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Embedded Questions and Sluicing in Georgian and Svan[1]

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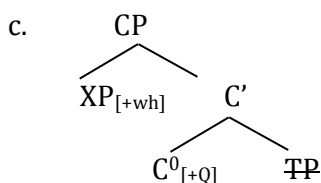
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1.   Introduction

Although the subject of extensive research in theoretical syntax for decades, ellipsis is still little studied in the languages of the Caucasus. As for many other varieties of ellipsis, the discovery of SLUICING, that is, of ellipsis in embedded wh-questions, illustrated in 1a-b, as well as the coining of the term itself, is due to Ross (1969/2012). The "classical" sluicing has been defined and studied for languages that exhibit wh-fronting, primarily single wh-fronting. It is on the basis of data from such languages that standard tests for sluicing have been formulated. The now widely accepted analysis in the minimalist framework, introduced and argued at book length by Merchant (2001), is to posit that the wh-phrase is moved into Spec CP, while the complement of the CP is deleted, 1c. The deletion is triggered by a feature hosted by the interrogative C head.

(1)   a.   Abby was reading something, but I don't know **what**.
      b.   Jack called, but I don't know **when/how/why/where from**. Merchant (2008)

c.

```
            CP
           /  \
      XP[+wh]  C'
              /  \
          C⁰[+Q]  T̶P̶
```

Although the cross-linguistic breadth of sluicing studies has greatly increased in the course of the years that passed since the appearance of Merchant (2001), see Merchant & Simpson (2012) and more references in Erschler (2014), it is still worth the while to undertake such a study for yet a new language, especially when the latter exhibits a pattern of wh-question formation different from the canonical wh-fronting.

The presence of sluicing-like phenomena in languages with a different structure of wh-questions than the one observed in West Germanic can be puzzlement for movement *cum* deletion approaches: the analysis depicted in 1c cannot apply to them *verbatim*. However, constructions that at least superficially resemble sluicing are relatively common in languages that lack wh-movement into a sentence-initial position, as noticed already in Merchant (2001: 84-85).
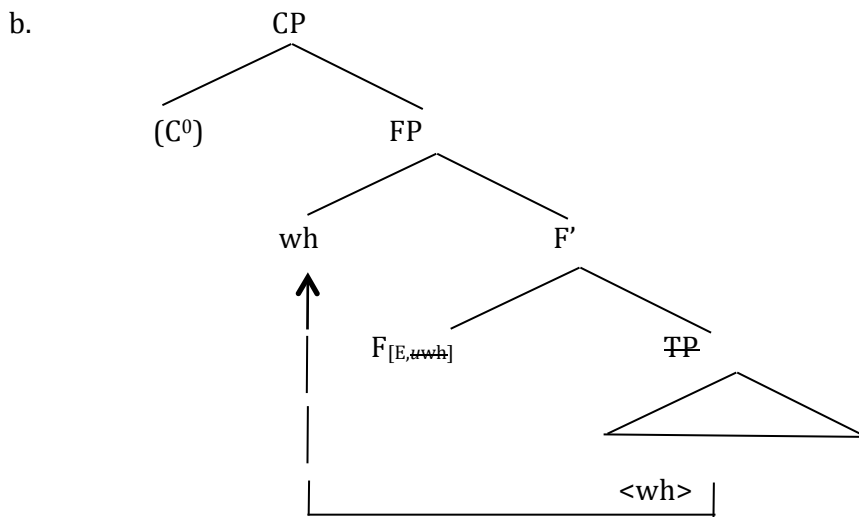
In the cases when wh-phrases still move, although not as high as into SpecCP, it can be reasonable to posit that the language under consideration possesses a high FocP (which is still below the CP), and that the sluicing deletes the complement of this FocP[2]. This, for instance, is implemented in Toosarvandani (2008) for Persian. This language is often assumed to exhibit wh in situ, see arguments for this assumption, as well as further references, in Karimi & Taleghani (2007), or, alternatively, adjunction of wh-words to vP at the very highest, as proposed by Kahnemuyipour (2001). However, wh-phrases in Persian are able to undergo focusing, which motivates Toosarvandani's (2008) analysis[3], 2b.

(2) a.   kesi   man-o   hol dad
          someone   I-ACC[4]   push s/he.gave

          væli ne   midunam (**ke**) **ki**
          but NEG I.know   COMP   who
          'Someone pushed me, but I don't know who.' (Dara Fourouzan, p.c.)

---

[2] An anonymous reviewer wonders why this projection needs to be the FocP. The point is well taken, and, indeed, it could be a different projection below the CP, although I am not familiar with analyses that would implement this idea for any language. At any rate, as we will see later, the FocP is indeed the most plausible choice in the case of Georgian.

[3] More precisely, Toosarvandani (2008) does not have the C layer in his tree, but given that his own data show that the complementizer *ki* can be present above the wh-phrases in embedded questions and sluices, I have taken the liberty of adding the CP to his tree.

[4] Glosses: ACC accusative; COMP complementizer; DAT dative; EMB embedded question marker; ERG ergative; GEN genitive; INS instrumental; LOC locative; MOD modal; NEG negation; NOM nominative; PL plural; PRS present; PST past; Q interrogative; Q.COMP interrogative complementizer; REL relativizer; SG singular.

b.

```
                        CP
              ┌──────────┴──────────┐
           (C⁰)                     FP
                          ┌──────────┴──────────┐
                         wh                     F'
                          ↑            ┌─────────┴─────────┐
                          ┊        F_{[E,uwh]}            TP
                          ┊                          ┌────┴──────┐
                          ┊                          │           │
                          └──────────────────────── <wh>
```

Any analysis of sluicing that proposes that wh-phrases are hosted by a projection below the CP will predict that sluices will allow overt complementizers, should these be possible in embedded questions, a generalization borne out by the Persian data in 2b. Alternatively, sluicing-like constructions can arise via a mechanism other than ellipsis in embedded wh-questions. The matter is subject to cross-linguistic variation, see a systematic overview in Vicente (2014). Specifically, sluicing-like constructions can be either manifestations of a different type of ellipsis, for instance, stripping, as it is sometimes proposed for Japanese, see Fukaya and Hoji (1999) and Nakamura (2012). Yet another potential source for a sluicing-like construction could be embedded copular clauses with omitted copula, see, among others, Adams and Tomioka (2012) for Mandarin.

This paper will deal with sluicing in two South Caucasian languages without canonical wh-fronting, namely, Georgian and Svan. Sluicing in either of these languages has not been addressed in the literature so far. In Georgian, wh-phrases are placed into immediately preverbal position, which I identify with Spec FocP, 3a. In embedded questions, the interrogative complementizer *tu* can optionally precede wh-phrases, 3b. This complementizer can also be retained in sluices, 3c.

(3) a.   <p'ur-i>   vin   <*p'ur-i> iq'ida?
           bread-NOM   who(ERG)   s/he.bought
           'Who bought bread?'

     b.   rezo mixvda   (**tu**)   rat'om   c'avida   manana
           Rezo s/he.realizedd   Q.COMP   why   s/he.left   Manana
           'Rezo realized why Manana left.'

c. manana-m   gušin   raɣac(a)   iq'ida,
   Manana-ERG   yesterday something.NOM s/he.bought

   magram ar   vici   **(tu)**   ra
   but   NEG I.know Q.COMP   what.NOM
   'Manana bought something yesterday, but I don't know what'

To account for these facts, I am going to develop an analysis similar to the one that Toosarvandani (2008) proposed for Persian, namely, to argue that sluices are derived by moving wh-phrases into specifiers of the FocP and subsequently deleting its complement.

The Svan facts diverge from the Georgian ones in two aspects: first, negative indefinites may intervene between the wh-phrases and the verb in a Svan wh-question, 4a, which indicates that the clause architecture in Svan is somewhat different from Georgian. Second, while the wide-purpose complementizer *er(e)* is possible in non-reduced embedded questions, 4b, it cannot be retained in a sluice, 4c.

(4)   Upper Bal Svan
   a.   jær-d   **dær-s**   **mamgweš**   laxwem?
       who-ERG nobody-DAT nothing   gives
       'Who didn't give anything to anyone?'

   b.   gela-s   čo=xoxa,   [**ere** šoma=do   ænqdeni nino]
       Gela-DAT PRV=knows   COMP when=EMB   arrives   Nino
       'Gela knows when Nino arives.'

   c.   manana-d   la:t   mo:le   anq'id
       Manana-ERG   yesterday something bought

       mare mam mixa   (***ere**)   mæj=do
       but NEG I.know   COMP   what=EMB
       'Manana bought something yesterday, but I don't know what.'

These facts indicate that a different analysis is required for the sluicing-like construction in Svan. For the time being, I only provide a descriptive account of sluicing in this language, leaving an analysis for future research.

     The paper is organized as follows: section 2 provides some necessary background on South Caucasian grammar; section 3 introduces basic facts about sluicing; in section 4, various tests for sluicing are discussed and applied to Georgian sluicing-like constructions. In Section 5, I examine adposition drop under sluicing and show, that, although Georgian data at first glance contradict Merchant's (2001) generalization about the correlation between adposition stranding and adposition drop in sluices, there are separate factors in Georgian that confound the picture. In Section 6, I show that Georgian sluicing site can be embedded. In Section 7, I investigate compatibility of sluices with complementizers and patterns of complementizer placement in sluices. In

Section 8, I argue against analyzing Georgian sluicing as a reduced copular construction. In Section 9, I show that sluicing and stripping are separate phenomena in Georgian. In Section 10 I lay out my proposal for Georgian. In Section 11, I briefly present the parallel Svan data and discuss how they differ from their Georgian counterparts. Section 12 concludes.

2. Background on South Caucasian

Georgian and Svan belong to the small South Caucasian (also called Kartvelian) language family, Boeder (2005). They are mostly spoken in Georgia. Georgian has about 3 million speakers, whereas Svan is spoken by several tens of thousands and is endangered. In this paper, I use data from modern colloquial Georgian as spoken in Tbilisi, the capital of the country, and from the two Svan dialects of Upper Svaneti, Upper and Lower Bal. South Caucasian languages are notorious for their complex verb morphology, which is difficult to gloss. Given that the verb morphology does not seem to be relevant for my present purposes, I only provide simplified translations of the verbs in the example sentences.

2.1 Basics of Georgian Clause Structure

Georgian has fairly free word order in simple clauses, see, e.g. Harris (1981), Apridonidze (1986), Testelets (1998), and Skopeteas et al. (2009). GB/Minimalist analyses of the simple sentence structure were proposed in Nash-Haran (1992), Nash (1995), and McGinnis (1995, 1997), but admittedly the evidence for structural priority between arguments is fairly elusive, as shown by Amiridze (2006), Wier (2011), and Wier (2014), and constituency tests are not particularly clear. However, for the purposes of this paper the finer internal structure of the extended VP is largely irrelevant, nor, as far as I am able to tell, do the matters discussed here impinge in any way upon the controversy over the structure of the lower domain of the Georgian clause. The language shows pro-drop and is famous for its complex splits in case-marking of main arguments, see, e.g., Harris (1981) for a thorough description. It is not clear whether Georgian has a DP: I am not aware of any evidence for the existence of covert D in Georgian, whereas overt articles are definitely not attested, see Bošković (2009) for arguments against positing the existence of a DP under such circumstances.

2.2 Wh-questions in Georgian

In Georgian simple clauses, wh-movement proceeds (descriptively) into the preverbal position, Harris (1981), which structurally corresponds to Spec FocP, Nash (1995). Only negation markers may (and actually must) intervene between the wh-phrase[5] and the verb: the sentence in 5b is ungrammatical, where the direct object *p'uri* 'bread' intervenes, while the sentence with a negative marker in 5c is grammatical.

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[5] Unless the wh-phrase is *rat'om* 'why', Harris (1984).

(5) a.   p'ur-i   vin   iq'ida?
              bread-NOM who(ERG) s/he.bought
              'Who has bought bread?'

      b.   *vin   p'ur-i   iq'ida?
              who(ERG)   bread-NOM s/he.bought

      c.   p'ur-i   vin   ar   iq'ida?
              bread-NOM who(ERG) NEG s/he.bought
              'Who hasn't bought bread?'

Multiple wh-movement is obligatory (see a discussion in Section 10 of the nature of this movement).

      If wh-phrases are D-linked, it is marginally possible to put one of them in the postverbal focus position, see Skopeteas & Fanselow (2009) about the latter.

(6) ??romel-ma   bič'-ma   garecxa   romel-i   mankana?
      which-ERG   boy-ERG   washed   which-NOM car.NOM
      'Which boy washed which car?'

Superiority constraints, that is, restrictions on the order of wh-phrases in a clause, do not seem to be operative[6] for many speakers of Georgian (*pace* Amiridze (2006: 64) and Harris (1981: 15), example 13e), 7. Pairs of sentences in 7a-b and 7c-d additionally show that the ordering of wh-phrases is not affected by animacy, unlike the situation that obtains in Ossetic, Erschler (2012).

(7) a.   ra   vis   ayizianebs?
              what.NOM who.DAT   annoys
              'What annoys who?'

      b.   vis   ra   ayizianebs?
              who.DAT   what.NOM annoys
              Idem

      c.   vin   ra   iq'ida?
              who(ERG)   what.NOM bought
              'Who bought what?'

      d.   ra   vin   iq'ida?
              what.NOM who(ERG) bought
              Idem

---

[6] It well might be that a large-scale rating experiment, similar to one carried out for German by Featherston (2005) will discover asymmetries between different orders of wh-phrases in questions, but this needs to be left for future research.

Cross-linguistically, it is sometimes the case that sharper judgments for superiority can be obtained when wh-phrases are extracted from a dependent clause, see e.g. Grewendorf (2005: 38) for German[7]. However, as we will see in the next subsection, such data are not replicable in Georgian for a principled reason: extraction from dependent clauses is not possible in this language.

2.3 Embedded finite clauses

A wide variety of matrix verbs in Georgian allow or require a finite complement clause, Vamling (1989: 60). The default complementizer *rom*, 8a, which is used in complements, relative clauses, and some adverbial clauses (see more examples and discussion in Hewitt 1987), is ungrammatical in embedded questions, where the complementizer *tu* must be used instead, 8b.

(8) a.   rezo icis   rom manana   c'avida
           Rezo knows   COMP Manana   left
           'Rezo knows that Manana left.'

     b.   rezo mixvda   (tu/*rom) rat'om   c'avida   manana
           Rezo s/he.realized   COMP   why   s/he.left   Manana
           'Rezo realized why Manana left.'

The default position of a complement clause is sentence-final; the complementizer is then preferably clause-initial, 9. The behavior of the complementizer *rom* in the capacity of relativizer is subject to much more complex restrictions, Foley (2013).

(9) manana   pikrobs   [**rom** rezo (*?**rom**)   saxl-s   (?**rom**)   ašenebs]
     Manana.NOM   thinks   COMP Rezo.NOM   house-DAT   builds
     'Manana thinks that Rezo builds a house.'

However, when the dependent clause is preposed, the indicative complementizer may not occupy the clause-initial position.

(10) [(*rom)   rezo   (?rom)   saxl-s   ([ok]rom)   ašenebs]
     COMP   Rezo.NOM   house-DAT   builds

     mxolod   manana   pikrobs
     only   Manana.NOM   thinks
     'That Rezo builds a house, only Manana thinks.'

Movement out of finite dependent clauses, except when the main clause is headed by certain modal verbs, is impossible in Georgian, Harris (1981).

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[7] I am obliged to Kyle Johnson for pointing out this publication to me.

(11) a. 　gela-m 　　　tkva 　　　　[rom manana 　　　　　　　c'avida 　　　kalak=ši]
　　　　　Gela-ERG 　　s/he.said 　COMP Manana.NOM 　　　　s/he.left 　city=LOC
　　　　　'Gela said that Manana left for the city.'

　　　b. 　*gela-m 　　sad 　　　　tkva 　　　　[rom manana 　　　　　　t_sad 　c'avida]?[8]
　　　　　Gela-ERG 　where 　　　s/he.said 　COMP Manana.NOM 　　　t_where s/he.left
　　　　　'Where did Gela say that Manana left for?'

The matrix clause interpretation of a wh-phrase that is situated in a dependent clause is not possible either.

(12) *manana-s 　　　sdžera/ 　　manana 　　　　　pikrobs 　[rezo
　　　manana-DAT 　　believe 　　s/Manana.NOM 　thinks 　　Rezo.NOM

　　　rodis 　　　čamova]?
　　　when 　　　s/he.will.arrive
　　　Intended reading: 'When does Manana believe/think that Rezo t_when will arrive?'

In embedded wh-questions, it is possible, although optional, to use the interrogative complementizer[9] *tu.* It must precede the wh-phrase, no matter where the wh-phrase is in the clause[10].

(13) a. 　rezo 　　　　mixvda 　　　　　**<tu>** 　　rat'om 　　**<*tu>** 　　c'avida
　　　　　Rezo.NOM 　s/he.realized 　Q.COMP 　　why 　　　Q.COMP 　　s/he.left

　　　　　manana
　　　　　Manana.NOM
　　　　　'Rezo realized why Manana left.'

　　　b. 　**tu** 　　　　rat'om 　　ar 　c'avida 　　manana 　　　　　rezo
　　　　　Q.COMP 　　why 　　　NEG 　s/he.left 　Manana.NOM 　　Rezo.NOM

　　　　　mixvda
　　　　　s/he.realized
　　　　　'Rezo realized why Manana did not leave.'

However, in embedded Y/N questions *tu* cannot be clause-initial.

---

[8] This sentence is grammatical on an (uninteresting) interpretation with the wh-phrase originating in the matrix clause: 'For which location x, did Gela say at x [that Manana left]?'

[9] Tschenkéli (1958: 199) reports that *tu* contributes to the meaning of the sentence: "Im indirekten Fragesatz wird vor das Fragewort oft ein თუ gesetzt, welches dazu dient, die Frage hervorzuheben oder zu verstärken. Im solchen Fällen lässt sich თუ etwa wiedergeben durch "eigentlich"." I have not been able to assess this claim, but, at any rate, this does not seem to be important for the purposes of this paper, nor does this contradict my interpretation of *tu* as a complementizer.

[10] An anonymous reviewer inquires whether *tu* is a proclitic. This is plausible: I am not aware of situations where *tu* would be clause-final. However, this does not seem to be related to our analysis.

(14) a. davit-s   unda   icodes   <*tu> axla <tu> tbila?
         david-DAT wants   s/he.would.know   Q   now   Q   is.warm
         'David wants to know whether it's warm now.'

     b. ar   vici   <*tu>   ciq'vebi   tu   k'argad   daprinaven
         NEG   I.know   Q   squirrels Q   well   they.would.fly
         'I don't know whether squirrels fly well.'

Although the interrogative complementizer *tu* is most commonly placed in the second position of the embedded clause, it can occur further to the right, up to the immediately preverbal position – behavior analogous to that of floating complementizers in Ossetic, Erschler (2012). So far, I have not been able to discover any differences in the meaning that would depend on the specific placement of *tu*.

(15) a. davit-s   unda   icodes   bost'on-ši axla tu   tbila
         david-DAT wants   s/he.would.know   Boston-in now Q   warm
         'David wants to know whether it's warm in Boston now.'

     b. ar   vici   giorgi-m   bavšv-s   tu   ač'ama
         NEG   I.know   Giorgi-ERG child-DAT Q   s/he.fed
         'I don't know whether Giorgi fed the child.'

The same holds for preposed embedded questions. I do not consider non-finite dependent clauses in this paper.

3. The sluicing-like construction

Georgian exhibits a construction that is at least superficially similar to sluicing. Any wh-phrase, no matter whether it is an argument or an adjunct, may appear in this construction.

(16) a. Argument
         manana-m   gušin   raɣac(a)   iq'ida
         Manana-ERG   yesterday something.NOM s/he.bought

         magram   ar   vici   ra
         but   NEG I.know   what.NOM
         'Manana bought something yesterday, but I don't know what'

     b. Adjunct
         šen sadɣac(a)   dat'ove   gasaɣeb-i magram
         you somewhere   you.left   key-NOM   but

         (me) ar   daminaxavs   sad
         I   NEG I.have.seen   where
         'You left the key somewhere, but I haven't seen where.'

In complete agreement with the fact that Georgian has obligatory multiple wh-movement, multiple wh-remnants in sluices are possible as well.

(17) a. kuča=ši   viɣac(a)   viɣaca-s   eloda
         street=LOC someone.NOM   someone-DAT   s/he.waited

         magram   ar   maxsovs   vin   vis
         but   NEG   I.remember   who.NOM   who.DAT
         'Somebody was waiting for somebody in the street, but I don't remember
         who waited for who.'

    b. gušin   viɣac(a)   viɣaca-s=tan   cekvavda
        yesterday   someone   someone-DAT=with   s/he.danced

        magram   ar   maxsovs   vin   vis=tan
        but   NEG   I.remember   who.NOM   who.DAT=with
        'Yesterday somebody danced with somebody, but I don't remember
        who with who.'

As in matrix questions, superiority constraints are inoperative in sluices; compare 18 and 7.

(18)   viɣacas   raɣaca   aɣizianebs   magram   ar   vici
         someone.DAT   something.NOM   annoys   but   NEG   I.know

    a. ra   vis
        what   who.ACC

    b. vis   ra
        who.ACC   what
        'Something annoys somebody, but I don't know what (annoys) who.'

The regular negative marker, *ar*, cannot be retained in a sluice, which can be explained either by the fact that NegP is deleted under sluicing or by *ar* being a proclitic[11] (because of which it would not be able to be sentence-final). Some speakers, however, allow to retain *ara* 'no' after the wh-phrase, (19). It is not clear whether *ara* is a just a phonologically strong negation marker or a verb proform. In the latter case, the sentence in (19) is not an instance of sluicing at all.

(19) titkmis   q'vela   bavšma   šeč'ama   tavisi   sauzme
     almost   every   child.ERG   s/he.ate   self's   breakfast.NOM

     magram   ar   vici   vin/romelma   ara/*ar
     but   NEG   I.know   who.ERG/which.ERG   NEG
     'Almost every child ate their breakfast, but I don't know who didn't.'

---

[11] I thank an anonymous reviewer and Yakov Testelets for bringing up this issue.

However, some syntactic material may precede wh-phrases in sluices, cf. similar Hungarian data in van Craenebroek (2012: 42). I will call such constructions "extended sluices". Their existences matches the observation made above in Section 2.2 that wh-phrases do not need to be sentence-initial in a matrix wh-question, compare 20 with 5a and 5c.

(20) a.
guram-i	gušin	rezo-m	cema
Guram-NOM	yesterday	Rezo-ERG	s/he.beat.up

ar	vici	dɣes	vin
NEG	I.know	today	who(ERG)

'Yesterday, Rezo beat up Guram. I don't know who (beat him up) today.'

b.
guram-i	rezo-m	cema
Guram-NOM	Rezo-ERG	s/he.beat.up

ar	vici	zurabi	vin
NEG	I.know	Zurab	who(ERG)

'Rezo beat up Guram. I don't know who (beat up) Zurab.'

In both sentences in 20, the pre-wh material is arguably the contrastive topic. Finally, anaphors may appear there, see Amiridze (2006) for data showing that *tav*-anaphors indeed need to be bound in the minimal finite clause. The reflexives in 21a-b are coreferent with the subjects in the matrix clauses, but cannot be bound by them, therefore, there must be covert material in the dependent clauses that binds the anaphors.

(21) a.
šaršan	bakar-ma$_i$	manana-s	xma	misca.
last.year	Bakar-ERG	Manana-DAT	voice	s/he.gave

magram	ar	vici	**tavis tav-s**$_i$	rodis
but	NEG	I.know	self's self-DAT	when

Last year Bakar voted for Manana, but I don't know when (he voted) for himself.

b.
gušin	bakar-ma$_i$	manana-s	p'ort'ret'-i daxat'a
yesterday	Bakar-ERG	Manana-GEN	portrait -NOM s/he.painted

magram	ar	vici	**tavisi**	**tavi**$_i$	rodis
but	NEG	I.know	self's	self-NOM	when

'Yesterday Bakar painted a portrait of Manana, but I don't know when (he painted) himself.'

Given that Georgian reflexives need to be bound in the ambient finite clause, Amiridze (2006), these data provide evidence for the existence of deleted structure in extended sluices.

4. Tests for sluicing

4.1 Case connectivity

One very strong argument for a movement *cum* deletion analysis of sluicing is the cross-linguistically wide-spread requirement for the wh-phrase in a sluice to match its antecedent in case. This requirement is fully operative in Georgian. For instance, in 22a, the wh-remnant *ra* 'what' may only stand in the dative, like its antecedent *raɣaca* 'something', whereas in 22b the same holds for the instrumental.

(22) a. manana   xval   raɣaca-s   iq'idis,
         Manana   tomorrow   something-**DAT**   s/he.will.buy

         magram   ar   v-ici   ra-s/*ra
         but   NEG   1SG.S-know   what-**DAT**/what.NOM
         'Manana will buy something tomorrow, but I don't know what.'

     b. čveni   dzaɣl-i   raɣac-it   moic'amla,
         our   dog-NOM   something-**INS**   got.poisoned

         magram   ver   gaviget   r-iti/*ra
         but   MOD.NEG   we. understood   what-**INS**/what-NOM
         'Our dog got poisoned with something, but we couldn't understand what with.'

4.2 Availability of sprouting

As in "classical" sluicing languages, such as English or Dutch, Georgian exhibits sprouting, that is, the sluice does not need an overt antecedent.

(23) a. Argument Sprouting
     rezo   č'ams,   magram   ar   vici   ra-s
     Rezo.NOM   eats   but   NEG   I.know   what-DAT
     'Rezo eats but I don't know what.'

     b. Adjunct Sprouting
     rezo   movida,   magram   ar   vici   vis=tan   ertad
     Rezo.NOM   s/he.arrived   but   NEG   I.know who.DAT=with   together
     'Rezo arrived, but I don't know with whom.'

4.3 Island repair

Furthermore, Georgian sluicing repairs strong island violations[12]. As we have seen already, Georgian does not allow any movement out of finite clauses. However,

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[12] Strictly speaking, the mechanism by which this occurs is still unknown. There exist proposals that argue for a non-isomorphic underlying structure for sluices whose antecedent is contained in an island, see e.g. Barros, Elliott & Thoms (2014) and Marušič & Žaucer (2013). However, given that

respective sluices are fully grammatical. Below, I illustrate alleviation of several of the classically known strong island constraints.

Complex NP Constraint

(24) a. mat   undoda-t   rom vinme   daekiravebinat
          they.ERG   they.wanted   COMP someone   they.will.rent

          vin=c   icis   ertert-i   evrop'ul-i   ena,
          who=REL   knows   some-NOM   European-NOM   language.NOM

          magram   ar   vici   romel-i   ena(*=a).
          but   NEG   I.know   which-NOM language.NOM=be.PRS.3SG
          'They wanted to hire someone who knows one of European languages.
          But I don't know which language (*it is).'

      b. uča cxovrobs saxl=ši,   sad=ac   viɣaca-m
          Ucha lives   house=LOC where=REL someone-ERG

          viɣac(a)   mok'la,   magram   ar   maxsovs
          someone-NOM   s/he.killed but   NEG   I.remember

          vin   vin
          who(ERG)   who(NOM)
          'Ucha lives in a house where somebody killed somebody, but I don't
          remember who (killed) who.'

      c. zurab-i   modis   cxen-it   romeli=c viɣac(a)
          Zurab-NOM   comes   horse-INS which=REL someone
          sxva-s   ek'utvnis, magram   ar   vici   vis
          other-DAT   belongs   but   NEG   1SG.S-know   who.DAT
          'Zurab is riding a horse that belongs to somebody else. But I don't know to
          who.'

Coordinate Structure Constraint

(25) a. tornik'e-m   iq'ida   gazet'-i   da c'ign-i
          Tornike-ERG   s/he.bought   newspaper-NOM   and book-NOM

          magram   ar   vici   romel-i   c'ign-i
          but   NEG   I.know   which-NOM   book-NOM
          'Tornike bought a newspaper and a book, but I don't know which book.'

---

island repair by sluicing is subject to cross-linguistic variation, see a.o. Nakamura (2012), I believe that it can be still used as a test for sluicing. Whatever mechanism is eventually found responsible for alleviation of island violations, this mechanism, or its slight modifications, will be operative in all languages that show standard sluicing.

Adjunct Constraint

(26)   tornik'e   c'avida   q'vavil-eb-is   saq'idlad
         Tornike.NOM   s/he.left   flower-PL-GEN   for.buying

         imit'om   rom viɣac(a)   gogo   mosc'ons,
         because   COMP someone.NOM   girl.NOM   likes

         magram   ar   utkvams   romel-i   gogo(=a)
         but   NEG   s/he.said which-NOM   girl.NOM(=be.PRS.3SG)
         'Tornike went to buy flowers, because he likes some girl.
         But he did not say which girl (it is).'

4.4 Backward sluicing

Sluicing, both "classical" and extended, can go backwards, that is, the sluicing site may
linearly precede its antecedent.

(27) a.   ar   vici   ra,   magram   manana-m
           NEG   I.know   what.NOM   but   Manana-ERG

           gušin   raɣac(a)   iq'ida
           yesterday something   s/he.bought
           'I don't know what, but Manana bought something yesterday.'

     b.   zurab-i   vin ar   vici,   magram   guram-i
           Zurab-NOM who NEG I.know   but   Guram-NOM

           rezo-m   cema
           rezo-ERG   s/he.beat.up
           Who (beat up) Zurab, I don't know, but Rezo beat up Guram.

To summarize, the sluicing-like construction in Georgian satisfies all the standard tests
that the *bona fide* sluicing has been found to satisfy.

5. Adposition drop in sluicing

    Famously, the movement *cum* deletion theory of sluicing makes the following
prediction, Merchant (2001: 91): if the language does not allow adposition stranding in
wh-questions, it will not allow adposition drop under sluicing either. This
generalization is not free from exceptions, see, e.g. Sag & Nykiel (2011) and Leung
(2014), and some effort has been spent to provide alternative derivations to sluicing-
looking sentences that ostensibly violate it, see, a.o., Stjepanovic (2012) and Rodrigues
et al (2009).
    Provided that the Georgian sluicing-like construction is indeed derived by
movement and deletion, Georgian is yet another example of a language that does not
allow adposition stranding, but does show adposition drop under sluicing. However, as

we will see below, Georgian does not necessarily provide a counterexample to Merchant's generalization.

Modern Georgian has only postpositions, Hewitt (1995). In regular wh-questions, adposition stranding is ungrammatical:

(28) a. vis=tan   ertad   midixar?
         who.DAT=with   together   you.go
         'Who are you(sg.) going with?'

    b.   *vis=tan   midixar   ertad?
         who.DAT=with   you.go   together
         Idem

Under sluicing, the picture is more complex. For monosyllabic postpositions which assign the dative to their complement and which are probably undergoing reanalysis into case markers in Modern Georgian, adposition drop is impossible.

(29) manana   viɣaca=ze   sasacilo   ist'oria-s   mohq'va
     Manana   someone=on   funny   story-DAT   s/he.told

     magram   (*is)   damavic'q'da   vis*(ze)
     but   that.NOM   I.forgot   who.DAT=on
     'Manana told a funny story about somebody, but I don't remember about who.'

However, adposition drop becomes at least marginally possible when phonologically heavy adpositions are taken into account. Sentences with dropped adpositions are still judged very informal, and not all the consultants acknowledge that they are grammatical.

(30) a. k'at'a   imaleboda raɣac-is   kveš
         cat   s/he.hid   something-GEN   under

         magram   ar   šemimčnevia   r-is   ?(kveš)
         but   NEG   I.am.sure   what-GEN   under
         'The cat hid under something, but I'm not sure what.'

    b.   guram-ma raɣac-is   šesaxeb   ilap'arak'a
         Guram-ERG something-GEN   about   s/he.spoke

         magram   ar   maxsovs   r-is   ?(šesaxeb)
         but   NEG   I.remember   what-GEN   about
         'Guram spoke about something, but I don't remember what.'

    c.   rezo viɣaca-s=tan   ertad   movida,
        Rezo someone-DAT=with   together s/he.arrived

        magram   ar   vici   vis=tan   (ertad)
        but   NEG I.know   who.DAT with
        'Rezo arrived with somebody, but I am not sure who.'

Nevertheless, this circumstance might not be detrimental to Merchant's generalization, because postposition ellipsis is possible[13] in other environments as well.

(31) a.   coordinated structures
         k'at'a   imaleboda   login-is   kveš   da   dzaɣli   magid-is
         cat   s/he.was.hiding bed-GEN   under   and dog   table-GEN
         'The cat was hiding under the bed and the dog (was hiding under) the table.'

    b.   fragment answers
         A: k'at'a   imaleboda   login-is   kveš
              cat   s/he.was.hiding bed-GEN   under
              'The cat was hiding under the bed'

         B: ara   magid-is
              no   table-GEN
              'No, (under the) table!'

Additionally, at least some such postpositions may occur without would-be complements, i.e. they show adverb-like behavior.

(32)   ertad   arian
        together   they.are
        'They are together.'

    It should be noted that sentences like 31a are problematic for the idea that a Georgian postposition, say, *kveš* 'under' heads a phrase whose complement is the respective NP (or DP), and the standard feature-driven approach to ellipsis, introduced in Lobeck (1995) and adopted in Merchant's (2001) theory of sluicing: under their theoretical assumptions, it would be impossible to elide the head without eliding its complement. One possible solution is to assume that a postposition, like a possessor, occupies Spec NP, and, also like a possessor, is linearized to the left of its head. A systematic investigation of this issue is beyond the scope of this paper.

---

[13] One of my consultants rejects postposition drop in any environment, including sluicing.

6. Embedded sluicing

One remarkable property of sluicing in English and other well-studied languages is that the sluicing site can find an antecedent no matter how deep the sluicing site is embedded.

(33) Mary cooked something and Jim suspects [that Sue realizes [that Jill knows what]]

This is one of the properties that distinguish sluicing from stripping in English[14]. Stripping is unable to find an antecedent when embedded.

(34) *Mary cooked something and Sue realizes [that Jill too]]

Returning to Georgian, we see that sluicing is possible in embedded contexts. However, the complementizer is highly dispreferred in the ambient clause.

(35) a. [Antecedent clause] and/but [Ambient clause [(?*COMP) [Main clause [Sluice]]]

        b.   rezo-m   šeč'ama   raɣac(a)   da   večvob,
             Rezo-ERG   s/he.ate   something and I.suspect

             ?(rom)   rusudan-ma   icis   ra
             COMP   Rusudan-ERG   knows   what.NOM
             'Rezo ate something and I suspect that Rusudan knows what.'

This could in principle mean that what looks like an embedded clause in 35 is in actuality a quotation. However, as 36b shows, a sluice can be embedded in a relative clause — a fact that indicates that the odd behavior of complementizer in 35 might be an independent phenomenon.

(36) a.   me   zust'ad   rva   saat=ze   c'aval
             I   exactly   8   hour=on   I.will.leave

             vera-vin   (ver)   unda   mixvdes   (tu)   sad
             NEG.MOD-who   NEG.MOD should   s/he.would.realize   Q   where
             'I will depart exactly at eight. No one would realize where.'

        b.   ɣam-it   bneldeba.   axla me čamovedi
             night-INS   it.gets.dark   now I   I.arrived

             iset kveq'ana=ši   [sad=ac   q'vela=m [ici-s (tu) rat'om]]
             such country=LOC   where=REL   everyone=ERG knows   Q   why
             'It gets dark at night. Now I have arrived in a country where everyone knows why'

---

[14] Cross-linguistically this is not necessarily so: in Russian, e.g., stripping embeds easily.

7. Sluicing and complementizers

To investigate the position of wh-phrases relative to C, we need to consider their behavior in non-reduced embedded questions and sluices. If complementizers precede wh-phrases, the latter may only occupy a position lower than Spec CP.

This is exactly what obtains in Georgian: As we have seen in section 2.3, example 13, embedded wh-questions allow the interrogative complementizer *tu*, which must precede the wh-phrase(s). The behavior of sluices turns out to be identical. Wh-phrases in a sluice are compatible with *tu*, the interrogative complementizer, but not with *rom*, a declarative complementizer, entirely analogously with non-reduced embedded wh-questions.

(37) a. Argument

    manana-m   gušin   raɣac(a)   iq'ida,
    Manana-ERG   yesterday   something.NOM   s/he.bought

    magram   ar   vici (tu/*rom)   ra
    but   NEG   I.know   Q/*COMP   what.NOM
    'Manana bought something yesterday, but I don't know what'

    b. Adjunct

    šen   sadɣac(a)   dat'ove   gasaɣeb-i, magram
    you   somewhere   you.left   key-NOM   but

    (me) ar   daminaxavs   (tu/*rom)   sad
    I   NEG   I.saw   Q.COMP/COMP   where
    'You've left the key somehwere, but I haven't seen where.'

c.   Multiple wh

    gušin   viɣac(a)   viɣaca-s=tan   cek'vavda,
    yesterday   someone.NOM   someone-DAT=with   s/he.danced

    magram   ar   maxsovs   (tu/*rom)   vin   vis=tan
    but   NEG   I.remember   Q.COMP/COMP   who.NOM   who.DAT=with
    'Yesterday someone danced with someone, but I don't remember who (danced) with who.'

In the case of sluicing with multiple wh-phrases, *tu* can only precede the first of them, no matter whether they are coordinated or not[15].

---

[15] This might serve as an argument against treating questions with coordinated wh-phrases as instances of CP-level coordination, *cf.* the discussion in Gribanova (2009) for Russian.

(38) a. am   zapxul-s   q'vela   sadɣac(a)   midis,
         this.OBL   summer-DAT   all   somewhere   goes

         magram   ar   vici   (tu) vin   (*tu) sad
         but   NEG   I.know   Q   who   Q   where
         'This summer, everyone is going somewhere, but I don't know
         who (is going) where.'

     b. rodisɣac(a)   rat'omɣac(a)   gamravleb-is   t'abul-s
         some.time f   or.some.reason   multiplication-GEN table-GEN

         visc'avle   magram   ar   maxsovs   (tu) rodis   da
         I.memorized   but   NEG   I.remember   Q   when   and

         (*tu) rat'om
         Q   why
         'Sometime I learned the multiplication table for some reason, but I forget
         when (and) why.'

In "extended sluices" the complementizer can only precede the wh-phrase. This serves
as evidence that the material preceding the wh-phrases is not lower than in SpecCP, or
occupies a position in the TopP that is located above the CP.

(39) a. guram-i   gušin   rezo-m   cema.
         Guram-NOM   yesterday Rezo-ERG   s/he.beat.up

         ar   vici   (*tu) dɣes   (?tu) vin
         NEG   I.know   COMP today   COMP who
         'Yesterday, Rezo beat up Guram. I don't know who (beat him up) today.'

     b. guram-i   rezo-m   cema.
         Guram-NOM   Rezo-ERG   s/he.beat.up

         ar   vici   (*tu) zurabi   (?tu) vin
         NEG   I.know   COMP today   COMP   who
         'Rezo beat up Guram. I don't know who (beat up) Zurab.'

Judgments about the possibility of the complementizer vary in the case of embedded
sluicing.

(40)   rezo-m   šeč'ama   raɣac(a)   da   večvob
         Rezo-ERG s/he.ate   something   and I.suspect

         rusudan-ma   icis   (*?tu)   ra
         Rusudan-ERG   knows   COMP   what.NOM
         'Rezo ate something and I suspect that Rusudan knows what.'

8. Is Georgian sluicing a reduced copular construction?

Before attempting a deletion-based analysis, we need to check whether the hidden structure in a sluice is plausibly identical to that in the antecedent, or has a different provenance — the class of phenomena called NON-ISOMORPHIC SLUICING in Vicente (2014). In this section, I provide evidence against what seems to be the only possible alternative source, namely, a copular clause with omitted copula.

Given that the copula is not reconstructible in many of the contexts, the sluicing-like construction does not seem to be derivationally related to a cleft. Furthermore, cleft-like constructions do not seem to be attested elsewhere in Standard Georgian[16].

(41) manana-s   viɣac-is   ešinia   magram   ar   vici
     Manana-DAT   someone-GEN   fears   but   NEG   I.know

     visi(*=a)
     who.GEN=be.3SG.PRS
     'Manana fears somebody, but I don't know who.'

The sentence in 42 illustrates the same point in an embedded context.

(42) a.   rezo-m   še-č'ama   raɣac(a)   da
           Rezo-ERG   PRV-ate   something.NOM   and

           večvob   **rom** rusudan-ma   icis   ra(*=a).
           I.suspect COMP Rusudan-ERG   knows   what=be.3SG.PRS
           'Rezo ate something and I suspect that Rusudan knows what.'

     b.   šen   sadɣac(a)   dadevi   gasaɣeb-i
           you.SG   somewhere   you.put   key-NOM

           vpikrob   [rom manana-m   dainaxa   sad   (*iq'o   es)]
           I.think   COMP Manan-ERG   s/he.saw   where   was   it
           'You put the keys somewhere, and I think that Manana saw where.'

When the copula is judged possible, the wh-phrase in the sluice must always stand in the nominative rather than match the antecedent in case, compare the (highly artificial) embedded clause in 43 with the copula-less sluice in 41.

---

[16] The situation in Georgian dialects, especially those spoken in the west of the country, might well be different.

(43) manana-s   viɣac-is   ešinia
     Manana-DAT   someone-GEN   fears

     magram   ar   vici   is   vin   aris
     but   NEG   I.know   it.NOM   who.**NOM** is
     'Manana fears somebody, but I don't know who this is.'

Consequently, it is impossible to assume that the sluicing-like construction is derived by copula drop — we need to assume a syntactic structure closely resembling that of the antecedent.

9. Can Georgian sluicing be reduced to stripping?

Classical sluicing is assumed to be a *sui generis* phenomenon. For the sake of theoretical elegance, however, it would be distinctly preferable to as much as possible reduce the taxonomic variety of ellipsis types. A natural candidate for unification with sluicing would be STRIPPING, the phenomenon first brought to the attention of syntacticians by Ross (1967) and defined by Hankamer & Sag (1976) as "a rule that deletes everything in a clause under identity with corresponding parts of the preceding clause, except for one constituent, (and sometimes a clause-initial adverb or negative)." Sentences in 44, taken from Lobeck (1995: 27), illustrate stripping in English.

(44) a.   Jane gave presents to John, but not to Geoff.
     b.   Jane loves to study rocks, and geography too.
     c.   Jane loves to study rocks, and John too.

Stripping exists in Georgian, 45a, and, as we will see below, it even shares many properties with sluicing, unlike in English. However, there is at least one reason to assume that they are two separate phenomena: namely, unlike sluicing, stripping in Georgian cannot go backwards.

(45) a.   rezo   ɣvino-s   svams   da   guram-i=c   agretve
           Rezo.NOM   wine-DAT   drinks   and Guram-NOM=too   also
           'Rezo is drinking wine and Guram too.'

     b.   *guram-i=c   agretve   da   rezo   ɣvino-s   svams
           Guram-NOM=too   also   and   Rezo.NOM   wine-DAT   drinks
           *'Guram too and Rezo drinks wine.'

On the other hand, unlike in English, embedded stripping is possible in Georgian.

(46)   rezo   ɣvino-s   svams   da   vpikrob
         Rezo.NOM wine-DAT   drinks   and   I.think

         [rom guram-i=c   ?(agretve)] /   ᵒᵏ[rom   agretve   guram-i=c]
         COMP Guram-NOM=too also   COMP   also   Guram-NOM=too
         'Rezo drinks/is drinking wine and I think that Guram (does so) too.'

Furthermore, like sluicing, embedded stripping escapes island constraints.

(47) Coordinate Structure Constraint

     manana-m   gaak'eta ɣomi   da   k'idev   raɣac(a)
     Manana-ERG   s/he.made ghomi   and   additionally   something

     vpikrob   (rom)   baže
     I.think   COMP bazhe
     'Manana cooked *ghomi* and something else. I think (that she cooked) *bazhe*[17].'

(48) Complex NP constraint

     a.   zurab-ma moit'ana   ambav-i   rom   sopel=ši
           Zurab-ERG s/he.brought   news-NOM COMP   village=in

           viɣac(a)   dak'orcinda   vpikrob (rom) guram-i
           someone   s/he.got.married   I.think   Guram-NOM
           'Zurab brought the news that someone in the village is getting married. I think (that) Guram.'

     b.   zurabi   modis   cxen-it   romel-i=c   sxva-s   ek'utvnis
           Zurab   goes   horse-INS   which-NOM=REL other-DAT belongs

           vpikrob   rom rezo-s
           I.think   COMP rezo-DAT
           'Zurab is riding a horse that belongs to somebody else. I think that (it belongs to) Rezo.'

To recapitulate, although stripping shares a number of properties with sluicing in Georgian, it still significantly differs from sluicing in that the ellipsis site may not precede its antecedent under stripping.

10. Towards an analysis

In the course of preceding sections, we have collected enough data to now venture upon an analysis of sluicing Georgian. The analysis I propose is essentially a slight modification of the approach developed in Merchant (2001).

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[17] *Ghomi* is a kind of porridge of corn (called *grits* in the Southern US); *bazhe* is a walnut sauce.

10.1 An overview

The preponderance of evidence suggests that, in Georgian, the sluicing-like construction comes about as the result of ellipsis in embedded wh-questions whose structure is maximally close to that of the antecedents, that is, Georgian sluicing is an instance of isomorphic sluicing in the sence of Vicente (2014). Accordingly, an analysis of sluicing in Georgian hinges upon an analysis of matrix and embedded wh-questions.

Potential analyses of displacement, to use a non-committal term, of wh-phrases in questions include movement to specifiers of some projection, formation of a cleft or pseudo-cleft, or scrambling, see a discussion in Potsdam & Polinsky (2011). A cleft-like or scrambling analysis does not appear to be applicable to Georgian. Alternative mechanisms of displacement of wh-phrases, clefting or scrambling, do not seem operative in Georgian. As we have seen in Section 8, cleft-like constructions are not attested in Standard Georgian. Furthermore, the fact that all wh-phrases must land in the preverbal position, as was discussed in Section 2.2, testifies against the scrambling scenario: scrambled items are typically much less constrained in their placement.

Accordingly, we need to establish the nature of the head to whose specifiers the wh-phrases are moved and of the feature that drives their movement. All the facts we have seen so far agree with the idea that wh-phrases in Georgian move into the specifiers of the FocP. Accordingly, I will take up the line of reasoning developed in Toosarvandani (2008) and Van Craenebroek & Lipták (2013) and assume that movement indeed proceeds into SpecFocP and that it is the sister of the phonologically null Foc^0 that gets deleted. The feature [E] that licenses deletion is hosted by Foc^0, as in the proposals cited above. For expository purposes I use the IP label to denote the complement of the FocP. We will discuss the nature of this projection in more detail later in this section.

(49)   FocP
      /   \
   wh₁   FocP
         /   \
      wh₂   ...
                      Foc'
                   /   \
             Foc^0[E]   ~~IP~~
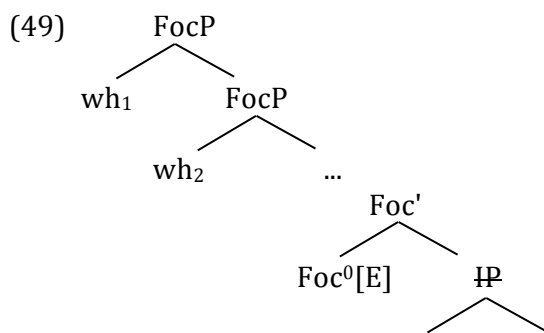
10.2 The structure of matrix wh-questions

The word order in Georgian wh-questions is subject to the following rigid constraints: first, only a negative marker may intervene between the wh-phrases and the verb, and, second, a focused XP may not precede the cluster of wh-phrases. To proceed with the analysis based on movement into multiple specifiers of the FocP we need to rule out its possible contenders, specifically

(i) adjunction to a certain projection (plausibly the TP);
(ii) movement of one wh-phrase into the SpecCP followed by focusing of the rest of the wh-phrases; and
(iii) movement of all wh-phrases into multiple specifiers of the SpecCP.

I use here a more fine-grained classification than that in Richards (2001): in his approach, movement into multiple specifiers of the FocP and adjunction to the TP will be subsumed under the term IP-absorption.

To exclude scenario (i), observe that, unlike a movement-to-multiple-specifiers analysis, multiple adjunction does not require the cluster of wh-phrases to behave as a single constituent. In particular, adjunction to the TP predicts that wh-phrases will be able to be interspersed by some other types of TP adjuncts, e.g. time adverbials, a prediction that is not borne out. Additionally, the evidence that the multiple wh-phrases indeed occupy multiple specifiers of the same head (or, which is essentially equivalent, are all adjoined to a single specifier, as per the proposal of Rudin (1988: 480) for Bulgarian and Romanian, or are "tucked in", according to Richards' (2001) approach) comes from the fact that parentheticals cannot intervene between them, 50a, but rather can only precede the wh-phrases or follow the verb, 50b-c.

(50) a.   *vin   [šen-i   azr-it]   ra   iq'ida?
           who(ERG) your-NOM opinion-INS   what.NOM bought
           'Who by your opinion bought what?' (intended meaning)

     b.   [šen-i   azr-it]   vin   ra   iq'ida?
           your-NOM opinion-INS   who(ERG) what.NOM bought
           Idem

     c.   vin   ra   iq'ida   [šen-i   azr-it]   ?
           who(ERG) what.NOM bought   your-NOM opinion-INS
           Idem

Another test used by Rudin (1988) to distinguish between the behavior of multiple wh-phrases as a single constituent or as multiple constituents has to do with placement of second position clitics. Even abstracting away from potential conceptual problems — 2P clitic placement could be a post-syntactic phenomenon that is not sensitive to the syntactic constituency — this test is inapplicable in Georgian, because 2P clitics compatible with wh-questions do not exist in this language.

The analysis listed under (ii), the one that assumes that one, and only one, of wh-phrases moves into SpecCP (driven by [+wh]-feature rather than by a focus feature) predicts that, in a language with focus fronting, as Georgian is, focus-fronted items may other than wh-phrases may occur in wh-questions with only one wh-phrase. This is not
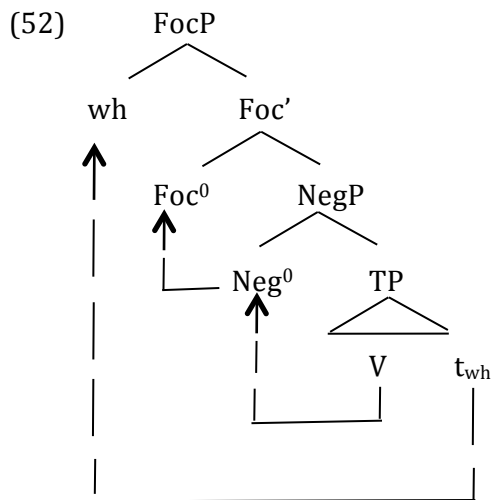
the case in Georgian. In 51, the DP *gela-m=ac k'i* 'even Gela' is associated with 'even[18]' and therefore focused. It cannot be placed to the left of the wh-phrase, as 51a shows, but when this DP is placed in a postverbal position, the ungrammaticality disappears. The same contrast holds in 51c-d: the focused phrase that is associated with *mxolod* 'only' may only follow the wh-phrase. This observation agrees with findings of Skopeteas & Fanselow (2009) who argue for the existence of preverbal and postverbal focus positions in Georgian.

(51) a.   ***gela-m=ac**   **k'i**   romel-i   c'igni   c'aik'itxa?
            Gela-ERG=too   PRT   which-NOM book-NOM read

      b.   romel-i   c'igni   c'aik'itxa **gela-m=ac**   **k'i**?
            which-NOM book-NOM read   Gela-ERG=too   PRT
            'Which book did even Gela read?'

      c.   ***mxolod** **ert-i**   **c'ign-i**   vis   misca   gela-m?
            only   one-NOM   book-NOM who.DAT   he.gave   Gela-ERG
            'Who did Gela give only one book to?'

      d.   vis   misca   **mxolod**   **ert-i**   **c'ign-i**   gela-m?
            who.DAT   s/he.gave only   one-NOM   book-NOM Gela-ERG
            'Who did Gela give only one book to?'

We may conclude accordingly that the cluster of wh-phrases indeed occupies the multiple specifiers of a single head. What remains to rule out is the possibility that this head is C^0 and what we are dealing with is wh-movement of the usual kind, slightly obscured by the presence of the topic layer above the CP. The evidence for not taking the SpecCP as the locus of wh-movement in Georgian comes from the structure of embedded wh-questions: as we have seen in section 2.3, the interrogative complementizer *tu* may only precede wh-phrases, as illustrated by the sentences in 13. Had they been situated in its specifier(s), under the standard assumptions about linearization, we would expect the complementizer to follow the wh-cluster.

To account for the obligatory multiple wh-movement in Georgian, it is reasonable to assume that the movement proceeds into multiple specifiers of the FocP. Specifically, I advance the following proposal. In non-embedded wh-questions, wh-phrases move to the specifiers of the same FocP projection, whereas the material that precedes them topicalizes into Spec TopP. To derive the adjacency requirement between wh-phrases, negation, and the verb, I propose that the verb head-moves first, into Neg^0 (if the latter is merged), and afterwards, into Foc^0. On its way from V^0, the verb probably head-moves through T^0 and Asp^0, but for the sake of simplicity I do not show this in (52).
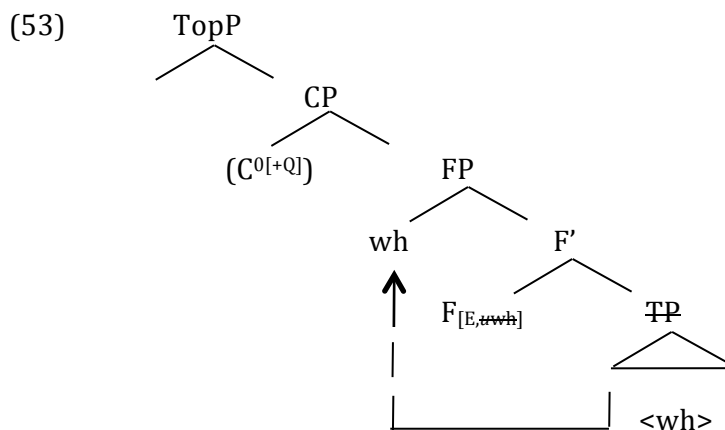
---

[18] Strictly speaking, Georgian lacks a direct translational equivalent of 'even', and in colloquial speech the Russian loanword *daže* (which means 'even' in Russian) is usually used for this purpose. The particle *k'i* has wider uses, see a discussion in Rostovtsev-Popiel (2012).

(52)

```
                    FocP
                  /      \
               wh         Foc'
               ↑        /      \
               |     Foc⁰       NegP
               |      ↑        /     \
               |      └── Neg⁰       TP
               |            ↑       / \
               |            |      V   t_wh
               |            └──────┘    |
               └──────────────────────┘
```

It may eventually be necessary to posit several Top layers in the spirit of Rizzi (1997) and the subsequent work, but I leave this issue for further research. The lack of superiority effects, as has been illustrated in 7 in section 2.2, can be attributed to unrestricted scrambling between specifiers of a single head. The fact that some speakers of Georgian do indeed have superiority constraints in their grammar (as the consultants of Harris (1981) and Amiridze (2006) did) can be explained by the inter-speaker variation in intraspecifier scrambling.

10.3 Embedded questions and sluicing

Now, as far as sluicing is concerned, Georgian facts are compatible with the clausal architecture of the embedded clause as depicted in (53). Modulo the admittedly delicate issue of configurationality in Georgian, this essentially agrees with the structure proposed in Wier (2014: 49).

(53)

```
        TopP
       /    \
             CP
            /    \
      (C⁰[⁺Q])     FP
                  /    \
               wh       F'
               ↑      /    \
               |   F[E,uwh]  ~~TP~~
               |              / \
               └────────────┘ <wh>
```

Consider, for instance, the derivation of the sentence in 54.

(54) manana-m   gušin   raɣac(a)   iq'ida
     Manana-ERG   yesterday something.NOM s/he.bought

     magram   ar   vici   (tu)   ra
     but   NEG   I.know   COMP what.NOM
   'Manana bought something yesterday, but I don't know what'

Here, the wh-phrase *ra* raises into Spec FocP, whereas Spec TopP remains empty (or, alternatively, is not merged at all).

(55)
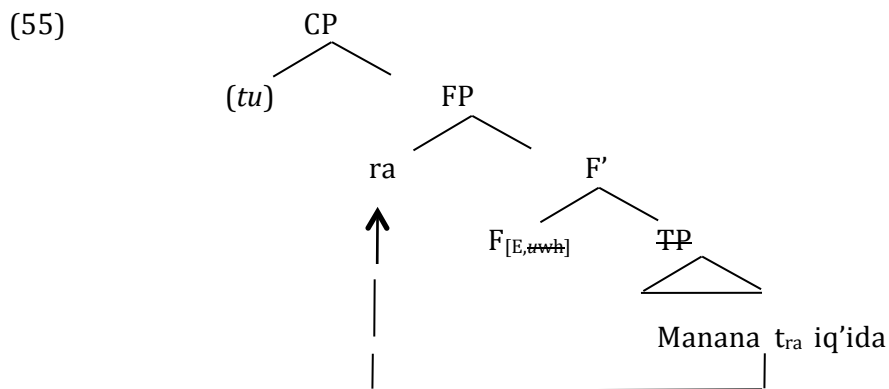
The non-survival of the verb in Foc^0 can be explained, for instance, by the assumption that sluicing bleeds verb movement, as argued, among others, in Merchant (2001: 73) and Van Craenebroeck, Lipták (2008).

A structure with a high TopP provides us with a natural way to derive "extended sluices" as well. For instance, to derive the sentence in 56, we need to assume that, alongside with the movement of the wh-phrase into Spec FocP, the adverb topicalizes.

(56) a.   guram-i   gušin   rezo-m   cema.
           Guram-NOM   yesterday   Rezo-ERG s/he.beat.up

           ar   vici   dɣes   (tu)   vin
           NEG   I.know   today   COMP who
           'Yesterday, Rezo beat up Guram. I don't know who (beat him up) today.'

b.
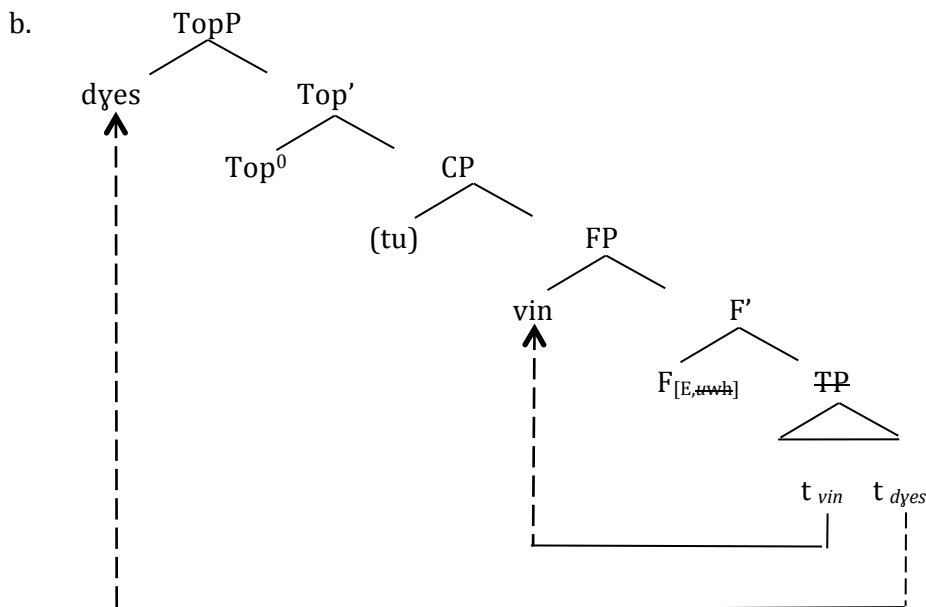
10.4 Remaining issues

Admittedly, it remains unclear why the complementizer *tu* cannot occupy the clause-initial position in embedded polar questions, as illustrated in 57.

(57)   ar   vici   (*tu) ciq'vebi   tu   k'argad   daprinaven
         NEG   I.know   COMP squirrels   COMP well   they.would.fly
         'I don't know whether squirrels fly well.'

A radical move would be to assume that we deal here with two homonymous complementizers, one for embedded Y/N questions and one for embedded wh-questions. Accordingly, in this case we can expect them to exhibit different behavior.

Given that we seem to need to posit separate lexical items for *tu* 'if[19]' and *tu* 'or' in interrogatives anyway, and that the complementizer is obligatory in Y/N questions,

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[19] In Georgian statements and interrogatives, two different lexical items for 'or' are used, compare the sentences in (ia) and (ib). The interrogative 'or', *tu*, is homophonous with the interrogative complementizer, as illustrated in (i b).

(i)   a.   A statement
                 xe-ze   ciq'v-s   **an/*tu** tevz-s   vnaxav
                 tree-on   squirrel-DAT   or   fish-DAT I.will.see
                 'I will see a squirrel or a fish in the tree. '

         b.   A question
                 es   ciq'v-i=a   **tu/*an** tevz-i?
                 this   squirrel-NOM=is or   fish-NOM
                 'Is this a squirrel or a fish? '

while it is optional in wh-questions, as has been illustrated in 13, this move is not completely unwarranted, although one would like to keep the number of homonyms as low as possible[20]. I leave this issue for further research.

To conclude this section, it is perhaps worth remarking that the Georgian facts appear to be essentially parallel to those described for Hungarian in van Craenenbroeck, Lipták (2008), modulo the fact that, unlike in Hungarian, topicalized elements in Georgian appear higher than in C.

11. Embedded wh-questions and sluicing in Svan

Unlike Georgian, Svan syntax has not been addressed in theoretical literature so far. Descriptively, the syntax of Svan looks at a first approximation fairly similar to the syntax of Georgian. That pertains to wh-questions and finite subordinated clauses as well. However, some facts indicate that the two languages significantly differ structurally. My data come from Upper and Lower Bal Svan, the facts may well be somewhat different in the dialects of Lower Svaneti: Lentekhian, Lakhshian, and Cholurian.

11.1 Wh-questions in Svan

Like Georgian, Svan exhibits obligatory wh-movement into the preverbal position, a fact already observed by Tuite (1997). Analogously to Georgian, the wh-phrases must be immediately adjacent to the verb in a question, compare the grammatical sentences in 58a and 58c with their ungrammatical counterparts in 58b and 58d. The only possible interveners are neg-phrases, see 59 below.

(58) a.   nato-s   jær laxk'axæn?
           Nato-DAT   who kissed

     b.   *jær nato-s   laxk'axæn?
           who Nato-DAT   kissed
           'Who kissed Nato?'   UB

     c.   šoma   esɣri   kalæk-te?
           when   you.go   city-ALL

     d.   *šoma   kalæk=te esɣri?
           when   city-ALL   you.go
           'When are you going to the city?' UB

Completely parallel to Georgian, negative markers, when present in a sentence, obligatorily intervene between the verb and the wh-phrases, 59a. Unlike in Georgian,

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[20] A possible direction for unification of different uses of complementizer-like and conjunction-like uses of 'or'-s cross-linguistically is outlined in Szabolcsi (2013).

however, negative indefinites may optionally intervene between the verb and the wh-phrases in a sentence, see the position of *dær-s* 'nobody-DAT' in 59b, of *dær-s mamgweš* nobody-DAT 'nothing' in 59c, and of *dem* 'never' in 59d.

(59) a.   jær-d   **mam/desa**   laxwem   dær-s   mamgweš?
       who-ERG   NEG   gave   nobody-DAT   nothing

    b.   jær-d   **dær-s**   laxwem   mamgweš?
       who-ERG   nobody-DAT   gave   nothing

    c.   jær-d   **dær-s**   **mamgweš**   laxwem?
       who-ERG   nobody-DAT   nothing   gives
       'Who didn't give anything to anyone?' UB

    d.   jær   **dem**   izbi   viskws?
       who   never   eats   apple.DAT?
       'Who never eats apples?' UB

Otherwise, the word order in wh-questions is free: all the three sentences in 60 are fully acceptable.

(60) a.   jærd   laxwem   gela-s   jæræɣ?
       who.ERG   gave   Gela-DAT   weapon

    b.   gela-s   jæræɣ   jærd   laxwem?
       Gela-DAT   weapon   who.ERG   gave
       'Who gave a weapon to Gela?' UB

    c.   gela-s   jærd   laxwem   jæræɣ?
       Gela-DAT   who.ERG   gave   weapon
       'Who gave a weapon to Gela?' UB

In multiple wh-questions, all wh-phrases are required to move into the preverbal position. As in Georgian, for the majority of Svan speakers superiority effects are non-existent, nor does animacy play a role in the ordering of wh-phrases, 61.

(61) a.   jæs   mæj xaxəra?
       who.DAT   what annoys

    b.   mæj jæs   xaxəra?
       what who.DAT   annoys
       'What annoys who?' UB

    c.   jær-d   mæj anq'id?
       who-ERG   what bought

    d.   **mæj** jær-d   anq'id?
           what who-ERG   bought
           'Who bought what?' UB

11.2 Clause embedding

Within the Georgian descriptive tradition, clause embedding in Svan was addressed in Abesadze (1960). In Svan finite embedded clauses, interrogative and declarative alike, a wide-purpose complementizer *er(e)* is used. At present, I do not know what governs the disappearance of the final vowel of this complementizer.

(62) a.   gela-s   xak'w   ere nino anqes.
         Gela-DAT wants   COMP Nino arrives
         'Gela wants Nino to arrive.' UB

    b.   gela ačæd maɣazija=te   er oxq'idæn bordžom
         Gela went shop=all   COMP buys   Borjomi
         'Gela went to a shop to buy (some) Borjomi[21].' UB

The complementizer may appear anywhere between the left edge and the verb, but not to the right of the verb.

(63)   mi   ču=mixa   <ere>   dæwit <ere>   esɣri <*ere> šwan-te
        I   PRV[22]=I.know COMP   David   goes   Svaneti-ALL
        'I know that David is going to Svaneti.' UB

Similar to Georgian, wh-phrases may move out of a finite dependent clause only for some modal matrix verbs:

(64) a.   jærd   džak'u   [ere t$_{jærd}$ atcindeds]?
         who.ERG you.want COMP   would.win
         'Who do you want to win?' UB

    b.   *gela jær asko:re   [ere t$_{jær}$ ænq'deni dešdwiš]
         Gela who thinks   COMP   will.arrive Tuesday
         'Who does Gela think that will arrive Tuesday?' (intended) UB

11.3 Embedded questions in Svan

    In embedded wh-questions the use of this complementizer is optional. The same adjacency requirements as in matrix wh-questions need to be satisfied between the wh-phrases and the verb.

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[21] A brand of mineral water.

[22] Rostovtsev-Popiel (2012) argues that *ču* here (and in 65b) has to be analyzed as an assertion-marking particle rather than as a preverb.

(65) a.   dæs   xoxa,   [(**ere**)   dec   imɣa=**do** li   jirži]
           nobody.DAT   knows   COMP   sky   why=EMB   is   blue

           dæs   xoxa,   [(**ere**)   imɣa=**do** li   dec   jirži]
           nobody.DAT   knows   COMP   why=EMB   is   sky   blue
           'No one knows why sky is blue.' UB

   b.   gela-s   ču=xoxa,   [ere šoma=**do** ænqdeni   nino]
         Gela-DAT   PRV=knows   COMP when=EMB arrives   Nino
         'Gela knows when Nino arives.' UB

Unlike in Georgian, embedded wh-questions in Upper and Lower Bal Svan carry overt morphological marking, the enclitic =*do*. No other contexts have been discovered so far where this particle would be used[23].

(66) a.   mam mixa   manana-d   mæj=**do** anq'id
           NEG I.know   Manana-ERG   what=EMB bought
           'I don't know what Manana bought.' UB

   b.   mi   ču=mixa   dæwit   šoma=**do** ɣəri šwæn=te.
         I   PRV=I.know   David   when=EMB goes Svaneti=to
         'I know when David is going to Svaneti.' LB

Only one copy of =*do* may be present in a clause, but it can encliticize to any of the wh-phrases. This supports the idea to treat =*do* as a clitic rather as an affix.

(67) ervale-d   mo:le   adkuču:re mare mam   mixa   ...
     someone-ERG   something broke   but   NEG   I.know

   a.   jærd   mæj=**do** adkuču:re
         who.ERG   what=EMB broke

   b.   jærd=**do**   mæj adkuču:re
         who.ERG=EMB   what broke

   c.   *jærd=**do**   mæj=**do** adkuču:re
         who.ERG=EMB   what=EMB broke
         'Someone broke something, but I don't know who (broke) what.' UB

11.4 Sluicing in Svan

A sluicing-like construction is available in Svan. The marker =*do* is still obligatory in sluices.

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[23] I thank Medea Saghliani for a discussion of this point.

(68)   manana-d   la:t   mo:le   anq'id
         Manana-ERG   yesterday something bought

         mare mam mixa   mæj=do
         but   NEG I.know   what=EMB
         'Manana bought something yesterday, but I don't know what.' UB

Multiple wh-phrases are grammatical in sluices.

(69) a.   ervaled   mo:le   adkuču:re
          someone   something broke

          mare mam mixa   jærd   mæj=do
          but   NEG I.know   who.ERG   what=EMB
          'Somebody broke something, but I don't know who (broke) what. UB

     b.   al   lüp-s   mæg imwala=te   esɣri,
          this summer-DAT   all   somewhere=ALL goes

          mare mam mixa   im=te=do   jær
          but   NEG I.know   where=ALL=EMB who
          'This summer everyone goes somewhere, but I don't know
          who goes where.' UB

The sluice may precede its antecedent.

(70) a.   mam mixa   im=do   mare rezo imwa:le   izbi
          NEG I.know   what=EMB but   Rezo something eats
          I don't know what, but Rezo is eating something. UB

     b.   jærd=do   mam mixa   mare
          who.ERG=EMB   NEG I.know   but
          erwa:led   nærxi   ant'wa:re
          someone.ERG   light   turned.on
          'Who, I don't know, but someone turned on the light.' UB

Case-matching requirements are fulfilled as well. Additionally, 71 illustrates that, unlike in unreduced embedded questions, the complementizer is ungrammatical in sluices.

(71)   mišgwe   žeɣ   imwanoš   adc'əmlawæn
         our   dog something.INST got.poisoned

         mare (*ere)   imnoš=do   mam mixa
         but   COMP   what.INST=EMB   NEG I.know
         'Our dog got poisoned with something, but we don't understand what with.'
         UB

Similarly to Georgian, Svan wh-questions obey all the standard island constraints. However, parallel sluices are grammatical.

(72) a.　gela ačæd jerwa:le　dinæ:　　sačkwæri laq'idte
　　　　Gela left　some　　　girl　　gift　　　to.buy

　　　　mare mi　mam mixa　　iša=do
　　　　but　I　NEG　I.know　which=EMB
　　　　'Gela left to buy a gift for a girl, but I don't know which girl.' UB

　　b.　mi　xwec'd　　ma:res　xedwæjd　　mo:le　　ašxwin
　　　　I　　I.saw　　man.DAT　who.REL.ERG　something s/he.hid

　　　　mare mi　deš　　xwec'd　　mæj=do
　　　　but　I　NEG.MOD　I.saw　what=EMB
　　　　'I saw a man who was hiding something, but I couldn't see what.' UB

Unlike Standard Georgian, Svan allows clefts in questions.

(73) a.　jær　li　　　　edža ere　gærgli=gar?
　　　　who be.PRS.3SG that COMP talks=only
　　　　'Who only talks?' UB
　　b.　jær　li　　　　edža ere　gelas　　　bəgid　　xalæt'?
　　　　who be.PRS.3SG that COMP Gela-DAT　strong　　loves
　　　　'Who does Gela very much love?' UB

Nevertheless, the copula is not recoverable in sluices.

(74)　gela-d　　imwalawš　　adɣape　　st'ol
　　　Gela-ERG　something.INS　painted　　table

　　　mare mi　mam mixa　　imnoš=do　　(*li)
　　　but　I　NEG　I.know　what.INS=EMB　be.PRS.3SG
　　　'Gela painted the table with something, but I don't know what with.' UB

11.5 Differences between Georgian and Svan sluicing

To recapitulate, the differences between the Svan and Georgian facts are as follows: in Svan wh-questions, negative indefinites may intervene between the wh-phrases and the verb; Svan has a dedicated marker *=do* in embedded wh-questions, which is retained in sluices; Svan does not allow the default complementizer in sluices.

The import of these differences for a theoretical analysis is that, unlike in Georgian, we cannot assume an identical underlying structure for sluices and unreduced embedded questions in Svan. Had they been identical, the complementizer *er(e)*, which obligatorily precedes wh-phrases when used in embedded wh-questions, and accordingly is situated higher in the clause, would have survived the deletion. Additionally, the fact that any neg-items may intervene between wh-phrases and verbs

indicates that the structure of matrix wh-questions in Svan is different as well: wh-movement targets a different projection. I leave an appropriate analysis of Svan clause structure for further research.

12. Conclusion

The Georgian sluicing-like construction does not have an obvious alternative origin, such as stripping or a reduced cleft. It fits with the generalized sluicing pattern, as advanced in Toosarvandani (2008) for Persian and van Craenebroeck, Lipták (2006, 2013) for Hungarian: wh-phrases move into the specifiers of a projection that is situated above the TP but below the CP, specifically, into the FocP. The head of this projection hosts the feature that licenses the deletion of the complement. The Svan counterpart of this construction also passes all the standard tests for sluicing, but the analysis must certainly be different from that of Georgian.

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