)

b. Mangí n – á – lé – í – m – zrika *Chaga*

1chief FOC-1SG-PST-9OM-1OM-send

'The chief sent him with it.' (Moshi 1998)

On the other hand, languages like Chichewa, Swahili, Zulu and other languages which allow co-occurrence do not allow more than one OM to be marked on the verb:

(188) a. *Juma a – li – m – ki – pikia *Swahili*

Juma 3SG-PST-1OM-7OM-cook.for

'Juma cooked it for him/her.'

b. *Mu-na-wa-i-patsa dzulo *Chichewa*

2SG-PST-2OM-9OM-give yesterday

'You gave them it yesterday.'

c. *Abafana ba-si-i-dlal-ela *Zulu*

children 3PL-5OM-9OM-ball-APP

'The children played it for him/her.'

As stated so far, these predictions and conclusions are not absolute. After all, it is just a cross-linguistic *tendency* for languages with clitics to allow more than one and for languages with object agreement to be restricted to one affix. There are exceptions to both. In fact, many of the Bantu languages that disallow OM-NP co-occurrence do not allow more than one OM on the verb. Lingala serves as an example:

(189) *Munganga a – e – mo – pes – aki *Lingala*

1doctor 3SG-9OM-1OM-give-PST

'The doctor gave it to her.'

These examples do not present a problem for the current approach, however, since the restriction to one OM in (189) could be due to other factors. Perhaps, for instance, the structural position to which complement clitics raise in these Bantu languages could be restricted to a single position. In fact, there is some evidence that this is the case. In many languages, either object in a double object construction may be expressed as a clitic and occur in the OM slot on the verb; this is the case for Lingala as shown in (190);

(190) a. Munganga a – pes – aki Poso nkisi. *Lingala*

1doctor 3SG-give-PST 1Poso 9medicine

'The doctor gave Poso medicine.'

b. Mungana a – mo – pes – aki nkisi

1doctor 3SG-1OM-give-PST 9medicine

'The doctor gave her medicine.'

c. Munganga a – e – pes – aki Poso

1doctor 3SG-9OM-give-PST 1Poso

'The doctor gave it to Poso.'

However, both objects may not occur as clitics in the same construction. If both are to be expressed as pronominals, one must be expressed as a full pronoun in argument position while the other can be marked on the verb:

(191) a. Munganga a – e – pes – aki ye *Lingala*

1doctor 3SG-9OM-give-PST her

'The doctor gave it to her.'

b. Munganga a – mo – pes – aki eye

1doctor 3SG-1OM-give-PST 9DEM

'The doctor gave this to her.'

I take this as evidence that the ban against multiple object marking in languages like Lingala is merely a morphological restriction. From a historical perspective, such a restriction can be seen as an intermediate step in the grammaticalization of pronominal clitics to agreement markers; that is, since languages tend to allow only one object to agree with the verb, it may be that limiting OMs to one is what allows children to reanalyze this marker as object agreement rather than as a pronominal clitic.

On the other side of things, it is logically possible that some languages could allow more than one complement to be marked by agreement affix OMs on the verb since there are indeed some languages in the world which appear to have multiple object agreement, such as Basque. That is, there could be languages that allow multiple object marking and also allow OM-NP cooccurrence. However, I know of no such Bantu language. If it is true that no such languages exist in Bantu, then the current approach does make an absolute prediction: every language that allows multiple OMs to be marked on the verb should disallow OM-NP cooccurrence. To my knowledge, this prediction is born out.

4.2.3 Object Marking in Relatives

As noted in section 2.2, there is a three-way contrast in Bantu languages as to whether or not they require or allow object marking in relative contexts. For the moment, I would like to reduce this contrast to a simpler dichotomy between languages that do not allow OMs at all in relative clauses (Lingala, Dzamba, Kirundi, e.g.) and those that do allow them (whether obligatorily like Zulu or optionally like Swahili and Chichewa). Representative examples appear below:

(192) a. mukanda mú – (*mu)- tind - aki Poso *Lingala*

5letter 5AGR-5OM-send-PST 1Poso

'the letter that Poso sent'

b. kitabu amba-cho Juma a-li-(ki)-soma jana *Swahili*

7book *amba*-7REL Juma 3SG-PST-7OM-read yesterday

'the book that Juma read yesterday'

c. incwadi isitshudeni **a**-isi-*(yi)-funda-yo *Zulu*

9letter 5student REL-5SA-9OM-read-RS

'the letter that the student is reading'

Notice that the grouping of languages here seems to be precisely the same as that made above for OM agreement and OM pronoun languages. The correlation is quite strong: languages in which OMs are agreement markers are those that allow or require OM marking in relatives; languages in which OMs are pronominals are those which do not allow them.

This empirical correlation makes intuitive sense based on the same logic from section 4.1: if OMs are pronouns in languages like Dzamba and Kirundi, we do not expect them to be present when a full argument NP is present. In the examples in (192), this argument is present, though it has been extracted to become the head NP of the relative clause. If OMs are agreement markers in languages like Zulu, Swahili, and Chichewa, on the other hand, we do expect to see some examples of co-occurrence.

This logic, though sound, is quite controversial. Throughout the literature, the assumption that OMs in Bantu are pronominals has been naturally carried over into the domain of relative clauses. Thus it is often claimed that OMs in object relative clauses such as those in (192) are resumptive pronouns resuming the relative head (see Mchombo 2005, e.g.).[69] The variation amongst Bantu languages, then, would boil down to whether or not those languages ban, require or optionally allow resumption. Zulu, for instance, would be a language with obligatory resumption while Swahili would allow it only optionally and Lingala would ban it altogether. Note that were this the case, the presence or absence of OMs in relative clauses should not necessarily correlate with facts about OM-NP co-occurrence since there is no obvious way that resumption and OM-NP co-occurrence are connected. Yet as I showed above there is such a correlation: languages with OMs in relative clauses are those which allow OM-NP co-occurrence, and languages that disallow OM-NP co-occurrence do not allow OMs in object relatives. These correlations make sense under the current understanding, however, since in both declarative and relative clauses the OMs are agreement markers and not pronominals in Zulu and Chichewa while OMs in Lingala are pronouns.

That OMs in relative clauses should be understood as agreement markers and not as resumptive pronouns is particularly easy to show for Swahili based on the same arguments used in section 4.1. If indeed OMs are agreement markers, we expect them to be obligatory with animate objects even when those objects have been extracted for relativization just as OMs are obligatory for animate objects in non-relatives. This is indeed the case:

[69] Though this assumption is widespread, to my knowledge it has never been explicitly argued that OMs in

(193) watoto amba - o Juma a – li - *(wa) – ona *Swahili*

2children amba-2REL Juma 3SG-PST-2OM-see

'the children that Juma saw'

Though many languages allow resumptive pronouns optionally (see Sells 1984; Boeckx 2003a for extensive discussion), I know of no cases where resumption is sensitive to the animacy of its antecedent. Agreement, however, is often sensitive to such features. I therefore conclude that the OMs in languages like Swahili as well as the other languages that allow them in (192) are agreement markers and not resumptive pronouns.

While the conclusions from section 4.1 allow us to explain why some languages do not allow OMs in relative clauses while others allow them, it does not explain why OMs should sometimes be required and other times optional in the latter group of languages. Part of this question can be explained based on the reasoning in section 4.1, however. Recall that we saw that languages that allow OM-NP cooccurrence do so in certain semantic contexts (disregarding the cases of Swahili animate objects for now). That is, OMs only co-occur with NPs that have the feature [+given] where their content is presupposed from previous discourse or context. I argued in section 4.1 that it is this feature of these NPs that triggers object agreement on the verb. We therefore, expect this semantic triggering effect to also be responsible for the apparent optionality of OMs in relative clauses in languages like Swahili and Chichewa. This is indeed the case: the

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relative clauses are resumptive pronouns.

presence of the OM in cases like (192) correlates with a "given" semantics for the relativized NP as seen in (194b) below.

(194) a. kitabu amba - cho Juma a – li – soma *Swahili*

7book amba-7REL Juma 3SG-PST-read

'the book that Juma read'

b. kitabu amba - cho Juma a – li – ki – soma

7book amba-7REL Juma 3SG-PST-7OM-read

'the book (we were discussing) that Juma read'

Thus an understanding of OMs as agreement markers in these languages, together with an understanding of what kinds of object NPs may trigger agreement, fully explains their obligatoriness with "given" object NPs (as well as with animate NPs in Swahili). It does not readily explain, however, why OM agreement markers should be obligatory in languages like Zulu:

(195) incwadi isitshudeni a-isi-*(yi)-funda-yo *Zulu*

9letter 5student REL-5SA-9OM-read-RS

'the letter that the student is reading'

In declarative sentences, Zulu is just like Chichewa. It has obligatory object agreement with given NPs. Why, then, should it differ from Chichewa in requiring OMs in relative

clauses regardless of the given semantics of the relativized NP? An answer to this puzzle is forthcoming, but requires a novel understanding of resumption in these languages. I return to this issue in section 4.3.2.3.

Bantu object marking and clitics in Romance. The debate engaged in this section about the status of Bantu object markers has much in common similar debates about how to characterize the use of clitics in various Romance languages. Given the vast body of literature on the subject, it is impossible to fully discuss the Romance data here. Instead, I will offer only a brief comparison.

Above, it was argued that a crucial point of differentiation between Bantu languages is that in some languages object markers may not co-occur with the NPs they index, but in other languages they may. I have taken this to mean that in the former languages object markers are pronominal clitics while in the latter they are agreement morphemes. A similar distinction would seem to be apt for the Romance languages. It is well-known that some Romance languages, such as French, do not allow an object NP and a coindexed clitic to co-occur. It would thus seem that French is like Kirundi, Dzamba, and Lingala in employing clitics with pronominal status. Other Romance languages, however, would seem to be more like Swahili, Chichewa, and Zulu in allowing an object clitic to co-occur with a full NP. Spanish is such a language (data from Suñer 1988). In (196) both the NP *la niña* and the dative clitic *le* are present in the clause:

(196) Le ofrecí ayuda a la niña. *Spanish*

to.her 1SG.PST.offer help *a* the girl

'I offered help to the girl.'

There are two important issues that arise in the discussion of clitic doubling in Romance. One concerns the distribution of doubled clitics and the semantics of the coreferential NP. As discussed in Jaeggli (1982) and Suñer (1988), while clitic doubling with indirect objects occurs quite freely in most Spanish dialects, clitic doubling with direct objects is much more restricted. In particular, it seems to occur only with objects that are [+animate, +specific].

(197) a. No (*lo) oyeron a ningún ladrón [+anim, -spec]

NEG 3SG.M 3PL.PST.hear *a* any thief

'They didn't hear any thieves.'

b. (*la) compramos (a) esa novela [-anim, +spec]

3SG.F 1PL.PST.buy a that novel

'We bought that novel.'

c. La oían a Paca / a la gata. [+anim, +spec]

3SG.F 3PL.PST.listen *a* Paca / *a* the cat

'They listened to Paca / the cat.'

Recall from the discussion above, that features of specificity and animacy are also relevant for object marking in the languages that allow co-occurrence. Swahili, for instance, requires object marking with animate objects. Both Swahili and Chichewa optionally employ object markers to mark specificity/definiteness:

(198) a. Bahati a – li – *(m) - linda mtoto *Swahili*
Bahati 3SG-PST-1OM-care.for 1child
'Bahati cared for the/a/some child.'

b. Juma a – li – soma kitabu jana
Juma 3SG-PST-read 7book yesterday
'Juma read a/the book yesterday.'

c. Juma a – li – ki – soma kitabu jana
Juma 3SG-PST-7OM-read 7book yesterday
'Juma read *a/the book yesterday.'

Given that they are sensitive to the same kinds of feature, Bantu object marking in languages that allow co-occurrence and clitic doubling in Romance are likely two instances of the same phenomenon. In this thesis, I have argued for Bantu that object markers are agreement affixes. The same may be true for clitics in Romance languages that allow clitic doubling. Indeed, this is the position of Suñer (1988) who argues that clitics in Spanish are inflections generated as part of the verb. However, Suñer also takes

clitics to be lexical elements whose features for animacy, gender, specificity, number, and person are specified in the lexicon. Once clitics enter the derivation as inflections, they are licensed as long as their lexically specified features match with those of the coindex NP in argument position (Suñer's Matching Principle). Suñer derives the fact that nearly all indirect objects may be clitic-doubled whereas only [+anim, +spec] direct objects may be doubled from the assumption that direct object clitics are inherently specific as [+spec] while indirect object clitics are not. Thus, when a direct objects is [-specific], a clash of features results in violation of the Matching Principle.

The present work is more or less compatible with this view, though I take agreement markers to be the spell-out of unvalued sets of phi-features which I assume cannot be specified in the lexicon. Under this view, the source of differentiation in object marking (be it in Romance or Bantu) must be located elsewhere. One possibility is to place conditions on the spell-out of object-related phi-features. That is, while phi-features may always be present and valued in v, they are only spelled-out when the agreed-with object meets certain conditions (such as being animate, specific, or a combination of both). Besides these semantic restrictions, however, there are other facts in the Romance clitic-doubling data that make a straightforward comparison between Romance and Bantu less simple. While in Bantu the morphological form of an agreed-with object is no different than that of a non-agreeing object, in Romance a doubled object typically occurs in the context of the marker *a*. This is true in all of the Spanish examples given above. The status and function of this marker in clitic-doubling constructions has been the source of much debate. Many have taken it to be a dative marker or preposition, and indeed it is homophonous with the preposition meaning 'to.' This fact led Aoun (1981) to

argue that the *a* marker signals the non-argument status of the NP following it. However, as Jaeggli (1982) and Suñer (1988) have pointed out, when the indirect object is a doubled *a*-phrase it is freely extractable. Typically non-arguments are not extractable.

(199) ¿A quién le regalaron un auto t? *Spanish*
a who it.DAT 3PL.PST.give a car
'Who did they give a car to?'

A second line of argument (Jaeggli 1982, 1986) has taken doubled clitics to require case. Therefore, when they are present in the clause a co-occurring full NP must receive case another way, namely from the *a* marker. This explains why the *a* marker always seems to accompany clitic doubling. As pointed out by Suñer, however, in some dialects there are contexts where clitic doubling is not accompanied by an *a* marker preceding its coindexed NP. These contexts usually involve the doubling of non-animate NPs:

(200) Yo la tenía prevista esta muerte *Spanish*
I 3SG.F 1SG.PERF.have premonition this death
'I had foreseen this death.'

Morevoer, *a* marking is not confined to contexts where its NP complement is clitc-doubled. In (201) the indirect object *a Mario* is the doubled NP, but the direct object *Josefa* can also be *a*-marked.

(201) Le presentaron (a) Josefa a Mario. *Spanish*

3SG.DAT 3PL.PST.introduce *a* Josefa *a* Mario

'They introduced Josefa to Mario.'

Based on these facts and others, Suñer concludes that *a* is not a case marker and that doubled clitics do not absorb case. Rather, she postulates that *a* is a marker of animacy and specificity. It is therefore the accident of a minor conspiracy that clitic doubling and *a*-marking of objects correlate so often: both *a*-marking and clitic doubling are sensitive to the same semantic features of the argument NP (animacy and specificity), though the two morphosyntactic processes are in principles independent. It is therefore possible to maintain the view that doubled clitics are agreement markers and that *a*-marked NPs are not obliquely marked with regard to case or theta-marking.

While Swahili and Chichewa have no marker analogous to the *a* marker found in Spanish doubling constructions, something similar is found in Bantu more generally, namely the augment. Augments are typically single-vowel prefixes that precede the noun class prefix in many Bantu languages and function somewhat like determiners in English, marking definiteness and/or specificity. Specifically, their absence signals a non-specific reading on the NP as seen in Zulu example below:

(202) a. A-ngi-bon-anga u-muntu *Zulu*

NEG-1SG-see 1AUG-1person

'I didn't see the person.'

b. A-ngi-bon-anga muntu

NEG-1SG-see 1person

'I didn't see anyone/a single person.'

Interestingly, it is impossible for an unaugmented NP to co-occur with an object marker. If the NP is to come with an object marker, it must have the augment. In that case, a non-specific reading is ruled out.

(203) a. *A-ngi-m-bon-anga muntu *Zulu*

NEG-1SG-1OM-see 1person

'I didn't see anyone/a single person.'

b. A-ngi-m-bon-anga u-muntu

NEG-1SG-1OM-see 1AUG-1person

'I didn't see the person.'

While important distributional and morphological differences exist, an analogy can be drawn between augments in Bantu and the *a* marker in Spanish based on the fact that both kinds of markers have a function outside of the context of object marking/clitic doubling. It so happens, however, that the semantic factors that determine the presence of the augment and *a* marker are also relevant for the phenomenon of object marking/clitic doubling leading to their occurrence in those contexts as well.

In summary, an analogy between variation in Bantu object marking and clitic doubling in romance is possible and inviting. Though more in-depth analysis is required, the analysis presented here for Bantu object marking suggests that an agreement analysis for clitic-doubling languages in Romance is a promising avenue for explanation.

4.3 Resumption and the /-o/ of reference

Above I argued that the presence of OMs in relative contexts does not constitute a case of resumption. In this section, however, I will argue that many Bantu languages do indeed have resumption, though it has never been properly identified as such. In the relative clauses of many Bantu languages, one finds relative markers homophonous with what is known in the literature as the "/-o/ of reference." It typically appears as a suffix on the verb form and is often labeled a 'relative suffix' in the specialized literature on Chichewa and Zulu and a 'relative marker' or complementizer in the literature on Swahili. Here I will begin glossing it consistently as RS (= relative suffix) for convenience:

(204) a. Kitabu a – soma – **cho** Juma *Swahili*
7book 3SG-read-**7RS** Juma
'the book that Juma reads.'

b. Mbuzi mu – ku – zi – funa – **zo** *Chichewa*
10goats 2SG-PRES-10OM-want-**10RS**
'the goats that you want'

c. Inja umfana o – wa – yi – thenga - (**yo**) in-hle *Zulu*

9dog 1boy REL-1SA-9OM-buy-**RS** 9SA-good

'The dog which the boy bought is good.'

The /-o/ of reference does not solely occur in relative contexts, however. In fact, it is commonly employed to form pronominals for non-human noun classes. This is illustrated below for Swahili. In (205a) the possessed object is *kitabu*, a noun of class seven. In (205b) the object is replaced by the corresponding pronominal *cho*, composed of the /-o/ of reference and a marker expressing agreement with *kitabu*. (205) provides other examples of /-o/ being employed as a pronominal element:

(205) a. Ni – na kitabu *Swahili*

1SG-have 7book

'I have a book"

b. Ni – na – cho

1SG-have-7PRO

'I have it.'

(206) a. Watoto wa – li – cheza na – yo *Swahili*

2children 3PL-PST-play with-9PRO

'The children played with it.'

b. Ni – li – piga mlango kwa-yo.

1SG-PST-hit 5door with-9PRO

'I hit the door with it.'

That these /-o/ markers are pronominals is also betrayed morphologically in Swahili. For human nominals, the –o marker is not used. Rather, a reduced form of full personal pronouns are used. As (207) illustrates, the full third person singular pronoun *yeye* is reduced to the pronominal clitic *ye*.

(207) a. Ni – na yeye *Swahili*

1SG-have him/her

'I have him/her.'

b. Ni – na - ye

1SG-have-3SG.PRO

'I have him/her.'

Returning to relative contexts, note that for extracted NPs that are third person animates, the reduced form of the third person personal pronoun is used here as well:

(208) mtoto a – li – **ye** – m – linda Juma *Swahili*

1child 3SG-PST-**1RS**-1OM-care.for Juma

'the child that Juma cared for'

Beyond simply being homophonous, it can be demonstrated that these markers are clitics when they occur in relative contexts (rather than being inflectional verbal suffix). Unlike verbal affixes like the applicative or causatives, the markers in (204) all appear after the so-called "final vowel" of the verb. As Mchombo (in press) extensively discusses, this is characteristic of verbal clitics. He gives other examples of clitics in Chichewa that parallel the distribution of the /-o/ marker in (204), such as adverbial elements:

(209) a. Mkanga u – ku – thyol – a – **nso** mipando *Chichewa*
3lion 3SG-PRES-break-FV-**too** 4chairs
'The lion is breaking the chairs, too.'

b. Mkanga u – ku – thyol – a – **be** mipando
3lion 3SG-PRES-break-FV-**still** 4chairs
'The lion is still breaking the chairs.'

Like *nso* and *be* in (209), the /-o/ markers in (204) occur outside the morphological domain of the verb stem.[70] They are syntactically independent, but phonologically-dependent clitics. They are thus not a part of the verbal morphology like the prefixal relative markers discussed in Chapter 2 for languages like Shona and Zulu.

[70] The facts for Swahili where the –o marker appears to be an infix on the verb or suffix on the complementizer *amba* are more complicated. Yet it can be shown that even in these cases the –o marker is a suffix on a verbal element. See Henderson (2003b) for extensive discussion.

The homophony and clitic-status of –o markers in both relative and non-relative contexts cannot be ignored. Since these markers clearly have the function and distribution of pronouns in non-relative contexts, it is natural to assume that they are pronouns in relative contexts as well. I propose that these markers are in fact resumptive pronouns, though to my knowledge they have never been identified as such. However, mere morpho-phonological similarity is not conclusive. Rather, it must be shown that these markers have a function and distribution similar to those described for resumptive pronouns in other languages. Unforunately, this task proves somewhat difficult to address, for while resumption has been studied extensively for a variety of languages, a uniform characterization of its distribution is still lacking. Resumption seems to play different roles in different contexts in different languages, making it unclear that it is in fact a uniform phenomenon (cf. Sell 1984; Boeckx 2003a). The best I can do here, therefore, is to demonstrate that –o pronominal markers in Bantu have a similar distribution and function as that described for resumptive pronouns in at least some specific languages and contexts.

4.3.1 Characteristics of Resumption

The majority of work on resumption has focused on a single chracteristic of this phenomenon, namely its ability to rescue derivations from island violations. In many languages, an otherwise illicit extraction from an island is made licit if a resumptive pronoun appears in the extraction gap within the island. An example appears below from Lebanese Arabic as discussed by Aoun and Choueiri (1999). In (210a) wh-movement takes place from within an island, leaving a gap. The sentence is ungrammatical. When a

resumptive pronoun appears in the island-internal gap in (210b), however, the sentence is fine.

(210) a. *Miin btaʕrfo l-mara yalli ʃeefit ___ b-l-maTʕam
Who know.2PL the-woman that saw.3SG.FEM in-the-restaurant
'Who do you know the woman that saw in the restaurant?'

b. Miin btaʕrfo l-mara yalli ʃeefit-o b-l-maTʕam
Who know.2PL the-woman that saw.3SG.FEM-him in-the-restaurant
'Who do you know the woman that saw him in the restaurant?'

Though much work on resumption has been restricted to island contexts, it is clear that resumption cannot just be about island repair. Indeed, Sells (1984) argues that languages that allow resumption *only* in island contexts do not truly have resumption at all, referring to such cases as *intrusive* pronouns. A clear example of an intrusive pronoun would be the case of English where a pronoun may be inserted to repair an island violation, making it more acceptable.

(211) The man$_i$ that the cat which saw him$_i$ ran away.

The pronoun in (211) makes the sentence sound more acceptable, but some deviance from grammaticality remains. Sells argues that such cases are not true cases of resumption, but are true last resort repair strategies. The criteria for distinguishing true

resumption, he argues, is the presence of a resumptive pronoun in non-island contexts where they often alternate with a gap. A prime example is found in Hebrew:

(212) ha-ʔiš še- raʔiti (ʔoto) *Hebrew*

The-man that-saw.1SG him

'the man that I saw (him)'

In many languages like Hebrew with true resumption, we also find that resumption is insensitive to islands.

(213) raʔiti ʔet ha-yeled še-ha-cayed harag ʔet ha-arie še-radaf ʔaxarav

Saw.1SG ACC the-child C-the-hunter killed ACC the-lion C-chased after-him

'I saw the child that the hunter killed the lion that chased after him.'

(Borer 1984)

The key point I want to bring out here, argued by Sells, is that the ability to repair island violations is not a necessary (and perhaps not even the central) characteristic of resumption. Rather, true resumption is characterized by its (often optional) presence in simple extraction cases that do not involve islands. We have seen that the –o markers in Bantu share this property: they are present in simple relative clauses. In Zulu and many

southern Bantu languages, we also find the optionality seen for resumptive pronouns in Hebrew. In (214) the –o marker, now glossed as a resumptive pronoun (RP) is optional.[71]

(214) Inja umfana o – wa – yi – thenga - (**yo**) in-hle *Zulu*

9dog 1boy REL-3SG-9OM-buy-**RP** 9SA-good

'The dog which the boy bought is good.'

The Zulu example in (214) also illustrates another property of resumption as discussed by Sells (1984), namely a semantic or pragmatic difference between constructions that include resumptive pronouns and those that include only a gap. Erteschik-Shir (1992) argues that the relevant property is that resumptive pronouns are D(iscourse)-linked in the terms of Pesetsky (1987). That is, the presence of a resumptive pronoun requires an antecedent that is salient in the present discourse. This position is also argued in Sharvit (1999). Sharvit observes that while resumptive pronouns are not generally allowed in wh-questions in Hebrew, they are allowed with D-linked wh-questions:

(215) a. im mi nifgaSta *Hebrew*

With who you met

'Who did you meet with?'

[71] The resumptive –o markers in Swahili and Chichewa do not share this property of optionality, a fact I explain below in section 4.3.2.3.

b. *mi nifgaSta ito

who you-met with-him

c. eyze student nifgaSta ito

which student you-met with-him

'Which student did you meet with?'

Sharvit also cites Doron's (1982) observation that the presence of a resumptive pronoun precludes a *de dicto* reading of its antecedent in a relative clause. In the relative with a gap in (216a) the sentence is ambiguous between a *de dicto* reading which does not presuppose the existence of a woman and a *de re* reading which does. In (216b) on the other hand a resumptive pronoun is present and only the *de re* reading is possible. That is, it must be that Dan will find a specific woman is looking for.

(216) a. Dan yimca et ha-iSa Se hu mexapes __ *Hebrew*

Dan will find the-woman C he look-for

'Dan will find the woman he is looking for.' (*de dicto/de re*)

b. Dan yimca et ha-iSa Se hu mexapes ota

Dan will find the-woman C he look.for her

'Dan will find the woman he is looking for.' (**de dicto/de re*)

The semantic facts are similar for Zulu. The presence of the marker –yo yields a D-linking semantics, triggering a discourse saliency on the head of the relative clause.

(217) a. Inja umfana o – wa – yi - thenga in-hle *Zulu*

9dog 1boy REL-3SG-9OM-buy 9AGR-good

"The dog that the boy bought is good."

b. Inja umfana o - wa – yi -thenga-**yo** in-hle

9dog 1boy REL-3SG-9OM-buy-**RP** 9AGR-good

"The dog (that we discussed) that the boy bought is good."

An identical difference can be observed for Chichewa, though the two relative constructions in (218) are not entirely structurally equivalent as they seem to be in Zulu. I return to this difference below. Note however, that (218a) does not display the resumptive pronoun –o marker while (218b) does. The two clauses differ in discourse saliency just as the two Zulu clauses in (217) do.

(218) a. Mbuzí **zi**méné mú – kú – zí – fŭna - (***zo**) *Chichewa*

10goats **10**REL 2PL-PRES-10OM-want-**10RP**

'the goats that you want'

b. Mbuzí mú – kú – zí – fună - **zo** *Chichewa*

10goats 2PL-PRES-10OM-want-**10RP**

'the goats (that we discussed) that you want'

(Mchombo 2005: 45)

Finally, the data from Doron and Sharvit presented in (216) can be repeated, at least for the Zulu case. In (219a) where no –yo marker is present, a *de re* or *de dicto* reading is possible. In (219b), on the other hand, when the –yo marker is present only the de re reading is possible.

(219) a. Ngi-themba uJohn u-zo-yithola intombi a – yi – funda *Zulu*

1SG-hope John 3SG-FUT-find woman REL.3SG-9OM-look.for

'I hope that John will find the woman he is looking for.'

(*de dicto/de re*)

b. Ngi-themba uJohn u-zo-yithola intombi a – yi – funda – yo

1SG-hope John 3SG-FUT-find woman REL.3SG-9OM-look.for-RS

'I hope that John will find the woman he is looking for.'

(**de dicto/de re*)

I take the analogies between –o markers in Bantu (especially Chichewa and Zulu) and resumptive pronouns in Hebrew above as evidence that the former are resumptive pronouns. Though the evidence presented so far is highly suggestive, skepticism is still

warranted as there are several issues I have yet to deal with. First, Swahili, unlike Chichewa and Zulu, employs the –o marker in all relative clauses and not just in non-subject relatives. Second, the –o marker in Zulu, unlike the –o marker in Swahili and Chichewa, does not agree with the head of the relative clause (which I take to be its antecedent).

More important than these questions, however, are two typological observations that I do not believe have been made before. As observed in section 2.4, it is not the case that all Bantu languages employ an –o marker in relative clauses. This property correlates, however, with another property: that of OM-NP co-occurrence. Bantu languages that employ –o markers are all languages allow co-occurrence between an object marker on the verb and an overt NP argument. In section 4.1 above, I argued that this co-occurrence property is a characteristic of true object agreement. In other words, resumptive pronouns in simple relatives are only found in languages with object agreement and never in languages without it. This is an interesting correlation that demands an account.

A second correlation, just as interesting, also exists. Among the languages that have resumptive pronouns in object relatives, some languages allow more than one relativization strategy where one strategy allows the resumptive pronoun and another does not. Both Zulu and Chichewa have this property. In the Zulu example in (220a) the marker is optional while in (220b) it is disallowed. Similarly, in the Chichewa relatives in (221a) the marker is required, but in (221b) it is disallowed. The correlation here is between the presence of the resumptive pronoun and the form of the complementizer. In both Zulu and Chichewa, resumption is disallowed when the relative complementizer

displays agreement with the relativized NP, but is allowed (optionally in Zulu, obligatorily in Chichewa) when there is no agreeing relative complementizer.

(220) a. Inja umfana **o**-wa-yi-thenga-(**yo**) *Zulu*
9Dog 1boy **REL**-3SG-9OM-buy-**RP**
'The dog which the boy bought'

b. Inja **e**-mfana wa – yi – thenga-(***yo**)
9dog **9REL**-1boy 3SG-9OM-buy-**RP**
'The dog which the boy bought'

(221) a. Mbuzí mú – kú – zí – fună - **zo** *Chichewa*
10goats 2PL-PRES-10OM-want-**10RP**
'the goats that you want'

b. Mbuzí **zi** - méné mú – kú – zí – fŭna - (***zo**)
10goats **10AGR**-REL 2PL-PRES-10OM-want-**10RP**
'the goats that you want' (Mchombo 2005: 45)

The correlations between resumption and agreement, summarized in (222), demand an explanation. I develop one in the following sections, based on the work of Boeckx (2001, 2003a) and in the process offer accounts for the more trivial differences between Swahili, Chichewa, and Zulu noted above.

(222) Correlations

(i) Resumptive pronouns only occur in languages with object agreement.

(ii) Resumptive pronouns never occur in relative clauses with an agreeing relative complementizer.

4.3.2 The Reasons for Resumption

As discussed in the previous section, resumptive pronouns have largely been discussed in the context of islands. However, the present work is following Sells (1984) in assuming that languages that *only* have resumption in islands do not truly have resumption. Such languages instead have what Sells terms "intrusive" resumption, characterized as a kind of repair strategy to make island violations less offensive to the ears. True resumption, on the other hand, is characterized by its presence in simple extraction cases and (very often) its ability to alternate with a gap as in the Hebrew and Zulu cases discussed above. Very often languages with true resumption extend their use to island contexts where they are indeed employed to "rescue" (as opposed to "repair") island violations. The question arises as to what kinds of principles underlie the need or possibility for resumption in either context, and in particular in non-island contexts where it seems a gap would do just fine. Here I will only discuss the latter context since I do not have space here for a full investigation of extraction in island contexts. For that, I direct the reader to Boeckx (2003a) where the view of resumption defended here originates and where resumption is taken to crucially inform a theory of islands.

Regarding resumption in non-island contexts, we have seen that there are two unexpected points of co-variation that strongly suggest a connection between resumption and agreement phenomena, listed in (222) above. I address each in turn below.

4.3.2.1 Object Agreement and Resumption

Recall the observation by Bresnan & Mchombo (1987) that an indirect object marked on the verb is outside of the VP. In the present account, I have interpreted this fact to mean that agreed-with objects undergo EPP movement to some position above VP. Here I propose that this EPP movement associated with object phi-feature checking is what is responsible for the presence of resumption in these languages.

The proposal is based upon Richards' (1997, 2001) general condition on the formation of movement chains. Examining a wide range of movement phenomena from a wide range of languages, Richards proposes that any movement chain can only contain one 'strong' position where the latter is defined as in (223).

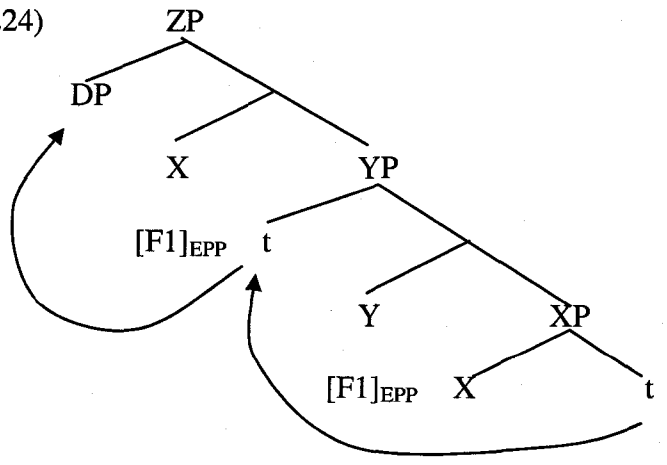
(223) Strong position: a specifier position to which movement has been triggered by a feature checking relation between and probe and goal.[72]

[72] The notion of strong position or 'EPP' position in Chomsky's (2000, 2001) terms is merely a description for the fact that movement takes place. I believe this is all we can say. That is, whether a probe-goal Agree relation results in movement to the probe's specifier or not, I take to be a basic point of parametric variation unamenable to deeper explanation. It is important to note, however, that the notion of strong position or 'EPP' adopted here differs from the EPP of Chomsky since Chomsky also employs EPP features to encode successive cyclic movement. Since such movements are not triggers by a probe-goal feature checking relation, I do not take movement to phase/barrier edges to be movement to be movement to a strong position.

Richards suggests that what underlies the principle in (223) has to do with pronunciation, proposing that the strength of a feature encodes where the goal associated with checking that feature gets pronounced. Specifically, strong features are instructions to PF to pronounce the goal in the specifier of the feature's head. Therefore, if the movement chain of a particular XP contains more than one strong position, this would amount to ambiguous instructions to PF regarding pronunciation. PF would be unable to determine where to pronounce the XP. Thus, only one strong position per chain is permitted.

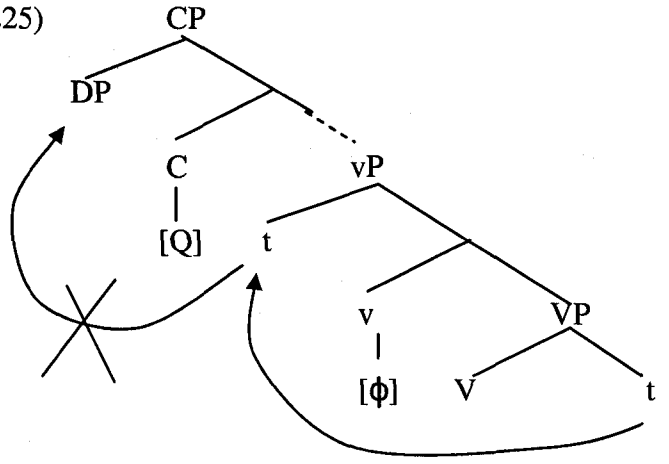
Generally, speaking, Richards' restriction on chains rules out configurations like that in (224). Here a feature [F1] of the head Y enters an Agree relation with some matching feature of XP. Since [F1] is a strong feature (signified by the EPP subscript), XP undergoes movement to SpecYP. At a further point in the derivation, a second feature [F2] on the highest functional head Z enters an Agree relation with XP, now in SpecYP. Since [F2] is also a strong feature, it requires movement of XP to SpecZP. It is this movement to a second strong position that is ruled out under Richards' generalization.

(224)



Note that the configuration in (224) is exactly the kind of structure found in an object relative clause in a language with object agreement like the kind we have been examining. In (225) a feature of C ([Q]) enters an Agree relation with the matching feature of the object which already resides in the strong position of SpecvP, having checked the strong phi-features of v. Since the chain in (225) has two strong positions (SpecCP and SpecvP) the structure is ruled out by Richards' generalization.

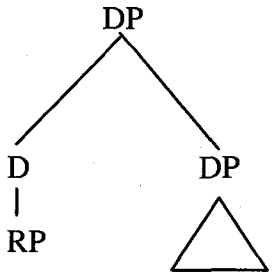
(225)



With this in mind, Boeckx (2003a) proposes that resumption is a way of rescuing the derivation in (225), putting forth an analysis of resumption as stranding. A resumptive pronoun and its antecedent, he argues, are merged to the derivation as a single constituent. The particular structure he proposes is the 'big DP' structure suggested by Kayne (1972), Torrego (1986), Uriagereka (1988), and others to underlie clitic doubling. In (226) the head of the structure is a determiner and its complement is another DP. In the course of the derivation, this complement DP may be extracted from the big-DP, stranding the D head of the structure. When stranded in this way, the D head can be

spelled out as a resumptive pronoun bound to the antecedent which was once its complement.[73]

(226)

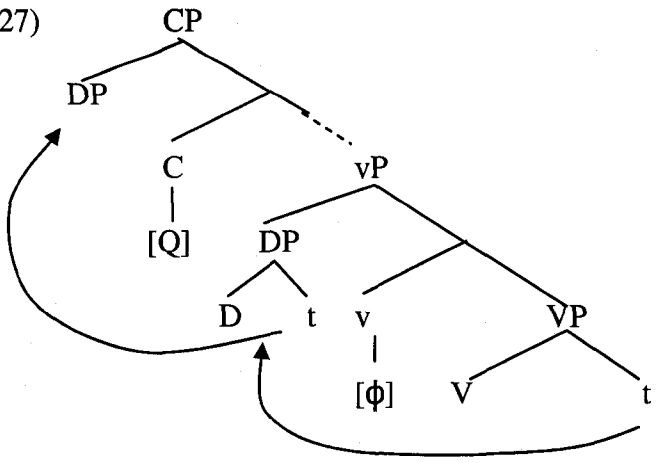


Given a derivation like (226), stranding provides a way to rescue the derivation. As long as the first-merged object is complex enough, part of the object can be stranded in the first strong position in the derivation while its complement moves on to another strong position. The result is that what would be a single chain with two strong positions becomes two chains, each with one strong position. I propose that this is precisely what happens in the case of Bantu languages with object agreement. In object relatives, the big-DP object moves to the strong position of SpecvP in the course of checking the strong phi-features on v. Then when the CP level is reached in the derivation, the [Q] feature of C attracts the complement of the head of the big-DP, extracting it to the second strong position of SpecCP. In (227), the D head stranded in SpecvP is spelled out as a resumptive pronoun.[74]

[73] The idea that determiners and pronouns are the same functional elements goes back to Postal (1966). In more recent works, Elbourne (2000) argues that a D head is spelled out as a determiner when its complement is an NP, but as a pronoun when it lacks a complement.

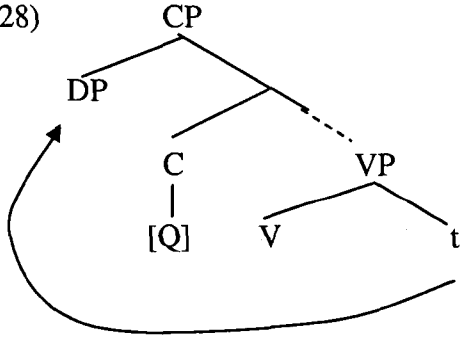
[74] The fact that these markers are consistently attached as verbal enclitics requires the assumption that the verb raises at as high as the syntactic head that selects vP (perhaps the head of a mood or aspectual phrase as suggested by Myers 1990).

(227)



Note that the account presented here explains the typological generalization that only languages with true object agreement employ resumptive pronouns in simple object relatives since it is these languages that will have two strong positions in object relative clauses. Languages like Lingala, Kirundi, Dzamba, and others that do not have object agreement will not have the set of strong phi-features that trigger object movement to SpecvP in languages like Swahili, Chichewa, and Zulu. In object relative clauses, then, languages without object agreement will have a movement chain with only one strong position, namely SpecCP:

(228)



To conclude, in this section I have argued that the fact that only languages with true object agreement allow resumption in simple relatives follows from Richard's generalization that chains allow only one strong position and from Boeckx's analysis of resumption as stranding. In the next section, I turn to the generalization noted above that only relatives with non-agreeing complementizers employ resumption.

4.3.2.2 Complementizer Agreement and Resumption

As noted in section 2.4, both Zulu and Chichewa allow more than one strategy for non-subject relatives.[75] The choice between strategies appears to be free, at least for some speakers.[76] Note that a crucial difference between these strategies is the presence of the resumptive –o pronoun. In the Zulu example in (229a) the marker is optional while in (229b) it is disallowed. Similarly, in the Chichewa relatives in (230a) the marker is required, but in (230b) it is disallowed.

(229) a. Inja umfana **o**-wa-yi-thenga-(**yo**) *Zulu*

9Dog boy **REL**-3SG-9OM-buy-**RP**

'The dog which the boy bought'

[75] Here and throughout this dissertation I discuss only direct object relatives as the canonical cases of non-subject relatives. Languages may vary in interesting ways in the relativization of oblique objects or objects of prepositions. Unfortunately, I do not have the space or resources to explore the full paradigm for all of the languages considered in this study.

[76] In fact, some Zulu speakers do not accept the so-called 'strategy 2' Zulu relatives or only allow them in possessor extraction cases. However, other speakers appear to allow free variation between the two strategies. Among my informants, the two speakers who rejected these relatives grew up in the urban area

b. Inja **e**-mfana wa – yi – thenga-(***yo**)

9Dog 9**REL**-1boy 3SG-9OM-buy-**RP**

'The dog which the boy bought'

(230) a. Mbuzí mú – kú – zí – fună - **zo** *Chichewa*

10goats 2PL-PRES-10OM-want-**10RP**

'the goats that you want'

b. Mbuzí **zi**méné mú – kú – zí – fŭna - **(*zo)**

10goats **10**REL 2PL-PRES-10OM-want-**10RP**

'the goats that you want' (Mchombo 2005: 45)

What is conditioning the possibility of resumption in (229-230)? Besides the presence or absence of the resumptive pronouns, the only difference between the (a) and (b) examples above is the choice of complementizer. In the Zulu example in (229a) the complementizer is the uninflected marker /a/ which prefixes to the subject agreement marker on the verb. In (229b), on the other hand, the /a/ relative complementizer precedes the overt subject and agrees with the relativized NP. Similarly, in the Chichewa example in (230a) there is no relative complementizer present and relativization is marked with a lexical high tone on the verb form. In (230b), on the other hand, the inflected complementizer *zimene* is present and it agrees with the relativized NP. It would seem, then, that the possibility of resumption depends upon the presence or absence of

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of Johannesburg while those who accepted them were from rural areas in Kwa-Zulu Natal. Thus, it would

agreement inflection on the relative complementizer. When the relative complementizer agrees with the relativized NP, resumption is impossible as in the (b) examples above. When no agreeing complementizer is present, resumption is possible or required as in the (a) examples.

This same correlation between complementizer agreement and resumption has been noted elsewhere in the literature, in particular in Boeckx (2003a). Boeckx discusses resumption in simple object relatives in Irish taken from McCloskey (2001). In Irish the choice of complementizer in relative clauses varies depending upon whether a gap or a resumptive pronoun is present in object position.[77] Interestingly, Harlow (1981) argues that the complementizer *aL* (as well as its counterpart in Literary Welsh) is an agreeing complementizer. It is this complementizer which cannot occur with resumption.

(231) a. an ghirseach **a** ghoid na síogaí ___ *Irish*
the girl **aL** stole the fairies
`the girl that the fairies stole away'

b. an ghirseach **ar** ghoid na síogaí **í**
the girl **aN** stole the fairies **her**
`the girl that the fairies stole away'

(McCloskey 2001)

---

seem to be a point of dialect variation.

[77] I employ only the most basic case here. See McCloskey (1990, 2001) for sophisticated discussion of the intricacies of complementizer selection in Irish.

The variation in Chichewa and Zulu described in (229-230) above can thus be taken as even clearer cases of a connection between the presence of an agreeing complementizer and the (im)possibility of resumption. The next question that arises, of course, is why this surprising connection should exist at all.

Throught this dissertation, I have argued that Agree relations are subject to minimality. With this assumption in mind, consider the derivation of an object relative with an agreeing complementizer. In (232) the big-DP structure has moved to SpecvP. At this point, the features of the agreeing complementizer in C must probe into the big-DP structure to enter an Agree relation with the complement of the resumptive pronoun D head. However, note that the phi-features of the resumptive pronoun are in principle independent of the phi-features of its complement. The phi-features of D1 (the resumptive pronoun) therefore count as an intervener for the Agree relationship between the phi-features of C and the phi-features of DP2. Since the Agree relationship cannot be established, DP2 cannot be extracted from the big-DP structure to undergo movement to SpecCP.[78]

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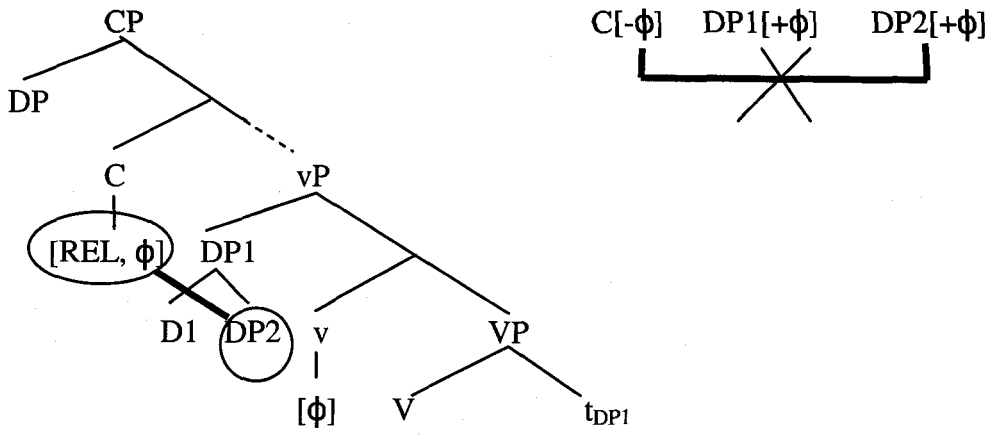
[78] This analysis relies on two crucial assumptions. The first is that dominating material may count as an intervener for minimality. This is assumption is not new, but neither is it standard. See Fitzpatrick (2002) for an overview of this locality question. The second assumption is that the features [Q] and [ϕ] in C must probe together as a single entity. Otherwise, movement could take place under Agree with [Q] and then enter an Agree relation with [ϕ] once movement to SpecCP has taken place. Indeed, I argued for exactly this analysis for OVS constructions in section 3.2.4. Why should the two constructions differ in this way? One possibility is that in (232) above both features [Q] and [ϕ] are associated with a single lexical item, namely the complementizer. This is not the case in OVS constructions. In fact, there is some evidence that T-to-C movement takes place in OVS constructions. In Lingala, negation blocks T-to-C movement since NegP projections between CP and TP. OVS constructions in Lingala cannot be negated

(i) Mukanda mu-tind-aki Poso *Lingala*
Letter AGR-send-PST Poso
'The letter, Poso sent it'

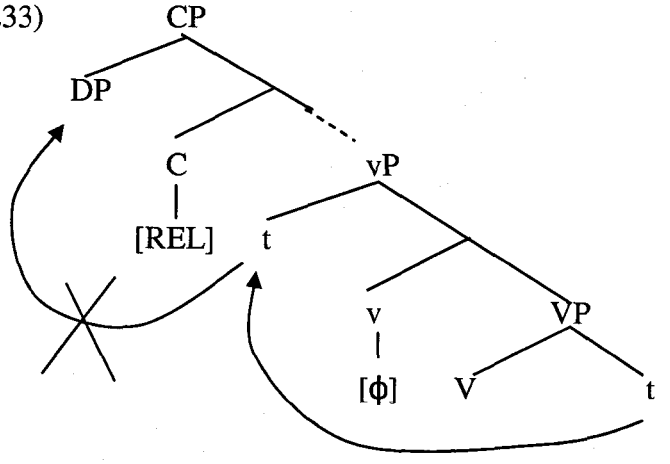
(ii) * Mukanda mu-tind-aki Poso te
Letter AGR-send-PST Poso NEG
'The letter, Poso sent it'

(232)



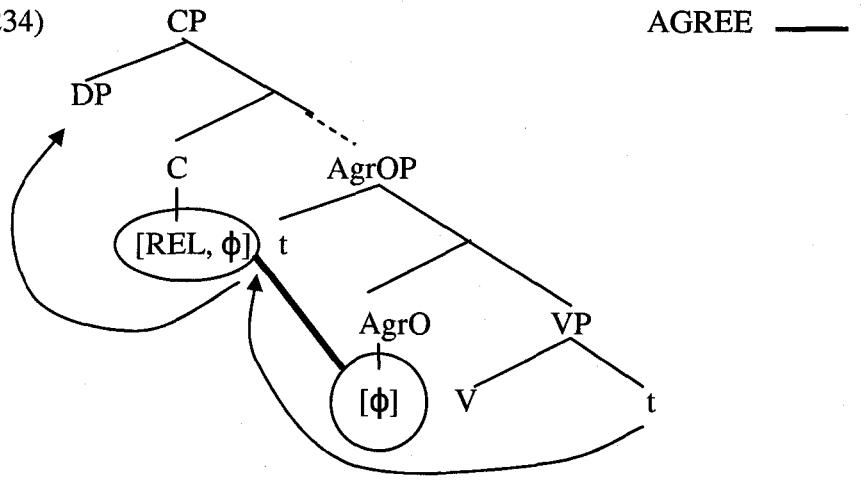
Thus the minimality restriction on Agree relations accounts for why resumption never occurs in relative clauses with agreeing complementizers. Of course, the next logical question is *how does* relativization occur in relative clauses with agreeing complementizers? After all, if Richards' generalization is correct, then all derivations of the shape in (233) should be ruled out. If stranding (resumption) cannot rescue relative clauses with agreeing complementizer from (233), what does rescue them?

(233)



Again following Boeckx's lead, I propose that in relatives with agreeing complementizers, the derivation in (232) can be rescued by establishing an Agree relation between the phi-features of COMP and the phi-features of v. The effect is that the EPP/strong character of the lower set of features is satisfied by its relationship with the higher set of strong features. SpecvP therefore no longer counts as a strong position. The DP that has raised to SpecvP is therefore 'released' from its EPP anchor and is free to undergo movement to SpecCP:[79,80]

(234)



The derivation in (234) not only allows for a derivation with an agreeing complementizer, but also explains why we never find resumption with agreeing complementizers in languages with object agreement.

Given that OVS constructions involve T-to-C movement, it is possible that the cohabitation of [ϕ] and [Q] in C results from this movement, providing some justification for their status as distinct probes.

[79] If domination counts for intervention as I have assumed, then it must be the case that the phi-features of v are the most local phi-features to the phi-features of C in the configuration in (234). We might therefore revise the analysis of intervention put forth in (232) to state that it is the valued phi-features of v that rather than those of the resumptive pronoun that act as an intervener in (232).

[80] Elabbas Benmamoun (p.c.) has pointed out to me that this analysis is reminiscent of certain characterizations of negative concord whereby two negative elements appear in the same clause, but are interpreted as a single instance of negation. In fact, Zeijlstra (2005) argues for an Agree analysis of negative concord.

Note also that Zulu and Chichewa are somewhat unique in allowing either the resumption or Agree strategies. Not all Bantu languages with object agreement allow both strategies. Swahili, for instance, does not have a relative strategy with an agreeing complementizer. Therefore, it always employs the resumption strategy: -o markers are always required in Swahili relatives.[81]

4.3.2.3 Resumptive agreement and object agreement

In section 4.3.1.1 above, I briefly noted an asymmetry amongst the primary languages under study in this section. In the Swahili and Chichewa object relative clauses in (235), the resumptive –o marker agrees with the relativized NP. In the Zulu object relative in (235c), on the other hand, the marker does not display agreement. Rather, it receives default class 9 agreement.

(235) a. Mbuzí mú – kú – (zí) – fună - **zo** *Chichewa*
10goats 2PL-PRES-10OM-want-**10RP**
'the goats that you want'

b. kitabu u – (ki) – soma – **cho** *Swahili*
7book 2SG-7OM-read-**7RP**
'the book you (always) read'

[81] One can imagine a third strategy for getting around Richards' Generalization: suppressing the phi-features on v in object relative clauses, a kind of anti-agreement effect well-documented for subject extraction in Bantu languages like Kinande (see Scheider-Zioga 2000, 2002). A language with this strategy would have object agreement in non-relative contexts, but no OMs in object relatives. Boniface Kawasha (p.c.) informs me that Lunda and other Zone K Bantu languages may have this characterization. However, I

c. abantu o – ba – yazi – **yo** *Zulu*

2people REL.2PL-2OM-know-**9RP**

'the people that you know'

Non-agreement between a resumptive pronoun and its antecedent is not unique to Zulu. McCloskey (2001) notes that in some cases a 3rd person pronoun resumes a non-3rd person antecedent as in (236a). Similar facts hold in Swahili where the third person resumptive pronouns are used for non-third person antecedents as in (236b-c).

(236) a. A Alec, tusa a bhfuil an Bearla aige *Irish*

Hey Alec you aN is the English at-him

'Hey Alec you that knows English.'

b. Wewe u – li – ye – enda arusi-ni bila zawadi *Swahili*

You 2SG-PST-3SG.RP-go wedding-LOC without gift

'You who went to the wedding without a gift.'

c. Sisi tu – si – soma - o kabla ya mitihani *Swahili*

We 2PL-NEG-read-3PL.RP before 4tests

'We who never study before tests.'

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have not had the chance to work with the data personally. I reserve the examination of these languages for future work.

Further cases of non-agreement have been noted for Italian dialects in the context of clitic-doubling (Ledgeway 2000; Kayne 2000).

Interestingly, the non-agreement facts for Zulu seem to line up with a second difference between Chichewa and Swahili on the one hand and Zulu on the other. In the relatives in (235a-b) above, the object agreement marker is optional while in Zulu it is always obligatory. Similar facts hold for Swati. In (237) below, the object marker is obligatory while the resumptive –o does not display agreement with the relativized NP, but shows default agreement with a locative class.

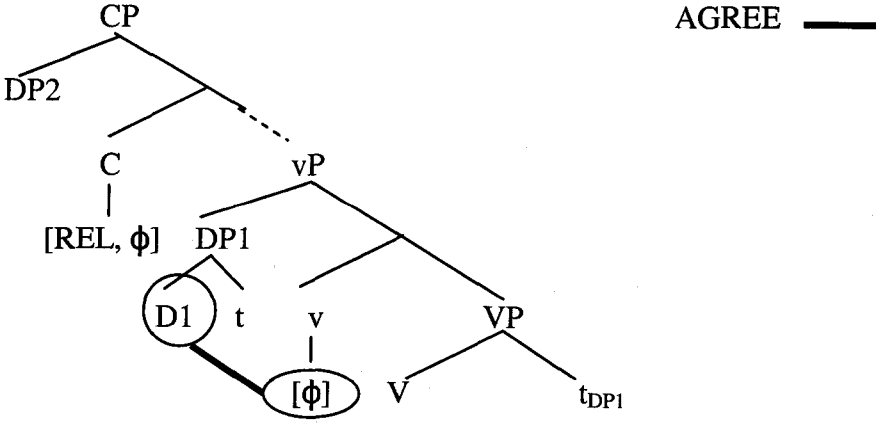
(237) umfati tintfombi le – ti – m – elekelela - ko *Swati*

1woman 10girl REL-10SA-1OM-help-12RP

'the woman whom the girls help' (Zeller 2002)

I take this correlation to reflect a morpho-phonological condition on the Agree relationship between the phi-features of v and the resumptive pronoun in object relative clauses. The relevant configuration is that in (238):

(238)



The condition I would like to propose is that the Agree relation between v and the resumptive must be expressed morphologically in Bantu, a condition perhaps having to do with the strong character of phi-features in these languages. However, languages may differ in the method of expression. Thus in Zulu-type languages object agreement is always expressed in relative clauses; that is, v expresses the Agree relationship in (238). Therefore, it is unnecessary for the v-RP Agree relation to be expressed on the resumptive pronoun itself. On the other hand, in Swahili and Chichewa the resumptive pronoun always agrees with the relativized object, expressing the v-RP Agree relation through its own set of phi-features. Therefore, in these languages the realization of the phi-features of v itself in relative clauses is not required.[82] This explains the correlation between (non-)agreement of the resumptive pronoun and (non-)obligatory expression of object agreement in object relatives.

4.3.2.4 Subject-Object Asymmetry in Resumption

It is a well-known characteristic of resumption that it seems to be more common in non-subject position than in subject position. More specifically, many languages that allow resumption in object position do not allow resumption in the subject position of the matrix clause. This is also the case for Chichewa and Zulu. While we have seen that the resumptive –o marker is obligatory in certain object relative strategies, this marker is generally not present in subject relative clauses:[83]

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[82] Though it may be induced by other circumstances, such as the case with animate objects in Swahili where the object marker is obligatory in object relatives.

[83] An exception is intransitive clauses in Zulu where the marker –yo seems to be required as seen in (i). On the other hand, subject relatives with transitive verbs do not allow the marker as seen in (ii). It is unclear to me what is behind this difference. One possibility is that it is related to the long/short alternation discussed

(239) a. Umfana o-wa-thenga-(*yo) inja mu-hle *Zulu*

Boy REL-SA-buy-RS dog AGR-good

'The boy that bought the dog is good

b. Anyaní a – kú – bá mikánda *Chichewa*

2baboons 3PL-PRES-steal beads

'the baboons that are stealing beads' (Mchombo 2005)

The question arises why subject resumption is not more common. In particular, if the subject position is a strong position in the sense of Richards (2001), movement from subject position (SpecTP) to SpecCP in cases of subject relativization should constitute an ambiguous chain and require stranding to rescue it.

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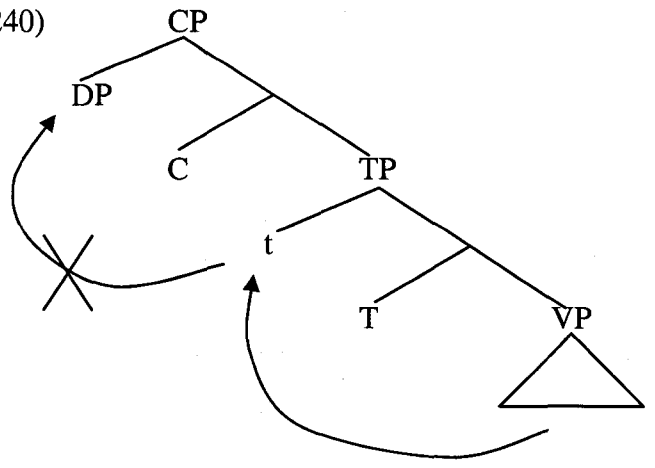
for Zulu above in section 3.4.2 and as suggested in Buell (2006). That is, perhaps the resumptive pronoun is always required in subject relatives, but its optionality allows it to be deleted when the verb is not the final element in its constituent. Thanks to Nikki Adams (p.c.) for pointing the facts out to me.

(i) Umfana o-funda-yo muhle
1Boy REL.3SG-study-9RP 1good
'The boy who is studying is good'

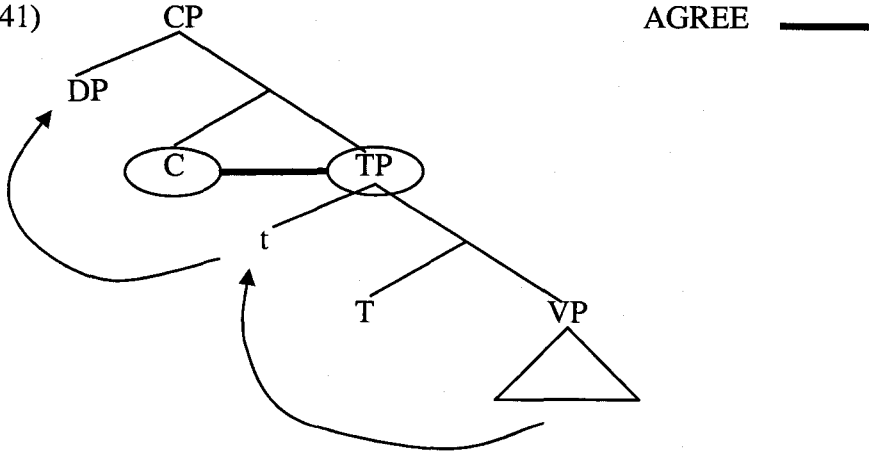
(ii) Umfana o-funda-(*yo) isiZulu muhle
1boy REL.3SG-study-9RP Zulu 1good
'the boy who is studying Zulu is good'

(240)



Recall, however, that stranding is not the only way to rescue a chain with two strong positions. There is also the Agree strategy. Boeckx (2003a) argues that the selection of T by C in the configuration in (240) amounts to an Agree relation, essentially ruling out the resumptive strategy. This explains why we do not often find resumption in subject relatives since in many cases C selects T. On the other hand, C never selects v, allowing for the resumptive strategy to take place.

(241)



I have no account for this fact and no idea why transitivity should be a relevant factor in triggering

Nevertheless, there are languages that do allow resumptive pronouns in subject position. West African languages such as Vata (Koopman and Sportiche 1986), Edo (Baker 1999), and Igbo (Goldsmith 1981) are well-known for this property. An example appears below from Edo:

(242) De omwan ne o de ebe *Edo*

Q person that he buy book

'Who bought a book?' (Baker 1999)

Given the logic above, it must be the case that in languages like Edo C does not select T, thus allowing for the possibility of resumption. Following Baker (1999) and Finer (1997), Boeckx (2003a) takes it to be significant that languages like Edo and Vata makes extensive use of a verbal complementizer. In particular, he postulates that such complementizers form serial verb constructions with the verbs they embed. This explains why these complementizers tend to be uninflected: in SVCs the secondary verb is always uninflected. More importantly, this analysis precludes an Agree relation between C and T, making resumption the only strategy available to disambiguate a subject relativization chain.

This line of argument is relevant for the languages currently under discussion since, unlike Zulu and Chichewa in which subject resumption is ruled out, Swahili has obligatory resumption with subject NPs:

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resumption in any language. I leave this for further investigation.

(243) mtoto amba-**ye** a-li-soma kitabu *Swahili*

1child amba-**1RP** 3SG-PST-read book

'the child that read the book'

Fortunately, Swahili is amenable to the same analysis proposed above for Edo as the relative complementizer *amba* in Swahili is clearly a verbal element, equivalent to the verb 'say' (just as the complementizer *wee* is in Edo). Chichewa and Zulu, on the other hand, do not employ relative complementizers derived from verbs, but rather employ relative complementizers derived from demonstratives (see Zeller 2002). It is therefore possible that in Swahili a verbal projection separates C from T in the relevant sense, making an Agree relation between the two possible in principle, but not automatic. The properties of the functional head C and the elements that occupy it in Swahili is thus quite different from the properties found in Chichewa and Zulu and provides a basis for allowing resumptive subject pronouns in Swahili, but not in the latter two languages.

4.4 Conclusion

In this chapter I have argued for a rethinking of the old debate about the status of object markers in Bantu languages, arguing that OMs are pronominal clitics in some languages, but true object agreement markers in others. This conclusion entailed that OMs, when they occur in object relative clauses, are not resumptive pronouns as often claimed in the literature. Nevertheless, I have presented evidence that there are resumptive pronouns in Bantu languages, though they have remained unidentified until now. I demonstrated that –o markers found in the relatives of some languages share certain distributional

properties with resumptive pronouns in other languages like Irish and Hebrew for which resumption facts are better established. A closer examination of the distribution of these markers also uncovered connections between their presence and object agreement as well as complementizer agreement, lending support to the conclusion that Agree is sensitive to minimality as well as the notion of resumption as a stranding phenomenon employed to rescue derivations from ambiguous chains.

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