

Accessibility and demonstrative operators in Basaá relative clauses

Peter Jenks
UC Berkeley

Emmanuel-Moselly Makasso
ZAS, Berlin

Larry M. Hyman
UC Berkeley

1. Introduction

This paper reviews both typical and less-typical properties of relative clauses in Basaá [basaá] (A.43), a Bantu language spoken in southern Cameroon. Two basic relativization strategies are outlined, one involving a gap and another involving a resumptive pronoun. The distribution of these two strategies is shown to follow from the predictions of the Accessibility Hierarchy (Keenan & Comrie 1977). It is further demonstrated that relative clauses form a natural class with demonstratives: both license a definite/specific prefix /í-/ on the head noun, and relative operators are in complementary distribution with demonstratives in relative clauses involving a gap. These facts are used to motivate a head raising analysis of relative clauses (Kayne 1994) just for those relative clauses which include a gap; the complementarity of demonstratives and relative operators in Basaá thus serves as a novel empirical argument for this analysis of relative clauses. From the perspective of grammaticalization, it is shown that the relative operator in Basaá is only partially grammaticalized from a demonstrative.

The structure of this paper is as follows. Section 2 introduces basic facts about relative clauses in Basaá, including the morphosyntactic marking of relative clauses, the range of arguments that can be relativized, and the position of relative clauses within the noun phrase. Section 3 discusses the relationship between specificity, demonstratives, and relative operators. Section 4 presents a formal syntactic analysis of both relative clauses which involve a gap and relative clauses involving resumption. Section 5 discusses the grammaticalization of the definite/specific prefix and the relative operator in Basaá.

2. Restrictive relative clauses in Basaá

Basaá is a relatively well-described language (Bot Ba Njock 1970, Lemb & Degastines 1973, Dimmendaal 1987, Bitjaa Kody 1990, Hyman 2003). The grammatical properties of Basaá are typical for Northwest Bantu languages: it is head-initial, exhibiting SVO word order in declarative sentences, head-modifier order, and prepositions. Basaá exhibits the rich noun class system typical of Bantu, as well as subject agreement on verbs and concord on nominal modifiers. Phonologically, Basaá exhibits a binary distinction in H vs. L tone; these tones play an important role in marking morphosyntactic distinctions as well as encoding lexical contrasts between words.

Relative clauses in Basaá have been described by Makasso (2010), which this paper builds on, and more briefly by Hyman (2003) and Dimmendaal (1988). This section treats much of the same material as these works, covering the morphology and syntax of relative clauses in Basaá as well as the positions that are accessible to relativization. Section 2.1 reviews the external properties of relative clauses, including their position relative to other modifiers, the morphology of the relative operator, and the ability of relative clauses to license a nominal prefix that marks specificity. Section 2.2 demonstrates that Basaá exhibits two basic strategies for relativization, a gap strategy for relativization from argument positions, and a resumption strategy for relativizing possessives.

2.1 Basic characteristics of relative clauses

Relative clauses in Basaá follow the head noun. In most cases, the internal syntax of relative clauses is identical to the syntax of declarative sentences, modulo a gap in an argument position created by relativization. The location of this gap will be marked overtly throughout this paper and subscripted with an index matching the head noun, for clarity. The main morphological marker of a relative clause is an optional relative pronoun, identical to the ‘near speaker’ demonstrative (see below, section 3) which precedes the relative clause and agrees with the head noun in noun class. This is illustrated for a subject (1b) and object (2b) relative clause:¹

(1) SUBJECT RELATIVE CLAUSE

- a. *mut a bí ʔjé bíjék* ‘The person ate the food.’
 1.person 1.SBJ P2 eat 8.food
- b. *í-mut₁ (nú) [___₁ a bí ʔjé bíjék]* ‘the person that ate the food’
 AUG-1.person 1.REL 1.SBJ P2 eat 8.food

(2) OBJECT RELATIVE CLAUSE

- a. *liwándá lí bí ʔtéhé hínuní* ‘The friend saw the bird.’
 5.friend 5.SBJ P2 see 19.bird
- b. *hínuní₁ (hí) [liwándá lí bí ʔtéhê ___₁]* ‘the bird that the friend saw’
 AUG.19.bird 19.REL 5.friend 5.SBJ P2 see

Relativization is also marked by the insertion of a /í-/ prefix on the head noun, realized either as *í-*, as in (1b), or simply as a H tone on the class prefix of the noun, as in (2b).² We concur with Dimmendaal (1988, p. 58) that the high tone on the prefix in (2b) is a reduced form of the *í-* prefix in (1b). We return to this item in more detail in section 3.1.

Relative clauses occur at the right edge of the noun phrase in Basaá. This means that relative clauses must follow adjectives (3), numerals (4), possessive pronouns (5), and demonstratives (section 3), which also follow the noun:

(3) ADJECTIVE > RELATIVE CLAUSE

- a. *hínuní hi-kéńí (hí) [liwándá lí bí ʔtéhê ___₁]*
 AUG.19.bird 19-big 19.REL 5.friend 5.SBJ P2 see
 ‘the big bird that the friend saw’
- b. **hínuní (hí) [liwándá lí bí ʔtéhê ___₁] hi-kéńí*

¹ Abbreviations: 1st, 2nd – first/second person; AUG – augment prefix; CON – connective; DEM – demonstrative; PRO – independent pronouns; P1 – today past tense; P2 – general past tense; POS – possessive; PR – present tense; REL – relative operator; SBJ – subject agreement

² The noun class prefix also has H tone in object position in (2a), but this is due to metatony, whereby in most tenses a H tone occurs on the verb and what follows (Makasso to appear). The citation form for ‘bird’ is *hi-nuní*, with L on the class prefix.

(4) NUMERAL > RELATIVE CLAUSE

- a. *dínuní* *dítán* (*dí*) [*liwándá lí* *bí* ⁴*téhê* ____₁]
AUG.13.bird 13.five 13.REL 5.friend 5.SBJ P2 see
'the five birds that the friend saw'

- b. **dínuní* (*dí*) [*liwándá lí* *bí* ⁴*téhê* ____₁] *dítân*

(5) POSSESSIVE PRONOUN > RELATIVE CLAUSE

- a. *hínuní* *hyêm* (*hí*) [*liwándá lí* *bí* ⁴*téhê* ____₁]
AUG.19.bird 19.my 19.REL 5.friend 5.SBJ P2 see
'my bird that the friend saw'

- b. **hínuní* (*hí*) [*liwándá lí* *bí* ⁴*téhê* ____₁] *hyêm*

The right-edge position of relative clauses puts them in a class with demonstratives, which must also occur following other modifiers (Hyman 2003, p. 270). Focused demonstratives and possessive pronouns can also precede the noun, as section 3.1 shows for demonstratives. We will see in section 3 that the connection between demonstratives and relative clauses is deeper than their shared syntactic distribution.

2.2 Accessibility to relativization and the resumptive strategy

While all noun phrases in Basaá are accessible to relativization, there are two distinct strategies for forming relative clauses. The first strategy, seen already in examples (1-2), involves a dependency between the head noun and a gap located inside of the relative clause. This strategy extends to relative clauses formed on indirect objects (6) as well as oblique noun phrases, such as the object of a prepositional phrase (7):

(6) RELATIVIZATION FROM INDIRECT OBJECT

- a. *liwándá* *lí* *bí* ⁴*tí* *njók* *litám*
5.friend 5.SBJ P2 give 9.elephant 5.fruit
'The friend gave the elephant fruit.'
- b. *í-njók*₁ (*í*) [*liwándá lí* *bí* ⁴*tí* ____₁ *litám*]
'the elephant that the friend gave fruit (to)'

(7) RELATIVIZATION FROM OBJECT OF PREPOSITION

- a. *mut* *a* *m* *bíí* *káar* *í-ηgií* *têble*
1.person 1.SBJ P1 put 9.book LOC-top 9.table
'The person put the book on the table.'
- b. *í-têble*₁ (*í*) [*mut a m bíí káar í-ηgií* ____₁]
'the table that the person put the book on top of'

The second strategy for forming relative clauses involves the use of a resumptive pronoun. This strategy can be used with objects of prepositions, which are realized as possessive pronouns (8) (Makasso 2010, p. 152). Resumptive pronouns are obligatory when relative clauses are formed on possessive noun phrases (9):

(8) RESUMPTIVE PRONOUN WITH RELATIVIZATION FROM OBJECT OF PREPOSITION

í-têble₁ (i) [mut a m bíí káar í-ηgii yé^lé₁]
 AUG-9.table 9.REL 1.person1.AGR P1 put 9.book LOC-top 9.POS
 ‘the table that the person put the book on top of it’

(9) RESUMPTIVE PRONOUN WITH RELATIVIZATION FROM POSSESSIVE

- a. *ηgwó i-maηgέ i bí kəgól mē*
 9.dog 9-child 9.SBJ P2 bite 1ST.SG
 ‘The child’s dog bit me.’
- b. *í-maηgέ₁ (nú) [ηgwó yé^lé₁ i bí kəgól mē]*
 AUG-child 1.REL 9.dog 9.POS 9.SBJ P2 bite 1ST.SG
 ‘the child whose dog bit me’ (lit. ‘the child that his dog bit me’)

In (9b), the head noun, ‘child’, is coindexed with the class 1 possessive pronoun *yé* (the H tone and downstep on the pronoun arise due to high tone spread from *ηgwó*).

If the possessive target of relativization is located in object position, another possibility for relativization becomes available: the noun phrase containing the resumptive possessive pronoun is displaced to the front of the relative clause, and a pronoun is left in its place (10b). Fronting is optional, however. The noun phrase containing the resumptive pronoun can also occur in object position (10c):

(10) RELATIVIZATION FROM POSSESSOR IN OBJECT POSITION

- a. *mε bí ^ljé bijék bí máaηgέ*
 1ST.SG P2 eat 8.food 8.CON child
 ‘I ate the child’s food’
- b. *í-maηgέ₁ (nú) [bijék *(gwéé₁) mε bí^l jé *(gwó)₁]*
 AUG-1.child 1.REL 8.food 8.POS 1SG P2 eat 8.PRO
 ‘the child whose food I ate’ (lit. ‘the child that his food I ate it’)
- c. *í-maηgέ₁ (nú) [mε bí ^ljé bijék *(gwéé₁)]*
 AUG-1.child 1.REL 1SG P2 eat 8.food 8.POS
 ‘the child whose food I ate’ (lit. ‘the child that I ate his food’)

Resumptive pronouns are obligatory in these examples. Thus, relativizing a possessive noun phrase necessarily relies on the resumption strategy.

Resumption is also necessary with standards or objects of comparison:

(11) RELATIVIZATION FROM OBJECT OF COMPARATIVE

- a. *ηgwó i ye i-kéηí ilél maηgέ*
 9.dog 9.SBJ PR.be 9-big exceed 1.child
 ‘The dog is bigger than the child’
- b. *í-maηgέ₁ (nú) ηgwó i ye ikéηí ilél *(^lnyé₁)]*
 AUG-1.child 1.REL 9.dog 9.SBJ PR.be 9-big exceed 1.him
 ‘the child that the dog is bigger than’
 (lit. ‘the child that the dog is big exceeding him’)

Comparative objects are structurally similar to the objects of prepositions and genitives in (7-10); they are the argument a predicate — either a noun, a preposition, or an ‘exceed’ predicate — which itself is an argument of the main predicate.

The distribution of relativization strategies in Basaá follows from the predictions of the *Accessibility Hierarchy* (Keenan and Comrie 1977, p. 66), where ‘>’ means ‘is more accessible than’:

- (12) ACCESSIBILITY HIERARCHY (AH)
 SU > DO > IO > OBL > GEN > OCOMP

As predicted by Keenan and Comrie, the two relativization strategies in Basaá correspond to contiguous segments of the AH, and that the primary strategy in Basaá — marking the relativized site with a gap — forms a contiguous stretch of the AH including subjects. The secondary strategy, marking the relativized site with a resumptive pronoun, includes oblique arguments, optionally, and genitive noun phrases:

- (13) ACCESSIBILITY IN BASAÁ
 a. Strategy 1: Gap SU > DO > IO > OBL
 b. Strategy 2: Resumptive pronoun OBL > GEN > OCOMP

The generalization seems to be that while arguments of the main verb can be directly relativized with the gap strategy in Basaá, arguments of these arguments must be relativized with the resumptive strategy. The oblique arguments/prepositional objects are transitional because in many cases the preposition is selected by the verb, though the noun phrase is structurally dependent on the preposition. It would not be surprising to find variation even between different prepositions.

In summary, we have seen that relative clauses occur at the right edge of the noun phrase. The primary morphological reflex of relativization is an optional relative operator which is homophonous with a demonstrative modifier. The following section turns to the syntactic status of this operator as well as the status of the augment prefix on the noun.

3. Relative operators, demonstratives, and specificity

This section examines the distribution of demonstratives and the augment prefix with relative clauses. After reviewing the distribution of demonstratives in section 3.1, section 3.2 shows that the augment prefix, obligatory with postnominal demonstratives, only occurs with relative clauses in definite noun phrases. Section 3.3 presents a novel finding: demonstratives in Basaá are in complementary distribution with relative operators in the gapped relative clause strategy.

3.1 Properties of demonstratives

Basaá makes a three-way distinction in its demonstrative system. These distinctions identify people or objects near the speaker, near the hearer, and beyond the speaker and hearer. Demonstratives show concord with the noun in noun class, i.e. gender and number.

(14) DEMONSTRATIVES IN BASAÁ (from Hyman 2003, p. 267)

Class	'this' (n.s.)	'that' (n.h.)	'that' (far)
1	<i>núnú</i>	<i>nû</i>	<i>núú</i>
2	<i>báná</i>	<i>bá</i>	<i>báa</i>
3	<i>únú</i>	<i>û</i>	<i>úú</i>
4	<i>míní</i>	<i>mî</i>	<i>míí</i>
5	<i>líní</i>	<i>lî</i>	<i>líí</i>
6	<i>máná</i>	<i>mâ</i>	<i>máa</i>
7	<i>íní</i>	<i>î</i>	<i>íí</i>
8	<i>bíní</i>	<i>bî</i>	<i>bíí</i>
9	<i>iní</i>	<i>i</i>	<i>íí</i>
10	<i>íní</i>	<i>î</i>	<i>íí</i>
19	<i>híní</i>	<i>hî</i>	<i>híí</i>
13	<i>tíní</i>	<i>dî</i>	<i>díí</i>

As seen, these demonstratives all begin H except for class 9, whose tonal agreement is L, as in Proto-Bantu. With the exception of connectives and demonstratives, this is true for class 1 as well (Hyman 2003, p. 266).

Demonstratives in Basaá can occur either before or after the noun they modify, as in many Bantu languages (Van de Velde 2005). The prenominal position of demonstratives is associated with contrastive or identificational focus on the demonstrative (cf. Makasso 2010, p. 149). The postnominal position, while information structurally unmarked, requires that the augment prefix be present on the noun:³

(15) PRENOMINAL AND POSTNOMINAL DEMONSTRATIVES

a.	<i>líní</i>	<i>liwándá</i>	b.	<i>lí^lwándá</i>	<i>líní</i>
	5.this	5.friend		AUG.5.friend	5.this
	'THIS friend' (near speaker)			'this friend' (near speaker)	
c.	<i>lí</i>	<i>liwándá</i>	d.	<i>lí^lwándá</i>	<i>lî</i>
	5.that	5.friend		AUG.5.friend	5.that
	'THAT friend' (near hearer)			'that friend' (near hearer)	
e.	<i>líí</i>	<i>liwándá</i>	e.	<i>lí^lwándá</i>	<i>líí</i>
	5.that	5.friend		AUG.5.friend	5.that
	'THAT friend' (far)			'that friend' (far)	

Hyman (2003) identifies the *í*-prefix as a trace of the Proto-Bantu augment due to its identical position before the noun, its H tone, and its connection to definiteness. A homophonous prefix also functions as locative marker in expressions such as *í-^lndáp* 'at home' (Makasso 2010, p. 148). While the formal connection between the locative and the nominal prefix cannot be ignored, we will refer to *í*- as the 'augment prefix' in the following discussion below.

³ As discussed earlier, this prefix is realized as H on the noun class marker, or as *í*- with nouns that lack an overt CV prefix, as in examples (1) and (6-10).

The augment prefix cannot occur on bare (unmodified) nouns. Thus, there is no means of overtly marking definiteness or specificity in Basaá in unmodified noun phrases:

(16) DEFINITE BARE NOUNS

- a. *yaaní mε bí' téhé mût ni mudaá.*
 yesterday 1SG P2 see 1.person with 1.woman.
 'Yesterday I saw a man and a woman.'
- b. *(*í-)mut a bée ntendée, (*í-) mudaá kírk*
 1.person 1.SBJ P2.be tall 1.woman short
 'The man was tall, but the woman (was) short.'

With the exception of relative clauses, postnominal modifiers besides the demonstrative cannot occur with the augment prefix, including numerals (*ma-wándá mátân* 'five friends' vs. **má-^lwándá mátân*) possessive pronouns (*li-wándá jêm* 'my friend' vs. **lí-^lwándá jêm*) and adjectives (*li-wándá li-kéńí* 'big/important friend' vs. **lí-^lwándá li-kéńí*). This distinction between the demonstrative and the other modifiers also holds in their phonological behavior: while H spreads from nouns to numerals and possessive pronouns, it does not spread to demonstratives. To see this, compare *ngwó yêm* 'my dog' vs. *njok yem* 'this elephant,' where H spreads to the possessive pronoun from the H toned *ngwó*, to *ngwó iní* 'this dog' vs. *njok iní* 'this elephant', where H does not spread from *ngwó*.

3.2 Relative clauses and specificity

The previous section demonstrated that the augment appears on the noun when they are modified by postnominal demonstratives. As was shown in examples (1-11) in section 2, the augment prefix also appears with relative clauses. However, relative clauses and demonstratives differ in one crucial respect: while the augment must occur with demonstratives, it can be omitted with relative clauses, resulting in an indefinite interpretation for the noun phrase (Makasso 2010, p. 153-4):

- (17) a. *mε í ^lgwés mût₁ (nú) [___₁ a yé mbóm]*
 1SG PR like 1.person 1.REL 1.SBJ COP 9.big
 'I like someone that is big/important.'
- b. *mε í ^lgwés í-mut₁ (nú) [___₁ a yé mbóm]*
 'I like the person that is big/important.'
- (18) a. *mε ń ^lyéη mááηgέ₁ (nú) [mε ń ^lyí ___₁]*
 1.SG PR seek 1.child 1.REL 1.SG PR know
 'I'm looking for a child that I know.' (not a specific child)
- b. *mε ń ^lyéη í-maηgέ₁ (nú) [mε ń ^lyí ___₁]*
 'I'm looking for the child that I know.'

The object noun phrase in (17a) and (18a) must be non-specific indefinites. Thus, (17a) is interpreted as a generic statement about the preferences of the speaker, while in (18a) the child is not known to the speaker. This pattern of interpretations shows that the augment prefix in Basaá marks specificity, rather than definiteness.

The noun in unaugmented relative clauses can be omitted, as in the following colloquialism, resulting in an indefinite headless relative clause:

- (19) *(mut₁) nú [___₁ a mbok l̂] a mbok jé*
 person 1.REL 1.SBJ first come 1.SBJ first eats
 'Whoever comes first, eats first.'

Thus, the augment is an overt marker of specificity in noun phrases containing relative clauses and demonstratives. In other words, something which is usually marked covertly in Basaá, definiteness or specificity, is marked overtly in the presence of these modifiers.

3.3 Relative operators and demonstratives

In examples (17-19), the distribution of the relative operator (e.g. *nú*) is independent from the definiteness or specificity of the noun phrase, marked by the augment. This is expected if the sole syntactic function of the relative operator is to mark a relative clause.

However, the following examples demonstrate that relative operators are in complementary distribution with demonstratives, whether they are postnominal or prenominal. This is shown for subject relative clauses in example (20) and object relative clauses in example (21), both of which use the gap strategy:

- (20) COMPLEMENTARY DISTRIBUTION OF RELATIVE OPERATOR AND DEMONSTRATIVE (SUBJECT R. C.)

- a. *lí-^lwándá₁ líní/lí^l/líí (*lí^l) [___₁ lí bí ^ljé bíjék]*
 AUG.5-friend 5-DEM 5.REL 5.SBJ P2 eat food
 'this/that friend that ate the food'
- b. *líní/lí/líí lí-wándá₁ (*lí^l) [___₁ lí bí ^ljé bíjék]*
 5.DEM 5-friend 5.REL 5.SBJ P2 eat food
 'THIS/THAT friend that ate the food'

- (21) COMPLEMENTARY DISTRIBUTION OF RELATIVE OPERATOR AND DEMONSTRATIVE (OBJECT R. C.)

- a. *í-maangé₁ núnú/nú^l/núú (*nú) [mε ń ^lyí ___₁]*
 AUG-1.child 1.DEM 1.REL 1ST.SG PR know
 'this/that child that I know.'
- b. *núnú/nú^l/núú maangé₁ (*nú) [mε ń ^lyí ___₁]*
 1.DEM 1.child 1.REL 1ST.SG PR know
 'THIS/THAT child that I know.'

The complementary distribution of demonstratives and relative operators is unexpected. This is because the demonstratives and the relative operator have been shown to have distinct syntactic behaviors — only demonstratives require the augment prefix — and semantic effects — augmentless noun phrases with relative clauses are indefinite.

The complementarity between demonstratives and the relative operator is more limited with relative clauses involving the resumption strategy. While the 'near-hearer' demonstrative cannot occur with the relative operator, the 'near-speaker' and distal demonstrative can occur with the relative operator. This is illustrated for resumptive relatives formed on standards of comparison (22) and possessive noun phrases (23):

- (22) DISTRIBUTION OF RELATIVE OPERATOR AND DEMONSTRATIVE (OBJECT OF COMP R. C.)
- a. *í-maangé₁ núnú/nú[↓]/núú (*nú)* [*‘ηgwó i ye ikéńí ilél ‘nyé₁*]
 AUG-1.child 1.DEM 1.REL 9.dog 9.SBJ PR.be 9-big exceed 1.PRO
 ‘this/that child that the dog is bigger than’
- b. *núnú/nú[↓]/núú maangé₁ (*nú)* [*‘ηgwó i ye ikéńí ilél ‘nyé₁*]
 ‘THIS/THAT child that the dog is bigger than’
- (23) DISTRIBUTION OF RELATIVE OPERATOR AND DEMONSTRATIVE (OBJECT POSSESSOR R.C.)
- a. *í-maangé₁ núnú/*nú[↓]/núú nú* [*mε bí ‘jé bijék gwéé₁*]
 AUG-1.child 1.DEM 1.REL 1ST.SG P2 eat 8.food 8.POS
 ‘this/that child whose food I ate’
- b. *núnú/*nú[↓]/núú maangé₁ nú* [*mε bí ‘jé bijék gwéé₁*]
 1.DEM 1.child 1.REL 1ST.SG P2 eat 8.food 8.POS
 ‘THIS/THAT child whose food I ate’

With fronted genitives (cf. 10b), the pattern is the same:

- (24) DISTRIBUTION OF RELATIVE OPERATOR AND DEMONSTRATIVE (FRONTED OBJECT POSSESSOR R.C.)
- a. *í-maangé₁ núnú/*nú[↓]/núú nú* [*bijék gwéé₁ mε bí ‘jé gwó₁*]
 AUG-1.child 1.DEM 1.REL 8.food 1.POS 1ST.SG P2 eat 8.PRO
 ‘this/that child whose food I ate’
- b. *núnú/*nú[↓]/núú maangé₁ nú* [*bijék gwéé₁ mε bí ‘jé gwó₁*]
 1.DEM 1.child 1.REL 8.food 1.POS 1ST.SG P2 eat 8.PRO
 ‘THIS/THAT child whose food I ate’

To summarize, relatives clauses formed by resumption pattern together, allowing demonstratives to co-occur with the relative operator, with the exception of the homophonous near-hearer demonstrative. In contrast, in relative clauses formed with the gap strategy, demonstratives cannot co-occur with the relative operator at all.

We have seen that relative clauses in Basaá share with demonstratives the ability to license an overt marker of specificity, the augment prefix. This prefix cannot mark specificity on bare (unmodified) nouns, however. Furthermore, while the relative operator is segmentally identical to the near-hearer demonstrative, it can occur in indefinite, augment-less noun phrases, leading to the expectation that the relative operator is syntactically distinct from demonstratives. Yet the relative operator and demonstratives are in complementary distribution, though a subset of the demonstratives can occur with the relative operator in relative clauses formed by resumption.

4. Analysis

This section presents an analysis of relative clauses in Basaá which accounts for the distribution of demonstratives and relative operators. After showing that the relative operator forms a constituent with the relative clause, a head-raising analysis of relative clauses along the lines of Kayne (1994) is presented, from which the complementarity

between the relative operator and demonstrative in (20-21) follows, given additional assumptions about the syntactic category of relative operators. This analysis cannot be extended to the resumption strategy, for which an analysis involving base generation of relative operator is proposed. This analysis accounts for the non-complementarity of certain demonstratives with the relative operators in these cases (22-24).

4.1 The syntactic status of the relative operator

This section provides evidence from stacked relatives and non-restrictive relatives that show that the relative operator forms a constituent with the relative clause rather than with the head noun. This conclusion excludes an analysis where the relative operator is syntactically identical to demonstratives — an appealing hypothesis due to their complementarity.

The first argument that relative operators form a constituent with relative clauses comes from the recurrence of relative operators in stacked restrictive relative clauses in Basaá. (25) and (26) provide definite and indefinite stacked relatives, respectively:

(25) SPECIFIC/DEFINITE STACKED RELATIVES

liwándá jêm lí ń ʔgwés ńdíki híngɔnda₁ (hí) [__₁ hí yé diláám]
 5.friend 5.my 5.SBJ PR like only AUG.19.girl 19.REL 19.SBJ PR.be 13.beaut.
**(hí) [nyan a ń ʔyí __₁]*
 19.REL mother 1.SBJ PR know
 ‘My friend only likes the girl that is beautiful that his mother knows.’

(26) NONSPECIFIC/INDEFINITE STACKED RELATIVES

liwándá jêm lí ń ʔgwés ńdíki diɲgɔnda₁ (tí) [__₁ dí yé diláám]
 5.friend 5.my 5.SBJ PR like only 13.girls 13.REL 13.SBJ PR.be 13.beaut.
**(tí) [nyan a ń ʔyí __₁]*
 19.REL mother 1.SBJ PR know
 ‘My friend only likes girls that are beautiful that his mother knows.’

If a demonstrative occurs with the stacked relatives in (25), only the first relative operator is prohibited:

(27) STACKED RELATIVES WITH PRENOMINAL DEMONSTRATIVE

*liwándá jêm lí ń ʔgwés tɪní diɲgɔnda₁ (*tí) [__₁ dí yé diláám]*
 5.friend 5.my 5.SBJ PR like these 13.girls 13.REL 13.SBJ PR.be 13.beaut.
**(tí) [nyan a ń ʔyí __₁]*
 19.REL mother 1.SBJ PR know
 ‘My friend only likes THESE girls that are beautiful that his mother knows.’

These examples show that the demonstrative which occurs before relative clauses is a true relative operator by virtue of the fact that it *must* recur in stacked relatives. Example (27) demonstrates that the complementarity between the relative operator and demonstratives only holds of the relative operator closest to the head noun.

The second argument that the relative operator is syntactically associated with the relative clause comes from non-restrictive relative clauses (Makasso 2010, p. 152):

(28) NON-RESTRICTIVE RELATIVE CLAUSES

- a. *Paul*₁, *nú* *^(1nyé₁) *a* *ń* ^{1gwés} *jé*, *a* *bí* *bok* *í-têble*
P. 19.REL 1.PRO 1.SBJ PR like eat 1.SBJ P2.be first LOC-table
‘Paul, who likes to eat, was the first to the table.’
- b. *baúrú*₁ *bêm*, *bá* *^(1bó₁) *bá* *bí* ^{1sál} *lóngê*, *bá* *bí* *net* *bóbasô*
2.student 2.my 2.REL 2.PRO 2.SBJ P2 work well AGR P2.succeed all
‘My students, who have been working well, have all succeeded.’

Non-restrictive relative, like restrictive relatives are introduced by the relative operator, but they necessarily use the resumption strategy, as indicated by the free subject pronouns in the examples above, usually used for non-subjects (Hyman 2003, p. 269). As the commas indicate, the relative operator forms a prosodic constituent with the non-restrictive relative clause, proving that the relative operator is not an adnominal demonstrative.

4.2 Demonstrative-operator complementarity and head-raising relatives

The Basaá facts presented above present two problems: 1) the complementarity of relative operators and demonstratives in ‘strategy 1’ relative clauses containing a gap and 2) distinguishing these cases from the non-complementarity of certain demonstratives and relative operators in ‘strategy 2’ relative clauses containing a resumptive pronoun. The intuition we pursue in this section is that the complementarity between demonstratives and relative operators in Basaá is due to the fact that even true demonstratives can function as relative operators, and both elements occur in the same syntactic position. This derivation does not extend to relative clauses involving resumption, which must receive a different analysis, the topic of section 4.3.

Complementarity arises from competition: two syntactic elements compete for the same syntactic position. To see how this will solve our problem, we begin with prenominal demonstratives in Basaá, which we take to occur in a position in the specifier of DP (15a):

- (29) [_{DP} *núnú/nú/núú* [_D Ø [_{NP} *mut*]]] ‘this/that person’

Intuitively, relative operators occur in this position as well. Relative operators have been analyzed as a D-element associated with the head noun in several other Bantu languages (Ngonyani 2001, Zeller 2004, Carstens 2005, Cheng 2006), which is particularly appealing, given the common morphological and diachronic relationship between demonstratives and relative operators (see section 5 for more on this).⁴ That the analysis in (29) also solves the complementarity problem provides a further argument for assuming such an analysis in Basaá. An additional argument for this conclusion in Basaá is the fact that prenominal demonstratives are focused. Since relative operators are *wh*-operators, hence focused, assigning them to a shared position in the specifier of DP is all the more appealing.

⁴ The alternative would be to analyze the relative operator as a relative complementizer (cf. Demuth & Harford 1999; Schneider-Zioga 2007; Henderson 2009).

We take the prenominal position of demonstratives to be derived from the postnominal position, which is a lower position within NP or some intermediate functional projection.⁵ It may be the presence of this functional projection that triggers the appearance of the augment, as the bare NP complement would not have this effect.

(30) [DP *í* [FP [NP *mut*] *núnú/nú/núú*]]

The fact that the postnominal position of the demonstrative is not associated with focus provides evidence that it is the basic position. From this perspective, the fact that the augment prefix occurs overtly in (30) but not in (29) follows from a generalized version of the “Doubly-filled COMP Filter” (e.g. Koopman & Szabolsci 2000, p. 4), which states that a head cannot be pronounced if its specifier is filled. That is, D cannot be pronounced in (29) because the demonstrative or relative operator is occupying its specifier position.

With this proposal as background, we turn now to the derivation of relative clauses themselves. Kayne (1994, p. 87) proposes that the nominal heads of relative clauses raise to the specifier of the relative CP, which can be selected as the complement of D. This head-raising analysis has been argued to hold in other Bantu languages (Ngoyani 2001; Carstens 2005; Cheng 2006; Henderson 2009). For Basaá, such an analysis entails that the augment takes the relative CP as its complement. In the specifier of this relative CP is the noun and the relative operator or demonstrative with the structure in (29). This is illustrated below for example (1b), repeated below:

(31) [DP₁ *í* [CP [DP₂ *nú mut*]_i [C' ... *t_i* ...]]]

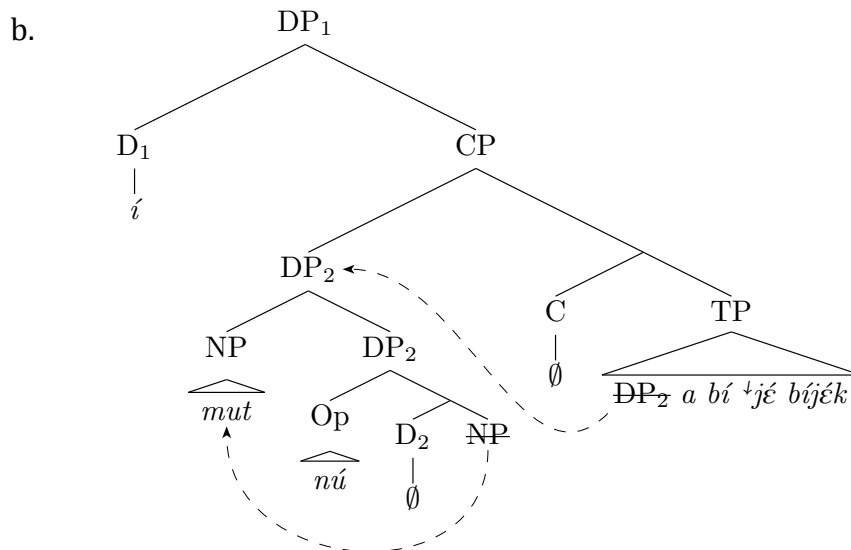
In (33), DP₁ represents the entire DP, headed by the augment. DP₂ is the moved relative head, whose base position is *t₁*. The C head is always silent in Basaá due to the filled complementizer, again by the Doubly-filled COMP Filter.

The structure in (31) never surfaces, however, because one of two further operations must take place for the derivation to converge. Either 1) the N must move past Dem to the specifier of DP₂ (cf. Kayne 1994, p. 90), or 2) DP₂ moves to Spec, DP₁. Both steps occur because D₁ requires a noun in its “minimal domain” (Bianchi 2000, p. 128).

In the first case, the Aug-N-Op/Dem-RC word order results, as is illustrated below:

(32) a. *í-mut₁ nú* [*___₁ a bí ʼjé bíjék*]
 AUG-1.person 1.REL 1.SBJ P2 eat 8.food
 ‘the person that ate the food’

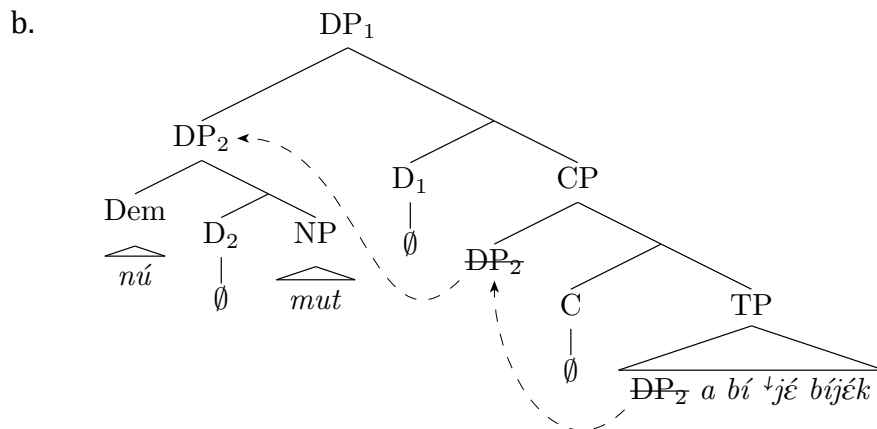
⁵ Demonstratives show similar alternations in their position in Romance languages, particularly in Romanian and Spanish, and they are similarly seen as raising from a lower postnominal position to a higher position before the noun. In Spanish, the prenominal position also blocks the definite article. See, e.g., Bernstein 1997; Brugè 1996, 2002; Giusti 1997, 2002; Leu 2006; *inter alia*.



This derivation represents the unmarked case. It is the only option when the relative operator is a true operator rather than a demonstrative. The movement of the demonstrative to the operator position inside the specifier of DP₂ is not represented. Furthermore, we can now posit that this is the configuration in which the relative operator is optional, perhaps due to the licensing of the higher NP by the higher D head. Indefinite relative clauses which lack the augment can be seen as having the structure in (32) but with an unpronounced indefinite article in D₁ instead of the augment.

In the second derivation, the entire relative head moves out of CP, resulting in the Dem-N-RC word order with emphasis on the demonstrative:

- (33) a. *nú* *mut*₁ [₁ *a* *bí* ʔ*jé* *bíjék*]
 1.that 1.person 1.SBJ P2 eat 8.food
 ‘THAT person that ate the food’



The derivation in (33b) is restricted to cases where the operator is a ‘true’ demonstrative (e.g. 20-21). Demonstratives can also remain in [Spec, CP], as in (32). The derivations in (32-33) for relative clauses mirror the two derivations for demonstratives in (29-30). It follows that either a demonstrative or a relative operator can occur in a restrictive relative clause, but not both, as both occur in the same position internal to DP₂.

This proposal thus derives the complementarity between demonstratives and relative operators (section 3.3). Yet this solution begs the deeper question of why demonstratives and relative operators are in competition at all, or, stated differently, why demonstratives can serve as relative operators. This seems to be a language-particular property of Basaá: if relative operators are distinguished by some feature *Op* (cf. McCloskey 2001, Adger & Ramchand 2005), then *Op* can also be realized by demonstratives in addition to their more contentful deictic features in Basaá. Thus, Basaá is simply a language with a rich set of relative operators.

Standard diagnostics for A-bar movement, including weak and strong crossover effects (34-35) (Postal 1971) and island constraints (36) (Ross 1967) confirm that the gap strategy for relative clauses involve overt movement, as expected under the analysis above:

(34) WEAK CROSSOVER

- a. *í-maangé₁ nú [___₁ a ń^l-gwés líwándá jéé_{1/2}]*
 AUG-1.child 1.REL 1.SBJ PRES-like 5-friend 5.POSS
 ‘the child₁ that likes his_{1/2} friend’
- b. *í-maangé₁ nú [lí-wándá jéé*_{1/2} lí ń^l-gwés ___₁]*
 AUG-1.child 1.REL 5-friend 5.POSS 5.SBJ PRES-like
 ‘the child₁ that his*_{1/2} friend likes’

(35) STRONG CROSSOVER

- í-maangé₁ nú [pro*_{1/2} a ń^l-gwés ___₁]*
 AUG-1.child 1.REL 1.SBJ PRES-like
 ‘the child₁ that he*_{1/2} likes’

(36) COMPLEX NP ISLAND VIOLATION IN SUBJECT (A) AND OBJECT (B) RELATIVE W/GAP

- a. **líwándá jém lí ń^l-gwés í-kaat₁ i [mé ń^l-yí*
 5.friend 5.my 5.SBJ PR like AUG-9.book 9.REL 1ST.SG PR know
[í-maangé₂ nú [___₂ a ńág ___₁]]
 AUG-1.child 1.REL 1.SBJ read
 ‘*My friend likes the book that I know the child that read.’
- b. **líwándá jém lí ń^l-yí í-maangé₁ nú [mé ń^l-gwés*
 5.friend 5.my 5.SBJ PR like AUG-1.child 1.REL 1ST.SG PR like
[í-kaat₂ i [___₁ a ńág ___₂]]
 AUG-9.book 9.REL 1.SBJ read
 ‘*My friend knows the child that I like the book that read.’

Reconstruction facts which have been argued to specifically favor the head-raising analysis of relatives by Bhatt (2002) can be reproduced in Basaá. For example, relative heads can receive bound readings under quantificational subjects inside the relative clause (37), and adjectives can receive interpretations internal to the relative clause (38):

(37) BOUND VARIABLE RECONSTRUCTION

- í-^lfóto₁ i [hígií ńúrú a bí yɔɔ ___₁ ndáp yé^lé] i bée iláám*
 AUG-9.photo 9.REL every 1.student 1.SBJ P2 take 9.house 9.his 9.SBJ P2.be 9.nice
 ‘The picture that every student took of his house was nice.’

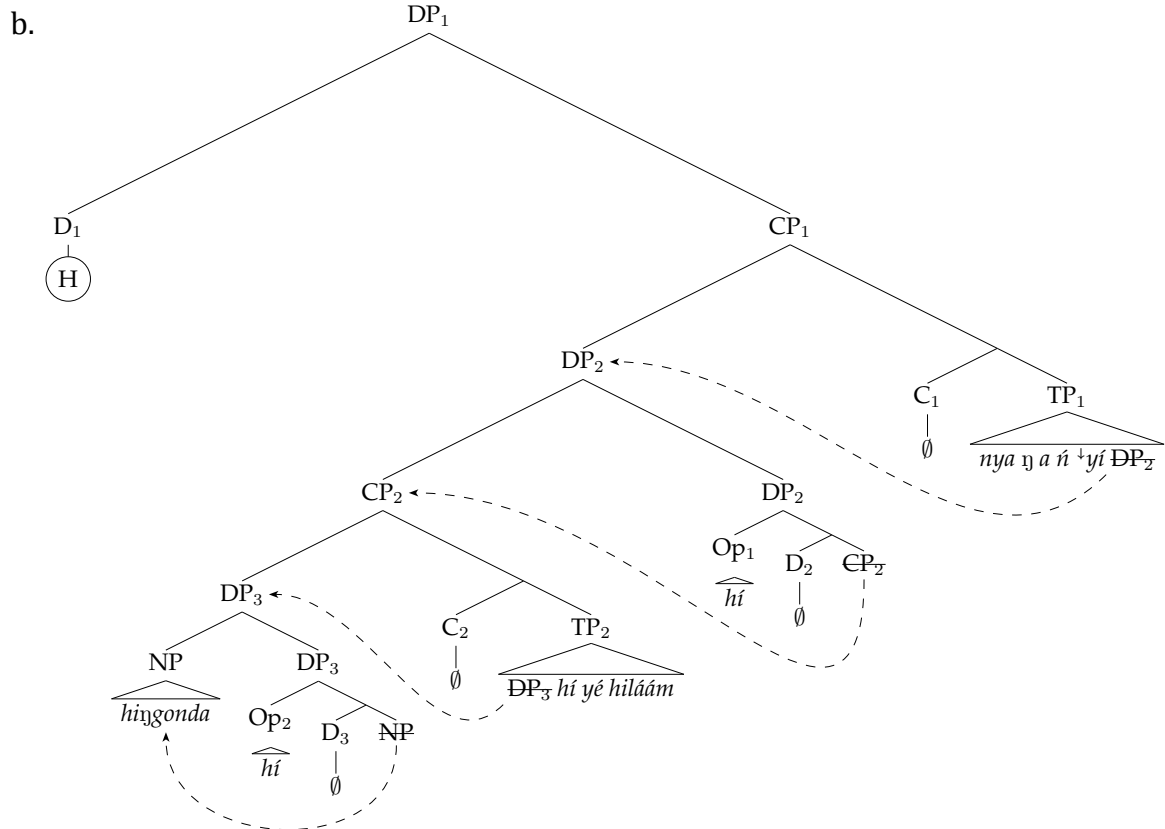
(38) ADJECTIVE RECONSTRUCTION

pǝm kaat₁ i [Pierre a ń-kal lé Victor a ńńń ____₁]
 only book 9.REL P. 1.SBJ P1-say that V. 1.SBJ read
 ‘the only book that Pierre said that Victor read’ (only > say, say > only)

Example (37) is admittedly not a true case of bound variable reconstruction: the head DP does not contain a bound pronoun. However, the most salient interpretation of (37) is one where each student took a different picture, which would involve reconstruction, which would involve reconstruction of the head noun into the relative VP where it could undergo existential closure under *hígíí* ‘every.’ Together, then, the facts in (34-38) support the head-raising analysis of restrictive relative clauses involving a gap in Basaá.

A remaining challenge for this proposal is the recursion of relative operators in stacked relative clauses, only the first of which is in complementary distribution with demonstratives (27). The proposal above can countenance these facts if relative operators are base-generated in the specifier of a DP (DP₂ below) which can take a CP complement (CP₂ below). This latter CP must move to a position above the operator, as was shown to be necessary with nouns in simple (non-stacked) relative clauses in example (32b), and parallel to the movement of NP below (cf. Bianchi 2000, p. 132):

- (39) a. *híngonda₁ (hí) [____₁ hí yé hiláám] *(hí) [nyań a ń ‘yí ____₁]*
 AUG.19.girl 19.REL 19.SBJ PR.be 19.beautiful 19.REL mother 1.SBJ PR know
 ‘the girl that is beautiful that his mother knows.’



This structure accounts for the observed properties of stacked relative clauses. First, the configuration in DP₃ is similar to the configuration in (34b) where it is adjacent to the upper D head, and the relative operator is optional in both cases. Second, the relative operator in DP₂ is not adjacent to an upper D head, and this operator is obligatory. Third, the relative clause on the right, CP₁, is predicted to have scope over CP₂ on the left, due to the fact that it is structurally higher. This prediction is correct; (41a) has the interpretation of restricting a larger set of beautiful girls to a particular girl that his mother knows. Fourth, demonstratives are only predicted to alternate with Op₂, because only Op₂ occurs in a DP which takes a NP complement, which is the source of demonstratives (cf. 32). Finally, demonstratives are only predicted to be in complementary distribution with Op₂ for the same reason.

4.3 Resumption, unselective binding, and non-complementarity

Now that the analysis of ‘strategy 1’ restrictive relative clauses involving a gap has been established, ‘strategy 2’ restrictive relative clauses involving a resumptive pronoun will be shown to have a different structure. This proposal can account for the ability of relative operators to co-occur with demonstratives in relative clauses with resumption (22-24).

There is long-standing tradition in the analysis of relative clauses to see the presence of resumptive pronouns as evidence for the absence of movement. This has most famously been shown in Irish (McCloskey 1990, 2002), where there is a morphological distinction on the relative complementizer correlating with the presence of resumptive pronouns, and relative clauses involving resumption are not subject to island constraints.

The following examples, which are identical to (36a-b) except for the existence of resumption, demonstrate that resumption alleviates island constraints in Basaá as well.

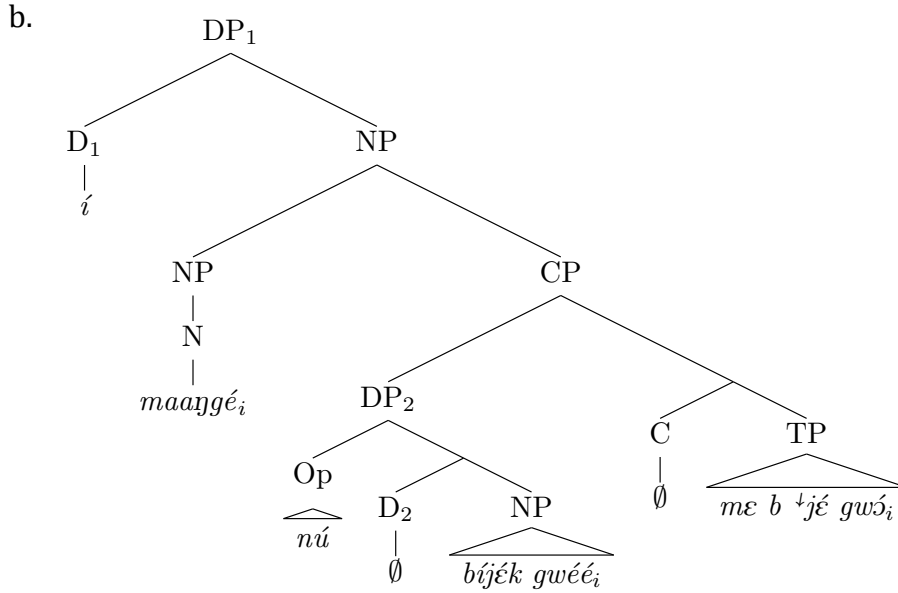
(40) NO COMPLEX NP ISLAND VIOLATION IN SUBJECT (A) AND OBJECT (B) RELATIVES W/ RESUMPTION

- a. *liwándá jêṁ lí ñ ʔyí í-maangé₁ nú [mé ñ ʔgwés*
 5.friend 5.my 5.SBJ PR know AUG-1.child 1.REL 1ST.SG PR like
[í-kaat₂ i [nyé₁ a ñáŋ —₂]]
 AUG-9.book 9.REL 1.PRO 1.SBJ read
 ‘??My friend knows the child that I like the book that he read.’
- b. *liwándá jêṁ lí ñ ʔgwés í-kaat₁ i [mé ñ ʔyí*
 5.friend 5.my 5.SBJ PR like AUG-9.book 9.REL 1ST.SG PR know
[í-maangé₂ nú [—₂ a ñáŋ yɔ₁]]
 AUG-1.child 1.REL 1.SBJ read
 ‘??My friend likes the book that I know the child that read it.’

Based on this evidence we can conclude that relative clauses involving a resumptive pronoun do not involve movement at all. This entails in turn that these relative clauses cannot be derived by the head-raising analysis detailed in section 4.2, but must simply occur as nominal adjuncts with a base-generated relative operator.

The analysis of relative clauses involving resumption is shown below for the case of a possessive relative, which can occur left peripherally in the relative clause (10b):

- (41) a. *í-maangé₁ (nú) bijék gwéé₁ mε bí ^ljé gwó₁*
 AUG-1.child 1.REL 8.food 8.POS 1SG P2 eat 8.PRO
 ‘the child whose food I ate’



The structure presumably the same in relative clauses which lack an overt NP complement with the operator. In structures such as (41b), the relative clause is likely attached to a projection above NP, rather than NP itself, though the analysis above is adequate.

It follows from the structure in (41b) that demonstratives are not in complementary distribution with relative operators because the relative clause is an adjunct. Therefore, the presence or absence of a relative operator would not be expected to affect the internal syntax of the NP to which it attaches. Thus, when an additional demonstrative is present (22-24), it presumably attaches a position between the NP and the CP, and optionally fronts to [Spec, DP], as outlined in the previous section.

Two issues remain unresolved. The first is the fact that the ‘near hearer’ demonstrative is blocked even in cases involving resumption. The second is how these proposals can shed light on the licensing of the augment.

An appealing hypothesis for the persistent complementarity between the ‘near hearer’ demonstrative and the relative operator is a case of haplology, or Menn & MacWhinney (1984)’s Repeated Morph Constraint: when two identical elements are adjacent, one must be deleted: e.g. *í-maangé (*nú) nú bijék gwéé₁ mε bí ^ljé gwó₁* ‘(lit.) the child that (*that) his food I ate it.’

A problem with this view is that even prenominal near-hearer demonstratives are impossible with the relative operator: **nú maangé nú bijék gwéé₁ mε bí ^ljé gwó₁* ‘(lit.) that child that his food I ate it.’ To block this latter case, a more powerful constraint would be required, which either blocked adjacent identical elements at any point in the derivation or at a certain distance. Yet the claim that the Repeated Morph Constraint would apply at an earlier point in the derivation which does not surface would be surprising, as this is generally a surface-level phenomenon. In either case, this issue does not directly affect the basic proposals above and we leave it for further work.

The second issue, involving augment licensing, is even more vexing, and the problem is more serious. The structures for head-raising relative clauses pursued in the previous section offered a potential explanation for the licensing condition, as in these structures the D took a CP complement rather than an NP, and thus was participating in a distinct structure. However, the ability for relative clauses involving resumption (e.g. 43) and demonstratives to license the augment cannot be made to follow from this proposal, as both of these modifiers elements are adjuncts. One promising line of explanation would be to say that demonstratives and relative clauses both attach to a higher position in the noun phrase than other modifiers, and are able to license the augment from this position. Evidence for this analysis comes from the H spreading facts noted at the end of section 3.1, where demonstratives were seen to be distinct from other modifiers in not allowing spreading from the N, a possible effect of their structural height.

5. Grammaticalization

While the previous section has examined relative clauses in Basaá from a formal perspective, this section puts into a historical context the distribution of the augment prefix in Basaá (section 3.1-3.2) as well as the complementarity between demonstratives and relative operators (section 3.3). These facts receive ready explanations from the perspective of grammaticalization theory.

Beginning with the augment, if the definite/specific prefix in Basaá is a remnant of the Proto-Bantu augment, as suggested in Hyman (2003, p. 267), its restricted distribution can be seen as the development of a new, more restricted, meaning for the augment in Basaá, relating to deixis. A similar suggestion is made by Makasso (2010), who identifies the basic function of the augment prefix as demonstrative. This conclusion would not be surprising from a broader Bantu perspective, as the augment has very different behavior in different Bantu languages (e.g. de Blois 1970, Hyman & Katamba 1993).

To clarify, specific noun phrases containing relative clauses (17b, 18b, 19b, 20b) and noun phrases containing demonstratives (15) both identify a particular individual (or group of individuals) in context. Relative clauses in indefinite noun phrases (19a, 20a) do not share this function; they arguably serve only to restrict the *potential* referents of the head noun by restricting the predicate itself; a semantic operation called Predicate Modification (Heim & Kratzer 1998, p. 65). While relative clauses in definite noun phrases might also be interpreted by Predicate Modification, they intuitively serve the same deictic function as demonstratives, identifying a specific intended referent in a context. Thus, the modern distribution of the augment prefix in Basaá has arguably become more specialized, only occurring on nouns that contain a deictic modifier.

This explanation is not entirely satisfying, however, as neither adjectives nor possessives license the use of the prenominal augment, though both can be deictic. What seems likely is that the occurrence of the augment was historically tied only to noun phrases which contained postnominal demonstrative pronouns (section 3.1), and its use with relative clauses represents an extension of this pattern.

This leads us to the complementarity between relative operators and demonstratives in Basaá. Recorded instances of grammaticalization from demonstratives to relative markers are widespread (Diessel 1999; Heine & Kuteva 2002, p. 113). In some languages where this grammaticalization has occurred, demonstrative relative markers

and demonstratives themselves freely co-occur. Germanic provides examples of this late stage of grammaticalization. English is one case: *that man that I knew*; German is another: *die Frau die meinen Bruder liebt*. From this perspective, Basaá represents a language where the demonstrative has not fully grammaticalized as a relative marker, but still retains its demonstrative status at some level. We have seen in the formal analysis above that this can be captured by identifying the demonstrative and relative operator both within the raised head internal to the relative clause, also accounting for the different behaviors of demonstratives between gap-strategy and resumption-strategy relative clauses.

It is somewhat surprising that Basaá demonstratives are still in this early stage of grammaticalization, as relative markers in many Bantu languages have fully grammaticalized from demonstratives into verbal prefixes, as in the southern Bantu languages discussed by Zeller (2004, also Demuth & Harford 1999). But these languages generally have a much more agglutinative structure than NW Bantu, so the affixal status of the relative markers in these languages is consistent with their morphological profile.

The fact that the relative operator in Basaá retains its demonstrative status may provide an historical explanation for the distribution of the augment prefix as well. The current distribution of the augment prefix can be traced back to a period where it was used exclusively with demonstratives. As demonstratives grammaticalized to relative operators, the augment may have been reanalyzed as a marker of specificity, used exclusively in deictic contexts, as suggested above. This historical process provides an explanation for why the augment cannot occur with possessive and adjectival modifiers, as they do not contain grammatical markers which developed from demonstratives.

6. Conclusion

While certain aspects of relative clauses in Basaá have proven to be regular from a crosslinguistic perspective, such as the conformity of relativization to the Accessibility Hierarchy (section 2), other aspects of relative clause formation were shown to be more particular to Basaá, such as the ability of relative clauses to license an augment prefix which overtly marks specificity (section 3.2) and the complementarity of demonstratives with relative operators (section 3.3.). This complementarity, and the different distributions of demonstratives with gapped and resumptive relatives, was in turn shown in section 4 to follow from two standard analyses of relative clauses, one which invokes head-raising, accounting for complementarity, and another that relied on base-generation of the relative operator and adjunction of the relative clause to NP, which allowed multiple demonstratives. This analysis did not solve the question of augment licensing, however, which was hypothesized in section 5 to have grammaticalized from an earlier state where the augment was associated exclusively with demonstratives.

It is interesting to observe that a strength of the formal analysis — explaining the distinction between gapping and resumptive relative clauses in the complementarity of relative operators and demonstratives — is a weakness of the historical analysis, as it is puzzling from the perspective of grammaticalization why relative operators in resumptive and gapped relatives should behave differently. At the same time, grammaticalization theory had more to say about how the particular pattern of augment usage in Basaá might have arisen, an issue that the formal analysis in section 4 sheds little light on. Last, both perspectives had plausible explanations for the complementarity of demonstratives and relative operators in gapped relatives, and the explanations complement each other well:

the idea that demonstratives syntactically compete for the same positions as the relative operator formalizes the intuition that the demonstrative has not completely grammaticalized to a relative operator.

References

- Adger, D., and G. Ramchand. 2005. Merge and move: *Wh*-dependencies revisited. *Linguistic Inquiry* 36:161–193.
- Åfarli, T. 1994. A promotion analysis of restrictive relative clauses. *Linguistic Review* 11(1), 81–100.
- Bernstein, J. 1997. Demonstratives and reinforcers in Romance and Germanic languages. *Lingua* 102:87–113.
- Bhatt, R. 2002. The raising analysis of relative clauses: Evidence from adjectival modification. *Natural Language Semantics* 10:43–90.
- Bianchi, V. 2000. The raising analysis of relative clauses: A reply to Borsley. *Linguistic Inquiry* 31:123–140.
- Bitjaa Kody, D. Z. 1990. *Le système verbal du basaa*. Thèse de 3ème Cycle, Université de Yaoundé.
- Brugè, L. 1996. Demonstrative movement in Spanish: A comparative approach. *University of Venice Working Papers in Linguistics* 1–53.
- Brugè, L. 2002. The positions of demonstratives in the extended nominal projection. In *Functional structure in DP and IP: the cartography of syntactic structures, Vol. 1*, ed. by G. Cinque, 15–53. Oxford University Press.
- Carstens, V. 2005. Agree and EPP in Bantu. *Natural Language & Linguistic Theory* 23, 219–279.
- Cheng, L. L.-S. 2006. Decomposing Bantu relatives. In *Proceedings of NELS 36*, C. Davis, A. R. Deal, and Y. Zabbal (eds.), 197–215.
- de Blois, K. F. 1970. The augment in the Bantu languages. *Africana Linguistica* 4:85–165.
- Demuth, K. & Harford C. 1999. Verb raising and subject inversion in Bantu relatives. *Journal of African Languages and Linguistics* 20: 41–61.
- Diessel, H. 1999. The morphosyntax of demonstratives in synchrony and diachrony. *Linguistic Typology* 3, 1–49.
- Dimmendaal, G. J. 1988. *Aspects du basaá: bantou zone A, Cameroun*. Paris: Peeters/Selaf.
- Givon, T. 1981. On the development of the numeral ‘one’ as an indefinite marker. *Folia Linguistica Historica* 2(1), 35–53.
- Giusti, G.. 1997. The categorial status of determiners. In *The New Comparative Grammar*, L. Haegeman (ed.), 95–123. New York: Longman.
- Giusti, G. 2002. The functional structure of noun phrases: A bare phrase structure approach. In *Functional structure in DP and IP: the cartography of syntactic structures, Vol. 1*, ed. by G. Cinque, 54–91. Oxford University Press.
- Heim, I., and A. Kratzer. 1998. *Semantics in Generative Grammar*. Blackwell: Malden, MA.
- Heine, B. and T. Kuteva. 2002. *World lexicon of grammaticalization*. Cambridge University Press.
- Henderson, B. 2009. Anti-agreement: Locality of movement or agreement? In *Proceedings of CLS 45*, R. Bochnak, N. Nicola, P. Klecha, J. Urban, A. Lemieux, and C. Weaver (eds.), 89–102.

- Hopper, P. and J. Martin. 1987. Stricturalism and diachrony: The development of the indefinite article in English. In *Papers from the 7th International Conference on Historical Linguistics* (Current Issues in Linguistic Theories, 48.), ed. by A. G. Ramat, O. Carruba, and G. Bernini, 195-304. Amsterdam: John Benjamins.
- Hyman, L. M. 2003. Basaá (A43). In *The Bantu languages*, D. Nurse and G. Philippson (eds.), 257-282. New York: Routledge.
- Kayne, R. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Keenan, E. L., & B. Comrie. 1977. Noun phrase accessibility and Universal Grammar. *Linguistic Inquiry* 8(1), 63-99.
- Koopman, H. & A. Szabolcsi. 2000. *Verbal Complexes*. Cambridge, MA: MIT Press.
- Lemb, P. & F. de Gastines. 1973. *Dictionnaire basaá-français*. Douala (Cameroon): Collège Libermann.
- Leu, T. 2006. These *HERE* demonstratives. In *UPenn Working Papers in Linguistics, Vol. 13.1: Proceedings of PLC 30*, 141-154.
- Makasso, E.-M. 2010. Processus de relativisation en Bâsâa: de la syntaxe à la prosodie. In *Papers from the Workshop on Bantu Relative Clauses* (ZAS Papers in Linguistics 53), L. Downing, A. Rialland, J.-M. Beltzung, S. Manus, C. Patin & K. Riedel (eds.), 145-158. Berlin: ZAS.
- Makasso, E.-M. To appear. Metatony in Basaa. In *Selected Proceedings of the 42nd Annual Conference on African Linguistics: African Languages in Context.*, M. R. Marlo, N. B. Adams, C. R. Green, M. Morrison & T. M. Purvis (eds.), Somerville, MA: Cascadilla Proceedings Project.
- McCloskey, J. 1990. Resumptive pronouns, A'-binding and levels of representation in Irish. In *Syntax of the modern Celtic languages*, R. Hendrick (ed.), 199-248. New York & San Diego: Academic Press
- McCloskey, J. 2002. Resumption, successive cyclicity, and the locality of operations. In *Derivation and explanation in the Minimalist Program*, ed. S. Epstein and T. D. Seely, 184-226. Malden, MA: Blackwell.
- Menn, L. & B. MacWhinney. 1984. The Repeated morph constraint: toward an explanation. *Language* 60:519-541.
- Ngonyani D. 2001. Evidence for head raising in Kiswahili relative clauses. *Studies in African Linguistics* 30(1): 59-73.
- Ouhalla, J. 2004. Semitic relatives. *Linguistic Inquiry* 35(2), 288-300.
- Schneider-Zioga, P. 2007. Anti-agreement, anti-locality and minimality: The syntax of dislocated subjects. *Natural Language and Linguistic Theory* 25, 403-446.
- Van de Velde, M. (2005). The order of noun and demonstrative in Bantu. In *Studies in African Comparative Linguistics with special focus on Bantu and Mande*, B. Koen and J. Maniacky (Eds.), 425-441. Tervuren: Royal Museum for Central Africa.
- Vries, M. de (2002). *The Syntax of Relativization*. Utrecht: LOT (LOT Dissertation Series 53).
- Zeller, J. 2004. Relative clause formation in the Bantu languages of South Africa. *Southern African Linguistics and Applied Language Studies* 22(1-2): 75-93.