Sluicing-like Phenomena and the Location of CP in Ossetic *

David Erschler[a]

[a]Department of Protein Evolution, Max Planck Institute for Developmental Biology,
Spemannstrasse 35, Tübingen 72074, Germany
and
Tübingen Center for Linguistics, University of Tübingen,
Nauklerstrasse 35, Tübingen 72076, Germany
erschler@gmail.com

Summary. Sluicing-like constructions are attested in languages that either lack wh-movement or show non-canonical patterns thereof. The issue how to analyze such structures is controversial. In this talk, I will discuss sluicing-like phenomena in Ossetic. Ossetic has a highly unusual clause structure: complementizers, depending on their type, are either preverbal or "float" between the left edge of the clause and the verb, whereas wh-phrases and relative pronouns are obligatorily preverbal. Nevertheless, Ossetic "pseudo-sluicing" patterns with standard sluicing constructions with respect to all usual diagnostics. I provide an account for these phenomena proposing that a fragment of CP in Ossetic is indeed situated low in the clause.

Keywords: Ellipsis, Sluicing, Wh-movement, Left periphery, Ossetic.

1   Introduction

The classical sluicing occurs in wh-fronting languages, and it is only the wh-phrase that is retained:

(1)   *Anne invited someone, but I don't know who.* Merchant (2001: 40)

Real sluicing is supposed to be able to, a.o. (Hankammer 2011):
  ✓ go backwards
  ✓ be unbounded, i.e. be able to occur in multiply embedded clauses:

(2)   *Bill bought something and [$_{CP}$ I suspect [$_{CP}$ that Martha knows [$_{CP}$ what]]].*

  ✓ amnesty islands

Sluicing-like constructions are also attested in languages that either lack wh-movement or show non-canonical patterns thereof. For instance, Georgian (South Caucasian, Georgia) features preverbal wh-phrases, Harris (1984: 70-71):

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(3) a. *sad c'avida nino?*　　　　　　　　b. *nino sad c'avida?*
　　　where went　　Nino　　　　　　　　　　Nino　where　went
　　　'Where did Nino go?'

　c. **sad nino c'avida?*　　　　　　　　d. **c'avida nino sad?*

However, Georgian has sluicing-like constructions, (4 a-b), that differ from real sluicing in that they are not unbounded, (4c).

(4) a. *nino raɣacas　　q'idulobs [magram ar vici　[**ras**]]*
　　　Nino　something.DAT[1] bought　　but　　NEG I.know　what.DAT
　　　'Nino bought something, but I don't know what.'

　b. *nino raɣacas　　q'idulobs　[magram [ras]　　ar vici]*
　　　Nino something.DAT bought　　　but　　what.DAT NEG I.know
　　　Idem, judged somewhat better than a. (no idea, why).

　c. **nino raɣacas　　q'idulobs da vpikrob　rom manana icis　ras*
　　　Nino something.DAT bought　　and I.think　　CPL Manana knows　what
　　　Intended: 'Nino bought something, and I think that Manana knows what.'

Wh-in-situ languages show sluicing-like patterns as well:

(5) a. Tyvan (Turkic, South Siberia)
　　　[du:n　bis-ke　ta:-kym　ke:p　čor-du]
　　　yesterday we-DAT　somebody go.CVB come.PST
　　　*[[sagyn-majn　　tur　men] [**kym** ijik]]*
　　　remember-NEG.CVB stand 1SG　who PRT
　　　'Yesterday somebody came to us, but I don't remember who.',

　b. Khakas (Turkic, South Siberia)
　　　*[min nimete　alyrɣe itken] [[če　šepilbinžem]　[**nime**]]*
　　　I　　something to.buy　wanted but remember.NEG what
　　　'I wanted to buy something, but I don't remember what[2].'

The issue how to analyze such structures is controversial, see, e.g. the polemics between Ince (2012) and Hankamer (2011) on the proper analysis of Turkish sentences of this type.

2　Generalities on Ossetic

Ossetic is a cover term for two closely related Eastern Iranian languages spoken in the Central Caucasus: Iron and Digor. In this paper, most examples will be from Digor Ossetic, but the languages behave in an essentially similar manner insofar as sluicing is concerned.

　　At a first glance, Ossetic looks like a garden variety head-final language: it features non-rigid SOV, postpositions, and head-final NP, see Erschler (2012) for examples. It has a relatively rich case system (Nominative; Accusative/Genitive; Dative, Ablative, Inessive; Allative; Superessive; Equative, in Iron also Comitative). The noun phrase is completely rigid and unsplittable: if a modifier needs to be moved (e.g. being a wh-word), the whole NP is pied-

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[1]　The following abbreviations are used in glosses: ABL ablative; ACC accusative; ALL allative; CORR correlate; CPL complementizer; CTR contrastive topic; CVB converb; DAT dative; EMP emphatic clitic; INF infinitive; NEG negation; OBL oblique; PL plural; SUP superessive.
[2]　My 2007 field work materials, Kazanovka, Khakassia, Sagay Khakas.

piped.

In Ossetic, wh-phrases, (6), and certain complementizers, (7), are obligatorily preverbal, no matter where the verb is situated in the clause, and only certain items may intervene between the wh-phrases/complementizer and the verb. It is an obvious challenge to theories of "left periphery" to analyze such a structure: even if the preverbal placement of wh-phrases might be explained away as focusing, this can be hardly done for complementizers.

(6) Preverbal placement of wh-phrases

   a. Affirmative sentence
     soslan   k'ere baχʷardta
     S.   pie   s/he.ate
     'Soslan ate a/the pie.'

   b. Interrogative sentence
     *k'ere **ka** baχʷardta?*
     pie   who s/he.ate
     'Who ate a/the pie?'

   c. Wh-phrases do not stay *in situ*
     ***ka**   k'ere baχʷardta?*
     who pie   s/he.ate
     Intended reading: 'Who ate a/the pie?'

(7) Preverbal placement of complementizers

   a. *tersgæ   kænun [χæpsæ mistæbel   æppunder **ke** ne=wwænduj]*
     afraid.CVB I.do   frog   mouse.SUP at.all   CPL NEG=believes
     'I am worried that the frog does not believe the mouse at all.'

   b. ***ke** χæpsæ mistæbel   æppunder ne=wwænduj]*
     CPL frog mouse.SUP   at.all   NEG=believes
     Intended reading: 'that the frog does not believe the mouse at all.'

Items that may intervene between wh-phrases and the verb in Digor are comparative degrees of adverbs, (8a) and various negative items, (8b).

(8) a. *ka **fuldær** baniwaza?*
     who more   s/he.would.drink
     'Who would drink more?'

   b. *ka **neči** baχʷardta?*
     who nothing s/he.ate
     'Who ate nothing?'

Another type of complementizer may float between the left edge of the clause and the verb, Erschler (2012):

(9) *fid-i   fænduj[(cæmæj) aboni (cæmæj) Alan (cæmæj) bæχ (cæmæj) nirtaja]*
   father-OBL wants (CPL)   today (CPL) Alan (CPL)   horse (CPL) would.bathe
   'The father wants that Alan bathe the horse today.'

Certain verbs allow for complementizer drop as well. Descriptively, the clause structure looks like:

(10) (Floating compl) Topic .... (Floating compl) ....   Focus
       Wh-phrases/Preverbal Complementizer N-phrases V   Postverbal XPs

A priori, we would not have expected a language with so unusual a clause structure to show sluicing of classical type.

3   Sluicing in Ossetic

Despite the unusual patterns of wh-placement and complementation, Ossetic shows a construction that is at least superficially similar to sluicing. It is available for any type of wh-phrase:

(11) a. *[soslan čidɐr   baχʷardta][[fal nɐ=zonun] [či]]*
    Soslan something ate   butNEG=I.know   what
    'Soslan ate something, but I don't know what.'

   b. *žonən ɐrmɐšt [šošlan mɐdinɐjəl kɐm   šɐmbaldi] fɐlɐ nɐ=žonən **kɐd***
    I.know only   S   M.SUP   where met   butNEG=I.know when
    'I only know where Soslan met Madina, but don't know **when**.' (Iron Ossetic)

   c. *maχ žonɐm šošlansal   č'irijə   baχordta fɐlɐ*
    we   we.know S   how.many pie.OBL ate   but
    *mɐdinɐ=ta   nɐma žonə   **sal***
    M=CTR   not.yet knows how.many
    'We know how many pies Soslan ate, but Madina doesn't yet know **how many**.' (Iron Ossetic)

   d. *šošlan kɐjdɐr   təχχɐjɐmzvgɐ nəffəšta fɐlɐ(=ɐj)*
    S.   someone.OBLabout   poem wrote   but=ACC.3SG
    *nɐ=žonən   **kɐj**   təχχɐj*
    NEG=I.know   who.OBL   about
    'Soslan wrote a poem about someone, but I don't know **about whom**.' (Iron Ossetic)

   e. A: *šošlan kɐšag ɐrsaχšta*   'Soslan caught a fish.'
       S.   fish   caught
    B: *o   fɐlɐ nɐ=žonən **kʷəd*** 'Yes, but I don't know, **how**.' (Iron Ossetic)
       yes butNEG=I.know how

Analogously to "classical" sluicing, this type of ellipsis can go backwards (12a), is unbounded (12b), and is not sensitive to islands, (12 c-f). This is particularly striking, because in general Ossetic island restrictions are very robust, and, furthermore, Ossetic lacks long distance movement of any kind.

(12) a. *[nɐ=j   zonun [**cɐbɐl**]] [fal=mi   ɐrwagɐs kɐnuj]*
    NEG=ACC.3SG I.know what.SUP but=ABL.1SG belief   does
    *[Mɐdinɐ **cɐbɐldɐr**   ke cɐʁduj] je]*
    M.   something.SUP CPLplays CORR
    'I don't know what, but I believe Madina plays something.'

   b. *soslan čidɐr   baχʷardta ɐma [gurusχɐ kɐnun*
    S.   something ate   and   suspicionI.do
    *[mɐdinɐ ke zonuj **či**] wobɐl]*
    Madina CPLknows what CORR
    'Soslan ate something and I suspect that Madina knows what.'

c. Coordinate Structure Constraint
*soslan gažžet ɐma kiwunugɐ balχɐdta fal nɐ=zonun **čiwavɐr kiwunugɐ***
Soslan newspaper and book bought butNEG=I.know which book
'Soslan bought a newspaper and a book, but I don't know which book.'

d. Coordinate Structure Constraint
šošlan č'iri baχordta ɐmɐ gažet balχɐdta
S pie ate and newspaper bought
*fɐlɐ=ɐj nɐ=žonən **savɐr gažet***
but=ACC.3SG NEG=I.know which newspaper
'Soslan ate a pie and bought a newspaper, but I don't know which newspaper.'
(Iron)

e. Adjunct Constraint
šošlan asədi didindžɐtɐ balχenənmɐ wəmɐn ɐmɐ ju čəžg
S went.out flowers buy.INF.ALL because one girl
*jɐ=žɐrdɐmɐ sɐwə. fɐlɐ=jɐ nɐ=žaχta **kɐsə čəžg***
POSS.3SG=heart.ALL goes but=ACC.3SG NEG=said which girl
'Soslan went to buy flowers, because he likes some girl. But he did not say which girl.' (Iron)

d. Sentential complement
*žaχtoj [sədɐr kɐj baχordtoj] fɐlɐ nɐ=žonən **sə***
they.said something CPL they.ate butNEG=I.know what
'They told that they had eaten something, but I don't know what.' (Iron)

f. Complex NP Constraint
[kɐjdɐr baχχʷəršənmɐ qavənc [jevropejag ɐvzɐgtɐj
someone.OBL hire.INF.ALL they.intend European languages.ABL
*ju či žonə] aχɐm] fɐlɐ **savɐr ɐvžag** wəj nɐ=žonən*
one who knows such but which language it.obl NEG=I.know
'They wanted to hire someone who knows one of European languages. But I don't know which language.' (Iron)

It is a standard assumption that what makes the difference between island-sensitive and island-insensitive types of ellipsis is the size of the ellipsis site (see e.g. Fox & Lasnik (2003) for VPE and sluicing in English.) "Fake" sluicing, like in Hindi, does not amnesty islands (Manetta 2011).

That Ossetic (pseudo)-sluicing is indeed an independent type of ellipsis, and not a subvariety of stripping [as argued for Turkish pseudo-sluicing in Hankammer (2011)], follows from the fact that, unlike sluicing, stripping is ungrammatical in dependent clauses (13 a-b), and cannot go backwards, (13 c-d):

(13) a. *mɐdinɐ fɐndur-ɐj cɐʁduj [ɐma ɐnʁɐl dɐn*
M. fandoor-ABL plays and guess am
[zɐlinɐ=dɐr ke cɐʁduj] (woj)]
Z=EMP CPL plays (CORR[3])
'Madina plays fandoor, and I hope that Zalina plays it too.'

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[3] In Ossetic, finite subordinate clauses are normally doubled by a correlate/proleptic in the main clause. For instance, in (12 f) the correlative is *aχɐm* 'such'. Conditions under which the correlate may be dropped are rather complex and do not concern us here.

b.   *mɐdinɐ fɐndur-ɐj   cɐʁd-uj [ɐma [ɐnʁɐldɐn [zɐlinɐ=dɐr (ke) ~~cɐʁduj~~]]
     M.   fandoor-ABL plays   and   guess   am   Z=EMP   CPL plays
     Intended: '*Madina plays fandoor and I hope that Zalina too.'

c.   alan kiwunugutɐ kɐsun   warzuj ɐma mɐdinɐ = dɐr
     Alan books   read.INF loves   and Madina=EMP
     'Alan likes to read books and Madina does so too.'

d.   *Mɐdinɐ(=dɐr) ɐma alan kiwunugutɐ kɐsun warzuj
     Madina(=EMP) and Alan books read.INF loves
     Intended: '*Madina too and Alan likes to read books.'

Another potential analysis of pseudo-sluicing, reduced cleft, is ruled out because the copula cannot be inserted in sluices, (14), *cf* a similar argument in Toosarvandani (2008: 682-684) for Persian.

(14) Q: *kɐmɐ   fɐʣʣurdta mɐdinɐ?* 'Who did Madina call?'
       who.ALL called   Madina
     A. *Soslan-mɐ / *?Soslan adtɐj*
       Soslan-ALL Soslan was

Furthermore, it is normally impossible to drop the copula, even in the present:

(15) *soslan χɐʣar-i   *(ɐj)*
      S.   house-OBL   is
      'Soslan is in the house.'

Therefore, it is natural to analyze Ossetic (pseudo)-sluicing as the classical sluicing, i.e. as deletion of the material below C. However, in the light of examples like (7), we would expect that pre-complementizer material may be retained. This prediction is borne out:

(16) *alan soslani   ɐžinɐ   fɐnnadta [fal nɐ=zonun [**ačibon ka**] (woj)]*
     Alan Soslan.ACC yesterday beat.up   butNEG=I.know today who (CORR)
     'Alan beat up Soslan yesterday, but I don't know who did so today.'

Furthermore, in such "extended sluices", the wh-phrase is normally final in its clause, and what is able to follow it are only the items that may separate wh-phrases/complementizers and verbs, compare (17b) and (8).

(17) a. *[alan soslani   ɐžinɐ   fɐnnadta] [fal nɐ=zonun   [**ka ačibon**](woj)]*
       Alan   Soslan.OBL yesterday beat.up   butNEG=I.know who today (CORR)
       'Alan beat up Soslan yesterday, but I don't know who did so today.'

   b. *[mɐdini   berɐ lɐqʷɐntɐ warzuncɐ] [[fal=ši   **ka fuldɐr**]*
       Madina.ACC many boys   they.love   but=ABL.3PL who more
       woj=ba   nɐ=zonun]
       CORR=CTR   NEG=I.know
       'Many boys love Madina, but I don't know who of them does so most.'

Given that what looks like sluicing in Ossetic satisfies all standard diagnostics for sluicing, we
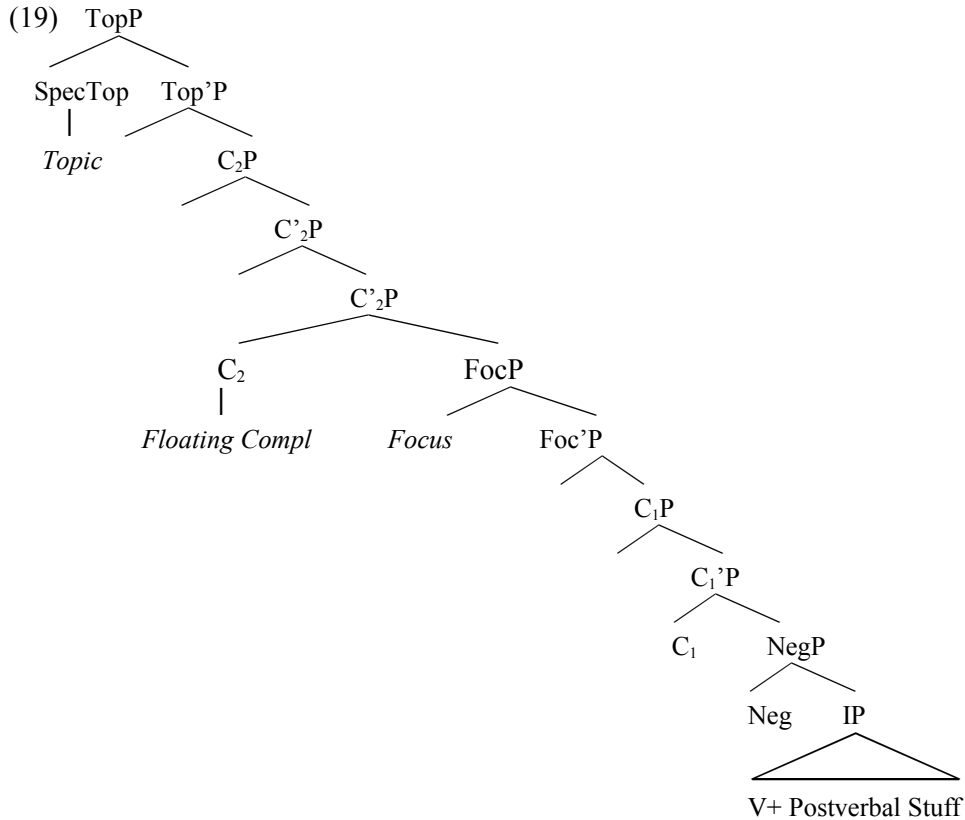
can adopt Merchant's (2001, 2004, 2008) analysis wholesale: the material below C gets deleted, and the deletion is triggered by an appropriate feature E hosted by C. The semantic content of the feature is that the complement of the hosting head (i.e. C) is e-GIVEN, Merchant (2001), whereas the phonological content is that the material below the hosting head should not be parsed at PF.

(18) a. *soslan čidɐr   baχʷardta fal [nɐ=zonun   [či]]*
      Soslan something ate   butNEG=I.know   what
      'Soslan ate something, but I don't know what.'

b.

           CP
      ／＼
XP$_{[+wh]}$ C'
 |
 či   C$^0_{[+Q, E]}$ IP
               t$_{či}$ *baχʷardta*
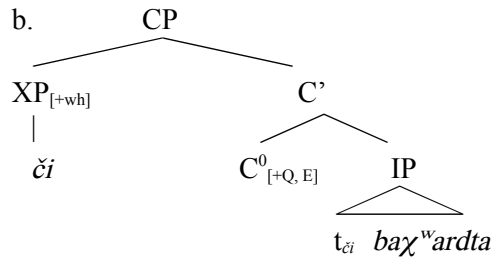
4   Conclusion

If my proposal is on the right track, it provides additional evidence that Ossetic indeed has C in the preverbal position. Tentatively, one may propose the following, admittedly highly unorthodox, clause structure for Ossetic, (19). It is an open question how this kind of structure is derived transformationally.

(19) TopP
     ／＼
SpecTop Top'P
 |
Topic   C$_2$P
       C'$_2$P
         C'$_2$P
       C$_2$ FocP
       |
  Floating Compl *Focus* Foc'P
               C$_1$P
                  C$_1$'P
               C$_1$ NegP
                   Neg IP
                      V+ Postverbal Stuff

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