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The semantics of multi-headed wh correlatives in Georgian

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Abstract. Existing accounts of Georgian relative clauses mention two relativization strategies, one involving the complementizer *rom*, and the other involving the relativizing clitic *-c*. While Foley (2013); Bhatt & Nash (2023) provide a syntactic account of these structures, their semantics remains unstudied. In this paper I present novel data on preposed relative clauses in Georgian formed via the relativizing clitic *-c*, and argue for a correlative-like semantics of these structures along the lines Dayal 1996's analysis of Hindi correlatives. Moreover, contra Bhatt & Nash (2023) I argue it is these multiple wh-*romelic* relative clauses rather than the multiple headed *rom* relative clauses that pattern like canonical correlatives in terms of definiteness effects, and their ability to license a pair-list interpretation.

Keywords. relative clauses; correlatives; wh-questions; Georgian

1. Introduction. A correlative is typically defined as a left peripheral relative clause that is linked to a nominal correlate in the matrix clause through a demonstrative. Unlike restrictive relative clauses in languages like English, the noun phrase modified by the relative clause is realised inside the clause, and can often be omitted from the matrix clause. Like free relatives, correlatives also involve relative or interrogative pronouns. In terms of semantics, existing literature places correlatives somewhere on the spectrum between free relatives and conditionals in the broad landscape of quantificational structures (Grosu & Landman 1998; Šimík 2023). From the surface structure, there are 4 characteristics that define a correlative:

(1) a. A left peripheral relative clause.
b. An interrogative or relative pronoun in the relative clause.
c. A corresponding demonstrative in the main clause.
d. The availability of stacking multiple relative pronouns in the relative clause.

As Grosu & Landman (1998) note, not all relative clauses have the same semantics as externally headed relative clauses. Crucially, unlike restrictive relative clauses, correlatives do not have a set intersective meaning. Instead, it has been argued that the relative clause denotes a generalized quantifier which then takes the main clause as an argument (Dayal 1996). This, along with other properties of correlatives, such as their maximality effects, and the ban on stacking leads them to classify these structures as maximizing relatives. Here, they seem to form a unifying class of sorts with free relatives, which also do not have an intersective meaning and the head noun is often absent.

Although correlatives were considered a typologically rare construction, recent investigations have shown that they are available in a wide variety of genetically unrelated languagesBelyaev &

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Haug (2020). Most recently, Bhatt & Nash (2023) presented an analysis of correlatives in Georgian, and show that relative clauses involving the complementizer *rom* allow correlative configurations. These *rom* correlatives display some curious properties and do not fit quite neatly into our current understanding of correlatives as outlined in (1).

In this paper, I investigate the difference between two correlative-like structures in Georgian involving two different relative clause markers: the clitic *-c*, and the complementizer *rom*. While Bhatt & Nash (2023) investigated *rom* correlatives, Georgian also allows preposed relative clauses via the relativizing clitic *-c* which has not been systematically investigated yet. Contra the findings in Foley (2013), I show that *-c* relative clauses actually do allow correlative-like structures. I also show that these structures behave semantically like Hindi-style correlatives unlike their *rom* counterparts. I argue that this difference is due to the presence of wh-DPs in *-c* correlatives and their absence in *rom* correlatives, and provide a semantic test to pull apart the difference in the truth conditions of the two structures.[1]

While the structural description of correlatives provided in (1) is a start at investigating the composition of these structures, it is fruitful to investigate if they have the same semantics cross-linguistically. The classical analysis of multi-head correlatives from Dayal (1996) builds on the semantics of wh-questions, and argues that the meaning of a correlative clause is similar to that of a multiple wh-question. I will show that these predictions bear out for *-c* correlatives, but not *rom* correlatives, and provide a possible explanation for this difference.

2. Correlatives in Hindi. Consider the classic examples of Hindi correlatives in (2). The simple case in (2a) involves a single internal head *jo larkii* in a left peripheral clause, and a corresponding demonstrative *vo* in the main clause. The multi-head variant in (2b) has two internal heads *jis larkii* and *jis larke* with two corresponding demonstratives in the main clause. We can see how these cases illustrate all the features of a correlative defined in (1).

(2) a. [jo which girl larkii stand kharii is hai] vo that tall lambii is hai.
The girl who is standing is tall.

b. [jis which girl-ERG larkii-ne jis which boy-GEN larke-ke saath with khelaa play] us-ne that-ERG us-ko that-ACC haraaya. defeat.
Which girl played with which boy, she defeated him. (Dayal 1996)

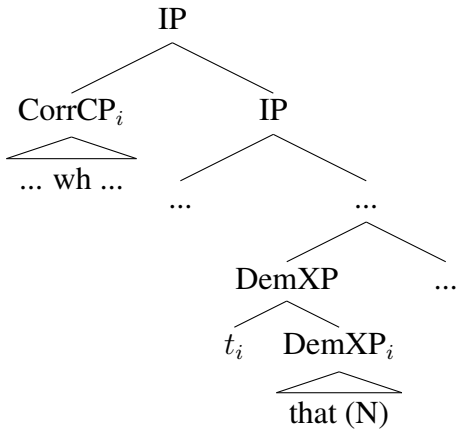
Bhatt (2003) proposes that simple correlatives in Hindi are base generated as adjuncts to the demonstrative (Dem-XP) in the main clause which then move to the left periphery. Correlatives also allow multi-head correlatives, which are constructions where the relative clause contains multiple relative pronouns in the relative clause with corresponding demonstratives in the main clause. These multi-head counterparts are argued by Bhatt (2003) and Dayal (1996) to be base generated as adjuncts to the IP in the left peripheral position.

While in the simple case, the Dem-XP proposal captures the matching requirement between the relative pronoun and the demonstrative, it remains unclear how this plays out in the multi-head correlative. Since the relative clause is an IP adjunct in the multi-head correlative, this ap-

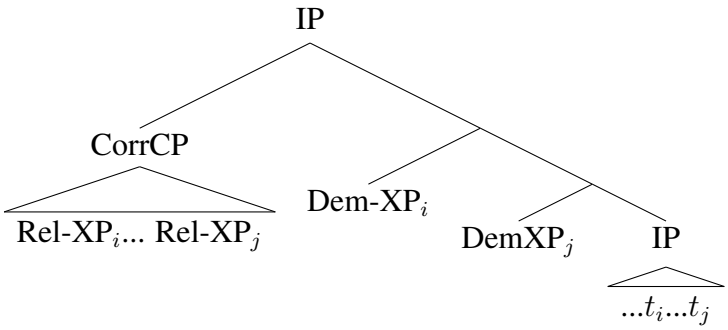
[1] Unless otherwise specified, the data presented here was collected and independently verified from 5 Georgian native speakers in Tbilisi, Georgia, as well as native Georgian speakers in Cambridge, Massachusetts.

proach appeals to 'Suitability' for the adjunction operation. [2] Moreover, the demonstratives must undergo covert movement at LF within the matrix TP in order to generate a predicate of the correct semantic type. This results in a configuration as in (4)

(3) Simple correlatives



(4) Multi-head correlatives



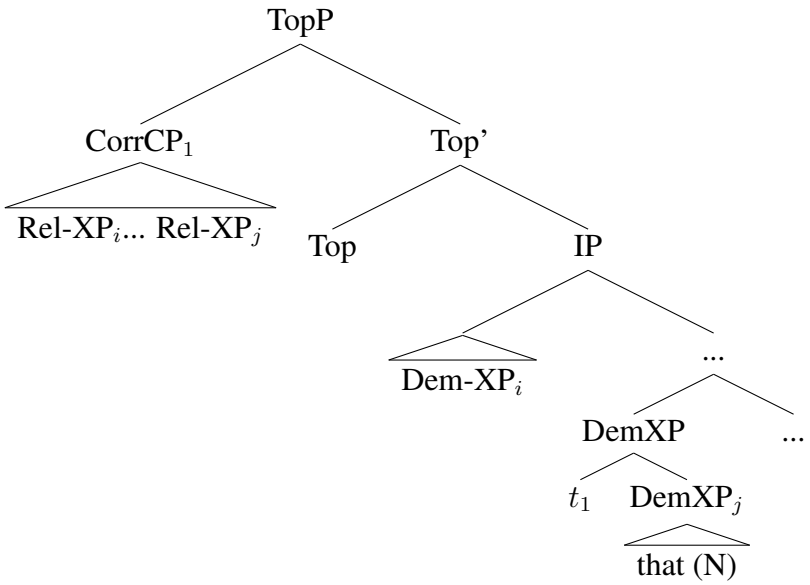
An alternative proposal for multi-head correlatives comes from Chierchia (2024) which suggests the correlative in multi-head correlatives is based generated as an adjunct to the lower demonstrative and then moves to a topicalized position in the left periphery as in (5). Within the correlative, the relative pronouns undergo covert movement at LF to Spec CP. Both proposals predict that the variables in the main clause are abstracted over.[3]

Hindi also has in-situ, and right extraposed relative clauses. But as shown in Bhatt (2003) and Dayal (1996), these are syntactically and semantically distinct from correlatives. Both in-situ and extraposed relative clauses behave semantically like restrictive relative clauses, while correlatives do not, i.e they compose with the external head noun in the main clause in the same way that English relative clauses do.

[2] Bhatt (2003) argues that a relative clause with n relative pronouns can only combine with an n-ary predicate denoted by the main clause if the number of demonstratives in the main clause matches the relative pronouns in the relative clause.

[3] The two approaches do make different predictions for what Chierchia (2024) calls cross-clausal correlatives but I do not discuss those cases here.

(5)



Now, let us establish some characteristics of the semantics of these structures. Correlatives are **not** 1) Restrictive relative clauses 2) Conditionals 3) Free relatives. However, they also seem to have certain similarities of all these constructions. The simple correlative, as in (2a), denotes unique definite individual. Multi-head correlatives are harder to define. While a simple correlative with singular morphology can only refer to a singular definite individual, multi-head correlatives can refer to pairs of individuals that are universally quantified over. In other words, a structure like (2b) refers to multiple girl-boy pairs even in the absence of overt plural morphology. A sentence like (2b) might be translated as *'For every girl-boy pair such that the girl played against a unique boy, that girl defeated that boy'*. At first glance, these might be reminiscent of donkey sentences which have a similar interpretation. However, multi-head correlatives have been argued to encode a strict functional reading that donkey sentences and conditionals lack. I will return to this point in §4 which outlines a semantic analysis of these structures that should also extend to the data in Georgian.

In §3 I provide an overview of relativization strategies in Georgian and illustrate the difference between *romeli-c* and *rom* relative clauses. As we will see, one of these correlative-like structures is quite unlike the canonical Hindi cases described above, while the other seems to have a very similar syntax, and more crucially, has the same interpretation.

3. Two types of correlatives in Georgian . We can broadly split relative clauses in Georgian into two types. One that involves the complementizer *rom* and the other involving relative pronouns and the clitic *-(a)c*. For Foley (2013), the difference between these two types of relative clauses is a consequence of the position of the relativizing head *-c* and the complementizer *rom*. While the former heads the focus phrase, the complementizer *rom* heads FinP. Let us first examine the case of *rom* below.

3.1. *rom* CORRELATIVES. In addition to the in-situ case in (6a), *rom* relative clauses can be both extraposed (6b) and preposed (6c). In the latter two configurations, the demonstrative is obligatory on the head noun in the main clause. This allows for the possibility of generating the correlative-like structures with *rom* which have been further investigated by Bhatt & Nash (2023).

(6) a. nino-m c'a-i-k'itx-a c'igni [Dato-m **rom** da-c'er-a]
Nino-ERG PVB-write-AOR.3.SG book.NOM [Dato-ERG COMP PVB-write-AOR.3.SG]
Nino read the book which Dato wrote based on Foley (2013)

b. nino-m *[im] c'ign-s k'itxul-ob-s, dato-m **rom** da-c'er-a.
Nino-ERG [DEM] book.DAT read-PRS-.3.sg, Dato-ERG COMP PVB-write-AOR.3.SG.
'Nino is reading a book which Dato wrote.'

c. dato-m **rom** da-c'er-a, nino-m *[im] c'ign-s k'itxul-ob-s
Dato-ERG COMP PVB-write-AOR.3.SG, Nino-ERG [DEM] book.DAT read-PRS-.3.sg.
'Nino is reading a book which Dato wrote.' Based on (Foley 2013)

Bhatt & Nash (2023) propose the following relativization strategies in Georgian involving the complementizer *rom*. We see that *rom* allows for the possibility for a gapped and an internally headed relative. Both these options are also possible in a correlative configuration.

It is important to note that the *rom* relatives involve neither a relative pronoun (as in Hindi) or an interrogative pronoun, which we expect to find in these constructions. Instead, *rom* correlatives involve a gap (8a) or a bare DP (8b) in the relative clause with a corresponding demonstrative in the main clause.

(7) Two types of correlatives available.

a. [XP... *rom* .... *gap*....V...][...Dem NP]

b. [XP... *rom* .... NP_{internal}....V...] [...Dem NP]

(8) a. [p'oet'-ma rom *gap* am dilit da-atvalier-a] is lamazi kalaki
[poet-ERG COMP *gap* this morning PVB-visit-AOR.3.SG] this beautiful.NOM
m-iq'var-s
city.NOM
I love this beautiful city that the poet visited this morning.

b. [p'oet'-ma rom **kalaki** am dilit da-atvalier-a] is lamazi
[poet-ERG COMP city.NOM this morning PVB-visit-AOR.3.SG] this
kalaki m-iq'var-s
beautiful.NOM city.NOM
I love this beautiful city that the poet visited this morning. (Bhatt & Nash 2023)

Bhatt & Nash (2023) propose that internally headed *rom* relatives are like hanging topics, not sensitive to locality, while gapped relatives are. The gapped correlative is formed when the *rom* relative clause is merged with the demonstrative cyclically or countercyclically. The internal NP is deleted under identity with the NP that is a sister of the Dem. Meanwhile, internally headed correlatives are treated as hanging topics, i.e their surface structure is not a result of movement. The demonstrative in these configurations takes a covert *pro* as its argument that is co-indexed with the correlative.

They also report that *rom* correlatives allow multiple NP heads as illustrated in (9). The two internal heads in the correlative are 'man'(*k'ac*) and 'cat'(*k'at'a*), and they have corresponding demonstratives in the main clause. The NPs in the main clause, while not ungrammatical, are reported to be slightly redundant. It is unclear whether a multi-head gapped *rom* correlative is possible.

(9) k'ac-ma rom k'at'a gada-arin-a im (k'ac-s) is (k'at'a)
man-ERG COMP cat.NOM PVB-save-AOR.3.SG, DEM man-DAT DEM cat.NOM
uq'var-s
love-PRES.3.SG
[Whichever man saved whichever cat], that man loves that cat (Bhatt & Nash 2023)

This strategy of relativization is noted by Belyaev & Haug (2020) as an outlier in their dataset. While the nominal head in the *rom* relative clause can be accompanied by a demonstrative, it is typically absent, as we can see in (9). They term them as pre-nominal gapped relatives and argue that the nature of these *rom* correlatives must be clarified before they can be included in their existing typology. They suggest that these correlative-like configurations in Georgian potentially had a different path of grammaticalization from those involving demonstrative and interrogative based correlatives. As we see in the next section, Georgian does have another relativization strategy that fits quite neatly into this typology.

3.2. *romeli-c* CORRELATIVES. Foley (2013) reports that *romelic* clauses can be left in-situ, or be extraposed, but not preposed. With extraposed *romeli-c* relative clauses, a demonstrative is obligatory on the head noun as in (10b). Note however, that in all of these configurations, the head noun is external to the relative clause whose left edge is marked by the interrogative pronoun and the relativizing clitic *'romeli-c'*.[4]

(10) a. c'igni, **romeli-c** dato-m da-c'er-a.
book.NOM, which-REL Dato-ERG PVB-write-AOR.3.SG.
'a book which Dato wrote.'
b. nino-m *[im] c'ign-s k'itxul-ob-s, **romeli-c** dato-m da-c'er-a.
Nino-ERG [DEM] book.DAT read-PRS-.3.sg, which-REL Dato-ERG PVB-write-AOR.3.SG.
'Nino is reading a book which Dato wrote.'
c. ***romeli-c** dato-m da-c'er-a., is c'igni
which-REL Dato-ERG PVB-write-AOR.3.SG DEM book.NOM
'The book which Dato wrote.' Based on (Foley 2013)

The ungrammaticality of preposed relative clauses involving *romelic* strategy like (10c) leads Foley (2013) to conclude that Georgian only has correlative-like configurations involving *rom*.

While it is certainly true that externally headed *romeli-c* clauses cannot be preposed, **internally headed** *romeli-c* clauses as in (11) can be preposed. This configuration essentially has the same interpretation as the restrictive relative clauses in (10a), but with a crucial structural difference; the presence of the internal DP. We also observe that the relativizing clitic *-c* that was

[4] This data is based on Foley (2013) and independently verified by native Georgian speakers.

attached to the wh-element *romeli* in previous configurations is attached to the DP *cigni* in this case.

(11) **romeli c'igni-c** Dato-m da-c'er-a, Nino-m **is** c'a-i-k'itx-a.
which book-REL Dato-ERG PVB-write-AOR.3.SG, Nino-ERG DEM PVB-PV-readAOR.3.SG
'which book Dato wrote, Nino that read'

This clearly mirrors the structure of the canonical Hindi correlative, with one difference. Hindi correlative involve dedicated relative pronouns while the Georgian correlatives involve interrogative pronouns which are marked with the relativizing *-c* clitic.

Moreover, these correlative-like configurations with *romelic* also allow multiple wh-DPs in the relative clause, as in (12). We see two wh-phrases in the relative clause, with the clitic *-c* on the lower wh-DP, and two corresponding demonstratives in the main clause.

(12) **romel-ma** **k'ac-ma** **romeli** **k'at'a-c** gada-arin-a, **mas**
which-ERG man-ERG which.NOM cat.NOM-REL PVB-save-AOR.3.SG, DEM.DAT
is uq'var-s
DEM.NOM love-PRES.3.SG
Which man saved which cat, he loves it.

This data presents a problem for Foley 2013's analysis of *-a(c)* relative clauses which incorrectly predicts that *-a(c)* relative clauses cannot be preposed. As we can see in 11 and 12, not only can *-a(c)* relative clauses be preposed as long as they have an overt internal nominal head along with the interrogative pronoun and relativizer, they also allow multiple relativizing heads.

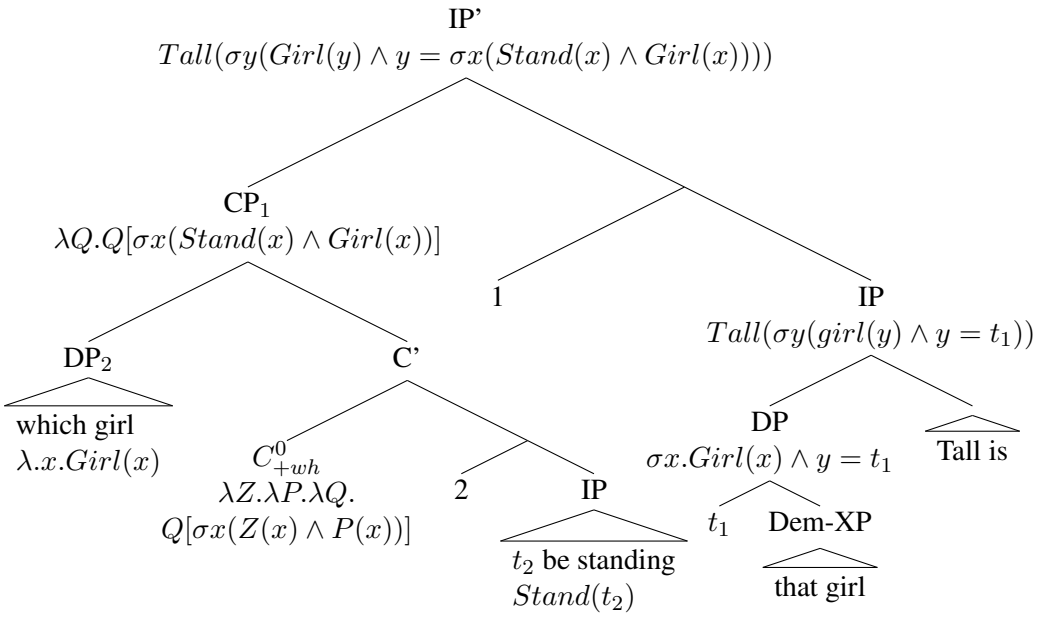
4. The semantics of correlatives. So far we have seen two strategies of relativization in Georgian, both of which seem to allow correlative-like configurations. However, of these, *rom* correlatives seem to be an outlier in the existing typology of correlatives that we see cross-linguistically. In a recent survey of correlative structures across 32 languages from various language families, Belyaev & Haug (2020) note that Georgian *rom* correlatives are the only instance of a correlative that does not involve an interrogative or relative pronoun.

English style restrictive relative clauses are typically analysed as denoting properties with a dependency between an operator and a pronoun or a gap in the relative clause. This structure derives a property from a proposition, and this property intersects with the property denoted by the head noun. However, this cannot be the mechanism through which correlatives compose with their main clause. Unlike in-situ and extraposed relative clauses, which are compatible with indefinite DPs, correlatives have a strict definite interpretation and cannot be interpreted the same way (Dayal 1996). This section presents a semantic analysis of simple and multi-head correlatives which has primarily been examined in Hindi.

4.1. SIMPLE CORRELATIVES. The standard analysis of simple correlatives proposed by Dayal (1996) is similar to the analysis of free relatives by Jacobson (1995). The simple correlative is a generalized quantifier, i.e the set of properties that hold of maximal entity defined by the correlative. This is different from the case of a free relative where the relative clause denotes a maximal individual instead of a quantifier. But crucially both involve a maximalization operation which is encoded in the denotation of the C-head. While Dayal (1996) assumes that the correlative is base

generated as a IP adjunct, we can also derive this structure by following Bhatt (2003) and assuming that the relative clause is first base generated as an adjunct to the demonstration in the main clause and then undergoes movement to Spec TP.

(13) based on Dayal (1996)



The relative pronoun is treated like a wh-expression which denotes a property. The C-head takes the TP inside the correlative, and the wh-expression as arguments and creates a quantificational structure which then takes the main clause as an argument. The trace left behind by the correlative is abstracted over so that the main clause also denotes a property. For Dayal (1996), the difference between a free relative and a correlative is that a free relative denotes a unique maximal individual while a correlative denotes a property of a maximal individual. However, unlike free relatives, correlatives can only denote singular individuals in the absence of any overt plural morphology.

4.2. MULTI-HEAD CORRELATIVES. One of the most striking properties of correlatives is their ability to have multiple internal heads in the relative clause. Structurally, Bhatt (2003) distinguishes them from their simple counterparts by arguing that the multi-head variants are base generated as IP adjuncts, while simple correlatives are base generated as adjuncts to the demonstrative in the main clause which undergo movement to the left periphery. Semantically, multi-head correlatives pose an interesting puzzle because the relative clause seems to have universal quantificational force, referring to multiple entities in the absence of any overt plural morphology on the wh-DPs. The semantics of multiple wh-correlatives have been argued to involve the following points (Dayal 1996; Gajewski 2008; Chierchia 2024).

- **Universal Quantification**: single NP heads in a multiple correlative universally quantify over multiple ordered pairs.
- **Domain Exhaustivity**: There must be a pair in the set for each member of the thematically higher head.

- **Pointwise Uniqueness**: there can be no more than one pair for each member of the higher head.

Consider the case of a multi-head correlative in Hindi in (14) which lacks an exact English counterpart. The construction roughly translates as follows; *Every girl played with exactly one boy, and she defeated the boy that she played against.*

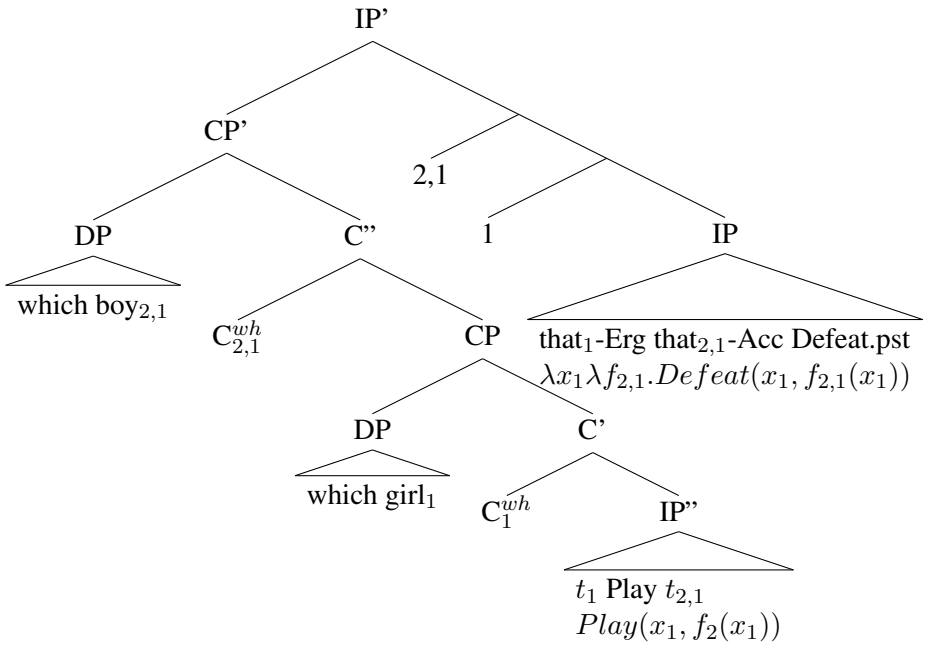
(14) [jis larkii-ne jis larke-ke saath khelaa] us-ne us-ko haraaya.
[which girl-ERG which boy-GEN with play] that-ERG that-ACC defeat.
Which girl played with which boy, she defeated him. (Dayal 1996)

The canonical example of a multi-head correlative in (14) refers to multiple girls, all of whom played with a unique boy, and each girl defeated that boy. By simply stacking the relative pronouns in the correlative, the wh-DP seems to shift from referring to a single unique individual to referring to an entire set. In order to explain this shift, Dayal (1996) builds on her analysis of multiple wh-questions which can have a pair-list as a possible answer. Dayal (1996) treats the relative pronouns as wh-DPs but encodes a functional dependency between them. The object wh-DP leaves a functional trace that encodes this functional dependency between the subject and object wh-DPs. This is what gives rise to the pair-list interpretation in the correlative. The result is a rather complex quantificational structure that is defined for a unique function rather than a unique individual.

The semantics of pair-lists impose two requirements on the answer — domain exhaustivity, and uniqueness. The set defined by the subject wh-DP must be exhaustified over; and each member of that set must be paired with a unique member of the set defined by the object wh-DP. Multiple wh-questions display an asymmetry between the wh-DPs in the subject and object position. While the subject DP is exhaustified over, the object DP is not. This extends to the correlative as well where the function denoted by the correlative is defined over the domain of the subject DP. So the correlative must be defined for every element in the set denoted by the subject, but not in the object. Since this a functional relation, each individual in the subject DP must also be paired with just one individual in the object DP, i.e a one to many pairing is not available. This functional dependency can be encoded in terms of a functional trace left by the object DP, or by defining the object DP as a quantifier over skolem functions. Rather than a complex C-head as in Dayal (1996), more recent approaches propose a split-Comp approach that is more in line with the semantics of multiple wh-questions. (Chierchia 2024; Thalluri 2024).[5]

[5] Chierchia (2024) departs from Bhatt (2003) in arguing for a movement analysis to derive both simple and multiple correlatives. He proposes that the multi-head correlative is base generated as an adjunct to the lower demonstrative corresponding to the object DP. This analysis also proposes that the main clause composes with the correlative via a SAT operation [$SAT(R)(\phi) = \forall x[x \in D(\phi) \rightarrow R(\phi)(x)]$]. Under this approach the correlative denotes a unique function, which fills two argument slots in the main clause. The main clause denotes a relation between a function and and an individual. The domain of the function saturates the individual argument while the function itself saturates the function argument.

(15)



(16) a. $[\![C^{wh}_1]\!] = \lambda Q.\lambda \mathcal{P}.\forall y.[BE(\mathcal{P})(y) \rightarrow Q(y)]$ (Thalluri 2024)

b. $[\![C^{wh}_{2,1}]\!] = \lambda P_f.\lambda \mathcal{P}.\lambda R.\mathcal{P}[\lambda f'[P_f(f') \wedge \forall z \in Dom(f') \rightarrow R(z, f')]]$

c. $[\![CP]\!] = [\![C_1]\!]([\![IP'']\!])([\![DP]\!])$

d. $= \forall y.Girl(y) \rightarrow Play(y, f_2(y))$

e. $[\![CP']\!] = [\![C_2]\!]([\![CP'']\!])([\![DP_2]\!])$

f. $= \lambda R.\exists f''.[f'' = \iota f.[[\forall y.Girl(y) \rightarrow Play(y, f(y))] \wedge \forall z \in Dom(f) \rightarrow R(z, f)]]$

g. $[\![IP']\!] = \lambda R.\exists f''.[f'' = \iota f.[[\forall y.Girl(y) \rightarrow Play(y, f(y))] \wedge \forall z \in Dom(f) \rightarrow R(z, f)]]$
$(\lambda f_j.\lambda x_i.Defeat(x_i, f_j))$

h. $= \exists f''.[f'' = \iota f.[[\forall y.Girl(y) \rightarrow Play(y, f(y))] \wedge \forall z \in Dom(f) \rightarrow Defeat(z, f)]]$

Regardless of whether we assume that the correlative denotes a unique function or a quantifier, a functional dependency between the two wh-elements remains at the core of its semantics which effectively captures the various components of its interpretation. As we have seen in this section, what we know about the semantics of correlatives is largely built on the semantics of wh-questions. This lends itself quite nicely to the description of a correlative laid out by Lipták (2009) in (1) which requires the presence of an interrogative or relative pronoun in the main clause.

Now that we have established the various semantic components in both simple and multi-head correlatives, we can return our attention to the two types of Georgian correlatives from the previous section. Of these, the *romelic* correlatives pattern quite closely with the Hindi relative clauses in terms of their structure and distribution. On the other hand, the *rom* correlatives are distinct due to the absence of an overt relative/interrogative pronoun in the relative clause. What we observe in Hindi is that the stacking of relative pronouns in multi-head correlatives results

in a shift from referring to a property of a unique individual, to that of a unique function defined by the correlative. We can now return to the two types of correlatives in Georgian to examine whether they have the same interpretation.

5. Multi-head correlatives in Georgian. The ability to stack relative pronouns in the relative clause is one of the most striking characteristics of a correlative structure that sets it apart from regular restrictive relative clauses. While Bhatt & Nash (2023) focus on simple *rom* correlatives, they do note an instance of multiple headed correlatives involving *rom*.

(17) k'ac-ma rom k'at'a gada-arin-a im k'ac-s is k'at'a
man-ERG COMP cat.NOM PVB-save-AOR.3.SG, DEM man-DAT DEM cat.NOM
uq'var-s
love-PRES.3.SG
Whichever man saved whichever cat, that man loves that cat (Bhatt & Nash 2023)

However, these are quite distinct from the Hindi multi-head correlative in (14) since they lack relative pronouns, and can optionally lack overt nominal heads in the relative clause. In this case, the left peripheral position of the relative clause and the obligatory presence of demonstratives in the matrix clause corresponding to the nominal heads are taken as diagnostics of a correlative here. However, it is unclear whether they behave semantically like the Hindi multi-head correlative.

5.1. FUNCTIONAL DEPENDENCIES IN MULTI-HEAD CORRELATIVES. Chierchia (2024) proposes an additional semantic feature to the properties of correlatives we know from (1); i.e the ability of multi-head correlatives to license pair-list interpretations. As we have seen in the previous section, the most viable way of deriving the semantics of a multi-head correlative is by assuming a functional dependency between the two wh-DPs in the relative clause. Functional variables can be found in other linguistic phenomena as well, most notably in functional questions, multiple wh-questions, as well as questions with quantifiers (Groenendijk & Stokhof 1984; Chierchia 1993; Xiang 2016). But this crucially relies on the assumption that relative clauses are somehow derived from wh-questions.

In the recent typology of correlatives presented in Belyaev & Haug (2020), languages differ with respect to the morphology of the relativizers we see in correlatives which can either originate from demonstratives or interrogatives. Of these, languuages like Hindi is considered a DEM-based correlative since the relativizing pronouns are derived from demonstratives. Languages such as Serbo-Croatian and Polish have correlative structures where the relativizer is derived from interrogatives which Belyaev & Haug (2020) classify as WH- based. Irrespective of whether the relativizer is derived from an interrogative or a demonstrative, it is sychronically treated as the same entity, and the universal interpretation of the multi-head correlative is a result of a functional dependency between the two relativizing heads. As Bhatt & Nash (2023) note, *rom* correlatives provide an interesting outlier in this typology of correlatives since they involve bare DPs or gaps in the relative clause, but lack a relativizing pronoun.

I argue that this makes them semantically distinct from correlatives involving overt relativizing heads. While this is not apparent in the simple case involving one one internal head, the difference in interpretations becomes apparent in the multi-head correlative. In the absence of

overt relativizing pronouns, we see that *rom* correlatives are unable to license pair-list interpretations, while their *romelic* counterparts can. Consider the two context below. The context in in (18) favours a single pair interpretation. Here we find that that *rom* correlative is acceptable while the *romelic* one is degraded. In contrast, the context in (19) favours a pair list interpretation, and we find that the judgments are reversed.

(18) *Context 1: There is a particular man who is familiar to the speakers who saved a cat. He loves the cat that he saved.*

a. k'ac-ma rom k'at'a gada-arin-a im k'ac-s is k'at'a
man-ERG COMP cat.NOM PVB-save-AOR.3.SG, DEM man-DAT DEM cat.NOM
uq'var-s
love-PRES.3.SG
[Whichever man saved whichever cat], that man loves that cat (Bhatt & Nash 2023)

b. %romel-ma k'ac-ma romeli k'at'a-c gada-arin-a, mas
which-ERG man-ERG which.NOM cat.NOM-REL PVB-save-AOR.3.SG, DEM.DAT
is uq'var-s
DEM.NOM love-PRES.3.SG
Which man saved which cat, he loves it.

(19) *Context 2: There are many men and they all saved a different cat. Each man loves the cat that he saved.*

a. #k'ac-ma rom k'at'a gada-arin-a im k'ac-s is k'at'a
man-ERG COMP cat.NOM PVB-save-AOR.3.SG, DEM man-DAT DEM cat.NOM
uq'var-s
love-PRES.3.SG
[Whichever man saved whichever cat], that man loves that cat (Bhatt & Nash 2023)

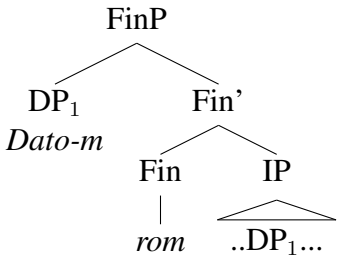
b. romel-ma k'ac-ma romeli k'at'a-c gada-arin-a, mas
which-ERG man-ERG which.NOM cat.NOM-REL PVB-save-AOR.3.SG, DEM.DAT
is uq'var-s
DEM.NOM love-PRES.3.SG
Which man saved which cat, he loves it.

I propose that this semantic difference between the two correlatives is due to the absence of interrogative pronouns in *rom* correlatives. It is the relative or interrogative pronouns that encode a functional dependency in these structures that results in their distinct semantic interpretation. Bare DPs as in the *rom* correlatives cannot license pair-list interpretations.

6. Structural differences between *rom* and *-(a)c* relative clauses. This section described certain structural differences between *rom* and *-a(c)* clauses that motivated the fact that they head two different syntactic projections Foley (2013) argues that the difference between the two types of relative clauses in Georgian is a result of the fact that the complementizer *rom* and the relativizer *-c* head two difference projections. Apart from relative clauses *rom* also occurs as a subordinator and is typically in second position or immediately preverbal. It may occur in the initial

position of a clause if the clause only contains a verb. As we can see below, the external nominal head *cigni* is followed by a relative clause containing the complementizer *rom* in second position. Foley (2013) argues that this is due to the fact that *rom* occupies Fin and has an EPP requirement that is fulfilled by an XP moving to Spec FinP.

(20)

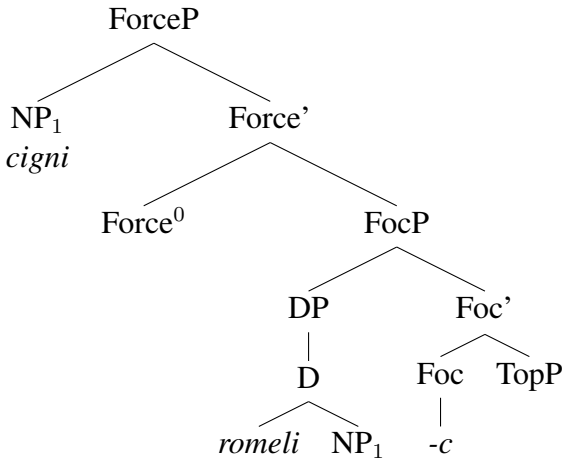


a. *c'igni* [*Dato-m* *rom* *da-c'er-a*]
book.NOM [Dato-ERG COMP PVB-write-AOR.3.SG]

the book which Dato wrote based on Foley (2013)

The second strategy of relativization in Georgian involves interrogative pronouns and the relativizing clitic *c*. The clitic *-c* also acts as a focus marker in other configurations. Due to this, it has been claimed that *-c* heads a FocP projection (Foley 2013). These constructions involve a gap, and an interrogative pronoun marker by the clitic *-c* occuring at the left edge of the relative clause.

(21)



a. *c'igni,* *romeli-c* *Dato-m* *da-c'er-a*
book.NOM, which-REL Dato-ERG PVB-write-AOR.3.SG

The book which Dato wrote. based on Foley (2013)

However, this analysis also predicts that *-c* relative clauses cannot be preposed. As we have seen in here, this is incorrect. *-c* relative clauses can be preposed as long as they as *internally headed*. Both strategies can generate correlative-like configurations, with certain structural and semantic differences. As shown by Bhatt & Nash (2023), *rom* correlatives involve a bare DP or a gap. But they cannot contain interrogative pronouns. On the other hand, internally headed

romelic-c correlatives obligatorily contain an interrogative pronoun, a nominal head, and the relativizing clitic.

While much of the focus has been on simple correlatives with a single internal head, the multi-head correlatives in both strategies require an explanation. Since both configurations can license multiple internal heads, it is unclear how the current syntactic proposals for *romelic* clauses by Foley (2013) can account for them. It is especially worth noting that in a multi-head correlative configuration, the relativizing clitic appears only on the lower wh-DP. It cannot occur on the higher wh-DP, and it cannot be doubled to appear on both internal heads. These structural differences between *rom* and *romelic* clauses also result in very different semantic interpretations of the multi-head counterparts of these two correlative-like structures. These findings suggest that correlatives require overt relativizing pronouns in order to ecode a functional dependecy in multi-head correlatives, and this is not possible with bare-DPs.

7. Conclusion. In this paper we have seen two types of relativization strategies in Georgian; one involving the complementizer *rom*, and the other involving interrogative pronouns and the relativizing clitic *-a(c)*. Of these, the existing literature argued that it is only *rom* type relative clauses that can form correlative configurations. I presented novel data which shows that correlatives are also possible with *romelic* relative clauses. I also showed how these *romelic* correlatives behave the same way as the canonical Hindi correlatives, with one difference. While Hindi correlatives involve relative pronouns, Georgian *romelic* correlatives involve interrogative pronouns. This is well in line with what we see in correlatives cross-linguistically.

Then, §4, I provided an overview of the semantics of simple and multi-head correlatives. I showed that *rom* and *romelic* multi-head correlatives have different interpretations and provided a test that illustrates this difference. I attributed this difference to the absence of a relative pronouns in *rom* which encode a functional dependency in multi-head correlatives, resulting in their pair-list interpretation. These findings call for a closer investigation into the structural and semantic differences between *rom* and *romelic* correlatives in Georgian. Since *rom* correlatives are structurally quite distinct from correlatives in other languages, and as we have seen, they do not have the same semantic features of correlatives, I follow Belyaev & Haug (2020) in arguing that these structures are not in fact correlatives, not just due to the absence of overt relativizers in the correlative, but also due to the semantic differences between multi-head *rom* correlatives and correlatives with overt relativizers. Moreover, I have shown that Georgian does in fact have 'true' correlatives that are derived from a different relativization strategy.

This calls for further investigation into the difference between the *rom* and *-a(c)* relative clauses, not just as correlatives, but in other relative clause configurations as well.

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