SLUICING-LIKE PHENOMENA AND THE LOCATION OF CP IN OSSETIC

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1 Introduction

This paper undertakes an investigation of sluicing phenomena in Digor and Iron Ossetic. I argue that, despite the very unusual word order—wh-phrases and certain complementizers are all placed clause-externally, in the immediately preverbal position, Ossetic exhibits overt wh-movement to Spec CP. Specifically, I show that what resembles sluicing in Ossetic, actually satisfies the standard tests for sluicing described in the literature. Under the assumption that deletion approaches to sluicing are on the right track, this allows applying to the Ossetic data the well-known analysis of sluicing proposed in Merchant (2001). I will not explore here the possibility that non-deletion approaches may fare better in the accounting for sluicing-related phenomena, but I will lay out some facts from Ossetic that seem to militate against this latter line of reasoning.

Sluicing is an elliptic construction where the remnant is usually a wh-phrase embedded in a question-licensing predicate, (1). Languages differ widely as to the availability of constructions of this type and as to the derivation mechanisms whereby these constructions are obtained.

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(1) a. English: wh-fronting
You called someone, but I don’t know who.

b. Sagay Khakas (Turkic, South Siberia): wh in situ
[min nime] [alyry etken] [če šepilinizem] nime
I something to.buy wanted but I.remember.NEG what
‘I wanted to buy something, but I don’t remember what.’

c. Georgian (South Caucasian); preverbal wh, no accepted analysis
manana-ı gušin ra rac(a) iq’iда
M-ERG yesterday something bought
magram ar vici ra
but NEG I.know what
‘Manana bought something yesterday, but I don’t know what.’ (Natia Dundua, p.c.)

Apart from many technical details, the principal question the research on sluicing impinges on is whether sluicing obtains by deletion/non-pronunciation of articulated syntactic structure or the sluice is generated “as is”, see an overview and discussion in Merchant (2006). On the assumption that at least in some languages, e.g. in English, sluicing is derived through the regular wh-movement and consequent deletion, a number of test were proposed that distinguish this type of sluicing from superficially similar constructions.

Hopefully, competing approaches to the analysis of sluicing can eventually be evaluated by their ability to cope with the cross-linguistic variation in sluicing patterns. It is yet preposterous to talk about the typology of sluicing. As Merchant and Simpson (2012: 3) put it, “There is at present no prospect for doing more surface-oriented typological work on sluicing, as sluicing is not a construction that is typically mentioned in grammars or in the kind of surveys that syntactic typologists used to working with genetically diverse languages rely on.” However, it seems that the actual picture is somewhat more optimistic: there is a growing body of research on sluicing in diverse languages. Besides the chapters in Merchant and Simpson (2012) that cover English, Dutch, Bangla, Hindi, Japanese, Malagasy, Mandarin Chinese, Romanian, and Turkish, one could name Chang (2010) on Hmong (Hmongie, China); Chung (2006) on Chamorro; Giannakidou and Merchant (1998) and Merchant (2000) on Greek; Grebenyova (2006) on Russian; Manetta (2011) on Hindi/Urdu and Kashmiri; Potsdam (2007) on Malagasy, Toosarvandani (2008) on Persian, and Wei (2010) on Amis (an Austronesian language of Taiwan).

A particular difficulty presented by the subject language of this study, Ossetic, is that no plausible derivation scenario for Ossetic clause structure has been proposed so far. Thus, it is sluicing data that might be hoped to shed some light on the architecture of the Ossetic clause, rather than the ready knowledge of this structure could be applied to the analysis of sluicing.

The paper is organized as follows: Section 2 provides general background on sluicing. Section 3 surveys relevant data on Ossetic grammar: after a brief general overview, I address the formation of wh-questions and finite dependent clauses in Ossetic, and argue that preverbal “particles” that appear in some dependent clauses are indeed complementizers. Section 4

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2 Glosses used throughout this paper: 1/2/3 1st/2nd/3rd person; ABL ablative; ACC accusative; ALL allative; CL classifier; COMP complementizer; CTR contrastive topic marker; CVB converb/gerund; DAT dative; IMP imperative; INF infinitive; NEG negation; NOM nominative; OBL oblique; PL plural; PRV preverb; REL relative pronoun; SG singular; SUP superessive. Non-IPA symbols used in Ossetic examples: c = ts; č =ʧ; š =ʃ, ž = ʒ, dž =ʤ.
describes (pseudo)-sluicing in Ossetic and applies a battery of standard tests to it. Section 5 argues for the applicability of Merchant’s (2001) analysis in our case. Section 6 presents an argument to the effect that peculiarities of the Ossetic word order provide additional arguments for the deletion analysis of sluicing. Section 7 concludes. In the appendix, I address non-wh-sluicing, i.e. a variety of ellipsis that preserves the focus of an embedded yes-no or alternative question, and show (without proposing any analysis) that it is grammatical in Ossetic.

2 Generalities on Sluicing

2.1 Sluicing: Classical Settings

Classically, since Ross (1969), who discovered the phenomenon and introduced the interesting but less than transparent term, the word *sluicing* is applied to the elliptical phenomenon where the remnant is a wh-phrase embedded in a clause licensing full embedded wh-questions. The language is assumed to exhibit wh-fronting into Spec CP. Relevant examples have the form like in (2 a-b), and the structure like sketched in (2c).

(2) 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. \[ \begin{array}{c}
    \text{CP} \\
    \text{XP}_{[\text{+wh}]} \\
    \text{C}^* \\
    \text{C}^0_{[\text{+Q}]} \\
    \text{TP} \\
    \end{array} \]

In these examples, the remnant is a wh-phrase, and its antecedent (here, I use this term in a loose pre-theoretical sense), is either an indefinite nominal, like in (2a), or null, like in (2b).

A widely accepted\(^3\) analysis of sluicing developed by Merchant (2001, 2004, 2008) assumes that sluicing is licensed by a dedicated feature, E, which is hosted by the (interrogative) C. The phonological content of this feature is an instruction to PF not to parse the complement of the head bearing E, whereas the semantic content is that the complement is e-given, Merchant (2001: 29-37). The latter condition is a technical implementation of the idea that the content of an elided fragment must be somehow overtly expressed in the preceding discourse. The precise formulation of this condition is immaterial for my present purposes.

Merchant (2001: 35-36) discovered an additional type of construction that closely resembles the prototypical sluicing: in such sentences, the antecedent of the sluice is not an indefinite, but a contrastively focused nominal phrase, (3). Merchant shows that his e-GIVENness condition is able to account for such sentences as well; van Craenebroeck (2010) has proposed to call this ellipsis variety “contrastive sluicing”.

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\(^3\) A good illustration of that how standard this analysis has become, is the following quotation from Sag & Nykiel (2011), authors who intend to argue against deletion accounts of ellipsis: “As of this writing, there seems to be broad agreement among ellipsis researchers that some version of Merchant’s deletion theory must be correct for Sluicing, if not for ellipsis phenomena in general.”
Adopting the basic tenets of Merchant’s analysis, one can use sluicing data to study the structure of the “left periphery”. For instance, this has been done by van Craenenbroeck (2010) for Dutch (which, of course, has more or less usual wh-fronting: a wh-phrase moves to a clause-initial position). The issue becomes much more intriguing if the language in question does not show wh-fronting in the classical sense.

### 2.2 Sluicing without WH-Fronting

A phenomenon that is at least superficially very similar to sluicing, occurs in some non-wh-fronting languages as well. Namely, these are structures where all the sisters of a wh-phrase in a dependent clause are deleted, whatever the antecedent of the elliptic clause may be. Such constructions are attested in a large number of languages – for instance, in Japanese, Takahashi (1994); Turkish, Ince (2012), Hankamer (2011, 2012); Bangla (Bhattacharya and Simpson 2012); Persian (Toosarvandani (2008); and Georgian (South Caucasian, Georgia) – my own fieldwork.) As an illustration, consider an example from Turkish, a language that is commonly assumed to have wh in situ, Kornfilt (1997):

\[
\text{(4) Hasan bïri-ne kitap vermiş ama kïm-e bïlmiyorum}
\]

\[
\text{H someone-DAT book gave but who-DAT I don’t know}
\]

‘Hasan gave a book to someone, but I don’t know to whom.’

Within the school that in principle accepts deletion analyses of ellipsis (to reiterate, for the time being I do not consider any other possible approaches), there are two lines of thought as to how to analyze sluicing-like phenomena in the absence of wh-fronting.

**Scenario A**: This is (perhaps a bit generalized) sluicing, i.e. the wh-phrase is moved into a specifier of a certain head (maybe lower than C) and the complement of this head is deleted.

**Scenario B**: This is some different structure (a reduced copular construction of some kind or another variety of ellipsis, namely, stripping).

Scenario A (to be argued for in this paper) has been pursued, for instance, in Liptak (2001) and Craenenbroeck & Liptak (2005, 2006) for Hungarian; Takahashi (1994) for Japanese; Wang (2002) and Chiu (2007) for Mandarin; Ince (2012) for Turkish; Toosarvandani (2008) for Persian; and Bhattacharya and Simpson (2012) for Bangla. The syntactic structure is then supposed to be similar to that shown in (2) for the “classical” sluicing:

\[\]

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\[ \] There are wh in situ languages that apparently lack sluicing, e.g. Adyghe (Northwest Caucasian), Nikolaeva (2005) and Khalkha-Mongolian (Bat-Erdene Somomjams, p.c., 2012).
Here, E is again the feature licensing the deletion of TP. The questions that need to be answered in order for this account to be tenable, are:

- What exactly is W?
- What motivates the movement of a wh-phrase into Spec WP?

In the case of scenario B, sentences that imitate sluicing are assumed to have one of the following two structures:

(6) a. Reduced copular clause

\[\text{Matrix } S [\text{Wh-phrase } \text{Copula}]\]

b. Stripping

\[\text{Matrix } S [\text{Dependent clause Wh-phrase Dependent clause}]\]

In this paper, I will call “true sluicing” constructions that arise according to Scenario A. For the second type of derivation, I will use the term “pseudo-sluicing”.

### 2.3 How to Tell apart True Sluicing and Pseudo-Sluicing

The tests I discuss in this section are based on the properties of sluicing observed in the classical cases, see, e.g. Chung et al. (1995), Merchant (2001, 2006), Merchant, Simpson (2012). Some of these properties are obvious consequences of the deletion analysis of sluicing, whereas the status of others is much less clear, and they should perhaps be considered as empirical generalizations – we might not have a satisfactory theory of why the dog barks and wags its tail, but if something barks and wags its tail like a dog, it is likely to be one.

Under true sluicing, the case of the wh-phrase in a sluice matches that of the antecedent, (7).

This property is of course predicted by the deletion analysis.

(7) Russian

\[
\begin{array}{ccccccc}
\text{on} & \text{xоčit} & \text{kemutə} & \text{peľ/s/tīl} & \text{no} & \text{eml} \\
\text{he} & \text{wants} & \text{somebody.DAT} & \text{flatter} & \text{but} & \text{they} \\
nʲi=\text{znajut} & \text{kemu} & /*\text{kto} & /*\text{krvo} \\
\text{NEG}=\text{they.know} & \text{who.DAT} & /\text{who.NOM} & /\text{who.ACC} \\
\end{array}
\]

‘He wants to flatter somebody, but they don’t know who.’
Furthermore, true sluicing can go backwards. While this is not directly predicted by the deletion analysis, at the very least, it is not ruled by it.

(8) a. [I don’t know what creatures], but Tom definitely poisoned some creatures in the park.
    b. Russian

    ja n'i = znaju kovo no Tom točno otrav'il
    I NEG=I.know who.acc but Tom definitely he.poisened
    kovo f=park'i
    someone.ACC in=park
    ‘I don’t know what (lit. whom5), but Tom definitely poisoned something (lit. someone) in the park.’

Additionally, true sluicing can occur in embedded clauses.

(9) a. Tom poisoned some creatures in the park and [his sweetheart claims [that she doesn’t know [which creatures Tom poisoned in the park]]]
    b. Russian

    Tom otrav'il
    kovo f=park'i i jivo poredruč
    Tom he.poisened someone in=park and his girlfriend
    utv'-rzdat' sto vna n'i = znait kovo
    claims that she NEG=knows who.ACC


(10) Relative clause island
    a. Sluicing

    They want to hire someone who speaks a Balkan language, but I don’t remember which.
    b. No Sluicing

    *I don’t remember which Balkan language they want to hire someone who speaks.
    Russian
    c. Sluicing

    vn'i xet'at nen'at' kovo-n'ibut' kto = bi gover'il
    they they.want hire.INF who.ACC-IDF who=SUB he.spoke
    n'i = balkanskom jezik' e no ja n'i = pomn'u
    on=Balkan language but I NEG=I.remember
    on=what
    ‘They want to hire someone who speaks a Balkan language, but I don’t remember what.’

5 In Russian, the wh-word for animals is ‘who’. Other indefinites are regularly formed on the basis of the wh-word, see, e.g., Haspelmath (1997).
Admittedly, the fact that sluicing amnesties islands comes as an embarrassment to any straightforward deletion analysis of sluicing. Nevertheless, given that this property is widely observed in the languages with otherwise standard properties of the left periphery (clause-initial complementizers, wh-movement to the left edge of the clause, etc.), it is reasonable to adopt it as one of key diagnostics of the “true” sluicing.

2.4 Predictions of Alternative Analyses

For any kind of “reduced copula” analysis to be tenable, as a bare minimum, the respective non-reduced constructions should be attested in the language. In more favorable cases, the copula might be recoverable, or even obligatory, in some pseudo-sluicing constructions. For instance, this is so in Chinese, Adams and Tomioka (2012), and in Hmong, Chang (2010). One possible prediction of the reduced copula analysis is that case mismatches between the antecedent and the wh-phrase can be licit, like in the mock example (11a) and the Waubach Dutch spading\(^6\) example (11b):

\[(11)\]  
\[
\text{a. } \text{I gave flower to girl-DAT, but I don’t know [who-NOM she was].}
\]
\[
\text{b. } \text{A: ich han inne gezieë B: wea/*wem dat}
\]
\[
\text{I have someone seen who.NOM/who.ACC that}
\]
\[
\text{‘A: I’ve seen someone. B: Whom?’ (Craenebroeck 2012: 64)}
\]

As for island constraints, given that under this type of analysis no movement is assumed to occur, they are not expected to be operative in this situation. This, indeed, is what obtains in Chinese, Wang and Tomioka (2012: 225-226), and in some types of sluicing-like constructions in Japanese, Nakamura (2012).

The stripping analysis, on the other hand, will predict that embedded sluicing and backward sluicing will not be acceptable.

\[(12)\]  
\[
\text{a. } \text{*Tom poisoned pigeons in the park and sang that}
\]
\[
\text{his sweetheart poisoned pigeons in the park too.}
\]
\[
\text{b. } \text{Tom poisoned some creatures in the park and [his sweetheart claims}
\]
\[
\text{[that she doesn’t know [which creatures Tom poisoned in the park]]]}
\]
\[
\text{c. } \text{*His sweetheart too and Tom poisoned pigeons in the park}
\]
\[
\text{d. } \text{I don’t know whom, but Tom definitely poisoned someone in the park.}
\]

\(^6\) Sluicing Plus A Demonstrative In Non-Insular Germanic. The term is Craenebroeck’s.
These effects are probably explainable by the movement analysis of stripping, see, a.o., Sag (1976); Johnson (1996, 2001); Kim (1997); and Depiante (2000): the position of the ellipsis site on the left periphery of the sentence, or in an embedded structure, precludes the possibility of movement out of it.

If all criteria for sluicing are met, we can adopt Scenario A, and apply Merchant’s analysis to the language in question. We then need to establish the nature of WP, the projection that hosts wh-phrases in sluices, (5), and what triggers their movement into that projection.

The puzzle that I am going to address in this paper is that in Ossetic wh-phrases and (natural candidates for) complementizers are clause-internal, more specifically, preverbal, but sluicing here satisfies all the standard conditions.

3 Generalities on Ossetic

To repeat, Iron and Digor Ossetic are two closely related Eastern Iranian languages spoken in the Central Caucasus, see more details in Erschler (2009, 2012). As far as sluicing is concerned, the languages behave in a fairly similar manner. Unless explicitly indicated otherwise, all examples in this paper are from Digor Ossetic.

The languages are relatively consistently head-final. In particular, they exhibit predominantly SOV main constituent order, postpositions, and strictly head-final NPs. The morphology is mostly agglutinative. Ossetic languages exhibit a relatively rich case system (Nominative; Accusative/Genitive; Dative, Ablative, Inessive; Allative; Superessive; Equative, in Iron also Comitative). The NP is rigidly ordered and non-splittable: if a modifier needs to be moved (e.g. being a wh-word), the whole NP is pied-piped. Unless under specific discourse conditions, Ossetic shows pro-drop. Given referents other than subjects are typically expressed by clitic pronouns, which are available for all the cases, Erschler (2009, 2010). Scrambling is very widespread, and, besides the most frequent SOV order, SVO is common, and the other 4 possible permutations are in principle attested. The alignment is consistently nominative-accusative. Ossetic shows differential object marking: inanimate lexical nouns in the direct object position usually remain in the nominative.

3.1 WH-Movement in Ossetic

In contrast to otherwise relatively free scrambling, wh-phrases have to be strictly preverbal, Erschler (2012).

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7 The two cases are morphologically different only for pronominal clitics. When syncretic, I gloss this case as oblique.
8 More accurately, the comitative analogs of clitics in Iron are phonologically independent.
(13) a. Affirmative sentence
   \[
   \text{Soslan k’ere baχ’ardta}
   \]
   S. pie s/he.ate
   ‘Soslan ate a/the pie.’
b. Interrogative sentence
   \[
   k’ere \text{ ka baχ’ardta?}
   \]
   pie who s/he.ate
   ‘Who ate a/the pie?’
c. Wh-phrases do not stay in situ
   *\text{ka k’ere baχ’ardta?}
   Who pie s/he.ate

In multiple wh-questions, all wh-phrases obligatorily undergo movement into the preverbal position:

(14) a. \[\vžimn\ voslan-en ka či rardta?\]
    yesterday Soslan-DAT who what give.PST.3SG
    ‘Who gave what to Soslan yesterday?’
b. *\[\text{ka rardta či?}\]
    who give.PST.3SG what

Actually, the generalization about adjacency should be somewhat qualified: first, the enclitic cluster may be placed after the sentence-initial wh-phrase, (15); second, this is optionally possible for certain types of adverb, of which we will see some examples later on; third, this is obligatory for negation markers and negative indefinites, Erschler and Volk (2011).

(15) \[ka=de isk’mdndj?\]
    who=ACC.2SG s/he.will.push
    ‘Who will push you?’

All of the above fully applies to echo questions and embedded questions as well. We could have dismissed these facts as mere manifestations of focusing; however, the behavior of relative pronouns and some complementizers, hardly natural candidates for focused constituents, is strikingly similar to that of wh-phrases.

### 3.2 Finite Dependent Clauses in Ossetic

In finite dependent clauses, relative pronouns and some complementizers are PREVERBAL (with same qualifications as for wh-words). Sentences in (16) illustrate this phenomenon for complementizers.

(16) a. \[\text{[\textcolor{red}{nv = xolodil’nik}} \textcolor{green}{ku} \text{ basastnj]} \]
    \textcolor{red}{our=fridge} COMP \textcolor{green}{s/he.broke}
    \[\text{[\textcolor{blue}{wend = nin = nj}}\]
    then=DAT.1PL=ACC.3SG
    \textcolor{blue}{soslan qeber taud iskodta]}
    Soslan very quick s/he.fixed
    ‘When our fridge broke down, then Soslan fixed it very quickly for us.’

a’. *\text{ku \textcolor{red}{nv = xolodil’nik}} \text{ basastnj]}
    COMP \textcolor{red}{our=fridge} s/he.broke
    ‘when our fridge broke down...’ (intended)
b. [tusd ke rajdeta] [woj ne lederete]
   war COMP s/he.began it.OBL NEG you.understand
   ‘You don’t understand that a war has begun.’
   (lit. That a war has begun, you don’t understand that.’)

b’. *ke tusd rajdeta
   COMP war s/he.began
   ‘that a war has begun...’ (intended)

The same effect obtains for relative clauses, (17). Remarkably, although probably irrelevantly for our present purposes, they are always formed as correlatives. In (17), the correlate is ječi temerlan-i that Tamerlan-OBL.

(17) [ne = adem ka niccasta] [ječi temerlan-i χvccv = mv
   POSS.1PL=people who beat that T-obl with=ACC.1SG
   qiber finduj is-toχ-un]
   very wants PRV-fight-INF
   ‘I very much want to fight Tamerlan, who exterminated our people.’ Maliti B.

It is tempting to analyze the preverbal complementizers and relative pronouns as essentially clause-final, and their preverbal position as a result of some kind of prosodic inversion or mirror spellout.

(18) ...V COMP CP] → [CP ... COMP=V]

However, this account will predict that the verb must always occupy the rightmost position in the clause, whereas in actuality Ossetic dependent clauses are not strictly verb-final (although statistically they are indeed predominantly so):

(19) a. [CP Complementizer/Relative V XP]

b. [ke = jin findujurda izarej]
   REL.OBL=DAT.3SG s/he.talked at.night
   wobel sewumnej fismon kendemenj
   it.SUP morning regret s/he.will.do
   ‘(Next) morning, he will regret that he talked to him last night.’

The sentences in (19a-b) actually demonstrate that correlates are possible for other types of finite dependent clause as well. In those sentences, the correlates are woj in (19a) and wobel in (19b). This may raise the suspicion that all such clauses in Ossetic are actually relatives10, as has been argued for Adyghe in Caponigro & Polinsky (2011). However, in Adyghe, multiple relativization is severely restricted, whereas in Ossetic it is relatively free:

9 The verb *find- ‘to want’ is one of the very few that require a non-nominative, namely, an accusative subject. The “wantee” can only be expressed by an infinitival clause. The verb always shows the default 3SG agreement. In this specific example, the subject of *finduj is the elitic mv ACC.1SG.
10 Admittedly, on the analysis of Kayne (2010) any complement clauses are (disguised) RCs, but I do not pursue this line of analysis here.
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(20) a. \textit{ka kɐmɨ cərəj wəsə wəmɨ ?(je) kərəj}
\begin{footnotesize}
who where live.PRS.3SG wife there he ask.PRS.3SG
\end{footnotesize}
\textit{‘Wherever whoever lives, there he marries.’}

b. \textit{[ke bon]=ʃi _CI adtəj wɔj arxajdua}
\begin{footnotesize}
whose strength=ABL.3 what was it.OBL strived.to.do
\end{footnotesize}
\textit{‘Whoever was able to do whatever, they were striving at it.’}

On the other hand, in sentences with a genuine complementizer only one occurrence of the latter is possible, Erschler (2012):

(21) \textit{*ɔnəzər-mə ʃi kʷə vəɾba-səwə wəd}
\begin{footnotesize}
house-ALL who when PRV-come.PRS.3SG then
\end{footnotesize}
\textit{poss.3SG-hand-PL PRV-wash.PRS.3SG}
\textit{‘Whenever whoever comes home, they wash their hands.’ (intended)}

Historically, the pattern of preverbal placement probably arose through reanalysis of the preverbal focus position, as argued in Erschler (2012). Besides the preverbal complementizers, there exist “FLOATING” ones, which can occur anywhere between the left edge of the clause and the immediately preverbal position, (22). In this sentence, \textit{(cəməj)} in parentheses appears in all places where the complementizer may stand. Needless to say, only one copy of it may be actually pronounced. What governs the placement of floating complementizers is unclear.

(22) \textit{fid-i fiəndɨj [(cəməj) aboni (cəməj) Alan (cəməj)]}
\begin{footnotesize}
father-OBL wants COMP today COMP Alan COMP
\end{footnotesize}
\textit{horse COMP would.bathe COMP}
\textit{‘The father wants that Alan bathe the horse today.’}

Null complementizers are also attested, as illustrated by the sentence in (23), which is taken from a published literary text. Arguably, the null complementizers are allomorphs of the preverbal ones: the embedded clause in (23) can as well be \textit{foʃɡə kej kənən} writing COMP I.do ‘that I write’. Therefore, the null complementizer may be assumed to be preverbal as well. There also exist other marginal complementation strategies, but they are irrelevant for our present purposes.

(23) \textit{Iron Ossetic}
\textit{čidər=mən rəwəsdədəj mə=rəzərd-ə korrekətərv}
\begin{footnotesize}
someone=I.ALL publishing.house-ABL my=story-OBL proofs
\end{footnotesize}
\textit{vrəbaʃəsta vəmə afəməjəmən agurəje}
\begin{footnotesize}
s/he.brought and so I.obl looking.for
\end{footnotesize}
\textit{buwäldər ɓəzəštəj [cə foʃɡə kənən] wəj}
\begin{footnotesize}
all they.learned writing I.do it.OBL
\end{footnotesize}
\textit{‘Somebody brought the proofs of my story from the publishing house, and while (this person) was looking for me, everyone learned that I wrote.’}

At least descriptively, it is tempting to posit the following structures for wh-questions and dependent clauses with a preverbal complementizer:

\[(24)\]  

(a).  
\[
k’ere \ ka \ baχ’ardta? \\
\text{pie who s/he.ate} \\
\text{‘Who ate a/the pie?’} \\
\]

(b).  
\[
tuśd \ ke \ rajđdta \\
\text{war COMP s/he.began} \\
\text{‘that war has begun...’} \\
\]

My contention is that trees in (24 a’-b’) are correct. This presents a challenge to multiple spellout approaches to derivation: Given that CP is a phase, see Chomsky (2001) and subsequent work, we are forced to suppose that the internal position of C has to be achieved before the merger with the matrix clause. However, in the latter case, there is a question why the dependent clause remains to be labeled as a CP for the purposes of the further computation.
4 (Pseudo)-Sluicing in Ossetic

4.1 Tests for Standard Sluicing

Despite the unusual patterns of wh-placement and complementation, Ossetic shows a construction that is at least superficially similar to sluicing:

(25)  
\[
\text{soslan } \text{čider} \text{ } \text{ba} \chi \text{̄ardta} \text{ } \text{fal} \text{ } [\text{me} = \text{zonun} \text{ } [\text{či}]] \\
\text{Soslan something ate but NEG=I.know what} \\
\text{‘Soslan ate something, but I don’t know what.’}
\]

This construction exhibits the properties of true sluicing. To begin with, it is available for ANY WH-WORDS, without restrictions on the type of argument, the distinction between arguments and adjuncts, etc. This observation is relevant because, cross-linguistically, situations are attested when a sluicing-like construction is only grammatical for a subset of wh-phrases \(^{11}\).

(26) a. The Sluice is an Argument
\[
\text{vžin} \text{ } \text{nv = širxentem} \text{ } \text{kader} \text{ } \text{erbacudej} \\
\text{yesterday our=neighbors.ALL someone s/he.arrived} \\
\text{fal} \text{ } [\text{me} = \text{fivvwidton} \text{ } [\text{ka}]] \\
\text{but NEG=Lsaw who} \\
\text{‘Someone came to our neighbors yesterday, but I didn’t see who.’}
\]

b. The Sluice is an Adjunct
\[
\text{irbek } \text{goret-me} \text{ } \text{randej} \text{ } \text{fal} \text{ } [\text{me} = \text{zonun} \text{ } [\text{cemem}]] \\
\text{Irbek city-ALL went but NEG=I.know why} \\
\text{‘Irbek went to Vladikavkaz, but I don’t know why.’}
\]

c. \[
\text{soslan } \text{vrgjaw} \text{ } \text{nifniu}j \text{ } \text{uj} \\
\text{Soslan late asleep is} \\
\text{ba=j } \text{zonaj} \text{ } [\text{alan=ba} \text{ } [\text{kud}]] \\
\text{PRV=ACC.3SG know.SUB.2SG Alan=CTR when} \\
\text{‘Soslan fell asleep late. Guess, when Alan (did so).’}
\]

The sluice may precede the matrix verb in Ossetic, unlike what is reported for Persian, by Toosarvandani (2008: 689):

(27)  
\[
\text{soslan } \text{čider} \text{ } \text{ba} \chi \text{̄ardta} \text{ } \text{fal} \text{ } [\text{či}] \text{ } \text{woj} \text{ } \text{me} = \text{zonun} \\
\text{Soslan something ate but what i.OBL NEG=I.know} \\
\text{‘Soslan ate something, but I don’t know what.’}
\]

The case matching, one of the strongest arguments for deletion analyses of sluicing, Merchant (2001: 89), holds in Ossetic for all the cases.

\(^{11}\) For instance, this is so in Mandarin Chinese, Wang (2002).
(28) a. Allative

\[
\begin{array}{llllll}
  \text{alan k} & \text{kemeder} & \text{niffīnsta} & p'ismo \text{ fal} & \text{[[keme} & /\text{ka]} \\
  \text{woj} & ne = \text{zomon} & \text{it.OBL} & \text{NEG} = \text{I.know} \\
\end{array}
\]

\[
A. \text{someone.ALL wrote letter but who.ALL who.NOM} \\
\]

‘Alan wrote a letter to somebody, but I don’t know to whom.’

b. Iron: Comitative

\[
\begin{array}{llllll}
  \text{šošlan} & \text{žnon} & \text{kejimed} & \text{erbasodi} & \text{fele} & \text{kejine} \\
  \text{S.} & \text{yesterday} & \text{someone.COM arrived but who.com} \\
  \text{woj} & ne = \text{žonon} & \text{it.OBL} & \text{NEG} = \text{I.know} \\
\end{array}
\]

‘Soslan arrived yesterday, but I don’t know with whom.’

Furthermore, Ossetic does not show ADPOSITION STRANDING, and, accordingly, postposition drop is strongly dispreferred, compare Merchant (2001: 91):

(29)

\[
\begin{array}{llllllllll}
  \text{keder} & \text{χecc} & \text{duɾda fal} = \text{ŋ} \\
  \text{someone.OBL} & \text{with talked but=} \text{ACC.3SG} \\
  \text{[ne = udi} & \text{kenun} & \text{[ke} & \text{*} & \text{χecc}] \\
  \text{NEG=} \text{thought I.do who.OBL} \text{with} \\
\end{array}
\]

‘He talked to somebody, but I don’t remember to who.’

The only preposition, \text{ene} ‘without’, behaves exactly in the same manner:

(30)

\[
\begin{array}{llllllllll}
  \text{ene} & \text{kemjej} = \text{šin} & \text{cewug} & \text{rawadej} \\
  \text{without} & \text{someone.ABL = DAT.3SG} & \text{go.CVB} & \text{it.turned.out} \\
  \text{fal} & \text{[*} & \text{ene] \text{kemjej} & \text{woj = ba ne} & \text{udi} & \text{kenun} \\
  \text{but} & \text{without} & \text{who.ABL} & \text{it.OBL=CTR} & \text{NEG} & \text{thought I.do} \\
\end{array}
\]

‘They had to go without somebody, but I don’t remember without whom.’

Additionally, Ossetic allows SPROUTING, i.e. the situation when the sluice corresponds to an argument/adjunct that is absent from the antecedent. In (31), it is illustrated only for a complement and one type of adjunct, but in principle it is unrestricted. On the other hand, in languages that lack genuine sluicing, sprouting is not always possible: for instance, in Chinese it is impossible for arguments, Adams and Tomioka (2012: 107).

(31) a. Complement sprouting

\[
\begin{array}{llllllllll}
  \text{suvellon} & \text{cumuj} & \text{fal} & \text{ne = zonun} & \text{či} \\
  \text{child} & \text{drinks but} & \text{NEG} = \text{I.know what} \\
\end{array}
\]

‘The child is drinking, but I don’t know what.’

b. Adjunct sprouting

\[
\begin{array}{llllllllll}
  \text{soslan} & \text{erba} & \text{cud} & \text{fal} ( = \text{ŋj}) & \text{ne = zonun} & \text{ke} & \text{χecc} \\
  \text{S} & \text{arrived} & \text{but=} \text{ACC.3SG} & \text{NEG} = \text{I.know} & \text{who.OBL} \text{with} \\
\end{array}
\]

‘Soslan arrived, but I don’t know with whom.’
Analogously to true sluicing, (8), this type of ellipsis can go **BACKWARDS**. We will later see that this option is unavailable for stripping in Ossetic.

(32) a. [Ambient clause [Sluice]] [Antecedent]
   b. \[ne\ = \_ j\ zonun [cebel]] \[fal = \_ mi \ urwages \ keney\]
   \[NEG=ACC.3SG \ I.know \ what.SUP \ but=ABL.1SG \ belief \ does\]
   \[Medine \ cebeler \ ke \ cezduj \ je\]
   M. \ something.SUP \ COMP \ plays \ it.NOM

‘I don’t know what, but I believe Madina plays something.’

In a further analogy to true sluicing, (9), this type of ellipsis is **unbounded**:

(33) a. \[Antecedent\] \[Matrix S [Ambient clause [Sluice]]\]
   b. \[soslan \ ćider \ baχ“arida \ uma \ [gurusχe \ kenun\]
   S. \ something \ ate \ and \ suspicion \ I.do\]
   \[medine \ ke \ zonuj [či]] \ wobl\]
   \[Madina \ COMP \ knows \ what \ it.SUP\]

‘Soslan ate something and I suspect that Madina knows what.’

Unbounded sluicing is also possible with floating and null complementizers:

(34) Iron Ossetic
a. floating complementizer
   \[šošlan \ șodėr \ baχordta \ [eme \ = \ mem \ after \ kezə\]
   S. \ something \ ate \ and=ALL.1SG \ so \ looks\]
   \[soma \ medine \ ʒonə \ [sə]]\]
   COMP \ M \ knows \ what\]

‘Soslan ate something, and it seems to me that Madina knows what.’

b. (optionally) null complementizer
   \[šošlan \ șodėr \ baχordta \ [eme \ after \ q“ødə \ kenən,\]
   S. \ something \ ate \ and \ so \ thought \ I.do\]
   \[murim \ = \ jə \ ʒonə \ [sə]]\]
   M=ACC.3SG \ knows \ what\]

‘Soslan ate something, and I think Madina knows what.’

c. the same sentence with an overt complementizer
   \[šošlan \ șodėr \ baχordta \ [eme \ už \ dožerdəg \ ne=kenən\]
   S. \ something \ ate \ and \ I \ doubtful \ NEG=I.do\]
   \[murim \ = \ jə \ kej \ ʒonə \ [sə]]\]
   M=ACC.3SG \ COMP \ knows \ what\]

‘Soslan ate something, and I don’t doubt that Madina knows what.’

---

12 There might arise a terminological confusion between **unbounded** sluicing and **long-distance** wh-movement (which doesn’t exist in Ossetic). These are unrelated phenomena.
Finally, Ossetic (pseudo)-sluicing is insensitive to islands.

(35) Coordinate Structure Constraint
a. ‘Irv and someone were dancing together, but I don’t know who. (Ross 1969)
a’. *Irv and someone were dancing together, but I don’t know who Irv and who were dancing together.

b. soslan gažžet uma kiwunuge balžedta fal [ne = zonun]
soslan newspaper and book bought but NEG=I.know
[čiwařer kiwunuge]
which book
‘Soslan bought a newspaper and a book, but I don’t know which book.’
b’. A variant with deleted material recovered
*fal [ne = zonun [čiwařer kiwunuge balžedta uma]
but NEG=I.know which book bought and
gažžet]
newspaper

The same holds for all island constraints in Ossetic I have tested so far, viz. Complex NP constraint, Left Branch Constraint, Adjunct Constraint, and extraction out of sentential complements:

(36) Iron Ossetic
a. Adjunct Constraint
šoslan asədî didindže balženņane wəmenņe ju čožg
S went.out flowers buy.INF.ALL because one girl
ju = čožgdenne swa. fiłu = ju me = čožtə kəsə čožg
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.’
b. Sentential complement
žačtoj [sədur kej baχordtoj] fiłu me = žonən sə
they.said something COMP they.ate but NEG=I.know what
‘They told that they had eaten something, but I don’t know what.’
c. Complex NP Constraint
kejder baχx=əršənne qavənc jevropejag užvgətəj
someone.OBL hire.INF.ALL they.intend European languages.ABL
ju či Žonə əxəm fiłu savər užag wəj me = 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.’

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) on how verb phrase ellipsis and sluicing differ in this respect in English. If wh-phrases land low, like in
Hindi, where they are supposed to move to Spec vP\textsuperscript{13}, sluicing for many speakers does not amnesty islands, Manetta (2011); Bhattacharya and Simpson (2012).

### 4.2 Potential Alternative Analyses

We still need to rule out the alternative possibilities, namely, that (pseudo)-sluicing is merely an instance of stripping or a reduced copular construction. Sentences in (32) and (33) show that sluicing-like constructions cannot arise via stripping, because stripping in Ossetic, like in English, although grammatical, cannot occur in embedded clauses or go backwards:

(37) a. Grammatical sentence without ellipsis  
\begin{align*}
\textit{alan kosuj cemnej soslan = der } & \textit{kosa (woj tu}x\chi \textit{ej)} \\
\text{Alan} & \text{ works } \text{COMP} \text{ soslan=too } \text{would.work } \text{it.OBL} \text{ for} \\
\text{‘Alan works so that Soslan would work too.’}
\end{align*}

b. No stripping in embedded clause  
*\begin{align*}
\textit{alan kosuj cemnej soslan = der } & \textit{(woj tu}x\chi \textit{ej)} \\
\text{Alan} & \text{ works } \text{COMP} \text{ soslan=too } \text{it.OBL} \text{ for}
\end{align*}*

c. forward stripping  
\begin{align*}
\textit{alan kiwunug-ute kes-un warzuj medine = der} \\
\text{A. book-PL read-INF loves M.=EMP}
\end{align*}

‘Alan loves to read books, and Madina loves to read books too.’

d. No backward stripping  
*\begin{align*}
\textit{medine = der } & \textit{alan kiwunug-ute kes-un warzuj} \\
\text{M.=EMP A. book-PL read-INF loves}
\end{align*}*

Idem (intended reading)

What remains to check is whether (pseudo)-sluicing is somehow reducible to a (pseudo)-cleft or some other type of a copular construction. They are all ruled out because the copula cannot be inserted in slui\textsuperscript{13}ces or in fragment answers, cf. a similar argument in Toosarvandani (2008: 682-684) for Persian.

(38) a. Q: \begin{align*}
\textit{kemne} & \textit{fedezurdta medine?} \\
\text{who.ALL called Madina}
\end{align*}

‘Who did Madina call?’

A. \begin{align*}
\textit{ok} & \textit{Soslan-me} / *\textit{?Soslan adtej} / *\textit{Soslan-me adtej} \\
\text{Soslan-ALL Soslan was Soslan-ALL was}
\end{align*}

‘Soslan’

b. \begin{align*}
\textit{NEG=ACC.3SG I.know what.SUP is but=abl.1sg belief does} \\
\text{Medine cebeldern ke cesduj je}
\end{align*}

‘I don’t know what, but I believe Madina plays something.’

\textsuperscript{13}Or, on the analysis of Mahajan (2005), to a lower focus position above the TP.
Furthermore, it is normally impossible to drop the copula, even in the present, where copula drop is typologically common:

(39)  
\[
\textit{soslan } \chi^\text{vndar-i} \quad *(ef) \\
\textit{S. house-OBL is} \\
\textit{‘Soslan is in the house.’}
\]

Finally, there are no (pseudo)-clefts attested in Ossetic. To recapitulate, scenarios other than wh-movement to a sufficiently high position plus deletion do not seem plausible in our case. As we have just seen, a reduced copular structure or stripping are ruled out. The properties discussed in section 4.1, namely, case matching, lack of adposition stranding, and absence of restrictions on the type of wh-phrase, serve as arguments for movement followed by deletion. The lack of island constraints indicates that the position targeted by the movement is situated relatively high in the clause.

5 Analysis

So far, we have seen that Ossetic pseudo-sluicing matches all standard criteria for sluicing. This allows us to adopt Merchant’s (2001, 2004, 2008) analysis wholesale. The structure of a sluiced clause, like exemplified in (40a), then will be the one shown in (40b).

(40)  
\[
\textit{Soslan something ate but NEG=1.know what} \\
\textit{‘Soslan ate something, but I don’t know what.’}
\]

However, as was already illustrated in (13), much overt syntactic material may precede wh-phrases in wh-questions. By writing ?P in (41a), I express my agnosticism as to the structural position of this material.

(41)  
\[
\text{[?P [FocP [CP [... [sp } v=\text{ser =in} ] [sp sermet-i gurv-bel] cumun nissast\text{a?} \\
\text{his=head=DAT.3SG S-OBL body-SUP why glued.up} \\
\text{‘Why did he_1 glue up Sarmat,’s head to his_2 body?’ Maliti V 2008}
\]

In the light of examples like in (13 c) and (41b), we would expect that pre-complementizer material may be retained under sluicing. This prediction is borne out:
Sluicing and Location of CP in Ossetic

(42) a. alan soslanı vəźine fənnadta [fəl ne = zonun
Alan Soslan.ACC yesterday beat.up but NEG=1.know
[αčibon ka] (woj)
today who (i.OBL)
‘Alan beat up Soslan yesterday, but I don’t know who (did so) today.’

b. alan medine-mv nifflinta p’ismo
Alan Madina lett
fal soslan keme woj = ba ne = zonun
but S who.ALL it.OBL=CTR NEG=1.know
‘Alan wrote a letter to Madina, but to whom (did so) Soslan, I don’t know.’

The sentences in (42) are analogous to “contrastive sluicing” sentences discussed in section 2.1. To counter the possible objection that the sentences in (42) actually arise through gapping, and not sluicing, I observe that embedded gapping is ungrammatical in Ossetic:

(43) fidgun-te ka warsta wəɣən leg isenbaldaŋj
meat.pie-PL who s/he.loved such man met
k’abuskagun-te ka *(warsta) wəɣən šilgojmag-(i)
cabbage.pie-PL who s/he.loved such woman-OBL
‘The man who liked meat pies met [the woman who *(liked) cabbage pies.’

It is thus reasonable to assume that what we deal with in (42) are indeed instances of sluicing with the CP located unusually low in the clause.

5.1 Which Projection Hosts WH-Phrases?

The key contention of this paper is that wh-phrases are overtly moved into Spec CP in Ossetic. The sluicing data presented so far have, hopefully, amply illustrated the fact that wh-phrases do move into some position relatively high in the clause. It still needs to be established that this projection is indeed CP. One strong argument to this effect is that non-null complementizers are incompatible with wh-words in embedded wh-questions or sluices

(44) Embedded questions
a. Alan bafarsta (*ke) ka urbcudaj (woj)
A. asked COMP who arrived i.OBL
‘Alan asked, who arrived.’ (intended)

Sluices
b. Madina urbcuwudaj fal Alan ne = rimisuj (*ke) ked
Madina will.arrive but A. NEG=remembers COMP when
‘Madina will arrive, but Alan doesn’t remember when.’

Consequently, it is natural to conclude that we are dealing here with a regular instance of wh-movement.
5.2 Typological Counterparts of Ossetic

It is instructive to compare the picture in Ossetic with those in languages that show sluicing, and are to some extent typologically similar to Ossetic, but whose clause structure is better understood. Here, I will address Hungarian, Persian, and Bangla. It should be stressed that the Ossetic-type word order pattern whereby both wh-phrases and complementizers are preverbal, appears to be typologically unique.

5.2.1 Sluicing in Hungarian

Wh-phrases in Hungarian are immediately preverbal – a striking, but apparently accidental similarity to Ossetic. Under most analyses, Hungarian wh-phrases are assumed to occupy Spec FocP, Kiss (2002). The similarity between Ossetic and Hungarian extends even further: the latter, as well as the former, exhibits canonical sluicing, van Craenenbroeck and Lipták (2005). Hungarian complementizers, however, are strictly clause-initial and wh-phrases are compatible with appropriate overt complementizers – both in embedded questions and in sluices.

\[(45)\quad \text{a fiúk lányokat hívtak meg, de nem tudom,}\\ \quad \text{the boy.PL girl.PL.ACC invite.PST.3PL PRV but not know.1SG}\\ \quad \text{hogy ki melyiket}\\ \quad \text{COMP who which.ACC}\\ \quad \text{‘The boys invited girls, but I don’t know who (invited) which.’ (Anna Szabolcsi, p.c.)}\\
\]

Consequently, it is plausible to assume that wh-movement in Ossetic exists and, despite the surface similarity, targets a higher projection than that in Hungarian.

5.2.2 Sluicing in Persian

Persian is so far the only Iranian language whose syntax is relatively well studied. Its syntactic similarities to Ossetic are rather typological than genetic: the time depth of the split between the languages, and the difference in their histories are enormous. Still, some insight can be gleaned from their comparison. In non-reduced Persian questions, wh-phrases stay in situ (or, under a different analysis, they adjoin to vP, Kahrnemuyipour (2001)).


\[(46)\quad \text{The boys who (invited) which of the girls?}\\ \quad \text{‘The boys who invited which girl?’ (Toosarvandani, 2008)}\\
\]
This picture might seem fairly similar to the Ossetic one, however, there exist a number of differences: first, the complementizer, *ke*, in Persian is obligatorily clause-initial, Toosarvandani (2008: 695, footnote 15). Second, *ke* is possible in embedded questions and with sluices:

(47) a. *hæds bezeñ (ke) ramin či xarid*
    guess hit.IMP.2SG COMP Ramin what bought
    ‘Guess what Ramin bought.’ (Dara Fourouzan, p.c.)

b. *kesi man-o hol dad*
    someone I-ACC 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.)

These data support the idea that, in Ossetic, where wh-phrases are incompatible with overt complementizers, wh-phrases occupy a relatively high position, both in sluices and in non-reduced embedded wh-questions.

### 5.2.3 Sluicing in Bangla

Bangla, an Indic language, does not exhibit overt short-distance wh-movement, Bayer (1996), Bhattacharya and Simpson (2003). Nonetheless, it employs a sluicing construction that satisfies all the standard tests: it requires case matching, amnesties islands (Bhattacharya, Simpson 2012), can go backwards, (48a) and be embedded, (48b), my own field data.

(48) a. *ami dzani na ke kintu mini-r dokan-tʰeke keu*
    I know NEG who but Mini-GEN shop-from someone
    *ek-ثار böj curi koreteʰe*
    one-CL book stealing did
    ‘I don’t know who, but someone stole a book from Mini’s shop.’

b. *mini-r dokan-tʰeke keu ek-ثار böj curi koreteʰe*
    Mini-GEN shop-from someone one-CL book stealing did
    *ar amar dzišaš je mini dzani ke*
    and my belief COMP Mini knows who
    ‘Someone stole a book from Mini’s shop and I believe that Mini knows who.’

This is expectable, given the proposal of Bhattacharya and Simpson (2003) that wh-phrases in Bangla are actually moved into C-domain. It remains to be seen whether this analysis really
hinges on their assumption that Bangla is underlyingly an SVO language. The latter point has been argued against in Bhatt and Dayal (2007). In a direct analogy to Ossetic, Bangla wh-phrases are incompatible with overt complementizers, Simpson, Bhattacharya (2012). Once again, the Bangla data, and their analysis, are in good agreement with the conclusion that in Ossetic wh-phrases move into Spec CP.

To recapitulate the discussion of this subsection, the available cross-linguistic data support the scenario advocated in this paper, namely, that Ossetic sluicing-like constructions are obtained by first moving the wh-phrases into Spec CP and then deleting the complement.

6 Ossetic Data as an Argument for a PF Deletion Analysis of Sluicing

All the discussion above has been based on the assumption that the deletion analysis is essentially correct. A number of authors challenge this idea, among the most recent publications see Culicover and Jackendoff (2012) and Sag and Nykiel (2011). So, why accept the deletion analysis in the first place? The peculiar Ossetic word order restrictions provide an additional argument for this type of analysis. As it has been already illustrated above, certain items may intervene between wh-phrases and the verb in Ossetic.

\[(49) \quad \text{ka fulder baniwaza?} \]
\[\text{who more s/he.would.drink} \]
‘Who would drink more?’

Accordingly, 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 the word order in (50b) and (49).

\[(50) \]
\[\text{a.} \quad *alan soslani ežine fennadta fal ne = zonun} \]
\[\text{Alan Soslan.ACC yesterday beat.up but NEG=I.know} \]
\[\text{[ka acibon] (woj)} \]
\[\text{who today (i.OBL)} \]
‘Alan beat up Soslan yesterday, but I don’t know who did so today.’

\[\text{b.} \quad \text{madini bere leq”entv warzunce [fal = ši ka fulder]}} \]
\[\text{Madina.ACC many boys they.love but=ABL.3PL who more} \]
\[\text{woj = ba ne = zonun} \]
\[\text{i.OBL=CTR NEG=I.know} \]
‘Many boys love Madina, but I don’t know who of them does so most.’

Consequently, the word order in sluices exactly reproduces all the quirks of the word order in wh-questions. A scenario other than deletion would need to independently explain this odd coincidence.
7 Conclusion

In this paper, I have documented sluicing in Ossetic, showed that it has properties very closely resembling those that sluicing in more familiar languages with wh-fronting has. Specifically, sluicing is permitted for any type of wh-phrase; the wh-phrase must match in case with its antecedent; no adposition drop is legitimate in sluicing, in complete analogy to non-reduced questions; sluicing may precede the antecedent and occur in embedded clauses; finally, sluicing amnesties the island constraint violations, which is otherwise inadmissible in Ossetic. I have argued on this basis that the landing site of Ossetic wh-phrases is the true CP, (51), or, more precisely, a fragment thereof, and the movement is a regular instance of wh-movement. This fact comes as a surprise, given the very unusual word order in Ossetic: not only wh-phrases, but even some complementizers are immediately preverbal, whereas familiar clause-edge complementizers do not exist at all.

\[
\begin{array}{c}
\text{XP} \\
\text{CP} \\
\text{wh-phrase} \\
C' \\
C^0 [+\text{wh}] \\
\text{TP} \\
t_{\text{wh}} V
\end{array}
\]

(51)

How to derive this structure remains an open question.

Appendix: Non-WH Sluicing in Ossetic

Interestingly, the tests presented in section 2 single out one more type of elliptic sentences with a fragment of a dependent clause as the remnant. Such sluicing-like structures without a wh-phrase in the remnant are ungrammatical in English, (52a-b), but are not that uncommon cross-linguistically, (52c-d).

(52) a. *Someone called, but I don’t know whether Mary.
   b. *Someone called, but I don’t know (whether) Mary or John.
   c. Russian
      
      \[
      \begin{array}{cccc}
      \text{ktot} & \text{zven'ili} & \text{no} & \text{ja} \quad n'i=znaju \\
      \text{someone} & \text{he.called} & \text{but} & \text{I} \quad \text{NEG=I.know} \quad \text{Masha}=Q
      \end{array}
      \]
      ‘Someone called, but I don’t know whether it was Masha.’
   d. \text{ktot} \ zven'ili \ no \ ja \ n'i=znaju \ masha = *li \\
      someone \ he.called \ but \ I \ NEG=I.know \ Masha \ or \ Dasha
      ‘Someone called, but I don’t know whether it was Masha or Dasha.’
These constructions satisfy all the tests for sluicing discussed above. In (53), I only illustrate some of these for this type of sluicing in Russian:

(53) a. Case matching

\[
\begin{align*}
\text{mos} & \quad \text{kevot} & \quad \text{nor}^{\prime} \text{isval} & \quad \text{no} & \quad \text{ja} & \quad n^i = \text{znaju} \\
\text{Vasya.NOM} & \quad \text{someone.ACC} & \quad \text{he.drew} & \quad \text{but} & \quad \text{I neg}=\text{I.know} \\
\text{ma}^{\prime} \text{u}*\text{ma}^{\prime} & \quad \text{n} & \quad \text{Me} & \quad \text{li} \\
\text{Masha.ACC} & \quad \text{Masha.NOM} & \quad \text{=} & \quad \text{Q} \\
\end{align*}
\]

‘Vasya drew somebody, but I don’t know whether (it was) Masha.’

b. Backward sluicing

\[
\begin{align*}
\text{ma}^{\prime} \text{u} = \text{li} & \quad \text{ja} & \quad n^i = \text{znaju} & \quad \text{no} & \quad \text{vas}^\prime & \quad \text{tof}^n & \text{a} \\
\text{Masha.ACC} & \quad \text{I} & \quad \text{neg}=\text{I.know} & \quad \text{but} & \quad \text{Vasya.nom} & \quad \text{definitely} \\
\text{kevot} & \quad \text{nor}^{\prime} \text{isval} & \quad \text{someone.ACC} & \quad \text{he.drew} \\
\end{align*}
\]

‘I don’t know whether (it was) Masha, but Vasya definitely drew somebody.’

c. Relative clause island

\[
\begin{align*}
\text{ne}^i & \quad \text{xe}^\prime \text{at} & \quad \text{men}^\prime \text{at} & \quad \text{kevot} & \quad \text{nor}^{\prime} \text{isval} & \quad \text{kto} = \text{bi} & \quad \text{gover}^\prime \text{il} \\
\text{they} & \quad \text{they.want} & \quad \text{hire.INF} & \quad \text{who.ACC-IDF} & \quad \text{who}=\text{SUB} & \quad \text{he.spoke} \\
\text{no} & \quad \text{balkanskom} & \quad \text{jizik}^\prime \text{e} & \quad \text{no} & \quad \text{ja} & \quad n^i = \text{pomn}^\prime \text{u} \\
\text{on}=\text{Balkan} & \quad \text{language} & \quad \text{but} & \quad \text{I NEG}=\text{I.remember} \\
\text{no} & \quad \text{bulgarskom} = \text{li} \\
\text{on}=\text{Bulgarian} & \quad \text{=} & \quad \text{Q} \\
\end{align*}
\]

‘They want to hire someone who speaks a Balkan language, but I don’t remember whether (it is) Bulgarian.’

I leave the analysis of this type of sentence for further study.
References


