

Exploring the cross-linguistic variation in sluicing

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- This talk presents the results of an in-progress investigation of sluicing in Meadow Mari (Uralic)
- Aims:
 - (i) explore the empirical landscape of sluicing in Mari
 - (ii) identify the crucial properties of the constructions employed wrt to the division between isomorphic and non-isomorphic sluicing
 - (ii) outline theoretical analyses that capture these properties
- Novel empirical observations: Meadow Mari utilizes three types of sluicing-like constructions; the most general is illustrated in (1)

(1) Tāj alakö-lan oksa-m puenat no **kö-lan-(že)**, om
2SG someone-DAT money-ACC give.PRF.2SG but who-DAT-POSS.3SG NEG.PRS.1SG
pale.
know

'You gave money to someone but I don't know to whom.'¹ [Mari]

- Proposal:
 - (i) the pattern in (1) splits into two subtypes, depending on the presence of 3SG Poss
 - (ii) *wh*-remnants without 3SG Poss show the footprint of isomorphic sluicing
 - (iii) 3SG Poss marks contrastive topics – support for this comes from the comparison with Udmurt, a closely related language

1 Background

- Mari and Udmurt are Uralic languages spoken in the European part of the Russian Federation.
- Based on the Russia Census of 2010, Udmurt has approx. 324,000 speakers in an ethnic population of 550,000 and Mari has approx. 388,000 speakers in an ethnic population of about 547,000.² Note: Mari has two main varieties that have their own literary norms, Meadow Mari and Hill Mari.

¹1 = first person, 2 = second person, 3 = third person, ACC = accusative, CMPR = comparative, CN = connegative, DAT = dative, EVID = evidential, FUT = future, GEN = genitive, GER = gerund, INE = inessive, NEG = negative, NMLZ = nominalizer, NOM = nominative, PL = plural, POSS = possessive, PRF = perfect, PRS = present, PST = past, PTCP = participle, Q = question (marker), SG = singular.

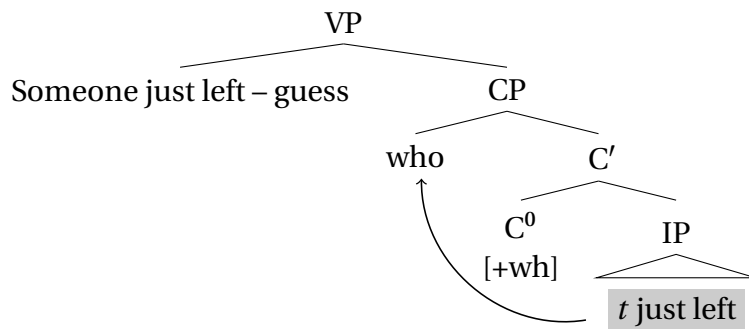
²The census data are available online at: http://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm (Last accessed: 25 January 2022).

- Mari and Udmurt are minority languages in the Russian Federation; they have official status in the Mari El Republic and the Republic of Udmurtia, respectively.
- This talk focuses on Meadow Mari (henceforth, Mari); the data come from my own fieldwork with six native speakers (age 35–50, representing the Morkinsko-Sernurskiy dialect (with different places of birth), currently residing in Hungary and Estonia). The Udmurt data were collected from two native speakers (representing the Northern and the Southern dialects, residing in Hungary and Estonia). Additionally, some examples from the Meadow Mari corpus are also used.³
- Typological profile of these languages: highly agglutinative; nominative-accusative alignment; Differential Object Marking (in Udmurt); widespread use of non-finite subordination; on basic word order and *wh*-questions see below
- Their syntax is understudied, especially from a formal perspective; no previous work on ellipsis exists.

2 Sluicing: theoretical background

- According to structural approaches to ellipsis (see Merchant 2018), there is syntactic structure present in the ellipsis site; specifically, under the PF-deletion approach, it is assumed that the syntactic structure is present throughout the derivation, but it is left unpronounced.
- PF-deletion approach treats sluicing as the non-pronunciation of a regular *wh*-question to the exclusion of a *wh*-phrase, without affecting its syntactic or semantic properties (Ross 1969; Merchant 2001).

(2) English sluicing: PF-deletion/non-pronunciation approach

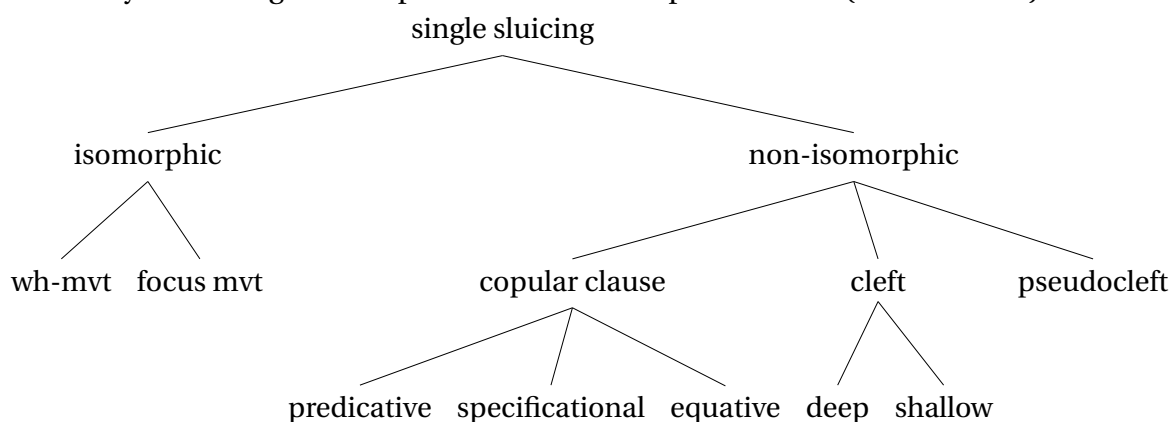


- ↪ sluicing is thus a type of constituent deletion; the remnant must evacuate the ellipsis site
- ↪ (high degree of) isomorphism between the sluice and the antecedent

³The corpus, available at: http://meadow-mari.web-corpora.net/index_en.html, currently contains 5.53 million words (last accessed: May 20, 2024).

- Cross- and intralinguistic variation in sluicing: certain ‘sluicing-like constructions (SLC)’ (Paul & Potsdam 2012) are to be derived from non-isomorphic sources.

(3) Taxonomy of sluicing: Isomorphic vs. non-isomorphic sources (Vicente 2018)



- Isomorphic sluicing with focus movement or scrambling:
Modern Standard Turkish (İnce 2012); Farsi (Toosarvandani 2018); Hungarian (van Craenenbroeck & Lipták 2006; Lipták 2018); certain sluices in Japanese (Takita 2009; Vicente 2018)
- This line of analysis has led to the proposal that the feature content of *wh*-phrases in non-elliptical questions determines what kind of remnants can escape TP-ellipsis in sluicing (‘The *wh*/sluicing Correlation’; see van Craenenbroeck & Lipták 2006).
- Non-isomorphic sluicing is diagnosed by a battery of tests (see below).
- Tentatively, one might add a further type to the taxonomy of non-isomorphic sources: sluicing with massive pied-piping in English.
When fronted, elliptical questions allow massive pied-piping (4a) in contrast with non-elliptical ones (4b) (Ross 1969). Abels (2019) proposes that (4a) is a contrastive left dislocation (CLD) with clausal ellipsis, see Section 5.2.

- (4) a. He has a picture of somebody, but [a picture of who] I don’t know.
 b. *He has a picture of somebody, but [a picture of who] he has I don’t know.
 c. *He has a picture of somebody, but I don’t know a picture of who. (Abels 2019)

➤ “[S]luicing is a syntactically heterogeneous construction both cross- and intra-linguistically” (Vicente 2018)

➤ Most “exceptional” cases of sluicing have been argued to arise from non-isomorphic sources

Q: What type of sluicing constructions are attested in Mari? Are they derived from an isomorphic source? If yes, what kind of movement is involved? If no, what is the structure of the non-isomorphic source?

3 Bird’s-eyes view on sluicing in Mari

- Mari employs three types of constructions that functionally correspond to English sluicing. The most general one is illustrated in (5):

(5) Tâj alakö-lan oksa-m puenat, no kö-*(lan)-(že) (*uleš),
 2SG someone-DAT money-ACC give.PRF.2SG but who-DAT-POSS.3SG be.PRS.3SG
 om pale.
 NEG.PRS.1SG know
 ‘You gave money to someone but I don’t know to whom.’ [Mari, SLC1]

- (5) already highlights two crucial properties of this SLC:
 - the *wh*-remnant shows case connectivity effects
 - no copula is used

Importantly, the other two strategies used in Mari are clearly copular clauses.

- As shown in (5), the *wh*-remnant can also bear a 3SG possessive morpheme.
- Novel empirical findings about (5):
 - bare and “possessed” *wh*-remnants do show similarities, but there are crucial differences between them → SLC1a and SLC1b
 - ellipsis with “possessed” remnants shows more interspeaker variation
 - the key to the understanding SLC1b are the discourse functions of 3SG Poss
- Several tests were applied to SLC1a and SLC1b in order to diagnose the (non)-isomorphism of the source. These include P(reposition)-stranding (cf. Merchant 2001), *else*-modification, and argument-adjunct asymmetries. Additionally, it is important to exclude other elliptical processes, e.g., stripping. The findings are summarized in the table below (see the Appendix for the data).

	case matching	copula	<i>wh</i> -adjuncts	backwards ellipsis	<i>else</i> -modification
SLC1a	✓	✗	✓	✓	✓
SLC1b	✓	✗	%	✓	✗

4 Towards an analysis: SLC1a as isomorphic sluicing

- SLC1a passes the diagnostics for isomorphic sluicing. An isomorphic analysis implies the availability of *wh*-movement, though.
- Background on word order and *wh*-movement in Mari
 - word order: Mari is a fairly strict SOV language; but the literature occasionally reports more variation
 - *wh*-phrases: interspeaker variation

Zooming in on the judgements of two speakers:

Speaker A

- * strongly prefers for immediately preverbal *wh*-phrases (6)
- * immediately preverbal, but not V-final *wh*-phrases are strongly dispreferred (7) and so are the sentence-initial ones (8)
- * multiple *wh*-questions: preference for (9) (Superiority?)

Speaker B

- * accepts (6) as well as (7) and (8); the latter two are considered more marked, though
- * accepts both (9) and (10), in different context, with different discourse properties

- | | | |
|-------------------------------------|-------------------------------------|----------------------------|
| (6) a. DO <i>who</i> V? | (7) a. <i>who</i> V DO? | (8) a. <i>who</i> DO V? |
| b. Adv Subj <i>whom</i> V? | b. <i>whom</i> V Subj Adv? | b. <i>whom</i> Adv Subj V? |
| (9) a. Adv <i>who to whom</i> DO V? | (10) a. Adv <i>to who who</i> DO V? | |
| b. Adv <i>who with whom</i> V? | b. Adv <i>with whom who</i> V? | |

Long-distance *wh*-movement is impossible, for all six speakers (11); the speakers opt for a paraphrase ('What do you think, whom did Ivan...').

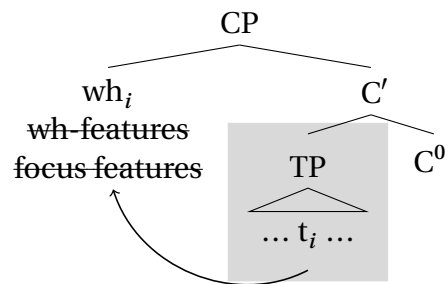
- (11) *_{CP} **Kö-lan** [_{CP} (tâj) [_{CP} Jâβan oksa-m puâš manân] kol'âć
 who-DAT 2SG Ivan money-ACC give.PST.3SG that hear.PST.2SG
 manân] šonet] ?
 that think.PRS.2SG
 Intended: 'Who do you think that you heard that Ivan gave money to?'

Zooming in on Speaker A and B: in an example with only one level of embedding, the *wh*-phrase can acquire matrix scope

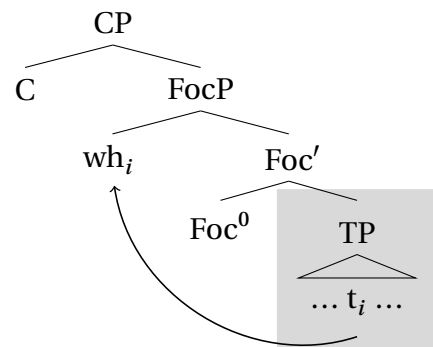
- (12) [_{CP} [_{CP} Jâβan oksam **kö-lan** puâš manân] šonet] ?
 Ivan money.ACC who-DAT give.PST.2SG that think.PRS.2SG
 'Who do you think Ivan gave money to?'

- Several theoretical solutions have been proposed for languages where sluicing shows properties associated with structures derived from an isomorphic source but *wh*-movement doesn't seem to be attested independently.
- Some languages are argued to utilize isomorphic sluicing with focus movement rather than *wh*-movement.
 - Modern Standard Turkish: *wh*-expressions stay in-situ; remnants in sluicing show case connectivity
 İnce's (2012) proposal: The *wh*-phrase copies and merges in Spec,CP where it checks both *wh* and focus features (indicated by strikethrough); then the TP is elided (indicated by the grey box), as in (13).
 - Similarly, sluicing in Farsi is derived by movement of the *wh*-phrase to a designated focus projection below CP, as in (14) (Toosarvandani 2018).

(13) Sluicing in Turkish:



(14) Sluicing in Farsi:



Note: these two approaches posit movement; they cannot derive sluicing in-situ remnants.

- Gribanova & Manetta’s (2016) Top-Copy Approach: sluicing in Hindi-Urdu is an exceptional instance of pronunciation of the top copy in a *wh*-movement chain (in non-elliptical context it is the intermediate copy that is pronounced).
- Stigliano (2022): true in-situ approach

5 Towards an analysis: SLC1b as contrastive topicalization

5.1 The discourse functions of 3SG Poss

- Mari is an articleless language, but the 3SG possessive suffix has non-possessive uses, related to the expression of definiteness, specificity and identifiability (Fraurud 2001; Nikolaeva 2003; Gerland 2014; Simonenko 2014, 2017; Pleshak 2019; Georgieva 2022, a.o.).
- The 3SG Poss on *wh*-remnants is not agreement: unlike possessive agreement, which cross-references the ϕ -features of the possessor (and of the subject in nominalized clauses), the suffix in (15) is invariant (cf. the subject in the antecedent is 2SG).

(15) Têj alakö-lan oksa-m puenat, no kö-lan-že, om
 2SG someone-DAT money-ACC give.PRF.2SG but who-DAT-POSS.3SG NEG.PRS.1SG
 pale.
 know

‘You gave money to someone but I don’t know to whom.’ [Mari, SLC1b]

- The 3SG Poss also appears in nominal ellipsis. (16) shows that there is a mismatch between Poss on the remnant and the ϕ -features of the possessor in the antecedent (this is similar to the mismatch in (15)).

(16) Nele sumka-t üstembalne, a kuštâlgo / kuštâlgâ-žo polkâšto.
 heavy bag-POSS.2SG on.table but light light-POSS.3SG on.shelf
 (Context: You have one heavy and one light bag.)

‘Your heavy bag is on the table, and your light one is on the shelf.’ [Mari, NPE]

- Outside of ellipsis, 3SG Poss may appear on noun phrases, in the so-called ‘double possessives’ (Simonenko 2014; Pleshak 2019; Georgieva 2022) where it co-occurs with a 1st or 2nd person possessive suffix (17). (3SG Poss is also licit on ‘your heavy bag’ in (16), provided that the bags are contrasted with other referents.)

(17) **Uškäl-em-žə-m** māj užalem.
 cow-POSS:1SG-POSS:3SG-ACC 1SG sell.PRS.1SG
 ‘As for my cow, I will sell it.’ [Mari, double possessives]⁴

- What unifies (16) and (17) is that 3SG Poss marks the referent of a contextually given set and expresses (implicit) contrast.
- 3SG Poss may also occur on *wh*-phrases in non-elliptical questions.

- these *wh*-phrases have interpretation similar to D-linked *wh*-phrases (but note that Mari does employ a dedicated D-linked *wh*-phrase, *kudo* ‘which’); the possible referents in (18) are given in the preceding context

(18) **Kuštā-žo** nelā-rak?
 where.INE-POSS.3SG difficult-CMPR
 (Context: In what does starring in a movie differ from performing in the theater?)
 ‘In which one is it more difficult?’ [Кугарня 2016.02.19, Meadow Mari corpus]

- in out-of-the-blue contexts, the consultants interpret (19) as an echo question, and add the clarification:

(19) Pajremāšte Maksim **kö-žö** **dene...** Daša dene kušten
 celebration.INE Maxim who-POSS.3SG with Dasha with dance.PRF.3SG
 (mo)?
 Q
 ‘At the party, who did Maxim dance with, (was it) with Dasha?’⁵

- Additionally, *wh*-phrases with 3SG Poss can be used in relative clauses; they can also have (specific) indefinite reading, ‘somewhere’ in (20), typically in contrastive pairs

(20) **Kuštā-žo** foto dene kelāštarat, **kuštā-žo** motorân
 where.INE-POSS.3SG photo with select.PRS.3PL where.INE-POSS.3SG beautifully
 süretlat.
 draw.PRS.3PL
 (Context: Talking about preparing different albums)
 ‘In some albums (lit. where) they select photos, in others (lit. where) they attach beautiful drawings.’ [Марий Эл 2007.10.31, Meadow Mari Corpus]

- What is common among all these uses of *wh*-phrases with 3SG Poss is that the referent is **contextually available**, additionally, **contrast** is expressed; apart from (18), the sentences have no interrogative force.

⁴Modelled based on Simonenko 2014

⁵Tested with 2 speakers

- I argue that the same discourse properties of 3SG Poss are observed with ellipsis; moreover, I also tentatively propose that we are dealing with contrastive topicalization
 - The contrastive topicalization analysis is supported by the comparison with Udmurt:
 - 3SG Poss has non-possessive functions in Udmurt, too (Edygarova 2010; Riessler 2011; Usacheva & Arkhangelskiy 2018; É. Kiss & Tánčzos 2018; Georgieva 2020, a.o.).
 - Udmurt is also a Differential Object Marking language (Serdobolskaya & Toldova 2012; Tánčzos 2016; É. Kiss & Tánčzos 2018, a.o.).
DOs can be unmarked or marked by the suffix *-(j)ez* (which is historically a possessive suffix itself, É. Kiss & Tánčzos 2018).
Udmurt also employs a set of portmanteau suffixes expressing Poss and accusative case; but POSS.3SG.ACC has been shown to mark contrastive topical DOs that are not necessarily possessed (Serdobolskaya & Toldova 2012).
 - Consider SLC1b in Udmurt: in addition to the dative case (matching the case of the correlate), the *wh*-phrase is also accusative-marked by the matrix verb (21). Crucially, only the POSS.3SG.ACC is licit, the general accusative marker is not.
- ↪ what matters is the discourse function of POSS.3SG.ACC
- ↪ remnants are marked as contrastive topics

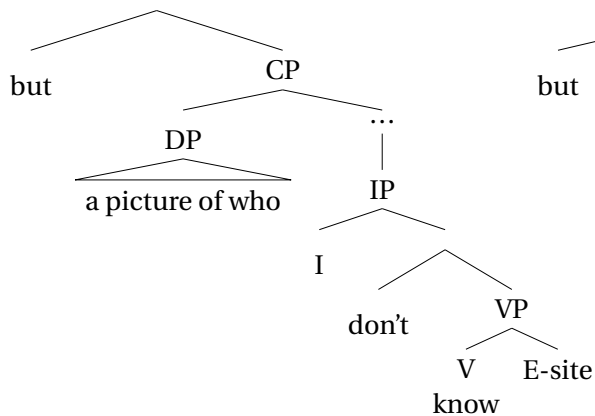
(21) Ton kinlĭ ke no ukśo śotemed, noš *kin-lĭ-jez /
 2SG someone.DAT money.ACC give.EVID.2SG but who-DAT-ACC
 kin-lĭ-ze ug todiśki.
 who-DAT-POSS.3SG.ACC NEG know.PRS.SG
 ‘You gave money to someone but I don’t know to whom.’ [Udmurt, SLC1b]

5.2 A parallel with English sluicing with massive pied-piping

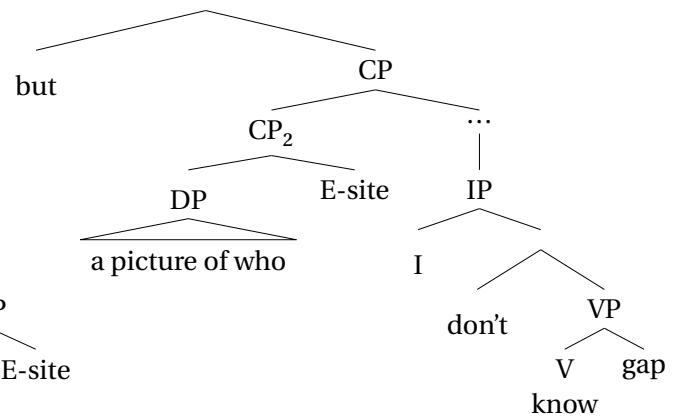
- When fronted, elliptical questions allow massive pied-piping (22a), while non-elliptical ones do not (22b):
 - (22) a. He has a picture of somebody, but [a picture of who] I don’t know.
 - b. *He has a picture of somebody, but [a picture of who] he has I don’t know.
 - c. *He has a picture of somebody, but I don’t know a picture of who.
- Ross (1969) assumes that (22a) is derived from the ungrammatical (22b) by sluicing, but as such, it violates the generalizations made about pied-piping under sluicing.
- Abels (2019): (22a) does not involve (proper) sluicing, neither does involve pied-piping; rather, it arises as a contrastive left dislocation with clausal ellipsis (‘swamp construction’). Note: His proposal is couched in a movement analysis of CLD, but this is not an essential ingredient of the proposal.

- Principled question: what is dislocated, DP or CP?

(23) Left dislocate = DP



(24) Left dislocate = CP



- Empirical evidence in favour of (24) for English: (i) the availability of the swamp construction correlates with the availability of CP fronting; (ii) the distribution of swiping

6 Conclusion

- Mari employs several ways of expressing sluicing. The most general strategy falls into two subtypes: sluicing with bare and “possessed” remnants.
- Sluicing with bare remnants patterns with isomorphic sluicing, the analysis of which heavily depends on the question of what the structure of *wh*-questions is; possibly interesting consequences for the movement vs. in-situ accounts of ellipsis.
- I tentatively proposed that the presence of 3SG Poss on the remnant indicates that we are dealing with contrastive topicalization. It remains to be explored, though, what the precise structure of these examples is and how to account for the variation attested.
- The Mari data firmly supports the accounts of microvariation within the I-language approach which stress the importance of investigating each speaker’s individual grammar (see Paster 2019 and Lyskawa & Ranero 2022).

Acknowledgements

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Appendix: empirical data

- The three SLCs in Mari:

(25) Təj alakö-lan oksa-m puenat...
2SG someone-DAT money-ACC give.PRF.2SG

- a. no **kö**-(**lan**)-(**že**) (***uleš**), om pale. [SLC1a,b]
but who-DAT-POSS.3SG be.PRS.3SG NEG.PRS.1SG know
- b. no (**tudən**) **kö** **ul-mə-žə-m**, om pale. [SLC2]
but 3SG.GEN who.NOM be-NMLZ-POSS.3SG-ACC NEG.PRS.1SG know
- c. no (**tudo / tide**) **kö** (**uleš**), om pale. [SLC3]
but 3SG this who.NOM be.PRS.3SG NEG.PRS.1SG know
'You gave money to someone but I don't know to whom.'

- Case connectivity effects are only observed with SLC1a,b, but not with SLC2 and SLC3.
- A copula is possible/obligatory in SLC2 and SLC3, but it never appears in SLC1a,b.
- P-stranding is ruled out in both *wh*-questions and elliptical contexts.

(26) a. Jəβan taće **kö** **dene** βašlijən?
Ivan today who with meet.PRF.3SG
'Whom did Ivan meet today?'

b. *Jəβan **kö** taće **dene** βašlijən?

c. ***Kö** Jəβan taće **dene** βašlijən? [*wh*-questions]

(27) Teŋgeće aβam pazarəšte alakö dene βašlijən, no **kö**
yesterday mother.POSS.1SG market.INE someone with meet.PRF.3SG but who
***(dene)**, om pale.
with NEG.PRS.1SG know.CN

'Yesterday my mother met someone at the market, but I don't know with who.' [SLC1a]

(28) Teŋgeće aβam pazarəšte alakö dene βašlijən, no
yesterday mother.POSS.1SG market.INE someone with meet.PRF.3SG but
kö-žö ***(dene)**, om pale.
who-POSS.3SG with NEG.PRS.1SG know.CN

'Yesterday my mother met someone at the market, but I don't know with who.' [SLC1b]⁶

- Argument-adjunct asymmetries between clefts and genuine sluicing: *wh*-adjuncts are impossible in truncated clefts in English, in contrast with sluicing (29).

(29) He fixed the car...

a. *...but I don't know how / why / when / where it was.

b. ...but I don't know how / why / when / where [__]. (Vicente 2018)

Wh-adjuncts are fine with SLC1a: (30) provides an illustrative corpus example, this is confirmed by speakers' judgements as well. As for SLC1b, it seems that there is interspeaker variation wrt to the acceptability of *wh*-adjuncts (31).

⁶Tested with 2 speakers

(30) Ūžmaš tol-šaš, no **kunam** – eše om pale.
 invitation come-PTCP.FUT but when yet NEG.PRS.1SG know.CN
 ‘The invitation should come, but when, I don’t know yet.’
 [Мари увер 2006.12.20; Meadow Mari Corpus]⁷

(31)%Ūžmaš tol-šaš, no **kunam-že** – eše om pale.
 invitation come-PTCP.FUT but when-POSS.3SG yet NEG.PRS.1SG know.CN
 ‘The invitation should come, but when, I don’t know yet.’ [SLC1b]⁸

- Genuine sluicing allows *else*-modification, clefts don’t (and neither do SLCs derived from cleft sources, e.g., *spading*, van Craenenbroeck 2012).

(32) Harry was there, ...
 a. *...but I don’t know who else it was.
 b. ...but I don’t know who else [___]. (Vicente 2018)

else-modification is fine with Strategy Ia but not with Strategy Ib:

(33) A: Jâβan Maša-m βele ogâl užân. B: **Kö-m eše?**
 Ivan Masha-ACC only NEG.PRS.3SG see.GER who-ACC else?
 ‘Ivan didn’t see only Masha. Whom else?’ [SLC1a]

(34) A: Jâβan Maša-m βele ogâl užân. B: ***Kö-žâ-m eše?**
 Ivan Masha-ACC only NEG.PRS.3SG see.GER who-POSS.3SG-ACC else?
 ‘Ivan didn’t see only Masha. Whom else?’ [SLC1b]⁹

- Operates backwards, unlike stripping. This data point has been checked only with speakers who allow *wh*-adjuncts with Poss (cf. (31)), and they also accept (37).

(35) a. John met his friend, and Mike, too / but not Mike.
 b. *Mike, too / Not Mike, and John met his friend.

(36) **Kušto** ot šarne, no (točno) palet
 where.INE NEG.PRS.2SG remember.CN but definitely know.PRS.2SG
 joltašetâm alakušto užânat.
 friend.POSS.2SG.ACC somewhere.INE see.PRF.2SG
 ‘You don’t remember where, but you (definitely) that know you saw your friend some-
 where.’ [SLC1a]¹⁰

(37) **Kuštâ-žo** ot šarne, no (točno) palet
 where.INE-POSS.3SG NEG.PRS.2SG remember.CN but definitely know.PRS.2SG
 joltašetâm alakušto užânat.
 friend.POSS.2SG.ACC somewhere.INE see.PRF.2SG
 ‘You don’t remember where, but you (definitely) know that you saw your friend some-
 where.’ [SLC1b]¹¹

⁷I thank Johannes Hirvonen for bringing this example to my attention.

⁸Tested with 4 speakers

⁹Tested with 3 speakers

¹⁰Tested with 4 speakers

¹¹Tested with 2 speakers

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