

THE SYNTAX OF GEORGIAN RELATIVE CLAUSES

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ABBREVIATIONS

| | |
|-------------|--|
| 1, 2, 3 | first, second, third person |
| AOR | aorist (perfective past) |
| ADV | adverbial (case) |
| COP | copula |
| COMP | complementizer |
| COND | conditional |
| DAT | dative (elided before certain postpositions) |
| DEM | demonstrative |
| ERG | ergative |
| FOC | focus |
| FUT | future |
| GEN | genitive |
| IMP | imperfect (imperfective past) |
| INST | instrumental |
| N | nominal head of a relative clause |
| NEG | negative |
| NOM | nominative (usually not marked) |
| OBL | oblique |
| OPT | optative (present subjunctive) |
| PLU | pluperfect (past evidential / past subjective) |
| POSS | possessive |
| PROG | progressive |
| RC | relative clause |
| REL | relative particle |
| PART | participle |
| PERF | perfect (evidential) |
| PL | plural |
| PRES | present |
| QUOT | quotative |
| [...] | (in glosses) embedded clause |
| {x, y} | one of x or y |
| {x} ... {y} | one of x or y |

NOTES ON GEORGIAN MORPHOSYNTAX

Georgian verbs are highly complex, incorporating morphemes that signal tense / aspect / mood categories, subject / object agreement, and argument structure. Such morphological complexity is irrelevant to the topic of this paper. Therefore, throughout, an exhaustive morphemic segmentation like (i) will be abbreviated as in (ii).

- (i) da-gv-e-lod-eb-o-d-a
 PERFECTIVE-1PL.OBJECT-APPLICATIVE-wait-NON.PAST-INTRANS-PAST-3SG.SUBJECT
 ‘s/he would wait for us’
- (ii) dagvelodeboda
 wait:COND.3SG/1PL
 ‘s/he would wait for us’

Note that ‘X/Y’ means ‘subject with φ -features x , object with φ -features y ’. Null third person object markers will not be glossed.

Case marking is dependent on tense and argument structure. Unaccusative subjects are always nominative. Psych verb experiencer subjects are always dative; their themes are always nominative. The arguments of transitive and unergative verbs are marked as according to the following table.

| Tense | S | DO | IO |
|----------------------|-----|-----|---------------------|
| PRES, FUT, IMP, COND | NOM | DAT | DAT |
| AOR, OPT | ERG | NOM | DAT |
| PERF, PLU | DAT | NOM | + <i>tvis</i> ‘for’ |

Certain verbs assign case lexically; for example, *codna* ‘know’ has an ergative subject even in the present tense and *ḡocna* ‘kiss’ always takes a dative object.

For more information see Aronson (1990), Harris (1981), Hewitt (1995, 2005).

TRANSLITERATION

GEORGIAN:

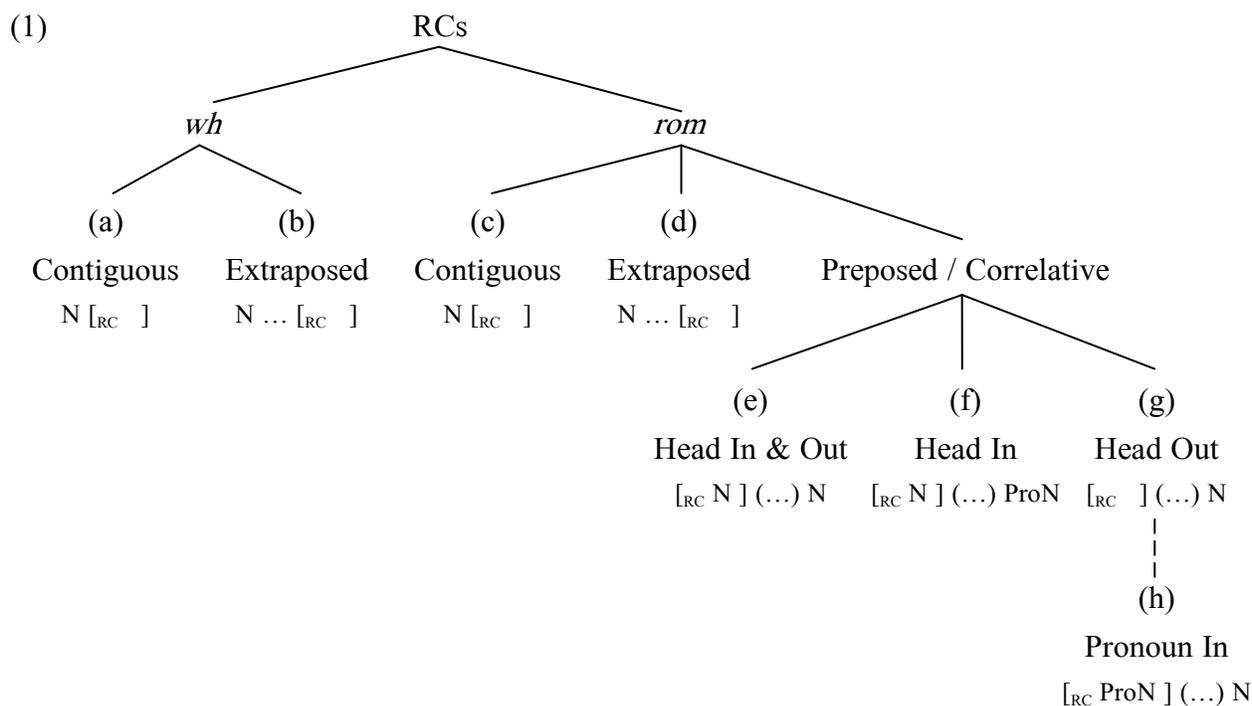
| | | | | | | | | |
|---|------|---|---|------|---|---|-------|---|
| ა | /a/ | a | მ | /m/ | m | გ | /ɣ/ | გ |
| ბ | /b/ | b | ნ | /n/ | n | ყ | /qʰ/ | q |
| გ | /g/ | g | ო | /o/ | o | შ | /ʃ/ | š |
| დ | /d/ | d | პ | /pʰ/ | p | ჩ | /tʃʰ/ | č |
| ე | /e/ | e | ჯ | /ʒ/ | ž | ც | /tsʰ/ | c |
| ვ | /v/ | v | რ | /r/ | r | ძ | /dzʰ/ | j |
| ზ | /z/ | z | ს | /s/ | s | წ | /tsʰ/ | ç |
| თ | /tʰ/ | t | ღ | /tʰ/ | t | ჭ | /tʃʰ/ | č |
| ი | /i/ | i | უ | /u/ | u | ხ | /x/ | x |
| კ | /kʰ/ | k | ფ | /pʰ/ | p | ჯ | /dʒ/ | j |
| ლ | /l/ | l | ქ | /kʰ/ | k | ჰ | /h/ | h |

HINDI:

As per the International Alphabet of Sanskrit Transliteration.

ABSTRACT

This thesis provides a unified syntactic analysis of Georgian relative clauses using the Minimalist framework (Chomsky 1995, 2000), specifically Derivation by Phase (Chomsky 2001). Georgian is notable in that it possesses many options for forming relative clauses (RCs). Within the relative, a *wh*-phrase may appear at the left edge, or the complementizer *rom* may appear in a non-initial position. In relation to the matrix clause, the relative may immediately follow its head noun; it may be extraposed; or, if formed with *rom*, it may be preposed in a correlative construction. Among the correlatives, the head noun may appear both inside and outside the RC, inside with a pronoun outside, or outside with a gap (or in certain constructions a pronoun) inside. The options are summarized in (1).



I argue that these various relativization strategies may all be derived from a single underlying structure where the RC is generated inside the head noun DP. The asymmetries that exist between (1a–h) (*wh* vs. *rom*; raising vs. matching interpretation; optional vs. obligatory demonstrative on the head noun) can be explained by the presence or absence of Phase escape hatches and by merging complementizers higher or lower in the left periphery.

1. INTRODUCTION

1.1 THE DATA

In English there are three ways to introduce a relative clause: with a *wh*-phrase (2a), the complementizer *that* (2b), or a null complementizer (2c). They may either directly follow their head noun (2) or be extraposed to the right edge of the clause (3), giving six distinct relative clause structures.¹

- (2) a. Robby told me about an artist [who screenprints landscapes with toothpaste].
b. Who did Annie give the picture [that she found on the subway] to?
c. The guy [Ø I met at the party] turns out to be one of Brittany's friends.
- (3) a. A man walked into the bar yesterday [who looked like John Cage].
b. A meteor passed by Earth yesterday [that had gone undetected by scientists].
c. We saw that movie yesterday [Ø Kelley was talking about].²

¹ English also has headless relatives, infinitival relatives, amount relatives, etc. However, the scope of this thesis is limited to finite, headed, restrictive relatives. Georgian, too, has other types of RCs. Beyond those types discussed here there are (at least): participle constructions (i), which arguably constitute nonfinite relative clauses; headless relatives (ii); and nonrestrictive relatives (iii).

(i) [Eḡa-s çakitxuli] çigni
[Eḡa-GEN read:PAST.PART] book
'the book Eḡa read ~ the read-by-Eḡa book'

(ii) gaaketeben, [ra = c saçiro = a]
do:FUT.3PL [what = REL necessary = COP]
'They will do what is necessary'

(iii) gušin vḡitxulobdi *Vepxiṡṡaosan-s,* [romeli = c Rustavel-ma daçera]
yesterday read:IMP.1SG *Knight.in.Panther's.Skin*-DAT [which = REL Rustaveli-ERG write:AOR.3SG]
'Yesterday I was reading *The Knight in Panther's Skin*, which Rustaveli wrote'

² Not all speakers accept extraposed zero-relatives.

Georgian, on the other hand, has no fewer than eight types of relative clauses, as shown above in the diagram (1). Broadly, they can be classified into two major types: those formed with *wh*-words (4b) and those with the complementizer *rom* (4c).

- (4) a. Nino-Ø çign-s k̄itxulobs. Dato-m çign-i daçera.
 Nino-NOM book-DAT read:PRES.3SG Dato-ERG book-NOM write:AOR.3SG
 ‘Nino is reading the book. Dato wrote the book.’
- b. Nino-Ø k̄itxulobs çign-s, [**romel-i = c** Dato-m daçera]
 Nino-NOM read: PRES.3SG book-DAT [**which-NOM = REL** Dato-ERG write:AOR.3SG]
 ‘Nino is reading the book which Dato wrote’
- c. Nino-Ø k̄itxulobs çign-s, [Dato-m **rom** daçera]
 Nino-NOM read: PRES.3SG book-DAT [Dato-ERG **ROM** write:AOR.3SG]
 ‘Nino is reading the book that Dato wrote’^{3,4}

In the first case, a *wh*-phrase appears at the left edge of the RC. This phrase takes the case of the relative clause gap, and acts as a host for the relativizing enclitic *-c*. The head is always external. *Wh*-RCs are very flexible: all of the nominal functions in Keenan & Comrie (1977)’s accessibility hierarchy are possible to relativize.

- (5) a. moščavle, [romel-ma = c çoveltvis icis p̄asuxi] SUBJECT
 student [which-ERG = REL always know:PRES.3SG answer]
 ‘the student who always knows the answer’
- b. kali, [romeli = c gušin Eḡa-m naxa] DIRECT OBJECT
 woman [which = REL yesterday Eḡa-ERG see:AOR.3SG]
 ‘the woman who Eḡa saw yesterday’

³ Unless cited, all Georgian examples come from personal field work with native-speaker consultants. Cited examples have occasionally been adapted slightly for brevity or consistency. All mistakes are my own.

⁴ Throughout I translate head nouns with the English definite article. Georgian has no articles, though; an indefinite interpretation is possible for contiguous *wh*-relatives. As Kojima (2005) reports, though, the heads of contiguous *rom*-RCs may only be interpreted as definite. This is an interesting asymmetry between the two types of RCs, but it will not be pursued here. Heads of noncontiguous relatives require a demonstrative (see (13), (14)), so indefinite readings are naturally impossible for them.

- c. bavšvi, [romel-sa = c Šota-m satamašo misca] INDIRECT OBJECT
 child [which-DAT = REL Šota-ERG toy give:AOR.3SG/3]
 ‘the child who Šota gave the toy to’
- d. magida, [romel = tana = c davaleba-s vçer] POSTPOSITIONAL OBJECT
 table [which = at = REL assignment-DAT write:PRES.1SG]
 ‘the table at which I do my homework’
- e. gogo, [roml-is deda = c daibada Somxet = ši] GENITIVE
 girl [which-GEN mother = REL be.born:AOR.3SG Armenia = in]
 ‘the girl whose mother was born in Armenia’
- f. biçi, [romel = ze = c Sopo upro mağali = a] OBJECT OF COMPARISON⁵
 boy [which = on = REL Sopo more tall = COP]
 ‘The boy who Sopo is taller than’

As these examples show, *romeli* ‘which’ is the most common *wh*-word used in relatives, but others are possible, too.

- (6) a. dana, [r-iti = c þuri gavçeri]
 knife [what-INST = REL bread cut:AOR.1SG]
 ‘the knife with which I cut the bread’
- b. momğerali, [vin = c qvela-s uqvars]
 singer [who = REL everyone-DAT love:PRES.3SG/3]
 ‘the singer who everyone loves’
- c. kveqana, [sada = c qvela = ze meþi miliardeli cxovrobs]
 country [where = REL all = on more billionaire live:PRES.3SG]
 ‘the country where the most billionaires live’

⁵ Comparison of the form ‘X is more Y than Z’ can be expressed in Georgian two ways:

- (i) X Z = ze (upro) Y = a (ii) X (upro) Y = a vidre Z
 X Z = on (more) Y = COP X (more) Y = COP than Z

Only the first comparative construction can be relativized.

- d. moment = ši, [rodesa = c çqali duğdeba]
 moment = in [when = REL water start.boiling:PRES.3SG]
 ‘at the moment when the water begins to boil’
- e. mizezi, [rațoma = c davaleba ar gamiķetebia]
 reason [why = REL assignment NEG do:PERF.1SG/3]
 ‘the reason why I didn’t do the assignment’

The second type of relative, the *rom*-RC, is often described as more colloquial (Hewitt 1987, 1995; Harris 1992). This construction’s namesake complementizer exhibits a rather peculiar distribution. If the relative clause contains only a verb, *rom* will be initial (7a). If other elements occur, though, at least one XP must occur to the left of *rom*, and any number may do so as long as *rom* remains preverbal (7b). In general, it seems the most natural place for *rom* is either second in the clause or immediately-preverbal.

- (7) a. çigni, [{rom} davçere { *rom}]
 book [{ROM} write:AOR.1SG { *ROM}]
 ‘the book that I wrote’
- b. çigni, [{ *rom} gušin {rom} Vano-m {rom} Tamaz-s {rom}]
 book [{ROM} yesterday {ROM} Vano-ERG {ROM} Tamaz-DAT {ROM}]
 Neștan-is = tvis {rom} çem = tan {rom} daacemina { *rom}]
 Neștan-GEN = for {ROM} 1SG.OBL = at {ROM} give.CAUS:AOR.3SG { *ROM}]
 ‘the book that Vano had Tamaz give Neștan at my place yesterday’

Rom may not interrupt constituents. For example, it may not come between an adjective and the noun it modifies (8a), or inside the CP complement of a verb like *want* (8b).

- (8) a. *çaviķitxe is çigni, [prangul-ma rom mçeral-ma daçera]
 read:AOR.1SG DEM book [French-ERG ROM writer-ERG write:AOR.3SG]
 Attempted: ‘I read the book that a French writer wrote’
- b. *vnaxe is ķaci, [undoda [axali mankana rom eķida]]
 see:AOR.1SG DEM man [want:AOR.3SG/3 [new car ROM buy:PLU.3SG/3]]
 Attempted: ‘I saw the man who wanted to buy a new car’

Rom-RCs are somewhat less flexible than *wh*-RCs, but it's not clear exactly to what extent. A quick summary of the facts is presented here; a thorough investigation of the types of gaps which are permitted in *rom*-RCs is beyond the scope of this paper.

Subjects, direct objects, and indirect objects are possible roles for the gap (9a–c).

- (9) a. *mosçavle*, [*çoveltvis rom icis þasuxi*] SUBJECT
 student [always ROM know:PRES.3SG answer]
 ‘the student who always knows the answer’
- b. *kali*, [*gušin rom Eça-m naxa*] DIRECT OBJECT
 woman [yesterday ROM Eça-ERG see:AOR.3SG]
 ‘the woman who Eça saw yesterday’
- c. *bavšvi*, [*Šota-m rom satamašo misca*] INDIRECT OBJECT
 child [Šota-ERG ROM toy give:AOR.3SG/3]
 ‘the child who Šota gave the toy to’

Certain semantically salient possessor relationships are okay, but others are not. Compare (10a), where the possessum is *švili* ‘child [son/daughter]’, and the ungrammatical (10b), which uses *bavšvi* ‘child [young person]’. Kojima (2005) argues this contrast stems from the fact that *švili* but not *bavšvi* presupposes a possessor.

- (10) a. *çaci*, [*švili rom þariskaci = a*] Kojima (2005)
 man [child ROM soldier = COP]
 ‘the man whose child [son] is a soldier’
- b. **çaci*, [*bavšvi rom þariskaci = a*]
 man [child ROM soldier = COP]
 ‘the man whose child is a soldier’

Instruments seem to be acceptable gaps.

- (11) *dana*, [*þuri rom davçeri*] *þuri dan-it davçeri*
 knife [bread ROM cut:AOR.1SG] ← bread knife-INST cut:AOR.1SG
 ‘the knife I cut the bread with’ ‘I cut the bread with a knife’

As for other adjuncts, certain postpositions may be dropped in the RC if they are recoverable from the context (12a, b), others may be stranded (12c), and still others don't seem to be able to license relative gaps (12d).⁶

- (12) a. *kali*, [*Ketevani rom cxovrobs*]
 woman [*Ketevan ROM live:PRES.3SG*]
 ‘the woman that Ketevan lives with’
- b. *ḡaci*, [*kali rom gviḡveboda*]
 man [*woman ROM tell:IMP.3SG/1PL*]
 ‘the man that the woman was telling us about’
- c. *xe*, [*bavšvebi rom kveš sxedan*]
 tree [*children ROM under sit:PRES.3PL*]
 ‘the tree that the children are sitting under’
- d. **otaxi*, [*ḡuxel rom (ši) mejina*]
 room [*last.night ROM (in) sleep:AOR.1SG*]
 ‘the room that I slept in last night’⁷

All the relatives presented so far have immediately followed their head noun. For both *wh*- and *rom*-RCs, though, extraposition is possible.⁸ In such a construction a demonstrative is

⁶ Using a resumptive pronoun is another possibility (see (15d)), but one which seems to be limited to preposed relatives.

⁷ *Kveš* ‘under’ and *ši* ‘in’ differ in that the former is a prosodically independent postposition that assigns genitive while the latter is a clitic postposition that assigns dative. Perhaps *kveš* may be stranded because genitive-case nouns are freer to be gapped than (non-argument) dative ones (as (10a)), or simply because it is prosodically more independent — *ši* has no host in a *rom*-RC.

⁸ A note on word order. Assuming the relative head is the object of the matrix clause, Nash (2002) reports that the following linear combinations are ungrammatical (at least with neutral intonation):

- (i) *S O [RC] V *RC in immediate preverbal position*
 (ii) *O S V [RC] *O scrambled, RC in immediate postverbal position.*

This is due to a prohibition against focused relative clauses. The immediate preverbal position is a low focus position (see (48)); another focus position obtains postverbally in certain configurations. For more on focus in Georgian, see Skopeteas & Fanselow (2010).

obligatory on the head noun (for contiguous relatives, a demonstrative is possible but not obligatory).⁹

- (13) a. Nino ***(im)** çign-s k̇itxulobs, [romeli = c Dato-m daçera]
 Nino ***(DEM:OBL)** book-DAT read:PRES.3SG [which = REL Dato-ERG write:AOR.3SG]
 ‘Nino is reading the book which Dato wrote’
- b. Nino ***(im)** çign-s k̇itxulobs, [Dato-m rom daçera]
 Nino ***(DEM:OBL)** book-DAT read:PRES.3SG [Dato-ERG ROM write:AOR.3SG]
 ‘Nino is reading the book that Dato wrote’

Prenominal relatives are possible, but only with *rom*.¹⁰ Again, a demonstrative is necessary.

- (14) a. *[romeli = c Dato-m daçera,] is çigni
 [which = REL Dato-ERG write:AOR.3SG] DEM book
 Attempted: ‘the book which Dato wrote’
- b. [Dato-m rom daçera,] ***(is)** çigni
 [Dato-ERG ROM write:AOR.3SG] ***(DEM)** book
 ‘the book that Dato wrote’

Prenominal *rom*-RCs may be contiguous to the head noun phrase (14b), or preposed to the left edge of the matrix clause (15). In either case, there are several possibilities as to the placement of the relativized head. It may appear both inside and outside the RC (15a), inside with a pronoun outside (15b), or outside with a gap inside (15c). Additionally, the head may appear outside and a pronoun inside if the head is an adjunct within the RC, or contained within one (15d).¹¹ If the head is an argument, though, a resumptive pronoun is quite degraded (15e).

⁹ The demonstrative is almost always *is* ‘that’, but occasionally *es* ‘this’ or even *mag* ‘that [by you]’ appears. Quantifiers may substitute for demonstratives.

(i) {is, çveli} biçi čemi mosçavle = a, [{romeli = c} park = ši {rom} tamašobs]
 {DEM, every} boy my student = COP [{which = REL} park = in {ROM} play:PRES.3S]
 ‘{The, every} boy who’s playing in the park is my student’

¹⁰ Though see section 5.2 below for what appears to be a preposed *wh*-RC.

¹¹ This seems only to be true for some speakers. Others reject all preposed *rom*-RCs with an internal pronoun and a full DP external head, or at least in certain contexts.

- (15) a. [Dato-m rom **çigni** daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **DEM:OBL** **book-dat** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’
- b. [Dato-m rom **çigni** daçera,] Nino **mas** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **3SG:DAT** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’
- c. [Dato-m rom daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’
- d. %[Keto rom **mas=tan** cxovrobs] Mzia **im** **kal-s** **icnobs**
 [Keto ROM **3SG:DAT=at** live:PRES.3SG] Mzia **DEM:OBL** **woman-DAT** know:PRES.3SG
 ‘Mzia knows the woman that Keto lives with’
- e. *?[Dato-m rom **is** daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM **3SG** write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 Attempted: ‘Nino’s reading the book that Dato wrote’

These options are only available for preposed *rom*-relatives. The ungrammatical examples in (16) attempt to construct postnominal *wh*- and *rom*-RCs with internal or doubled heads.

- (16) a. *Nino **kitxulobs** **çign-s** [{romeli=c} Dato-m {rom} **çigni** daçera]
 Nino read:PRES.3SG **book-DAT** [{which=REL} Dato-ERG {ROM} **book** write:AOR.3SG]
 Attempted: ‘Nino’s reading the book {which, that} Dato wrote the book’
- b. *Nino **im** **çign-s** **kitxulobs** [{romeli=c} Dato-m {rom} **çigni** daçera]
 Nino **DEM:OBL** **book-DAT** read:PRES.3SG [{which=REL} Dato-ERG {ROM} **book** write:AOR.3SG]
 Attempted: ‘Nino’s reading the book {which, that} Dato wrote the book’
- c. *Nino **mas** **kitxulobs** [{romeli=c} Dato-m {rom} **çigni** daçera]
 Nino **3SG:DAT** read:PRES.3SG [{which=REL} Dato-ERG {ROM} **book** write:AOR.3SG]
 Attempted: ‘Nino’s reading it {which, that} Dato wrote the book’
- d. *Nino **kitxulobs** **mas** [{romeli=c} Dato-m {rom} **çigni** daçera]
 Nino read:PRES.3SG **3SG:DAT** [{which=REL} Dato-ERG {ROM} **book** write:AOR.3SG]
 Attempted: ‘Nino’s reading it {which, that} Dato wrote the book’

e. *Mzia icnobs **kal-s** [{romel-sa = c} Keto {rom} **mas** = tan cxovrobs]
 Mzia know:PRES.3SG **woman-DAT** [{which-DAT = REL} Keto {ROM} **3SG:DAT** = at live:PRES.3SG]
 Attempted: ‘Mzia knows the woman {who, that} Keto lives with her’

f. *Mzia **im** **kal-s** icnobs [{romel-sa = c} Keto {rom} **mas** = tan
 Mzia **DEM:OBL** **woman-DAT** know:PRES.3SG [{which-DAT = REL} Keto {ROM} **3SG:DAT** = at
 cxovrobs]
 live:PRES.3SG]

Attempted: ‘Mzia knows the woman {who, that} Keto lives with her’

The facts presented in this section are summarized in table (17).

| (17) | <i>wh</i> -RC | <i>rom</i> -RC | Demonstrative Obligatory? | External head, Internal gap | Internal / Doubled head |
|---------------------------|---------------|----------------|------------------------------|--------------------------------|----------------------------|
| Contiguous N [RC] | ✓ | ✓ | No | ✓ | * |
| Extraposd N ... [RC] | ✓ | ✓ | Yes | ✓ | * |
| Preposed [RC] (...) N | * | ✓ | Yes | ✓ | ✓ |

1.2 OVERVIEW

With the relevant data established, the remainder of this paper is organized as follows. Section 2 gives a treatment of relative clauses that are contiguous to their head noun. It will be shown that raising and matching interpretations are available for this type of relative clause, but only a matching interpretation is possible for extraposd and preposed RCs. The difference between *wh*- and *rom*-RCs will be analyzed through an articulation of the CP domain: *wh*-phrases will be argued to move to the top of the left periphery, whereas the complementizer *rom* heads a lower projection. Section 3 analyses extraposd relatives, which will be analyzed via movement through an escape hatch provided by a demonstrative. Section 4 turns to preposed relatives. I will show that they are very similar to correlatives in Hindi, but can be derived slightly differently than has been proposed for this language — they may originate low, just as contiguous and extraposd relatives, and move through a Phase escape hatch in the embedded

left periphery before moving to the matrix clause's left edge. Section 5 summarizes my proposal and presents data that deserve future research.

2. CONTIGUOUS RELATIVES

2.1 RAISING VS. MATCHING ANALYSES

There has been much debate in the syntactic literature over how to account for fact that a relativized nominal head is interpreted as both a part of the matrix clause and part of the relative clause.¹² In (18), for example, the head noun *ḡaci* 'man' is in the nominative case because it is the direct object of matrix verb *saw*. In one approach to relatives (the 'matching' analysis), this fact is captured by generating the head noun in the matrix clause. At the same time, though, *ḡaci* is also interpreted as the subject of the relative clause; the ergative case on the *wh*-phrase reflects this. A competing approach (the 'raising' analysis) proposes that the relative head originates low and moves to its surface position.

- (18) vnaxe ḡaci, [romel-ma=c Nato-s aḡoca]
 see:AOR.1SG man [which-ERG=REL Nato-DAT kiss:AOR.3S]
 'I saw the man who kissed Nato'

Recent research (e.g., Bhatt 2002; Hulsey & Sauerland 2006; Sauerland 2000) suggests that both of these approaches are correct. Certain relatives must be derived through raising, others by matching, and still others are in fact ambiguous between the two structures.

Evidence in favor of a raising structure comes from idiom chunks and binding effects. Compare (19a) and (19b). The former is ungrammatical because *headway* is meaningless outside of the idiom *make headway*. In the latter, an idiomatic reading obtains. If *headway* were generated in the matrix clause, (19b) would be meaningless. Therefore, it must originate within the relative clause and move to its surface position.

¹² See de Vries (2002) for a detailed typological survey of relatives; Bianchi (2002a, b) or Alexiadou et al (2000) for an overview and history of generative approaches.

(19) a. *?Aurora was impressed by Jonathan's headway.

b. Aurora was impressed by the headway which Jonathan made.

Likewise, the anaphor in (20a) is ungrammatical because there is a φ -feature mismatch between *himself* and *Rosie*, the only available c-commanding nominal. In (20b), though, the same anaphor is grammatical because it can be interpreted within the relative.

(20) a. *Rosie_i liked the picture of himself_i.

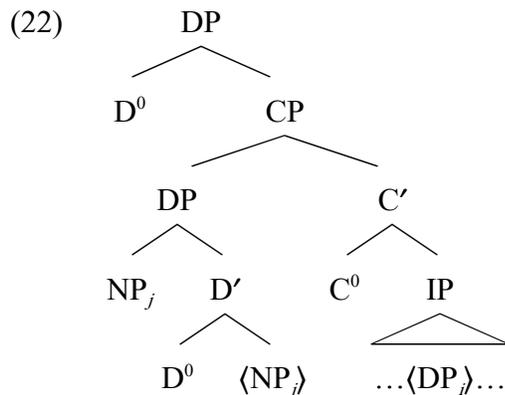
b. Rosie liked the picture of himself_i which Gabe_j painted.

These facts are paralleled by the *wh*-questions in (21). Given that *wh*-movement is a type of reconstructing \bar{A} -movement, the potentially offensive elements *headway* and *himself* are interpreted in situ, where they are licensed. Therefore, it must be a possibility that the relative head originates low and undergoes \bar{A} -movement its surface position.

(21) a. How much headway has Jonathan made ⟨how much headway⟩ on his project?

b. Which picture of himself_i did Gabe_j paint ⟨which picture of himself_i⟩?

Kayne (1994) proposes the following antisymmetric raising derivation of English *wh*-relatives. The *wh*-DP is base-generated within the relative and moves to SpecCP. Then the head NP moves to SpecDP. This is illustrated in (22).



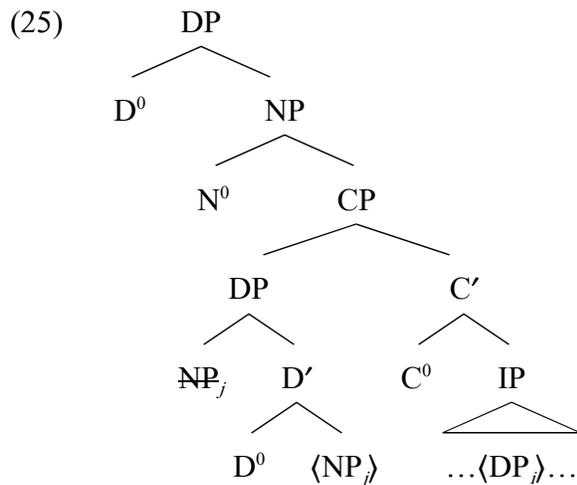
According to this analysis, the relatives in (19b) and (20b) have the following structures.

- (23) a. [_{DP} the [_{CP} [_{DP} [_{NP} headway]_j [_{D'} which ⟨NP_j⟩]]_i [_{C'} [_{IP} Jonathan made ⟨DP_i⟩] ...]
- b. [_{DP} the [_{CP} [_{DP} [_{NP} picture of himself]_j [_{D'} which ⟨NP_j⟩]]_i [_{C'} [_{IP} Gabe painted ⟨DP_i⟩] ...]

However, raising cannot explain all relative clauses. In (24a), *Gabe* and *he* can be coindexed. If *Gabe* were interpreted low and moved up, it should violate Condition C, like (24b).

- (24) a. Rosie likes the picture of Gabe_i which he_i painted.
- b. *Which picture of Gabe_i did he_i paint ⟨which picture of Gabe_i⟩?

The relative clause in (24a) must therefore have a matching derivation. Sauerland (2000) proposes that in such a structure, a DP of the head noun merges low and moves to the specifier of CP, just as in a raising relative. Instead of merging with D⁰, though, the relative CP merges with N⁰ — the head noun. The inner NP elides under identity. This approach gives a structure like (25) for a matching *wh*-relative.



Sauerland argues that the higher noun and the lower one need not be identical. The lower NP may be the anaphor *one* whose antecedent is the higher N⁰. For example, his structures for the relative clause in (24a) would be that in (26).

- (26) [_{DP} the [_{NP} picture of Gabe [_{CP} [_{DP} [_{NP} ~~one~~]_j [_{D'} which ⟨NP_j⟩]]_i [_{C'} [_{IP} he painted ⟨DP_i⟩] ...]

That the deleted NPs be *one* in these cases is crucial. If they were identical to the higher nominal phrases, Condition C would still be violated. (27) shows that an elided NP *picture of Gabe* would reconstruct low enough for the pronoun *he* to c-command the R-expression *Gabe*, thus violating Condition C.

- (27) *the picture of Gabe, ~~picture of Gabe~~_i which ⟨picture of Gabe⟩ he_i painted
 ⟨which picture of Gabe⟩

In summary, both a raising (22) and a matching (25) structure for relative clauses must be available for English. A relative clause which does not force one derivation or the other, like (28a), is in principle ambiguous between both, (28b) or (28c).

- (28) a. the picture which Gabe painted

b. [_{DP} the [_{CP} [_{DP} [_{NP} picture]_j [_{DP} which ⟨NP⟩]_i [_{C'} [_{IP} Gabe painted ⟨DP⟩] ...]

c. [_{DP} the [_{NP} picture [_{CP} [_{DP} [_{NP} ~~picture~~]_j [_{DP} which ⟨NP⟩]_i [_{C'} [_{IP} Gabe painted ⟨DP⟩] ...]

2.2 RAISING VS. MATCHING IN GEORGIAN

Before we use the binding diagnostics described in the previous section to determine whether raising or matching structures are available for the various relative clause types in Georgian, it will be useful to sketch the language's binding properties. Binding phenomena in Georgian are examined in great detail by Amiridze (2006).

The reflexive anaphor in Georgian is built on the grammaticalized body part *tavi* 'head'. First and second persons combine this with the possessive pronouns *čemi* 'my', *šeni* 'your', etc., yielding *čemi tavi* 'myself', *šeni tavi* 'yourself', etc. Third persons use the reflexive possessives *tavisi* 'his/her own' or *tavianti* 'their own'; thus *tavisi tavi* 'himself/herself', *tavianti tavi* 'theirselves'.

- (29) Gia_i { tavis_ɸ mis_j } sɔam = ze zis
 Gia { own:OBL, 3SG.POSS:OBL } chair = on sit:PRES.3SG
 'Gia_i is sitting on {his_ɸ his/her_j} chair'

Turning to binding diagnostics for raising vs. matching, we see that either interpretation is possible for contiguous relative clauses, whether *wh* or *rom*. As (33a–b) show, an anaphor may be bound by an R-expression within the relative, indicating that it can reconstruct low.¹³

- (33) a. *ṗrezident-s mosṗons ṡṡaṡia tavis tav_i=ze*, [*romeli=c Medea-m_i daṡera*]
 president-DAT like:PRES.3SG article own self=on [which=REL Medea-ERG write:AOR.3SG]
- b. *ṗrezident-s mosṗons ṡṡaṡia tavis tav_i=ze*, [*Medea-m_i rom daṡera*]
 president-DAT like:PRES.3SG article own self=on [Medea-ERG ROM write:AOR.3SG]

Both: ‘The president likes the article about herself_i which / that Medea_i wrote’

On the other hand, it is possible for a relative-internal pronoun to be coreferential with an R-expression in the relative head, as examples in (34) illustrate. This shows that matching is also a possibility for contiguous relatives. If the heads could only be interpreted low, the examples in (34) would violate Condition C.

- (34) a. *Medea-m daṡera ṡṡaṡia ṗrezident_i=ze*, [*romeli=c mas_i moeṡona*]
 Medea-ERG write:AOR.3SG article president=on [which=REL 3SG:DAT like:AOR.3SG/3]
- b. *Medea-m daṡera ṡṡaṡia ṗrezident_i=ze*, [*mas_i rom moeṡona*]
 Medea-ERG write:AOR.3SG article president=on [3SG:DAT ROM like:AOR.3SG/3]

Both: ‘Medea wrote the article about the president_i that he_i liked’

In extraposed relatives, matching interpretations are possible, as (35a–b) (which do not violate Condition C) demonstrate. Moreover, raising interpretations are impossible: the anaphors in (36a–b) cannot be coindexed with embedded subject *Medea*.

¹³ I will not use the idiom chunk test to force a raising interpretation as (19). My consultants did not accept non-literal meanings for any of the relativized idiom chunks I presented them. In general, idioms seem especially delicate in Georgian. For example, as Skopeteas & Fanselow (2010) note, VP idioms like *pexebis gaṡimva* ‘dying (lit. stretching of legs)’ only obtain with the word order OV.

- (i) *Ṗiṡer-ma pexebi gaṡima* (ii) *Ṗiṡer-ma gaṡima pexebi*
 Ṗiṡer-ERG legs stretch:AOR.3SG Ṗiṡer-ERG stretch:AOR.3SG legs
 ‘Ṗiṡer stretched the legs’ / ‘Ṗiṡer died’ ‘Ṗiṡer stretched the legs’ / *‘Ṗiṡer died’

(35) a. Medea-m is ştația prezident_i=ze daçera, [romeli=c mas_i moeçona]
 Medea-ERG DEM article president=on write:AOR.3SG [which=REL 3SG:DAT like:PRES.3SG/3]

b. Medea-m is ştația prezident_i=ze daçera, [mas_i rom moeçona]
 Medea-ERG DEM article president=on write:AOR.3SG [3SG:DAT ROM like:PRES.3SG/3]

Both: ‘Medea wrote the article about the president_i that he_i liked’

(36) a. prezident_s_i is ştația tavis tav_i *_j=ze moşçons, [romeli=c Medea-m_j daçera]
 president-DAT DEM article own self=on like:PRES.3SG [which=REL Medea-ERG write:AOR.3SG]

b. prezident_s_i is ştația tavis tav_i *_j=ze moşçons, [Medea-m_j rom daçera]
 president-DAT DEM article own self=on like:PRES.3SG [Medea-ERG ROM write:AOR.3SG]

Both: ‘The president_i likes the article about himself_i/*herself_j that Medea_j wrote’

Likewise, preposed *rom*-RCs can only be matching.

(37) [mas_i rom moeçona,] Medea-m is ştația prezident_i=ze daçera
 [3SG:DAT ROM like:PRES.3SG/3] Medea-ERG DEM article president=on write:AOR.3SG
 ‘Medea wrote the article about the president_i that he_i liked’

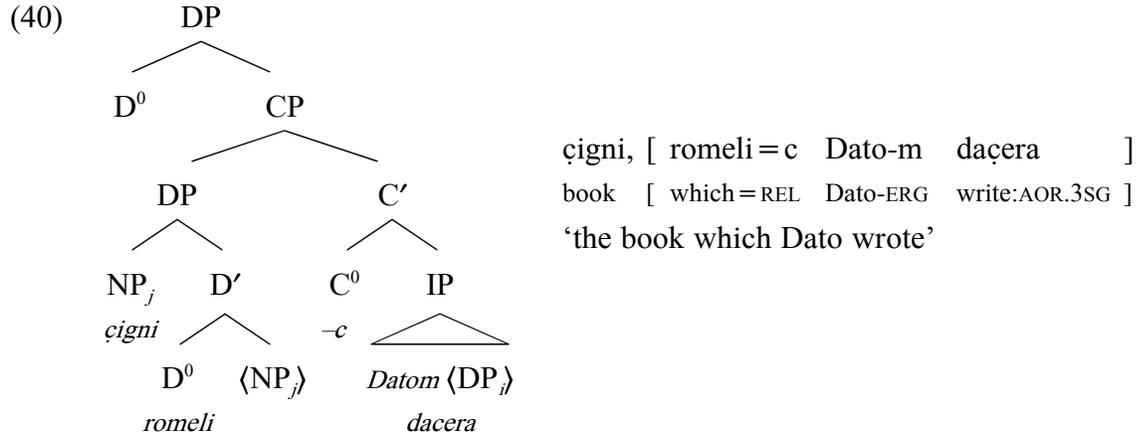
(38) [Medea-m_j rom daçera,] prezident_s_i is ştația tavis tav_i *_j=ze moşçons
 [Medea-ERG ROM write:AOR.3SG] president-DAT DEM article own self=on like:PRES.3SG
 ‘The president_i likes the article about himself_i/*herself_j that Medea_j wrote’

(39) is a chart updated with these data.

| (39) | <i>wh</i> -RC | <i>rom</i> -RC | Dem. Oblig.? | Ext. head, Int. gap | Other head positions | Raising | Matching |
|-----------------------------|---------------|----------------|--------------|---------------------|----------------------|---------|----------|
| Contiguous N [RC] | ✓ | ✓ | No | ✓ | * | ✓ | ✓ |
| Extraposited N ... [RC] | ✓ | ✓ | Yes | ✓ | * | * | ✓ |
| Preposed [RC] (...) N | * | ✓ | Yes | ✓ | ✓ | * | ✓ |

2.3 DERIVING CONTIGUOUS RELATIVES IN GEORGIAN

The raising structure (22) can easily accommodate a Georgian *wh*-relative if the enclitic *-c* is taken to be C⁰.



However, a *rom*-relative, especially one with more than one XP preceding the complementizer, is difficult to derive with a single CP layer. To account for these relatives, then, I build on Bianchi (1999)’s synthesis of Kayne’s antisymmetric derivation and Rizzi (1997)’s extended left periphery.

First, note that a sentence like (41) points to the CP-articulation (44) for English.

(41) He said that beans, never in his life has he been able to stand (them). Bianchi (1999: 179)

(42) [_{Force} that [_{TopP} beans [_{Top'} [_{FocusP} never in his life [_{Focus'} [_{FinP} [IP ...] ...]

With this in mind, consider the availability of topicalization / focalization in relative clauses.

- (43) a. a man [whom, for his brutal insolence and cruelty, Robin has long hated] Bianchi (1999: 177-8)
 b. the kind of car [that for my son I wouldn’t even have considered buying]
 c. *the kind of car [Ø for my son I wouldn’t even have considered buying]

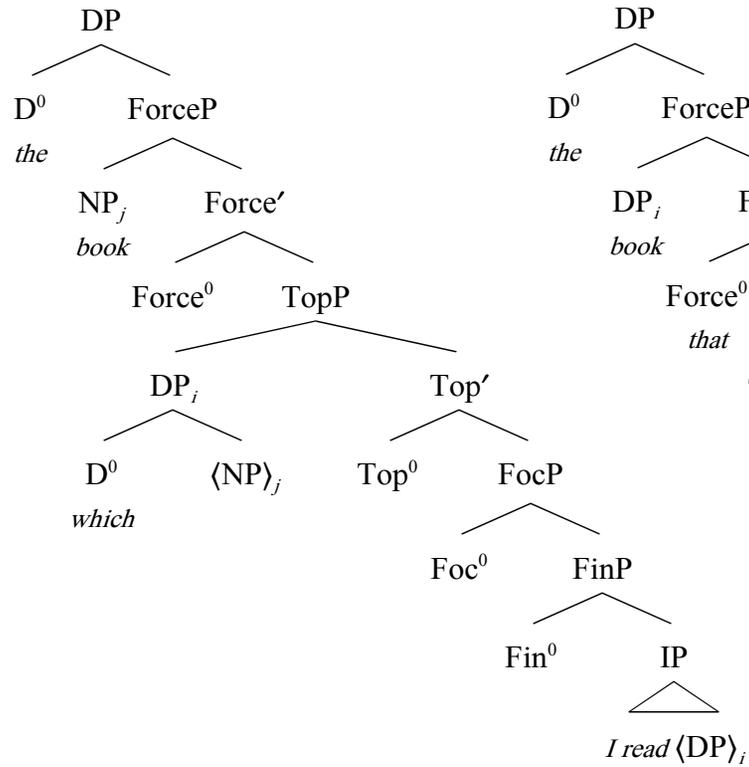
- (44) a. the kind of person [who under no circumstances would I be willing to talk to]
b. a dress [that under no circumstances would I consider buying]
c. ?a dress [\emptyset under no circumstances would I consider buying]

The dislocated *for* phrases in (43) must land in SpecTopP. The fact that such topicalization is possible in *wh*- and *that*-relatives (43a–b) but impossible in zero-RCs (43c) suggests that *wh*-phrases and *that* are in a position higher than TopP, but the head and the null complementizer of zero-RCs are in this projection or lower. That a focused phrase like *under no circumstances* is available in all three types of RCs further supports this.

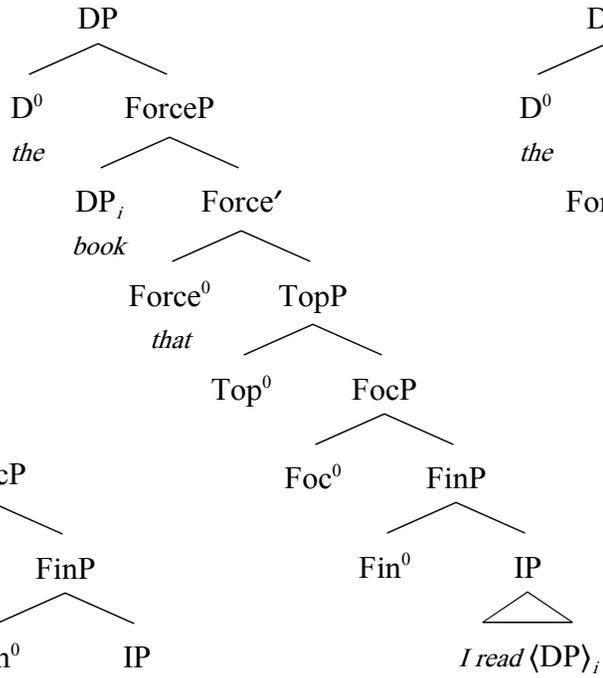
Therefore, Bianchi proposes the following derivation for English relatives. For *wh*-RCs, the *wh*-phrase moves to SpecTopP; the head NP then moves to SpecForceP (45a). In *that*-RCs, the head DP simply moves to the specifier of ForceP, which *that* heads (45b). In zero-RCs, the head moves to SpecTopP; no complementizer head is overt (45c).¹⁴

¹⁴ Bianchi's structure for zero-RCs is perhaps the most difficult to accept. She argues, however, that the null Foc⁰ in zero-RCs and the null complementizer in clausal complements like *John said \emptyset he went to the store* are one and the same element, and this element is the syntactic residue of embedded V2 found in Old English.

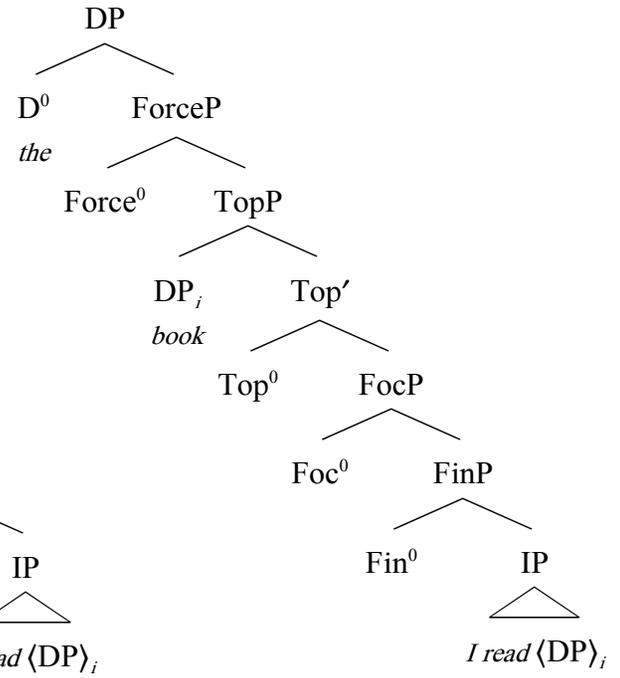
(45) a. wh-RC



b. that-RC



c. zero-RC



- b. did-sa, natel-sa mze-sa mcire ğrubeli = c moapens bnel-s
 great-DAT bright-DAT sun-DAT small cloud = FOC spread.over:FUT.3SG darkness-DAT
 ‘Even a small cloud will darken the great bright sun’

I propose, then, the following derivation. The embedded IP is constructed with a *wh*-DP which bears a FOC feature and whose complement is an NP that has a REL feature. Elements of the CP-domain begin to merge. The relativizing enclitic *-c* heads a high FocP. It bears an unvalued FOCUS feature. To satisfy it, Foc⁰ probes for the *wh* DP within the embedded IP. Foc⁰ and D⁰ Agree, moving DP to SpecFocP.¹⁶ Next Force⁰ merges, bearing an unvalued REL feature. (No material may intervene between the relativized head and the *wh*-phrase, suggesting TopPs do not exist between the high FocP and ForceP.¹⁷) Force⁰ probes for the head NP, agrees with it, and causes it to move into its specifier. Next either a D⁰ merges for a raising structure, or an N⁰ does for matching. In the latter case the NP in SpecForceP elides under identity. The derivation of (49) is illustrated in (50) and (51).

- (49) çigni, [romeli = c Dato-m daçera]
 book [which = REL Dato-ERG write:AOR.3SG]
 ‘the book which Dato wrote’

¹⁶ It is potentially problematic that relativized heads — even ones that originate in *wh*-phrases — move through a FocP, since it is not clear that they bear focus in any way semantically. The structures in (51) are motivated by the desire to unite low-focus *wh*-movement (46) and XP focalization with *-c* (59) with the surface order facts of Georgian *wh*-RCs. An alternative is provided in (i). The *wh*-phrase moves to a SpecTopP above the high FocP instead of SpecFocP itself (as per Bianchi (1999); see (45)). The clitic *-c* may still head FocP, or perhaps another projection in the left periphery.

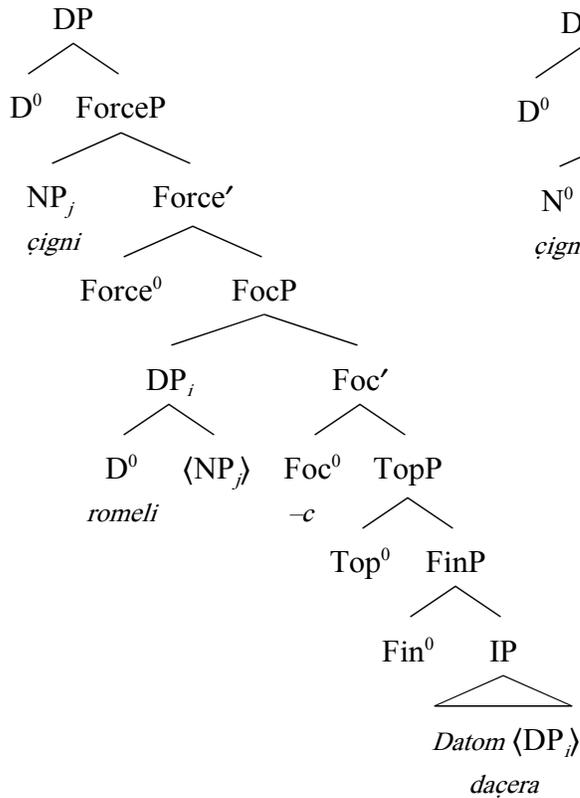
(i) [DP [ForceP NP_j [TopP [DP D⁰ (NP_j)]_i [Top' [FocP Foc⁰ [TopP [FinP [IP ... (DP)_j ...] ...]

¹⁷ Other data seem to suggest otherwise, though. The complementizer *tunda* ‘even if’ is optionally accompanied by the particle *-c*. This may attach to the complementizer or any preverbal XP. In (i), from Hewitt (1987), *aravis* ‘nobody’ is presumably in a focus position (either low or high, depending on whether *-c* follows it or not). If *-c* here heads a FocP in the left periphery, there must be a TopP for *sakvirveli* ‘surprising’ to move to above it when *aravis* hosts the clitic.

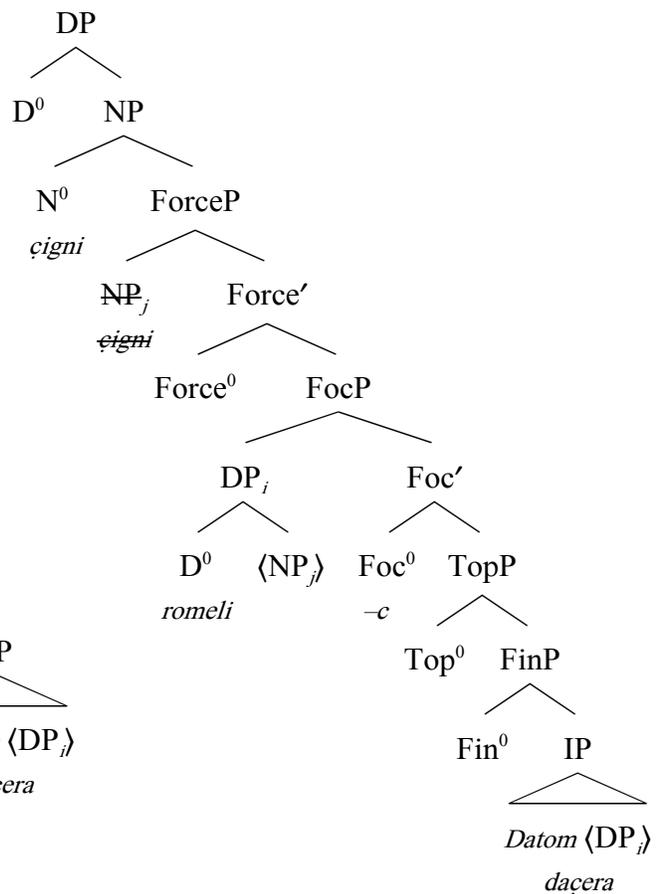
(i) tunda{ = c} sakvirveli{ = c} aravi-s{a = c} etkva, gaiķvirvebda
 even.if{ = FOC} surprise:FUT.PART{ = FOC} no.one-DAT{ = FOC} said:PLU.3SG/3 find.amazing:COND.3SG
 ‘Even if no one had said anything surprising, he would have been surprised.’

- (50) $[_{FocP} Foc^0_{[Foc_]} [_{Top/FinP} \dots DP_{[Foc]} \dots]$ *Foc⁰ (-c) merges*
- $[_{FocP} DP [_{Foc'} Foc^0_{[Foc\checkmark]} [\dots \langle DP \rangle \dots] \dots]$ *Foc⁰ Agrees with D⁰ (romeli)*
- $[_{ForceP} Force^0_{[REL_]} [_{FocP} [_{DP} D NP_{[REL]}] \dots]$ *Force⁰ merges*
- $[_{ForceP} NP [_{Force'} Force^0_{[REL\checkmark]} [_{FocP} [_{DP} D \langle NP \rangle] [_{Foc'} \dots]$ *Force⁰ Agrees with N⁰ (çigni)*
- $[_{DP} D^0 ForceP]$ *D⁰ merges. See (51a).*
- OR
- $[_{NP} N^0 [_{ForceP} ~~NP~~ [_{Force'} Force^0 \dots]$ *N⁰ merges; lower NP elides. See (51b).*

(51) a. Raising wh-RC



b. Matching wh-RC



Now let us turn to *rom*-RCs. Recall that, as long as an XP exists in the embedded clause, at least one XP must precede the complementizer. The XPs that precede *rom* may be topics (52c) or foci (52d), (53).

(52) a. *çigni*, [*rom daçera*]
 book [ROM buy:AOR.3SG]
 ‘the book that s/he wrote’

b. *çigni*, [*Dato-m rom daçera*]
 book [Dato-ERG ROM write:AOR.3SG]
 ‘the book that Dato wrote’

c. *çigni*, [*šaršan Dato-m rom daçera*]
 book [last.year Dato-ERG ROM write:AOR.3SG]
 ‘the book that Dato wrote last year’

d. *çigni*, [*aravi-s rom moscons*]
 book [nobody-DAT ROM like:PRES.3SG]
 ‘the book that nobody likes’

(53) Person A: *vķitxulob çign-s*, [*Dato-m rom daçera.*]
 read:PRES.1SG book-DAT [Dato-ERG ROM write:AOR.3SG]
 ‘I’m reading the book that Dato wrote’

Person B: *ara, im çign-s ķitxulob* [*Amiran-ma rom daçera.*]
 no DEM:OBL book-DAT read:PRES.2SG [Amiran-ERG ROM wrote]

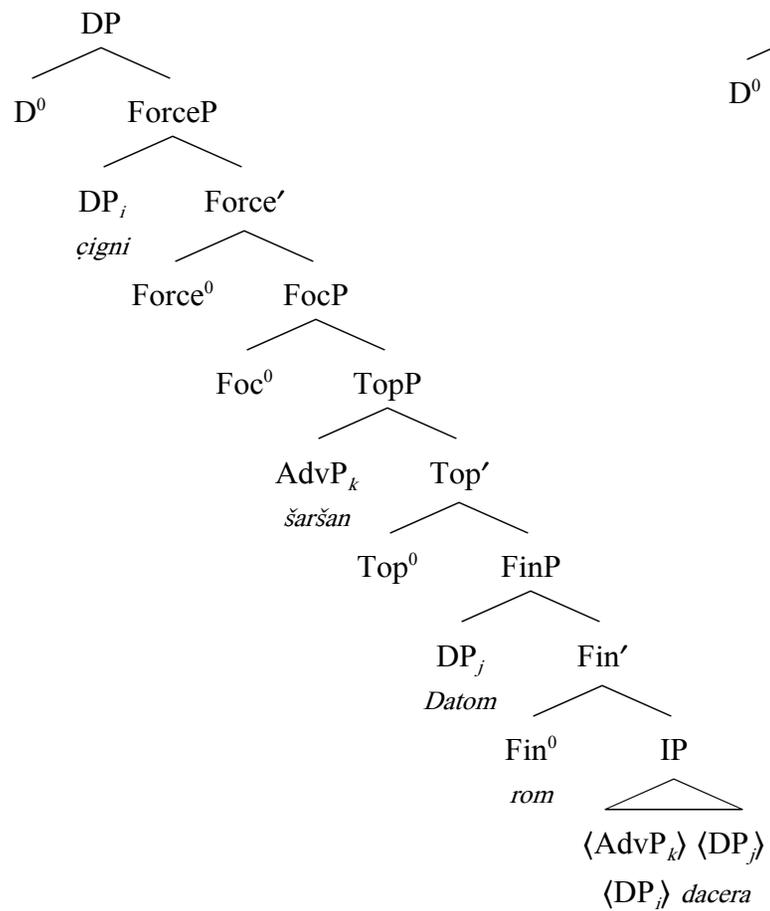
Dato-s arasodes ar dauçeria çigni.
 Dato-DAT never NEG write:PERF.3SG/3 book

‘No, you’re reading the book that *Amiran* wrote. Dato hasn’t ever written a book’

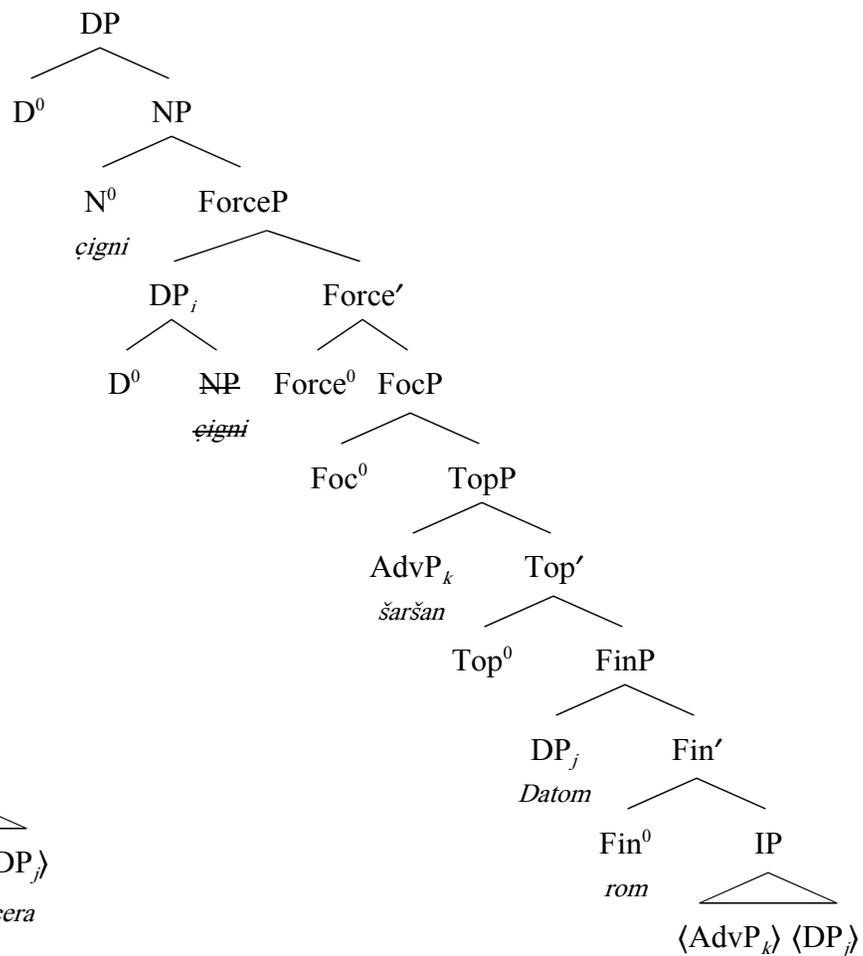
To account for this, I propose that *rom* heads FinP. It comes with an EPP feature, so if an XP exists in the relative clause, it will move to SpecFinP. Additional XPs in front of *rom* will occupy high focus or topic positions. As in *wh*-RCs, Force⁰ has an unvalued REL feature, so it probes for the head NP. The raising and matching derivation of (52c) follow.¹⁸

¹⁸ In a construction like (52a), where the relative contains only a verb, perhaps the head noun moves through SpecFinP (satisfying *rom*’s EPP) before moving on to SpecForceP as a last resort option.

(54) a. Raising rom-RC



b. Matching rom-RC



- (55) $[_{\text{FinP}} \text{Fin}^0_{[\text{EPP}]} [_{\text{IP}} \text{AdvP}_k \text{DP}_j \text{DP}_i \text{V}^0]]$ *Fin⁰ (rom) merges*
- $[_{\text{FinP}} \text{DP}_j [_{\text{Fin}'} \text{Fin}^0_{[\text{EPP}\checkmark]} [_{\text{IP}} \text{AP}_k \langle \text{DP}_j \rangle \text{DP}_i \text{V}^0] \dots]$ *DP (Dato) moves to satisfy EPP¹⁹*
- $[_{\text{TopP}} \text{Top}^0 \text{FinP}]$ *Top⁰ merges*
- $[_{\text{TopP}} \text{AdvP}_k [_{\text{Top}'} \text{Top}^0 [_{\text{FinP}} \dots \langle \text{AdvP}_k \rangle \dots]$ *AdvP (šaršan ‘last year’) moves*
- $[_{\text{ForceP}} \text{Force}^0_{[\text{REL}_\square]} [_{\text{FocP}} \text{Foc}^0 \text{TopP}]]$ *Foc⁰ and Force⁰ merge*
- $[_{\text{ForceP}} \text{DP}_i [_{\text{Force}'} \text{Force}^0_{[\text{REL}_\surd]} [_{\text{FocP}} \dots \langle \text{DP}_i \rangle \dots]$ *Force⁰ Agrees with DP (cigni ‘book’)*
- $[_{\text{DP}} \text{D}^0 \text{ForceP}]$ *D⁰ merges. See (54a)*
- OR
- $[_{\text{NP}} \text{N}^0 [_{\text{ForceP}} [_{\text{DP}} \text{D}^0 \text{NP}] [_{\text{Force}'} \text{Force}^0 \dots]$ *N⁰ merges; lower NP elides. See (54b).*

2.4 SUMMARY

It has been demonstrated that raising and matching structures must be available for contiguous relatives in Georgian. For raising, the head DP/NP moves to SpecForceP, then ForceP merges with D⁰; for matching, the same movement occurs, but N⁰ merges instead and forces the lower NP to elide. The difference between *wh*- and *rom*-RCs has been derived from an articulation of the left periphery. Either the relativizing enclitic *-c*, heading a high FocP, attracts the *wh*-DP

¹⁹ Note that the most unmarked word order for declarative clauses is Adv_{Temp} – S – IO – DO – V (i). This is also true for *rom*-RCs (i).

- (i) gušin Zaza-m Šorena-s bečedi misca
yesterday Zaza-ERG Šorena-DAT ring give:AOR.3SG/3
‘Zaza gave Šorena a ring yesterday’
- (ii) bečedi, [gušin Zaza-m Šorena-s rom misca]
ring [yesterday Zaza-ERG Šorena-DAT ROM give:AOR.3SG/3]
‘the ring that Zaza gave Šorena yesterday’

If the probes described in (55) always agreed with the XP closest to them, we would expect the linear order of the arguments in (ii) to mirror (i): *bečedi, [Šorenas Zazam gušin rom misca]*. However, this order is just as marked as it would be in a matrix clause. I suggest that, at least in this domain, Georgian prohibits nested movements.

into its specifier, or the complementizer *rom* heads FinP, a low enough projection to accommodate a number of XPs to precede it.

3 EXTRAPOSED RELATIVES

3.1 EXTRAPOSITION AS LATE ADJUNCTION

Extrapolation is the movement of a constituent to a clause's right edge (Büring & Hartmann 1997). An example is given in (56): the relative clause *who looked like John Cage*, though it modifies *a man*, is dislocated from it.

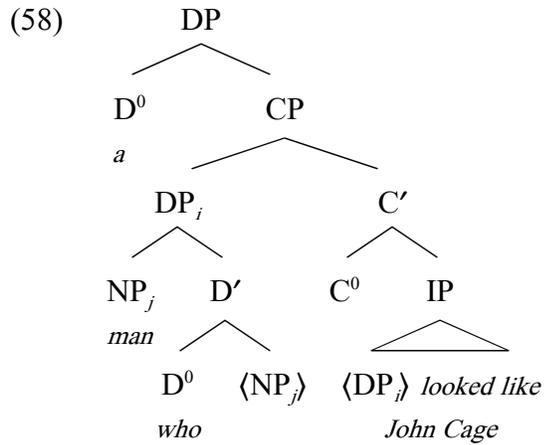
(56) A man walked into the bar yesterday who looked like John Cage.

An intuitive derivation is simply for the extraposed constituent to move rightward (see Vikner 1991; Vikner & Schwartz 1991).

(57) A man ⟨who looked like John Cage⟩ walked into the bar yesterday who looked like John Cage

However, this movement is impossible under the relative clause structure we have assumed. As (58) shows, in the DP *a man who looked like John Cage*, the RC [*who looked like John Cage*] does not form a constituent to the exclusion of [*a man*].²⁰

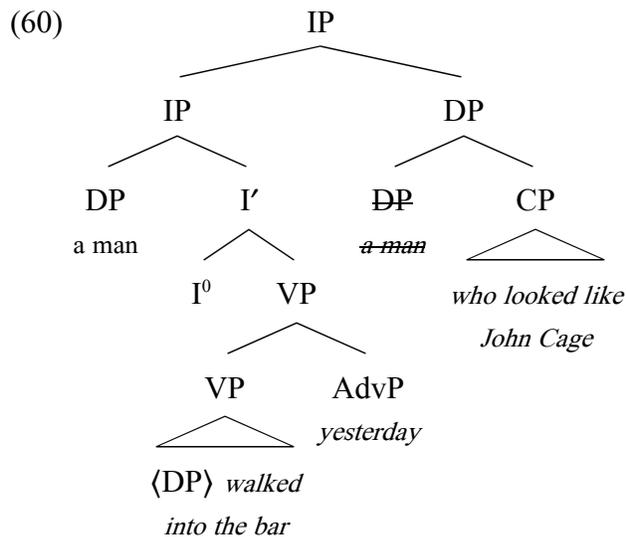
²⁰ If we accept Bianchi (1999)'s account, [*who looked like John Cage*] actually is a constituent. The movement would still be blocked, though, because FocP cannot escape the complex NP island (in other words, it is trapped in the CP Phase).



It has been observed that it is much easier to extrapose from indefinite DPs than from definite DPs.

- (59) a. A man walked into the bar yesterday who looked like John Cage.
 b. ??The/that man walked into the bar yesterday who looks like John Cage

Inspired by this fact, Fox & Nissenbaum (2000) propose that extraposition is a case of overt QR combined with late adjunction. A sentence like (56) might be derived as in (60).



For Fox & Nissenbaum, linguistic computation is not divided into syntactic and post-syntactic operations. The only difference between ‘overt’ and ‘covert’ movements is which link of a chain is pronounced. Therefore, in (56) the clause *A man walked into the bar yesterday* is built normally. Next the indefinite DP *a man* undergoes QR ‘overtly’, adjoining to IP. There the relative clause CP adjoins to the raised DP. In English, the link of the DP chain in SpecIP is pronounced, while the others (the copy in the verb phrase and the QRed copy) are silent. However, the ‘late-adjoined’ relative is pronounced where it merges, at the right edge of the clause, since that is the only copy of it in the derivation. In the next section I argue against the late adjunction structure for Georgian.

3.2 EXTRAPOSED RELATIVES IN GEORGIAN

Recall the defining characteristics of extraposed relative clauses in Georgian: they may be formed either with a *wh*-phrase or *rom*; a demonstrative is obligatory on the head noun; only a matching interpretation is available (35–36).

- (61) a. Nino im çign-s k̇itxulobs, [romeli=c Dato-m daçera]
 Nino DEM:OBL book-DAT read:PRES.3SG [which=REL Dato-ERG write:AOR.3SG]
 ‘Nino is reading the book which Dato wrote’
- b. Nino im çign-s k̇itxulobs, [Dato-m rom daçera]
 Nino DEM:OBL book-DAT read:PRES.3SG [Dato-ERG ROM write:AOR.3SG]
 ‘Nino is reading the book that Dato wrote’

The Fox & Nissenbaum late adjunction proposal is not incompatible with these facts, but there are several reasons I will not adopt it. First, the head noun in constructions like (61a/b) is necessarily definite; it needs a demonstrative. While there is evidence that definite DPs undergo QR if they need to (e.g., in antecedent contained deletion constructions; see Hackl 2008), it’s unclear that they can or should in a sentence like (61a) or (61b). Second, even if definite DPs do undergo QR, there is no obvious way to explain why the demonstrative is obligatory on the head noun in Georgian. Third, the structure in (60) necessitates that the relative CP *adjoin* to DP/NP; it would not be possible for a relative clause to merge late as the complement of N⁰ to obtain the structure I have assumed for a matching relative, or even explain why it should be a matching relative at all.

Instead, I propose relative clause extraposition in Georgian is a product of Phase extension.²¹ Assume that D^0 is a Phase head in Georgian, but, not only is it never phonologically overt, it cannot project a specifier.²² Therefore, RCs modifying bare (determinerless) DPs must be contiguous (62), since they are Spelled Out once DP merges into the matrix clause.

(62) *Nino çign-s kıtxulobs, [{romeli = c} Dato-m {rom} daçera]
 Nino book-DAT read:PRES.3SG [{which = REL} Dato-ERG {ROM} write:AOR.3SG]
 Attempted: ‘Nino is reading the book that Dato wrote’

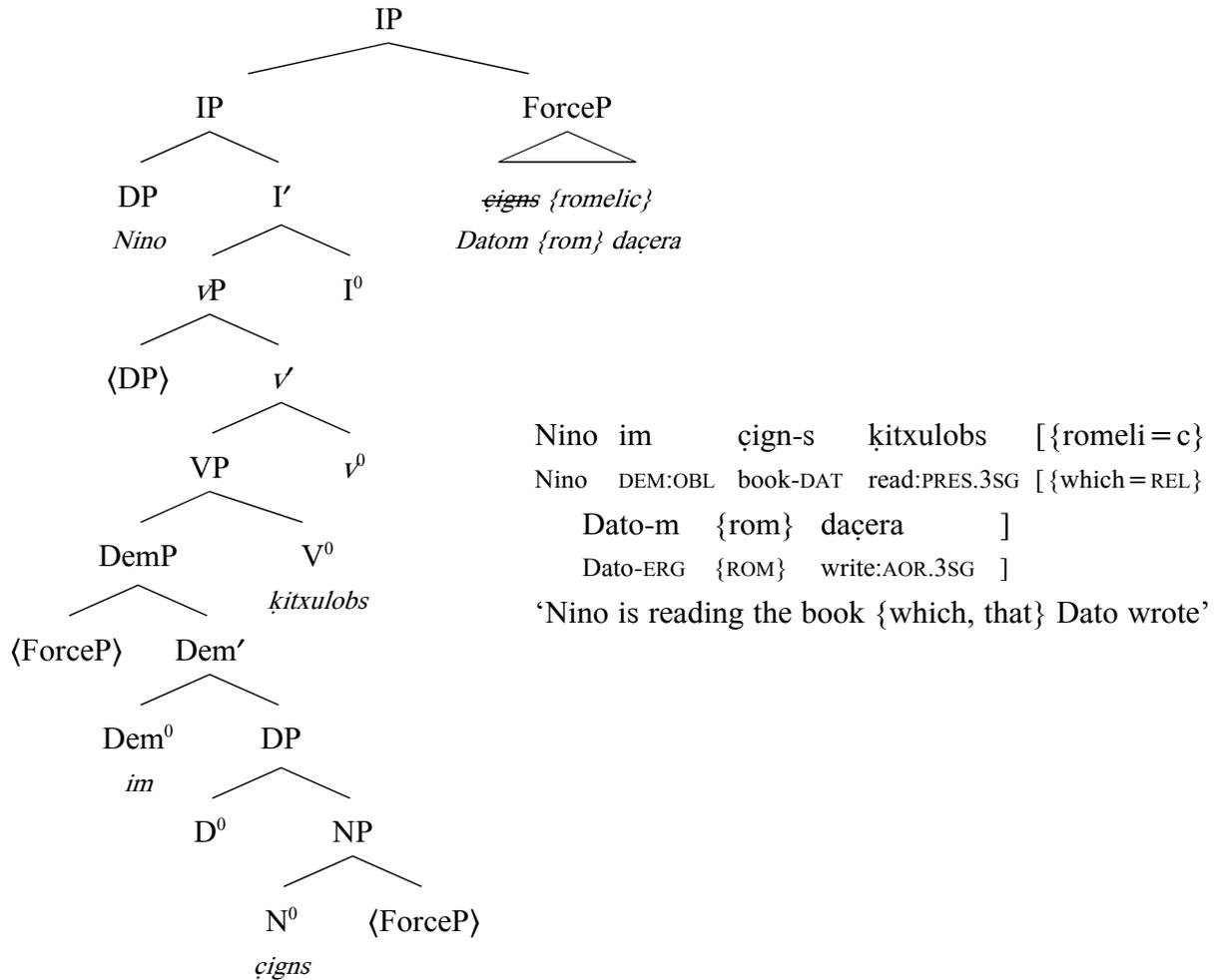
The DP-phase is extended, though, if Dem^0 (a demonstrative) merges. Unlike DP, $DemP$ can project a specifier, and therefore provides a Phase escape hatch. To derive (61a/b), then, the relative clause ForceP moves to Spec $DemP$ and on to the right edge of the clause.²³

²¹ For more on Dynamic Phases and Phase Extension, see Bobaljik and Wurmbrand (2005), Bošković (2010), den Dikken (2007).

²² Alternatively, perhaps Dem^0 can have some feature that triggers movement, but D^0 cannot.

²³ The exact site of movement is not crucial to my analysis. In my diagrams I adjoin RCs to IP, but they may move to (for instance) topic positions in the left periphery.

(63) RC Extraposition



That a demonstrative is obligatory in extraposed relative clauses follows from this structure.²⁴ To account for the fact that only matching interpretations are available, consider the structure an extraposed raising relative would entail:

(64) $[_{IP} [_{IP} \dots [_{DemP} \langle ForceP \rangle [_{Dem'} Dem^0 [_{DP} D^0 \langle ForceP \rangle]]] \dots] ForceP]$

Moving a raising relative ForceP would strand D^0 . It has been argued that determiner stranding (or at least article stranding) is impossible for various languages (see Giusti 1995), so the fact that extraposed relatives must be matching is independently motivated: matching provides an extra NP layer to ‘save’ the D^0 .

²⁴ A quantifier may also provide an escape hatch; see footnote 9.

3.3 OPEN QUESTIONS

There are several questions that my analysis as presented here provides no answers to. First, why must the RC ForceP right-adjoin? In other words, why can't *wh*-RCs be preposed?

- (65) * $[\text{romeli} = c \text{ Dato-m daçera }] \text{ Nino im } \text{çign-s } \text{ķitxulobs}$
 $[\text{which} = \text{REL Dato-ERG write:AOR.3SG}] \text{ Nino DEM:OBL book-DAT read:PRES.3SG}$
 Attempted: 'Nino is reading the book which Dato wrote'

Second, what motivates ForceP's movement to SpecDemP, and why must it move out of that position? In other words, why is (66) ungrammatical?

- (66) * $\text{Nino } [\text{romeli} = c \text{ Dato-m daçera }] \text{ im } \text{çign-s } \text{ķitxulobs}$
 $\text{Nino } [\text{which} = \text{REL Dato-ERG write:AOR.3SG}] \text{ DEM:OBL book-DAT read:PRES.3SG}$
 Attempted: 'Nino is reading the book which Dato wrote'

Perhaps we can appeal to 'syntactic weight'. For example, when the structure in (63) is sent to the phonological component, ForcePs must be linearized rightward because they are relatively heavy syntactic objects (they comprise many projections). Extraposition, then, might be akin to heavy NP shift.²⁵

Extraposition is a troublesome phenomenon to derive in any language. Though my proposed derivation is not perfect, it nevertheless accounts for the defining characteristics of extraposed RCs in Georgian.

²⁵ These facts are additionally concerning in light of my analysis for preposed *rom*-RCs described in Section 4. I will argue that preposed *rom*-RCs involve similar movement through SpecDemP, but not only can they stop in SpecDemP (see (14b), (78)), they are necessarily left-adjoined. Syntactic weight again may play a role in explaining this asymmetry. In *rom*-RCs, a smaller constituent than ForceP will move; therefore this type of RC is 'lighter' than the extraposed type. Perhaps ForcePs are therefore linearized to the right and smaller CPs to the left. This weight-sensitive linearization can extend to the position of SpecDemP — maybe extraposed RCs can stop in SpecDemP, but because of their size they are linearized rightward and therefore yield the same order as contiguous relatives.

- (i) $[_{IP} \dots [_{DP} [_{NP} N^0 \text{ ForceP}]] \dots]$
 (ii) $[_{IP} \dots [_{DemP} [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 \langle \text{ForceP} \rangle] \text{ ForceP}] \dots]$

4 PREPOSED RELATIVES

4.1 CORRELATIVES

In a preposed *rom*-relative, the head noun may be external, internal, or both; a demonstrative is obligatory (15). These are the the defining characteristics of a correlative — a left-peripheral relativizing construction that is linked to a (possibly unrealized) nominal head within the matrix clause.²⁶ Hindi is perhaps the best-studied language with correlatives (Srivastav 1991; Dayal 1996; Bhatt 2003). The head of a Hindi relative clause may appear both inside and outside the correlative (67a), only outside (67b), or only inside (67c).

- (67) a. [jo **laṛkī** kharī hai] **vo** **laṛkī** lambī hai Srivastav (1991: 647)
 [REL **girl** standing is] DEM **girl** tall is
- b. [jo kharī hai] **vo** **laṛkī** lambī hai
 [REL standing is] DEM **girl** tall is
- c. [jo **laṛkī** kharī hai] **vo** lambī hai
 [REL **girl** standing is] 3SG tall is

All: ‘The girl who’s standing is tall’

Constant is the demonstrative *vo* ‘that’ in the matrix clause. This element is the ‘correlate’ that links the two clauses. Note that a bare demonstrative, as in (67c), is a third-person pronoun.

Georgian preposed *rom*-RCs mirror these facts (68). Third-person pronouns, too, are clearly derived from demonstratives that host case endings (69).

²⁶ For a thorough description of correlatives and overview of generative approaches to them, see Lipták (2009).

- (68) a. [**gogo** rom dgas,] **is** **gogo** maḡali = a
 [**girl** ROM stand:PRES.3SG] **DEM** **girl** tall = COP
- b. [rom dgas,] **is** **gogo** maḡali = a
 [ROM stand:PRES.3SG] **DEM** **girl** tall = COP
- c. [**gogo** rom dgas,] **is** maḡali = a
 [**girl** ROM stand:PRES.3SG] **3SG** tall = COP

All: ‘The girl who’s standing is tall’

| (69) | Dem. | Pronoun | Case Suffix ²⁷ |
|------|----------|----------|---------------------------|
| NOM | is / igi | is / igi | -i/Ø |
| DAT | im | (i)mas | -s |
| ERG | im | (i)man | -m(a) |
| GEN | im | (i)mis | -is |
| INST | im | (i)mit | -it |
| ADV | im | (i)mad | -ad |

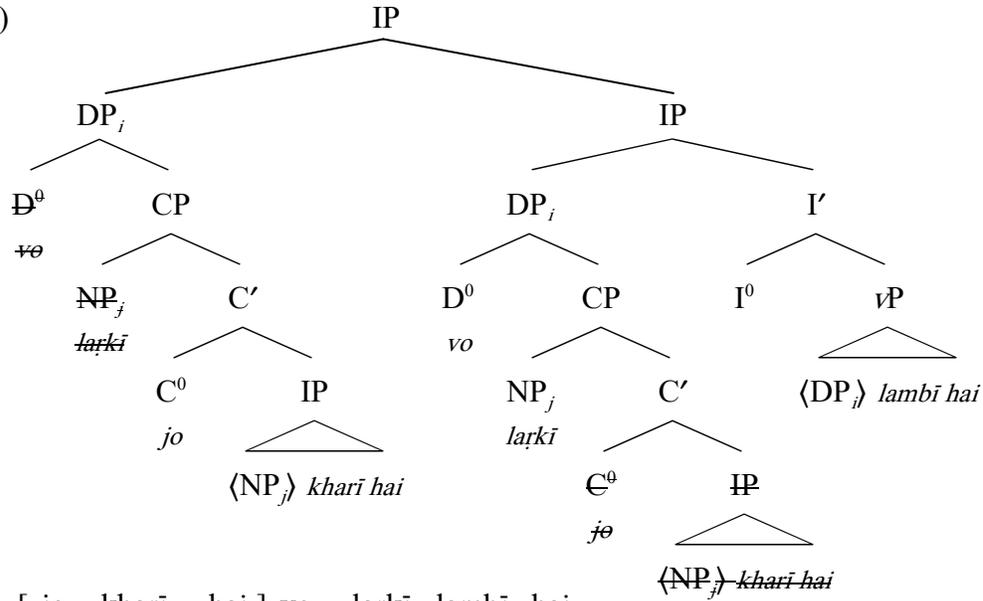
Like Georgian, Hindi also has more familiar postnominal relative clauses (both contiguous and extraposed).

- (70) a. vo laṛkī [jo kharī hai] lambī hai
 DEM girl [REL standing is] tall is
- b. vo laṛkī lambī hai [jo kharī hai]
 DEM girl tall is [REL standing is]
- Both: ‘The girl who’s standing is tall’

Mahajan (2000) proposes all relatives in Hindi begin DP-internally — that is, as (70a), the contiguous RC. The extraposed RC and the various correlative options are derived via movement. While attractive in that it unites all the language’s relativization strategies, his treatment requires partial deletion of non-constituents. For example, he derives (67b) as in (71).

²⁷ The *a* in *(i)mas* ‘3SG:DAT’ is likely the ‘euphonic vowel’ that appears on consonant-final stems before phonological elements (words and certain suffixes/clitics) which are fewer than two syllables. Presumably *(i)man* ‘3SG:ERG’ is derived from *im + man*, *-man* being the archaic ergative suffix.

(71)

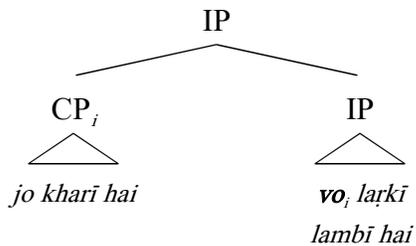


[jo kharī hai] vo laṛkī lambī hai
 [REL standing is] DEM girl tall is
 'The girl who's standing is tall'

That is, the DP *vo laṛkī jo kharī hai* 'the girl who's standing' copies, adjoining to IP. Both the top and the bottom copy undergo partial deletion: [~~vo laṛkī jo kharī hai~~] [~~vo laṛkī jə kharī hai~~], even though the deleted parts are not necessarily constituents.

More usual in the literature on Hindi correlatives is to assume that correlatives and relatives have fundamentally different structures. For example, Srivastav (1991) proposes that correlative CPs are base-generated adjoined to IP. They act as generalized quantifiers that bind a correlate variable, namely the demonstrative *vo*.

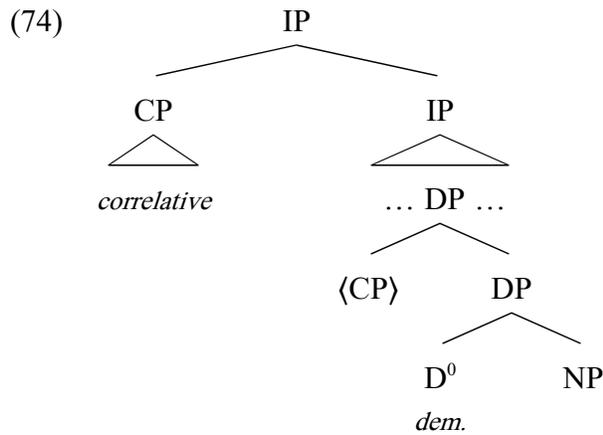
(72)



However, Bhatt (2003) observes that the correlative phrase and the head noun can form a constituent. For example, two relativized DPs can be conjoined.

- (73) Rahul ājkal [[jo kitāb_i Saira = ne likhī] vo_i] aur Bhatt (2003: 16)
 Rahul nowadays [[REL book Saira = ERG wrote] 3SG] and
 [[jo cartoon_j Śam = ne banāyā] vo_j] paṛh rahā hai
 [[REL cartoon Śam = ERG made] 3SG] read PROG is
 ‘Nowadays Rahul is reading the book that Saira wrote and the cartoon that Śam made’

With this in mind, Bhatt proposes that correlative phrases begin adjoined to the correlate DP and \bar{A} -scramble to a left-peripheral position.



In support of this hypothesis is the fact that island restrictions obtain in correlative constructions.

- (75) *[jo vahā̃ rahtā hai], mujh = ko vo kahānī Bhatt (2003: 13)
 [REL there stay is] 1SG = DAT DEM story
 [jo Arundhati = ne us_i laṛke = ke bāre mẽ lik^hī] pasand hai
 [REL Arundhati = ERG DEM boy = GEN about wrote] like is

Attempted: ‘I like the story that Arundhati wrote about the boy who lives there’
 Lit.: ‘Who lives there, I like the story that Arundhati wrote about that boy’

If correlatives originated adjoined high, there should be no reason to prevent a sentence like (75), since variable binding can take place across islands.

- (76) har laṛke_i=ko vo kahānī [jo Arundhati = ne us_i=ke Bhatt (2003: 13)
 every boy = DAT DEM story [REL Arund^hati = ERG 3SG = GEN
 bāre mẽ likhī] pasand hai
 about wrote] like is
 ‘Every boy_i likes the story Arundhati likes about him_i’

Condition C effects also point towards movement.

- (77) a. [jo laṛkī_i Sita_j=ko pyār kartī hai] us_i=ne us_j=ko ṭhukrā diyā Bhatt (2003: 22)
 [REL girl Sita = DAT love do is] 3SG = ERG 3SG = DAT reject gave
 ‘The girl_i who loves Sita_j rejected her_j’
 b. [jo laṛkī_i Sita_j=ko pyār kartī hai] us_{*j/k}=ne us_i=ko ṭhukrā diyā
 [REL girl Sita = DAT love do is] 3SG = ERG 3SG = DAT reject gave
 ‘She_{*j/k} rejected the girl_i who loves Sita_j’

In (77a), the correlative begins adjoined to the subject pronoun, *us ne* ‘she ERG’. The object pronoun *us ko* ‘her DAT’ may be coindexed with the R-expression *Sita* in the correlative because *us ko* does not c-command *Sita* at any point in the derivation. Compare (77b), where the correlative merges with the object *us ko*. The correlative’s movement reconstructs to this position, so the subject pronoun *us ne* is interpreted c-commanding it. Therefore *us ne* and *Sita* may not be coreferential.

4.2 DERIVING CORRELATIVES IN GEORGIAN

Like Hindi, it is possible to conjoin two correlativized nominals.

- (78) [[Merab-ma rom çigni daçera] is çigni] da Nash (2002)
 [[Nino-ERG ROM book write:AOR.3SG] DEM book] and
 [[Zurab-ma rom surati daxaṭa] is surati] movipare
 [[Zurab-ERG ROM picture draw:AOR.3SG] DEM picture] steal:AOR.1SG
 ‘I stole the book Merab wrote and the picture Zurab drew’

And locality constraints obtain (79), even though long-distance variable binding is possible (80).

- (79) *[Temur-ma rom çigni daḡarga] Otari icnobs gogo-s Nash (2002)
 [Temur-ERG ROM book lose:AOR.3SG] Otar knows girl-DAT
 [is çigni rom ipova]
 [DEM book ROM find:AOR.3SG]

Attempted: ‘Otar knows the girl who found the book that Temur lost’

- (80) qovel gogo-s moeḡona is leksi, [Tengo-m rom daçera mas = ze]
 every:OBL girl-DAT like:AOR.3SG/3 DEM poem [Tengo-ERG ROM write:AOR.3SG 3SG:DAT = on]
 ‘Every girl_i liked the poem that Tengo wrote about her_i’

These facts support a movement analysis like Bhatt's.²⁸ However, the two languages' correlatives are not identical. In fact, an important difference allows Georgian correlatives to be derived from the same structure as postnominal relatives.

Recall the characteristics of preposed RCs — they occur only with the complementizer *rom*; they are only compatible with matching interpretations; a demonstrative is obligatory; the head noun may appear inside, outside, or both.

- (81) a. [Dato-m rom **cigni** daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 'Nino's reading the book that Dato wrote'
- b. [Dato-m rom **cigni** daçera,] Nino **mas** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **3SG:DAT** read:PRES.3SG
 'Nino's reading the book that Dato wrote'
- c. [Dato-m rom daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 'Nino's reading the book that Dato wrote'
- d. %[Keto rom **mas=tan** cxovrobs] Mzia **im** **kal-s** **icnobs**
 [Keto ROM **3SG:DAT=at** live:PRES.3SG] Mzia **DEM:OBL** **woman-DAT** know:PRES.3SG
 'Mzia knows the woman that Keto lives with'

²⁸ The following sentences implement Bhatt (2003)'s last piece of evidence, Condition C effects.

- (i) %[Mariami_i rom uqvars] im **kaç-ma** **mas_i** **açoqa**
 [Mariam ROM love:PRES.3SG/3] DEM:OBL man-ERG 3SG:DAT kiss:AOR.3SG
 'The man who loves Mariam_i kissed her_i'
- (ii) %[Mariami_i rom uqvars] man_i im **kaç-s** **açoqa**
 [Mariam ROM love:PRES.3SG/3] 3SG:ERG DEM:OBL man-DAT kiss:AOR.3SG
 'She_i kissed the man who loves Mariam_i'

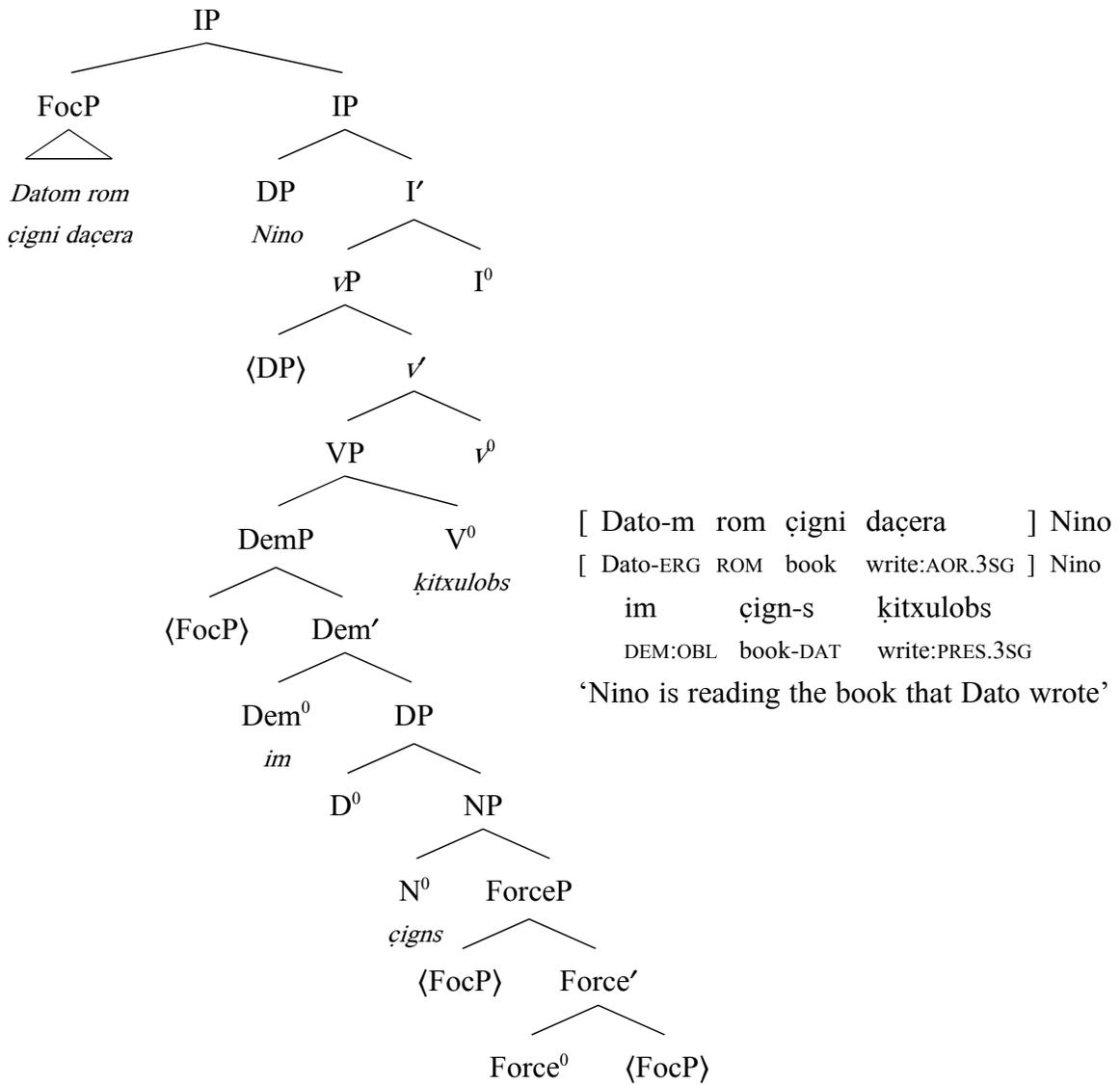
My informants' judgments varied, either accepting both bindings or rejecting both. None accepted (i) but rejected (ii) as in Hindi (77). This outcome is not damning for my proposal; it may simply suggest correlatives can either originate within the DP or adjoined to IP, as (72). Bhatt himself comes to this conclusion for Hindi, since multiple correlativization (see (86)) is not possible to derive via movement.

Note that in (81a–b) the head noun is in its canonical position. Even when the correlative head is embedded within another clause, it remains in situ.

- (82) [Nino-s rom undoda [**çigni** çaçkitxa,]] Dato-m is **çigni** daçera
 [Nino-DAT rom want:AOR.3SG [**book** read:PLU.3SG/3]] Dato-ERG **DEM** **book** read:AOR.3SG
 ‘Dato wrote the book that Nino wanted to read’

With this in mind, I propose the following derivation for Georgian correlatives.

(83) Preposed rom Correlative



Since the nominal head within the correlative remains in situ, nothing occupies SpecForceP. Therefore the complement of Force⁰ (here FocP) is free to move to this escape hatch and avoid being Spelled Out in the CP phase. As in extraposed relatives, Dem⁰ extends the DP phase. FocP moves to SpecDemP and again avoids Spell Out. The correlative may stay here, as (78) shows, or it may adjoin to IP at the left edge of the matrix clause.

My proposal straightforwardly accounts for the characteristic features of correlatives in Georgian. It is impossible for a correlative to be built with a *wh*-phrase because *wh*-relatives will always have a filled SpecForceP (51); the escape hatch from the CP will be unavailable. Raising structures, even those built on *rom*, will likewise have SpecForceP filled (51), (54). A demonstrative is obligatory because otherwise the correlative could not escape the DP phase. As for the variable head placement, this can be derived through optional ellipsis.

- (85) a. [Dato-m rom **çigni** daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’

[[_{CP} ... **çigni** ...] ... im çigns ...]

Both heads pronounced.

- b. [Dato-m rom **çigni** daçera,] Nino **mas** **kitxulobs**
 [Dato-ERG ROM **book** write:AOR.3SG] Nino **3SG:DAT** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’

[[_{CP} ... **çigni** ...] ... im→mas ~~çigns~~ ...]

Outer head elides. The demonstrative takes its pronominal allomorph to support case.

- c. [Dato-m rom daçera,] Nino **im** **çign-s** **kitxulobs**
 [Dato-ERG ROM write:AOR.3SG] Nino **DEM:OBL** **book-DAT** read:PRES.3SG
 ‘Nino’s reading the book that Dato wrote’

[[_{CP} ... ~~çigni~~ ...] ... im çigns ...]

Inner heads elides.

- d. % [Keto rom **mas=tan** cxovrobs] Mzia **im** **kal-s** icnobs
 [Keto ROM **3SG:DAT=at** live:PRES.3SG] Mzia **DEM:OBL** **woman-DAT** know:PRES.3SG
 ‘Mzia knows the woman that Keto lives with’

[[CP ... **kals**(→mas) ...] ... im kals ...]

Inner head elides. For some speakers, a pronoun is inserted to save the stranded postposition. For others, a bare postposition is okay.

In other situations the postposition deletes (see 12a–b).

Hindi correlatives cannot be derived with the analysis I have described. Unlike in Georgian, Hindi nominal heads always move to the left edge of correlative clauses, as shown in (84) (the unmarked word order in this language is SOV).

- (84) [**jo kitāb** Saira = ne lik^{hī}] vo Bhatt (2003: 16)
 [REL book Saira = ERG wrote] 3SG
 ‘the book that Saira wrote’

This suggests that SpecForceP is always filled for both relatives and correlatives in Hindi, and so a smaller constituent cannot move through this position to escape the CP Phase. Therefore, if Hindi correlatives originate as complements to N⁰ at all (contra Bhatt 2003; see (74)), it must be the whole ForceP that moves, as shown in (85). But if this is the case, and my analysis of RC extraposition (63) is also applied to Hindi, it’s unclear what differentiates correlatives and extraposed relatives (70b) in this language.

- (85) [IP ForceP [IP ... [DemP ⟨ForceP⟩ [Dem′ Dem⁰ [DP [NP N⁰ ⟨ForceP⟩]]] ...]]

Perhaps it is best to assume Hindi correlatives merge as adjuncts, as Bhatt (2003) does. This derivational asymmetry between Hindi and Georgian may explain why multiple relativization is possible in the former language (86), but apparently impossible in the latter.²⁹

²⁹ I have never encountered multiple correlativization in Georgian. The examples I tried constructing were judged awkward at best by my consultants.

(86) [jis laṛkī = ne jis laṛke = ke sāth khelā,]
[REL girl = ERG REL boy = GEN with played]

Lipták (2009: 5)

un = ne us = ko harāyā
3SG = ERG 3SG = DAT defeated

Literally: Which girl played with which boy, she defeated him
'Every girl defeated the boy she played with'

Bhatt notes that the correlative in (86) must originate adjoined to IP (cf. Srivastav 1991's structure in (72)), since it is not logically possible to derive multiple relativization via movement. In other words, Hindi correlatives may merge adjoined to either D(em)P or IP, depending on the number of nominal heads. In my analysis, Georgian correlatives only ever originate as complements of N⁰. This may be why only simple correlativization occurs in Georgian.

4.3 SUMMARY

This section has demonstrated that Georgian correlatives can be derived from the same structure that contiguous and extraposed relatives can. Several unresolved issues remain, however. First is what motivates the FocP to move from its base-generated position to SpecForceP again to SpecDemP and once more to the matrix clause left edge.

Second is what exactly differentiates contiguous / extraposed matching *rom*-RCs from preposed *rom*-correlatives. I have assumed that in the former case the head DP moves to SpecForceP and is elided when N⁰ merges, but in the latter the embedded head DP remains in situ. Why don't head nouns in correlatives move? Perhaps in contiguous / extraposed *rom*-relatives, the Agreement between Force⁰ and the head DP (to satisfy Force⁰'s unvalued REL feature; see (50, 55) above) triggers movement, while in *rom*-correlatives Force⁰ has an unvalued CORREL feature, and Agreement to satisfy this feature does not induce movement. I leave these issues to future research.

5 CONCLUSION

5.1 REVIEW

Georgian is notable for having no fewer than eight distinct surface forms for relative clause (1). Despite this variation, I have demonstrated that they may all be derived from a single structure, with the (cor)relative CP merged inside the head DP. I derive the asymmetries between the various relatives coherently through a combination of movement and phase extension.

The most salient variable in Georgian RCs — whether the clause contains a *wh*-phrase or the complementizer *rom* — is derived via an articulated left periphery. In *wh*-relatives, the relativizing enclitic *-c* heads FocP; the *wh*-phrase moves into its specifier. For *rom*-relatives, *rom* heads FinP. This element has an EPP feature, ensuring that an XP, if available, appear to *rom*'s left; additional XPs may move to high topic or focus positions beyond *rom*, too. For both *wh*- and *rom*-relatives (but not correlatives), the internal head NP/DP moves to SpecForceP.

What merges with ForceP determines whether the relative receives a raising or matching interpretation. If D^0 merges, raising obtains. If N^0 merges, the head in SpecForceP is elided and matching obtains.

If the DP is merged into the matrix clause, the RC must be contiguous to the head noun, because the complement of D^0 is Spelled Out. If Dem^0 merges with DP, though, the Phase is extended and the relative ForceP has the option to move into the escape hatch it provides. This ForceP, built either with a *wh*-phrase or *rom*, then moves to the right edge of the matrix clause, yielding an extraposed relative. This movement is incompatible with a raising structure because the movement would strand D^0 .

The derivation of correlatives is slightly different. Their nominal heads do not move to SpecForceP; they remain in the IP, or potentially raise into the lower left periphery if they precede *rom*. Since SpecForceP is unoccupied, it provides an escape hatch to the CP Phase. The complement of $Force^0$ moves through that specifier and on to SpecDemP, where it may stay or move again to the left edge of the matrix clause. Optional ellipsis may take place between the internal and external heads, accounting for the variability in head distribution.

The various options are schematized in the following table.

(87)

| TYPE | POSITION | STRUCTURE | DERIVATION |
|---------------|--------------|-----------|---|
| <i>wh + c</i> | Contiguous | Raising | $[_{DP} [_{ForceP} NP [_{Force'} [_{FocP} [_{DP} D^0 \langle NP \rangle] [_{Foc'} Foc^0 [\dots \langle DP \rangle \dots] \dots]]]]$ |
| | | Matching | $[_{DP} [_{NP} N^0 [_{ForceP} \cancel{NP} [_{Force'} [_{FocP} [_{DP} \langle NP \rangle] [_{Foc'} Foc^0 [\dots \langle DP \rangle \dots] \dots]]]]$ |
| | Extraposited | Matching | $[_{IP} [_{IP} \dots [_{Demp} \langle ForceP \rangle] [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 \langle ForceP \rangle]] \dots] [_{ForceP} \cancel{NP} [_{Force'} [_{FocP} [_{DP} \langle NP \rangle] [_{Foc'} Foc^0 [\dots \langle DP \rangle \dots] \dots]]]$ |
| <i>rom</i> | Contiguous | Raising | $[_{DP} [_{ForceP} DP [_{Force'} \dots [_{Fin} XP [_{Fin'} Fin^0 [_{IP} \dots \langle DP \rangle \langle XP \rangle \dots] \dots]]]$ |
| | | Matching | $[_{DP} [_{NP} N^0 [_{ForceP} [_{DP} \cancel{NP}] [_{Force'} [_{Fin} XP [_{Fin'} Fin^0 [_{IP} \dots \langle DP \rangle \langle XP \rangle \dots] \dots]]]]$ |
| | Extraposited | Matching | $[_{IP} [_{IP} \dots [_{Demp} \langle ForceP \rangle] [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 \langle ForceP \rangle]] \dots] [_{ForceP} [_{DP} \cancel{NP}] [_{Force'} [_{Fin} XP [_{Fin'} Fin^0 [_{IP} \dots \langle DP \rangle \langle XP \rangle \dots] \dots]]]$ |
| | Correlative | Matching | $[_{IP} [_{FinP} XP [_{Fin'} Fin^0 [_{IP} \dots DP \langle XP \rangle \dots]]] [_{IP} \dots [_{Demp} \langle FinP \rangle] [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 [_{ForceP} \langle FinP \rangle] [_{Force'} \langle FinP \rangle] \dots]]]$ $[_{IP} [_{FinP} XP [_{Fin'} Fin^0 [_{IP} \dots \cancel{DP} \langle XP \rangle \dots]]] [_{IP} \dots [_{Demp} \langle FinP \rangle] [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 [_{ForceP} \langle FinP \rangle] [_{Force'} \langle FinP \rangle] \dots]]]$ $[_{IP} [_{FinP} XP [_{Fin'} Fin^0 [_{IP} \dots DP \langle XP \rangle \dots]]] [_{IP} \dots [_{Demp} \langle FinP \rangle] [_{Dem'} Dem^0 [_{DP} [_{NP} N^0 [_{ForceP} \langle FinP \rangle] [_{Force'} \langle FinP \rangle]]]]]]] \dots]$ |

5.2 TOPICS FOR FUTURE RESEARCH

A number of related phenomena could not be examined in this thesis, but nonetheless deserve detailed investigation.

First is the behavior of the complementizer *rom*. It appears in noninitial position not only in relative clauses, but also in a number of adjunct clauses, including counterfactual conditionals (88a), *when*-clauses (88b), and *because*-clauses (88c).

- (88) a. [kolga **rom** çamogeğo,] ar dasveldebodi
 [umbrella **ROM** bring:PLU.2SG/3] NEG get.wet:COND.2SG
 ‘If you had brought an umbrella, you wouldn’t have gotten wet’
- b. [garet **rom** gavedi,] amababana Rayfield et al. (2006: 26, 1575)
 [outside **ROM** go.out:AOR.1SG] shiver:AOR.3SG/1SG
 ‘When I went outside, I shivered’
- c. imiṭom moinatla, [ğmerti **rom** içama uceb?]
 for.this.reason be.baptized:AOR.3SG [god **ROM** believe:AOR.3SG suddenly]
 ‘Did he get baptized because he believed in god all of the sudden?’

Rom can also introduce complement clauses. In this case, though, it must be clause-initial (cf. (7b), etc.)

- (89) Nino-s hgonia, [{**rom**} Boṣton = ši {***rom**} sçavlob] Nash (2002)
 Nino-DAT believe:PRES.3SG/3 [{**ROM**} Boston = in {***ROM**} study:PRES.2SG]
 ‘Nino believes that you study in Boston’

However, as Nash (2002) reports, when a complement clause is preposed, *rom* takes a non-initial position — and in fact an object pronoun may appear in the matrix clause.

- (90) [{***rom**} Boṣton = ši {**rom**} sçavlob] (is) hgonia Nino-s
 [{***ROM**} Boston = in {**ROM**} study:PRES.2SG] (3SG:NOM) believe:PRES.3SG/3 Nino-DAT
 ‘Nino believe that you study in Boston’

Example (90) greatly resembles a *rom* correlative — and in fact Nash suggests preposed complement clauses are essentially headless correlatives. Might the other types of *rom* clauses (88) be correlatives too? Bhatt & Pancheva (2006), for instance, propose that conditional clauses are free relatives of possible worlds.

Another noninitial complementizer exists in Georgian: *tu* ‘if’. Unlike *rom*, though, *tu* is free to be clause-initial.

- (91) [{tu} čangali {tu} tepš = ze {tu} šemode,] Rayfield et al. (2006: 1360)
 [{if} fork {if} plate = on {if} put:AOR.2SG]
 bluda çəğebuli = a
 dish take.away:PAST.PART = COP

‘If you put your fork on your plate, the dish will be taken away’

If *tu*-clauses are also correlatives, how do they differ from *rom*-conditional correlatives?

Wh-correlatives additionally deserve attention. While above I stated above that correlative / preposed RCs may only be built with *rom*, a consultant produced the following example for me.

- (92) [p̄uri r-iti = c davčeri,] is dana davqarge
 [bread what-INST = REL cut:AOR.1SG] DEM knife lose:AOR.1SG
 ‘I lost the knife that I cut the bread with’

What’s notable about this construction is the fact that while the *wh*-phrase hosts the enclitic *-c*, it takes a non-initial position within the clause (cf. postnominal *wh*-RCs). This is consistent with my claim that correlatives need an unfilled SpecForceP to move through. But just how similar is this construction to a correlative with *rom* (cf. (11))? Is the *wh*-phrase in the immediate preverbal focus position, or somewhere low in the left periphery (i.e., can XPs occur before and after this *wh*-phrase, or only before)? Does this construction have multiple options for head placement?

Clearly, relative clauses in Georgian are a fertile area for future research.

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იქა ქატო, აქა ფქვილი