## On Sluicing and island repair: Sluicing is neither a ferry nor a bridge

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## 1 Introduction

Sluicing is standardly understood to be an instance of TP ellipsis preceded by wh-movement (Ross 1969; Merchant 2001 among others). Sluicing is linked to a number of interesting properties, which puts it up front in many theoretical discussions. We will be looking more closely at its widely assumed property that it can fix various island violations (Ross 1969; Lasnik 2001; Merchant 2001; Fox and Lasnik 2003 etc.). It is not completely clear whether this is a consequence of ellipsis more generally (Fox and Lasnik 2003 argue there's some island repair also in VP ellipsis, and Bošković 2011 tries to derive this property out of some more basic property linked to ellipsis) or whether it is restricted only to a subtype of ellipsis constructions, but it is generally accepted that many unavailable movements become available if they are followed by TP ellipsis as in sluicing constructions and its variants (by this we mean Swipping, Spading, Fragment answers etc.). An example of this is shown in (1). Whereas a wh-word cannot move out from a relative clause to the beginning of the entire sentence in regular question, (1a), such movement is apparently available in sluicing in (1b).

a. \*Who did John ride a horse that kicked \_\_\_\_\_?
b. John rode the horse that kicked someone, but I don't know who [John rode the horse [that kicked \_\_\_\_]]

This approach has many supporters, but it is not universally accepted. Chung et al. (1995, 2011) argued sluicing actually does not involve deletion as the construction doesn't really involve any syntactic structure. Such a view easily explains apparent island violations, as no islands are violated in such a view. No syntactic structure means, there are no movements and thus no movement could have been illicit. This approach faces problems with things like case matching that is observed to hold cross-linguistically in Sluicing (see Merchant 2001 for many similar arguments in favor of this view). As shown in  $(2)^1$ , the wh-word that survives sluicing carries the case of the underlying argument it replaces. If sluicing involves wh-movement followed by TP deletion, this falls out naturally, but islands remain mysterious.

<sup>&</sup>lt;sup>1</sup>Unless stated otherwise, the non-English examples are Slovenian.

- (2) a. Nekdo je Petru pokazal Micko, ampak ne vem kdo. someone.nom aux Peter.dat showed Micka.acc but not know who.nom 'Someone showed Micka to Peter, but I don't know who.'
  - b. Janez je nekomu pokazal Micko, ampak ne vem komu. Janez.nom aux someone.dat showed Micka.acc but not know who.dat 'Janez showed Micka to someone, but I don't know who.'
  - c. Janez je Petru pokazal nekoga, ampak ne vem koga. Janez.nom aux Peter.dat showed someone.acc but not know who.acc 'Janez showed someone to Peter, but I don't know who.'

Alternatively, we can also hypothesize that sluicing does not involve the deletion of the entire sentence of the antecedent but rather of some smaller structure, possibly one where no islands are violated. This is suggested also by Merchant (2001), (p.209), who proposes that propositional islands, i.e. relative clauses, adjuncts, and basically anything clausal, are not fixed by sluicing since in this cases, the deleted material does not involve the entire antecedent clause but only a subpart of it, namely just the clause that created the propositional island, (3). Following this logic, propositional islands are not saved by sluicing as they are never violated (cf. Baker and Brame 1972, among others, for a similar proposal).

(3) Merchant (2001): (1b) John sold a horse that kicked someone, but I don't know who. NOT: ...who [John rode the horse [that kicked \_\_\_\_\_]]
BUT RATHER: ...who [horse kicked \_\_\_\_\_]

In what follows, we will go over a number of Slovenian examples and show how the predominant view that Sluicing repairs (all) islands cannot be fully correct. The data suggest that sluicing does not involve the deletion of the entire antecedent clause (cf. Merchant 2001; Barros et al. 2014; Abels 2011). We will extend Merchant's claim to all (strong) islands and ultimately claim that Sluicing never repairs island violations. Non-English examples in this paper are in Slovenian, but from what we were able to figure out when we presented this research, the same arguments could be made with Bosnian/Croatian/Serbian [B/C/S] (Boban Arsenijević p.c., Martina Graćanin Yuksek p.c.), Russian (Jacopo Garzonio p.c.), Czech (Mojmir Dočekal p.c.), and also Lithuanian (Adline, 2014) examples.

In section (2), we present the basic question regarding multiple sluicing constructions. In section 3, we go over a number of different islands, showing the amelioration vanishes for all of them. In section 4 we look at how pied-piping interacts with island violations and in section 5 we discuss the consequences.

## 2 Multiple sluicing

Slovenian is a multiple wh-movement language, (4). In this respect it patterns with B/C/S (see Golden 1997; Mišmaš 2015 and references therein for more info and the specifics of Slovenian wh-movement). It is not surprising that it readily allows multiple sluicing constructions as in (5).

- (4) Koga je komu Janez predstavil? who.acc aux who.dat Janez introduced 'Who did Janez introduce to who?'
- (5) Nekoga je predstavil nekomu, pa ne vem koga komu. Someone.acc aux introduce someone.dat but not know who.acc who.dat 'He introduced someone to someone, but I don't know who to who.'

Slovenian Like B/C/S and unlike Bulgarian and Macedonian does not allow multiple long-distance wh-movement. So, as shown in 6, while a single wh-word can front from an embedded declarative clause, two wh-words cannot.

- (6) a. Koga je Vid rekel, da je Črt predstavil Micki?
  Who.acc aux Vid said that aux Črt introduced Micka.dat
  'Who did Vid say that Črt introduced to Micka?'
  - b. \*Komu je koga Vid rekel, da je Črt predstavil? Who.dat aux who.acc Vid said that aux Črt introduced
  - c. \*Koga je komu Vid rekel, da je Črt predstavil? Who.acc aux who.dat Vid said that aux Črt introduced
- (6) contrasts with multiple sluicing examples with comparable sentential structure as sluicing constructions with multiple remnants<sup>2</sup> from an embedded clause are allowed, as shown in (7).
  - (7) a. Vid je rekel, da je Črt predstavil enmu enga, pa ne vem komu Vid aux said that aux Črt introduce one.dat one.acc, but not know who.dat koga.

    who.acc
    - 'Vid said that Črt introduced someone to someone, but I don't know who to who.'
    - b. ...who.dat who.acc [Vid said [that Črt introduced \_\_\_\_\_]]]

Given the standard understanding that sluicing (or ellipsis in general) fixes improper movement violations, this difference is easily explained. Movement of the second wh-word violates some grammatical constraint, which, in Lasnik (2001)'s terms, results in syntactic structure (or some specific node) being marked with \* or #, as (cf. Chomsky 1972). This marking gets erased when TP is sluiced, which means that it disappears from the derivation, and so given that there's no marking of this structure being ungrammatical anymore, the sentence becomes fine.

The same mechanism is often invoked for explaining how sluicing fixes island violations (Ross 1969; Lasnik 2001; Merchant 2001; Fox and Lasnik 2003; Boeckx and Lasnik 2006 etc.).

<sup>&</sup>lt;sup>2</sup>We are using the following terms for the various parts of the sentence that involves sluicing:

<sup>(1)</sup> i. (John kissed (some girl) ), but I don't know ( (which girl ) ( John kissed  $\_\_\_$  ) ) (correlate) (remnant ) ( ellipsis site ) ( antecedent ) ( sluice

As shown in (8), for example, wh-extraction is not possible out of a relative clause in regular wh-questions, (8a), (Ross, 1969), but it immediately becomes possible if it is followed by sluicing, (8b).<sup>3</sup>

- (8) a. \*Koga je Črt razlagal o konju, ki je brcnil? who aux Črt explained about horse which aux kicked 'Whom was Črt explaining about a horse that kicked?'
  - b. Črt je razlagal o konju, ki je brcnil nekoga, pa ne vem koga. Črt aux talked about horse which aux kicked someone but not know who
    - 'Črt was explaining about a horse that kicked someone, but I don't know whom.'
  - c. ...who.acc [Črt was explaining about a horse [ that kicked \_\_\_\_\_]]

But there is another way of looking at this. If sluicing is able to repair misdoings of the syntactic derivation, it should be able to fix everything not just island violations. Any violation that is not "marked" on the moving element itself, should in principle be voidable by sluicing. Of course this is not so easy to test as the only element surviving sluicing is the remnant, which means we have no way of knowing what is being deleted and what kind of violations were made during the derivation that got deleted. But assuming that the sluice is parallel to the antecedent, we can construct sentences that test this prediction. So for example as shown in (9), a regular sentence like (9a) is ungrammatical as the dative/prepositional argument is not selected. Assuming this ungrammaticality is marked on the attachment site rather than on the argument itself, it is predicted (given the logic just explained) that this ungrammaticality should be voided in sluicing, yet as shown in (9b), the constructed sluicing construction is clearly out. Obviously there might be other reasons why (9b) is ungrammatical, as the ungrammaticality might also result from one of the two interfaces (e.g. the introduced argument cannot be interpreted as LF etc.). So we do not take this as an argument against the view that sluicing deletes ungrammaticality, but it is nevertheless suggestive that not everything can be fixed by simple deletion of the syntactic structure.

- (9) a. \* Peter kissed John to Mary.
  - b. \* Peter kissed John, but I don't know to who.

Similarly one can ask how come the argument could at all be made from examples in (2). How do we know these cases were really grammatical in their base position? Couldn't this result from un ugrammatical structure that ultimately got deleted? Why can't we use some default case on these wh-words, something that would be ungrammatical in a sentence where the sluice was not deleted?

Another option is to claim, sluicing does not save island violations. This is not a new proposal as the claims that the ellipsis site does not contain the deleted antecedent clause is very old (cf. Baker and Brame 1972; Chung et al. 1995, etc.) The middle path was suggested in Merchant (2001). He notes that propositional islands could have an alternative source for sluicing so that the ellipsis would not target the entire antecedent clause but only the embedded clause where the wh-words originate. This is sketched in (10), where (10a) gives the alternative source of (7) and (10b) the alternative source of (8b).

<sup>&</sup>lt;sup>3</sup>English translations may ignore grammaticality to mirror the original examples as closely as possible.

(10) a. ...who.dat who.acc [Janez introduced \_\_\_\_\_]
b. ...who.acc [a horse kicked \_\_\_\_\_]

Following this idea, examples like (7) and (8b) are available because they have a possible source that does not violate any constraints on movement. If we take this view to the extreme and claim that sluicing never saves island violations, then sluicing will only be available if there is an overt version of the entire construction. As a result, only those apparent violations will be possible that have a possible overt source. But if there is no possible overt source, then sluicing should be equally impossible.

This view seems to be supported by the paradigm presented in Lasnik (2014), who cites the B/C/S example in (11), where the sluice consists of two wh-words that originate in two different clauses.

- (11) a. Neko misli da je Ivan nešto pojeo. Someone thinks that is Ivan something ate 'Someone thinks that Ivan ate something.' (B/C/S)
  - b. %Pitam se ko šta.ask self who what'I wonder who what.' (B/C/S)
  - c. ...who what [\_\_\_\_\_ thinks [that Ivan ate \_\_\_\_ ]]

According to Lasnik (2014) judgments for (11b) correlate with the judgments for comparable wh-extraction. One out of seven speakers rejected (11b). The same speaker was also the only speaker that rejected (12).

(12) % Ko šta misli da je Petar pojeo?
Who what thinks that is Petar ate
'Who thinks that Petar ate what?' (B/C/S)

We made a quick online questionnaire with 4 pairs of sentences where each pair consisted of a sluicing sentence and a regular wh-question, that corresponded to the non-elided sluice, the same as 11 and 12. All 13 speakers of B/C/S judged the wh-question sentence as better than the sluicing sentence of the same pair. Even though this doesn't fully confirm Lasnik's (2014) report on B/C/S data, it does confirm our prediction given above ("Sluicing will only be available if the overt version of the entire construction is acceptable.") and disproves the standard approach to Sluicing which should predict sluicing to be more permissible and therefore judged as better than the overt versions of the same clause.

The Lasnik (2014) type of examples are ungrammatical in Slovenian, both sluicing and regular wh-questions:

(13) a. \*Nekdo misli, da je Črt nekaj pojedel, ampak ne vem kdo kaj.

Someone thinks that is Črt something ate but not know who what

'Someone thinks that Črt ate something, but I don't know who what.'

b. ...who what <del>[\_\_\_\_\_ thinks [that Črt ate \_\_\_\_]]</del>

(14) \* Kdo kaj misli, da je Črt pojedel? Who what thinks that is Črt ate 'Who thinks that Črt ate what?'

In fact, any version of simultaneous extraction of one wh-word from an embedded clause and the other one from the matrix clause is ungrammatical in Slovenian. (15) shows this is the case for simultaneous extraction of the matrix subject and an embedded adjunct.

- (15) a. \* Nekdo je rekel, da je Črt nekam šel, pa ne vem kdo kam. someone aux said that aux Črt somewhere gone but not know who where 'Somebody mentioned that Črt went somewhere, but I don't know who where.'
  - b. ...who where [\_\_\_\_\_ mentioned [that Črt went \_\_\_\_]]
- (16) \* Kdo je kam omenil, da je Črt šel?
  Who aux where mentioned that is Črt went
  'Who mentioned that Črt went where?'

The unavailability of examples such as (15) and (13) could have been attributed to the more general ban on multiple extractions from two different clauses, if it was not the case that the B/C/S example in (11) is for many speakers ok. If multiple extraction from different clauses is bad, how come that it is allowed in B/C/S precisely for those speakers that allow multiple wh-fronting from different clauses.

The importance of these examples is that they show the condition for accepting a sluicing construction is the acceptability of regular overt wh-movement in comparable wh-questions. Sluicing is fine only if such extraction is ok in simple questions. In short, sluicing is available only in cases where the non-ellided sluice is also grammatical.

This means that sluicing in this cases cannot fix movement violations. Extending this to the extreme, we could say this is because sluicing never fixes improper-movement violations and that potentially even island repair is just an illusion. The illusion is achieved because there is no violation of any syntactic constraints in the sluice in the first place (cf. Szczegielniak 2006; Szczegielniak et al. 2008; Abels 2011; Barros et al. 2014 etc.). We will now go over a number of cases that all seem to suggest the same thing, namely that sluicing does not rescue any island violations and that consequently all instances of island repair are just apparent.

## 3 Extraction from an island + another extraction

Merchant (2001) differentiates between two types of islands, propositional and non-propositional islands. We follow Merchant and group the data in the following sections according to these two groups, but as it will turn out at the end, this distintion might not be really needed. We will systematically look at island violations that seem to be saved by sluicing and try to combine them with another extraction. As will be shown, extractions out of islands are trully ok only in single sluicing constructions. As soon as they are coupled with another island violating extraction, availability of sluicing dissapers.

### 3.1 Propositional islands

### 3.1.1 Relative clauses

As shown above in (8), we can easily extract a wh-word from a relative clause in sluicing. But notice that we cannot combine such a violation with another wh-extraction that does not originate in the same clause. So for example, we cannot extract two wh-words from two different relative clauses, as shown in (17a).

- (17) a. \*Črt je dal konju, ki je nekoga brcnil, podkev, ki jo je
  Črt aux gave horse which aux someone kicked horseshoe which it aux
  nekje kupil, ampak ne vem, koga kje.
  somewhere bought but not know who where
  'Črt gave the horse that kicked someone a horseshoe that he bought somewhere,
  - b. ...whom where [Črt gave the horse [that kicked \_\_\_\_] a horseshoe [that he bought \_\_\_\_]

Similarly ungrammatical are also combinations of a single island violation and another extraction from the matrix clause. So even when the other extraction does not violate anything, the combination of the two is ungrammatical. Again, there is a clause boundary between the two extraction sites, which we will comment on in section 3.1.5.

- (18) a. \*Nekdo je govoril o konju, ki je brcnil nekoga, ampak ne someone aux talked about horse that aux kicked someone, but not vem kdo koga.

  know who whom
  'Someone talked about a horse that kicked someone, but I don't know who whom.'
  - b. ...who whom [\_\_\_\_\_ talked about a horse [that kicked \_\_\_\_]]

## 3.1.2 Complex NP – complement clauses

Another propositional island are the complement clauses to nouns (Ross 1967). Whereas wh-extraction from embedded clausal complements to nouns is out, as shown in (19), this extraction is ok in sluicing constructions as shown in (20).

(19) \*Koga je Črt povedal novico, da je Vid zaprosil? who aux Črt told news that aux Vid proposed 'Who did Črt told the news that Vid proposed to?'

but I don't know who where.'

(20) a. \*Črt je povedal novico, da je Vid zaprosil nekoga, ampak ne vem Črt aux told news that aux Vid proposed someone but not know koga.

who

'Črt told the news that Vid proposed to someone, but I don't know who.'

b. ...who [Črt told news [that Vid proposed to \_\_\_\_\_]]

Again, as observed above, island repair is possible only in case the extraction that violates the island does not combine with an extraction from the matrix clause, (21), or with another extraction from another island, (22).

- (21) a. \* Nekdo je povedal novico, da je Vid zaprosil nekoga, ampak ne Someone aux told news that aux Vid proposed someone but not vem kdo koga.

  know who who 'Someone told the news that Vid proposed to someone, but I don't know who who.'
  - b. ...who whom [\_\_\_\_\_told news [that Vid proposed to \_\_\_\_]]
- (22) a. \*Črt je novico, da je Vid opisal nekoga, povedal punci, ki jo Črt aux news that aux Vid described someone told girl which her je nekje srečal ampak ne vem koga kje.

  aux somewhere met but not know who where

  'Črt told the news that Vid described someone, but I don't know who.'
  - b. ...who where [Črt news [that Vid proposed to \_\_\_\_] told the girl [that he met \_\_\_\_]

Just like above with relative clause islands, there is a finite clause boundary separating the two extraction sites.

### 3.1.3 Sentential subject island

wh-extraction is impossible out of sentential clauses (Ross, 1967), as shown in (23). But such extraction apparently becomes possible if it is followed by sluicing, (24).

- (23) \*Koga je, da je Peter udaril, presenetilo Micko? who aux that aux Peter hit surprised Micka 'Who did that Peter hit surprised Micka?'
- (24) a. Da je Peter odšel nekam v Afriko, je presenetilo vse. Ugani kam. That aux Peter went somewhere in Africa aux surprissed all guess where 'That Peter went somewhere in Africa surprissed all. Guess where.'
  - b. ...where [[that Peter went \_\_\_\_ ] surprised all]

Island amelioration vanishes once we add another extraction from outside this island.

- (25) a. \* Da je nekdo udaril Petra, je nekoga presenetilo. Ugani kdo koga. that aux someone hit Peter aux one surprised guess who who 'That someone hit Peter surprised someone. Guess who who.'
  - b. ...who whom [[that \_\_\_\_\_ hit Peter] surprised \_\_\_\_\_]

As in the two preceding sections, the pattern is the same—island violation is voided only when there's a single extraction and resumes as soon as this single extraction is coupled with another extraction from outside the island. Additionally, here too there is a finite clause boundary between the two extraction sites.

### 3.1.4 Adjuncts

wh-extraction is impossible from adjuncts (Ross, 1967) (if we take adjuncts to be just freerelative clauses, as argued by Bhatt and Pancheva 2006, then this is just a subcase of the relative clause island):

(26) \*Koga je Črt kihnil, ravno ko je Marta poljubila? who aux Črt sneezed just when aux Marta kissed 'Whom did Črt sneeze just when Marta kissed?'

In sluicing, such extraction is unproblematic:

- (27) a. \*Črt je padel, ravno ko je Kim brcnila nekoga, a ne vem koga.

  Črt aux fell just as aux Kim kicked someone but not know whom

  'Črt fell just when Kim kicked someone, but I don't know whom.'
  - b. ...whom [Črt fell [just when Kim kicked \_\_\_\_\_]]

But even in sluicing, it is impossible to combine a wh-extraction from a clausal adjunct with a matrix-clause extraction, (28), just as it is impossible to combine two such extractions from two different adjuncts, (29).

- (28) a. \*Nekdo je padel, ravno ko je Kim brcnila nekoga, a ne vem kdo someone aux fell just as aux Kim kissed someone but not know who koga.

  who
  - 'Someone fell just when Kim kicked someone, but I don't know who whom.'
  - b. ...who whom [\_\_\_\_\_ fell [just when Kim kicked \_\_\_\_\_]]
- (29) a. \*Črt je padel pod neko mizo, ravno ko je nekdo dal gol. Ugani Črt aux fell under some table just as aux someone gave goal guess pod katero kdo.

  under which who
  - 'Črt fell under some table just as someone scored a goal. Guess which table who.'
  - b. ...under which who [Črt fell under \_\_\_\_ [just as \_\_\_\_ scored a goal]]

### 3.1.5 Propositional island recap

As we have seen so far, island violating extraction cannot be combined with another extraction that does not come from inside the same island. Notice that it is not the case that sluicing can only fix one island violation at a time (which—if it were the case—would be an extremely difficult constraint to motivate and make sense of anyway). We can extract two wh-words from the same island in sluicing as shown in (30):

(30) a. Razlagal je o konju, ki je nekje nekoga brcnil, pa ne vem explain aux about horse which aux somewhere someone kicked but not know kje koga.

where who

'He was explaining about a horse that kicked someone somewhere, but I don't know who where.'

b. ...who where he was explaining about a horse that kicked \_\_\_\_\_

We can also extract a wh-phrase from a double island, e.g. when we have one island inside another island, as in (31) where the extracted wh-word gets out of an adjunct clause that is inside a relative clause.

- (31) a. Razlagal je o konju, ki je brcnil Črta, ko se je ta z explain aux about horse which aux kicked Črt when refl aux this with nekom pogovarjal, ampak ne vem s kom.

  someone talk but not know whom
  - 'He was explaining about a horse that kicked Črt when he was talking to someone, but I don't know to who.'

Even multiple sluicing is fine in such cases. As long as both wh-words originate in the same island as is the case in (32) where the two wh-words come from inside a relative clause that is inside a clausal complement to a noun.

- (32) a. Razpredal je o govorici, da je Črt kupil konja, ki je enkrat talked aux about romour that aux Črt bought horse which aux once nekoga brcnil, ne vem pa kdaj koga.

  someone kicked not know but when who
  - 'He talked about the rumour that Črt bought a horse that once kicked someone, but I don't know who when.'
  - b. ...who when <del>[he talked of a rumour [that Črt bought a horse [that kicked \_\_\_\_\_]]]</del>

The common problem with the examples in the preceding sections seems to be that whenever extraction crosses a finite clause boundary it cannot combine with another extraction that comes from another clause. This might potentially be explained with a generalization stated in Takahashi (1994) (p.287: (54b)) "The remnants in multiple Sluicing must be interpreted as clausemates." Note that as we have shown above in section 2 with the B/C/S examples discussed in Lasnik (2014), this is not an absolute restriction. Merchant (2001) (p.113, fn. 4) also notes this is not an absolute ban, as examples such as (33b) are said to be fine (cf. Nishigauchi 1998; Bhattacharya and Simpson 2012; Abels and Dayal 2017 for more examples).

- (33) a. \*Someone thinks Jon brought something. I don't know who what.
  - b. Everybody said they'll bring something. I don't know who what.

Further, this ban is really only for finite-clause boundaries as the remnants can be easily interpreted as originating from different sides of a non-finite clause boundary, but then again, multiple questions with a similar configuration are also ok in Slovenian, as shown in (34), and obviously so are parallel sluicing constructions, (35).

- (34) Kdo je koga pozabil poklicat? who aux who forgot call 'Who forgot to call who?'
- (35) a. Nekdo je pozabil poklicati nekoga, ampak ne vem kdo koga. someone aux forgot call someone but not know who who 'Someone forgot to call someone, but I forgot who who.'
  - b. ...who who [\_\_\_\_\_ forgot [to call \_\_\_\_ ]]

So given this, it does not seem possible to blame the impossibility of multiple wh-remnants coming from different islands exclusively on the clause-mate condition on multiple sluicing. See Abels and Dayal (2017) for a much longer discussion and an explanation of the clause-mate restriction on multiple sluicing.

In the next section we will show that the ban on multiple sluicing observed with propositional islands is really much more general, which further suggests this ban cannot be simply reduced to the clause-mate condition on multiple sluicing.

### 3.2 Coordinate Structure Constraint

Another constraint discussed by Ross (1967) is the Coordinate Structure Constraint [CSC], which bans movement from inside coordination. Grosu (1972) identifies two different movement restrictions, Coordinate constraint [CC], which bans movement of entire conjuncts, and Element constraint [EC], which bans movement of elements from inside conjuncts. There is some debate whether CSC is really an island constraint, e.g. Kehler (1996). Our purpose here is not to discuss the potential workings of CSC as we only want to draw a parallel between multiple sluicing and regular non-elliptical sentences (but see Zhang 2009 for a thorough discussion of CSC). In Slovenian simple wh-fronting cannot violate CSC, neither CC, (36a), nor EC, (36b), (36c:

(36) a. \*Koga je Peter videl \_\_\_\_ in Janeza?
who aux Peter saw and Janez
Intended: 'Who and Janez did Peter see?'
b. \*Čigavo je Peter videl \_\_\_\_ mamo in Janeza?
whose aux Peter saw mother and Janez
Intended: 'Whose mother and Janez did Peter see?'
c. \*Koga je Vid mislil, da bo srečal \_\_\_ in da bo kupil pivo?
Who aux Vid think that aux met and that aux bought beer

Sluicing was cited many times to fix CSC violations (cf. Ross 1969; Merchant 2001; Fox and Lasnik 2003 a.o.). This is also true of Slovenian. Sluicing fixes island violations regardless of what kind of subpart of CSC we look at and regardless of the conjunct the wh-phrase originates from: either from the second conjunct, (37) and (38), or from the first conjunct, (39) and (40).

(37) a. Vid je povabil Črta in še nekoga, ampak ne vem koga. Vid aux invited Črt and also someone but not know who 'Vid invited Črt and someone else, but I don't know whom.'

	b.	whom [Vid invited Črt and]
(38)	a.	Vid je mislil, da bo srečal Črta in da bo nekaj kupil, ampak se Vid aux think that aux met Črt and that aux something bought but refl sedaj ne spomnim kaj. now neg remember what
	b.	'Peter thought he will meet Črt and buy something, but cannot remember what.'what [Peter thought [[he will meet Črt] and [buy ]]]
(39)		Vid je povabil nekoga in še Črta, ampak ne vem koga.  Vid aux invited some and also Črt but not know who
	b.	'Vid invited someone and also Črt, but I don't know whom.'whom [Vid invited and Črt ]
(40)		Črt je mislil, da bo srečal nekoga in da bo kupil neke knjige, Črt aux think that aux met someone and that aux bought some books pozabil pa sem koga. forgot ptcl aux who
	b.	'Črt thought he will meet someone and buy books, but I forgot who.'who [Črt thought [[he will meet] and [buy books]]]
But co as sho	mbii wn i	and (40), sluicing apparently fixed EC and in (37) and (39) sluicing fixed CC. ning a CSC violation with another extraction of the same type is again impossible, n (41), where both conjuncts of the coordination are extracted, and in (42)-(43) wh-words are extracted from inside the two conjuncts.
(41)	a.	* Vid je povabil enega fanta in eno punco, pa ne vem katerega katero. Vid aux invited one boy and one girl but not know which which 'Vid invited some boy and some girl, but I don't know which one which one.
	b.	which one which one <del>[Vid invited and]</del>
(42)		* Črt je mislil, da bo nekoga srečal in nekaj kupil, ampak ne Črt aux think that aux someone met and something bought but not vem koga kaj. know who what
		'Črt thought he will meet someone and buy something, but I don't know who what.'
	b.	who what [Črt thought [[he will meet ] and [buy ]]]
(43)	a.	*Črt je želel nekoga srečati in nekaj kupiti, ampak ne vem koga Črt aux wished someone meet and something buy but not know who kaj. what
		'Črt wanted to meet someone and to buy something, but I don't know who what.
	b.	who what $[\check{\text{Crt wanted }}[[\text{to meet }\_\_\_]] \text{ and } [\text{to buy }\_\_\_]]]$

Extraction of both conjuncts is possible only when the two wh-words are conjoined, as in (44) and (45). But then we have not violated CSC as we have either fronted the entire coordination or else potentially conjoined two single sluicings (we will come back to this in the last section of this paper).

- (44) Vid je povabil enega fanta in eno punco, pa ne vem katerega fanta \*(in) Vid aux invited one boy and one girl but not know which guy and katero punco.

  which girl
  - 'Vid invited some boy and some girl, but I don't know which boy and which girl.'
- (45) Vid je mislil, da bo nekoga srečal in nekaj kupil, ampak ne vem Vid aux thought that aux someone met and something bought but not know ne koga ne kaj.

not who not what

'Vid thought he will meet someone and buy some books, but I don't know neither who nor how many.'

Note that the unacceptability of (41) is not due to a Richards (2010)-like distinctness-condition violation. As shown by Mišmaš (2011), different gender features are enough to make wh-words count as distinct in Slovenian. This is also shown in (46), a regular multiple sluicing example where the two wh-words originate within the same finite clause (one is the dative subject of the matrix clause and the other the dative internal object of the embedded non-final clause) where the two wh-words share everything but gender features and the example is acceptable.

(46) Nekemu fantu se ni pomagalo neki punci, ampak ne vem kateremu some boy $_{DAT}$  ref not-is helped some girl $_{DAT}$  but not know which $_{DAT.M}$  kateri? which $_{DAT.F}$ 

'Some boy didn't feel like helping some girl, but I don't know which which?'

Even combining a CSC violation with another CSC violation from another coordination makes the sentences unacceptable.

- (47) a. \*Vid in še nekdo sta kupila vsak po štruco kruha in še nekaj,
  Vid and also someone aux bought each at loaf bread and also something
  ampak ne vem kdo kaj.
  but not know who what
  - b. ...who what [Vid and \_\_\_\_\_ each bought a loaf of bread and \_\_\_\_\_]

### 3.3 DP internal islands

### 3.3.1 DP and PP complements of nouns

wh-extraction of a PP or a DP embedded inside a DP is impossible regardless of whether these DPs and PPs are adjuncts or arguments. (48) shows unacceptable wh-extraction of a PP from inside a DP and (49) gives a parallel unacceptable wh-extraction of a DP from inside a DP.

- (48) a. Črt je razložil teorijo o skladenjskih otokih. Črt aux explained theory about syntactic islands
  - 'Črt explained the theory about syntactic islands.'
  - b. \*O čem je Črt razložil teorijo? about what aux Črt explained theory
    - 'What did Črt explain the theory about?'
- (49) a. Črt je razložil teorijo relativnosti. Črt aux explained theory relativityGen
  - 'Črt explained the theory of relativity.'
  - b. \*Česa je Črt razložil teorijo whatGen aux Črt explained theory
    - 'What did Črt explain the theory of?'

In sluicing, such extractions are possible as shown in (50) for extraction of a PP embedded in a DP and in (51) extraction of a DP embedded in a DP.

- (50) a. Črt je razložil teorijo o nečem, pa ne vem, o čem. Črt aux explained theory about something but not know about what 'Črt explained the theory about something, but I don't know about what.'
  - b. ...about-what [Črt explained [the theory \_\_\_\_\_]]
- (51) a. Črt je razložil teorijo nečesa, pa ne vem, česa. Črt aux explained theory something.gen but not know what.gen 'Črt explained the theory of something, but I don't know what.'
  - b. ...what [Črt explained [the theory \_\_\_\_\_]]

But again, as soon as we try to combine it with some other extraction, such extractions become impossible. (52) gives an extraction of a PP embedded in a DP combined with a an extraction from outside this DP, and (53) gives an extraction of a PP embedded in a DP combined with another extraction of a PP from inside another DP.

- (52) a. \*Nekdo je razložil teorijo o nečem, pa ne vem, kdo o someone aux explained theory about something but not know who about čem.

  what
  - 'Someone explained the theory about something, but I don't know who about what.'
  - b. ...who about-what [\_\_\_\_\_ explained [the theory \_\_\_\_ ]]
- (53) a. \*Črt je prijatelju iz neke odročne vasi razložil teorijo o Črt aux friend from some remote village explained theory about nečem, pa ne vem iz katere vasi o čem. something but not know from which village about what

'Črt explained the theory about something to a friend from some remote village, but I don't know about what from which (village).'

b. ...about-what from-which-village [Črt explained [the theory \_\_\_\_ ][to a friend \_\_\_\_]

Similarly, (54) shows the ungrammatical combination of an extraction of a DP embedded inside a DP with an extraction from the rest of the clause and (55) shows incompatibility of two extractions of a DP from inside two different DPs.

- (54) a. \* Nekdo je razložil teorijo nečesa, pa ne vem, kdo česa. someone aux explained theory something but not know who what 'Somebody explained the theory of something, but I don't know who of what.'
  - b. ...who what [\_\_\_\_\_explained [the theory \_\_\_\_]]
- (55) a. \*Črt je prijatelju neke svoje sošolke razložil teorijo nečesa, pa ne
  Črt aux friend some his classmate explained theory something but not
  vem katere ( svoje sošolke) česa.
  know which his classmate what
  'Črt explained the theory of something to a friend of one of his classmates, but
  - I don't know of what of which classmate.'

b. ...what of-which-classmate [Črt explained [the theory \_\_\_\_\_ ] [to a friend \_\_\_\_\_ ]]

As soon as we combine an extraction from an island with an extraction from outside of that island, sluicing becomes impossible.

### 3.3.2 Left-branch extraction – LBE

LBE is generally impossible in Slovenian, at least the type of LBE that Merchant (2001) discusses.<sup>4</sup> The ungrammaticality of LBE in wh-extraction is shown in (56).

(56) a. \* Kako podroben je Črt zahteval spisek?
how detailed aux Črt requested list
'How detailed did Črt request a list?'

- (1) Prosim povej mi, koliko si videl hiš in koliko vrtov? please tell me how-many aux see houses and how-many gardens 'Please tell me how many houses and how many gardens did you see?'
- (2) Koliko misliš, da je Črt visok? how think that aux Črt tall 'How tall do you think Črt is?'

<sup>&</sup>lt;sup>4</sup>LBE is available to some degree in Slovenian (cf. Bošković 2008; Mišmaš 2017 but it is definitely not as freely available as in e.g. B/C/S. Cases like (i) and (ii) are for example possible or at least much improved over (55). As we have no intention of explaining the difference between various types of LBE, we simply make a contrast between sluicing and regular wh-questions using the same type of extracted elements.

b. \* Kako visoko je Vid preplezal steno? how tall aux Vid climbed cliff 'How tall did Vid climbed a cliff?'

In sluicing, such extractions become available, as shown in (57), where 'how detailed', the same wh-AP that can't get wh-extracted in regular questions can be the remnant in sluicing and in (58), where 'kako visoko' is ok as the remnant of sluicing.

- (57) a. Črt je zahteval podroben spisek, ampak ne vem kako podroben. Črt aux requested detailed list but not know how detailed 'Črt requested a detailed list, but I don't know, how detailed.'
  - b. ...how detailed [Črt requested [ \_\_\_\_\_ list]]
- (58) a. Vid je preplezal eno visoko steno, ampak ne vem kako visoko. Vid aux climbed a tall cliff but not know how tall 'Vid climbed a tall cliff, but I don't know, how tall.'
  - b. ...how tall <del>[Vid climbed [ \_\_\_\_\_ cliff]]</del>

But when we try to combine such an extraction exhibiting LBE with some other extraction from the rest of the clause, as in  $(59)^5$  and (60), sluicing can no longer rescue LBE.

- (59) a. \* Nekdo je zahteval podroben spisek, a ne vem, kdo kako somebody aux requested detailed list but not know who how podroben.4 detailed
  - 'Someone requested a detailed list, but I don't know who how detailed.'
  - b. ...who how detailed [ requested [ list ]]
- (60) a. Vid je enkrat preplezal eno visoko steno, ampak ne vem kdaj kako visoko. Vid aux once climbed a tall cliff but not know when how tall 'Vid climbed a tall cliff once, but I don't know, how tall when.'
  - b. ...how tall when [Vid climbed [ \_\_\_\_\_ cliff] \_\_\_\_\_]

Similarly LBE is incompatible with other types of extractions from inside the same DP. as shown for DP-inside-DP extraction in (61) and for another LBE from inside a PP inside the same DP in (62).

(61) a. \*Črt je zahteval podroben seznam nečesa, ampak ne vem, kako Črt aux requested detailed list something $_{GEN}$  but not know how podroben česa. detailed what $_{GEN}$  'Črt requested a detailed list of something, but I don't know how detailed of

<sup>&</sup>lt;sup>5</sup>(59) (or a version of (59)) is ok if it the LBE-ed remnant is kake podrobnega 'how detailed', with genitive case ending on the wh-remnant. We don't discuss this option because failed case-preservation clearly suggests the elided clause is not fully identical to the antecedent clause as the antecedent clause does not allow genitive cased adjective.

- b. ...how detailed of what [Črt requested [ \_\_\_\_\_ list [ \_\_\_\_ ]]]
- (62) a. \*Vid je preplezal eno visoko steno nad neko grapo, ampak ne vem kako Vid aux climbed a tall cliff over some gully but not know how visoko katero.

tall which

'Vid climbed a tall cliff over some gully, but I don't know, how tall which.'

b. ...how tall which [Vid climbed | \_\_\_\_\_ cliff over \_\_\_\_ gully |]

Sluicing also cannot save multiple LBEs (cf. Grebenyova 2005) neither if both LBEs are from the same noun phrase, as in (63), nor it they are from different noun phrases, as in (64) and (65).

- (63) a. \*Kupil si je nov avto. Ugani katere barve katere znamke. bought refl aux new car guess which color which brand 'He bought a new car. Guess what color what brand.'
  - b. ...what color what brand [he bought [ \_\_\_\_\_ car]]
- (64) a. \*Črt je precej otrokom podaril precej čudne balone, ampak ne vem Črt aux many children gave fairly strange balloons but not know koliko kako čudne.

  how-many how strange

  'Črt gave many children fairly weird balloons, but I don't know how many l
  - 'Črt gave many children fairly weird balloons, but I don't know how many how strange.'
  - b. ...how many how strange [Črt gave [ \_\_\_\_\_ kids] [ \_\_\_\_ balloons]]
- (65) a. \* Neka visoka punca je po mestu vodila neke čudne turiste, ampak some tall girl aux around city guided some strange tourists but ne vem kako visoka kako čudne.

  not know how tall how strange

  'Some tall girl was guiding some strange tourists around the city, but I don't know how tall how strange.'
  - b. ...how tall how strange [[ \_\_\_\_\_ girl] guided [ \_\_\_\_ tourists] around the city ]

### 3.3.3 Comitatives

Much like LBE and extraction from DPs, comitatives like Vidva z Črtom (you-two with Črt) "you and Črt" do not allow any extraction out of them. As shown in (66), regular wh-extraction is impossible, while sluicing is ok, (66b).

- (66) a. \*S kom sta vidva dobra prijatelja? with who aux you-two good friends 'Who are you with good friends?'
  - b. Slišal sem, da sta vidva z enim iz Bat super ekipa, ampak ne heard aux that aux you-two with one from Bate great team but not vem s kom.

    know with who

'I've heard that you two with somebody from Bate make up a good team, but I don't know who with?'

And just like we saw so far, combining an extraction from a comitative construction with any other extraction is impossible. This is shown in (67) where an extraction from a comitative is combined with an extraction from another noun phrase, and in (68) where it is combined with an extraction of a noun phrase from the rest of the clause that does not violate any island.

- (67) a. \*Vidva z enim iz Iga sta skupaj spila nekaj piv, ne vem pa you-two with one from Ig aux together drank some beers not know ptcl s kom koliko.

  with who how many

  'You two with someone from Ig drank some beers together, but I don't know
  - b. ...with who how many <del>[[you two \_\_\_\_] drank \_\_\_\_\_ beers together]</del>
- (68) a. \*Onadva z enim iz Grgarja sta skupaj nekam odšla, ne vem
  They-two with one from Grgar aux together someplace went not know
  pa s kom kam.
  ptcl with who where
  'Two of them with someone from Grgar together went someplace, but I don't
  know with where.'
  - b. ...with who where [[They two \_\_\_\_\_] went \_\_\_\_\_]

with who how many.'

## 3.4 Other (strong) islands

Not every island can be tested in such a way. We are avoiding weak-islands, as arguments, which typically participate in sluicing, can be extracted from them, consequently we are not looking at e.g. negative islands and wh-islands (see Szabolcsi and Den Dikken 1999 and Szabolcsi 2006 for a discussion and separation of various types of islands). Further, derived positions are impossible to test as deletion obscures the actual source of extraction.

Preposition stranding is typically not called an island constraint (also because it is not universal),<sup>6</sup> has been discussed in more detail by Merchant (2001), who proposes a generalization stating that only languages that allow preposition stranding under wh-movement, allow preposition stranding under sluicing. In other words sluicing apparently does not rescue the preposition stranding violations, which is again unexpected if sluicing simply deletes the asterisk on the syntactic structure where the ungrammatical move was made. But preposition stranding is actually a bit of a more complicated case.

Certain languages were claimed to go (at least apparently) against the Merchant (2001) P-stranding generalization (cf. Potsdam 2003; Sato 2007; Rodrigues et al. 2007), so that this generalization is probably not very strong. On the other hand some apparent counterarguments seem to suggest these data should be looked at more carefully. As shown in

<sup>&</sup>lt;sup>6</sup>Note that LBE and CSC which are considered islands in e.g. English are supposedly violable in some other languages, e.g. in B/C/S (cf. Franks and Progovac 1994; Stjepanović 1998; Bošković 2005 etc.).

Stjepanović (2008): the apparent preposition stranding under sluicing in B/C/S is clearly not a result of sluicing alone. Slovenian like B/C/S allows preposition stranding under sluicing (to some degree), as in (69), and could actually be used to replicate Stjepanović (2008)'s argument showing that in cases where sluicing allows preposition stranding (and thus apparently "saves" ungrammatical preposition stranding) it is not sluicing that is exclusively responsible for the accepted cases of preposition stranding as preposition stranding is possible also with sluiced coordinated PPs which do not involve pseudosluicing or base-generated fragments, (70) (cf. Rodrigues et al. 2007 for a similar claim that sluicing does not save preposition stranding violations in Brasilian Portugese and Spanish).

- (69) a. <sup>?</sup> Črt je na zabavo prišel z nekom, ampak ne vem kom Črt aux to party came with someone but not know who 'Črt came to the party with someone, but I don't know who.'
  - b. ...who [Črt came [to party ] [with \_\_\_\_\_]]
- (70) Vid je skril igračko za eno omaro in pod eno blazino, ampak ne vem Vid aux hid toy behind one cupboard and under one pillow but not know prav dobro ?(za) katero omaro in ?(pod) katero blazino quite well behind which cupboard and under which pillow 'Vid hid the toy behind a cupboard and under a pillow, but I don't know which cupboard and which pillow.'

But regardless of the actual nature of preposition stranding in sluicing constructions, as soon as we combine preposition stranding with some other extraction, either another preposition stranding, (71), or simply with an extraction that does not violate anything, the sentence is completely out, as shown in (72).

- (71) a. \*Črt je prišel na neko zabavo z nekom ampak ne vem katero zabavo Črt aux came to some party with someone but not know which party kom.

  who
  - 'Črt came to some party with someone, but I don't know which party who.'
  - b. ...which party who [Črt came [to \_\_\_\_\_] [with \_\_\_\_\_]]
- (72) a. \*Nekdo je prišel na zabavo z nekom, ampak ne vem kdo kom. Someone aux came to party with someone but not know who who 'Someone came to the party with someone, but I'm not sure who who.'
  - b. ...who who [ \_\_\_\_\_ came [to the party ] [with \_\_\_\_ ]]

## 3.5 Recap

As we have seen in this section, sluicing cannot save every type of violations of a certain sentence. It can save single island violations and multiple violations if they originate from

<sup>&</sup>lt;sup>7</sup>Note that the example (70) above which had two instances of preposition stranding inside the same sentence, has the two wh-words coordinated. This actually suggests (70) is potentially an instance of two independent sluicing constructions, which Stjepanović (2008) argues against. As it is not relevant at this point what exactly allows (70), we leave this question aside.

one single island. Combining an island violation with a violation of a different island, creates ungrammaticality. It is also impossible to combine an extraction from an island with an extraction from the main clause that does not violate anything. At this point it seems we can present the following generalization:

## (73) Generalization on multiple sluicing: Multiple sluicing can only rescue improper movement violations if all wh-remnants originate inside the same island.

This generalization is stated in a way that assumes sluicing can save island violations. As we have mentioned above, this is not so obviously true. Anticipating what is yet to come, we give here also a different slightly stronger generalization, that covers also the examples (11)–(15), but it crucially does assume that sluicing does not rescue island violations.

# (74) Generalization on multiple sluicing: Multiple sluicing is possible only when multiple wh-movement of the remnants is possible without subsequent TP-elipsis.

## 4 Island repair

At least apparently, for certain islands it has been claimed they can be saved also by other means. Ross (1967) identifies two such environments on top of sluicing: wh-in-situ and pied-piping (see also Cable 2010; Boeckx 2012 among others). Truswell (2007) notes that adjunct islands can be violated in certain cases and Bošković (2011) proposes that elements can extract from island-phrases that are headed by a trace (see also Stepanov 2012). We will now look at some of these environments. The idea being that in case there is something special about multiple sluicing that blocks island amelioration, then island amelioration should be banned for all instances of multiple sluicing. That is, if there's something about multiple sluicing, trying to save the island violations with another tool should be just as ungrammatical as the examples we have looked at so far, but in case it is really sluicing that creates the problem, than saving the island with another tool should make the examples that were ungrammatical above grammatical.

Obviously not everything can be modulated in sluicing. At least one of the island-voiding processes falls out as irrelevant right away; wh-in-situ strategy is incompatible with sluicing which requires wh-movement, so we can put it aside and have a look at pied-piping instead.

## 4.1 Pied-piping

### 4.1.1 LBE

Not all islands seem to be sensitive to pied-piping, but one that is typically claimed to be is LBE. Fronting the entire DP is most certainly possible also in regular wh-questions in Slovenian, as shown in (75).

<sup>&</sup>lt;sup>8</sup>Related to this are also the proposals by Den Dikken (2007) and Gallego (2010)—Phase-Extension and Phase-Sliding respectively—but as these are limited or focused on phases rather than islands, we will not discuss them any further.

- (75) a. Kako podroben spisek je Črt zahteval? how detailed list aux Črt requested 'How detailed a list did Črt request?'
  - b. Kako visoko steno je Vid preplezal? how tall cliff aux Vid climbed 'How tall a cliff did Vid climbed?'

And given that pied-piping avoids LBE violations also inside embedded questions, (76), we can assume this indeed involves proper wh-movement. And obviously, as this is an available strategy in wh-questions, pied-piping of the entire DP is also available in sluicing, (77).

- (76) Črt je vprašal, kako visoko steno je preplezal Vid? Črt aux asked how tall cliff aux climbed Vid 'Črt asked how tall a cliff did Vid climbed?'
- (77) Črt je preplezal eno nekam visoko steno, ne vem pa, kako visoko steno. Črt aux climbed a somewhat tall cliff not know ptcl how tall cliff 'Črt climber a somewhat tall cliff, but I don't know how tall a cliff.'

Quite expectedly, when LBE violation is avoided with pied-piping and pied-piping fronts/pied-pipped another remnant from the same DP, result is obviously grammatical, (78-79). Even though this is an instance of multiple sluicing it cannot be used as an argument to show that it is not multiplicity of wh-remnants that blocked multiple island ameliorations, as a single pied-piping moves two wh-words.

- (78) a. Črt je zahteval podroben seznam nečesa, ampak ne vem, kako Črt aux requested detailed list something $_{GEN}$  but not know how podroben seznam česa. detailed what $_{GEN}$ 
  - 'Črt requested a detailed list of something, but I don't know how detailed of what.'
  - b. ...how detailed list of what [Črt requested \_\_\_\_\_]
- (79) a. ? Vid je preplezal eno visoko steno nad neko grapo, ampak ne vem kako Vid aux climbed a tall cliff over some gully but not know how visoko steno nad katero grapo. tall cliff over which gully 'Vid climbed a tall cliff over some gully, but I don't know, how tall a cliff over which gully.'
  - b. ...how tall a cliff over which gully [Vid climbed \_\_\_\_\_]

But if the two wh-words originate in two different noun phrases, pied-piping needs to front two separate noun phrases. Grammaticality of such an example would be an argument suggesting that multiple island violations can be saved with multiple application of the same ameliorating process. As shown in (80), such examples are grammatical. Similarly, it is also possible to combine pied-pipped DP with another remnant if it comes from the same clause, (81), which is also something that wasn't available with sluicing alone.

- (80) a. Vid je nekaterim otrokom dal nekakšna darila, ampak ne vem katerim Vid aux some kids gave some gifts but not know which otrokom kakšna darila.

  kids which gifts

  'vid gave some gifts to some kids, but I don't know which gifts to which kids.'
  - b. ...which gifts to which kids [Vid gave \_\_\_\_\_]
- (81) a. Nek plezalec iz Tolmina je nekaj preplezal, ne vem pa, kateri Some climber from Tolmin aux something climbed not know ptcl which plezalec iz Tolmina kaj. climber from Tolmin what 'Someone climber from Tolmin climbed something, but I don't know who which climber from Tolmin what.'
  - b. ...which climber from Tolmin what [\_\_\_\_\_\_ climbed \_\_\_\_\_]

Note that in both of these situations, the unelided version of the contruction is also available, proven by the simple wh-questions with the same internal structure, (82) and (83).

- (82) Katerim otrokom je kakšna darila včeraj dal Vid? which children aux which gifts yesterday gave Vid 'Which children did Vid give which gifts yesterday?'
- (83) Kateri plezalec iz Tolmina je kaj preplezal? which climber from Tolmin aux what climbed 'Which climber from Tolmin climbed what?'

Pied-piping of the entire DP cannot save ungrammatical combinations of LBE with a remnant from a different clause or from different types of islands, e.g. as shown in (84) with a combination of a fronted DP and a remnant from an embedded clause. As shown in (85) this combination of movements is also impossible outside sluicing.

- (84) a. \* Nek plezalec iz Tolmina je povedal, da je Vid nekaj preplezal, Some climber from Tolmin aux told that Vid aux something climbed ne vem pa, kateri plezalec iz Tolmina kaj.

  not know ptcl which climber from Tolmin what

  'Someone climber from Tolmin climbed something, but I don't know who which climber from Tolmin what.'
  - b. ...which climber from Tolmin what [\_\_\_\_\_\_told [that Vid climbed \_\_\_\_\_]]
- (85) \* Kateri plezalec iz Tolmina je kaj povedal, da je Vid preplezal? which climber from Tolmin aux what told that aux Vid climbed intended: Which climber from Tolmin said that Vid climbed what?

Thus we can conclude that pied-piping can avoid LBE island violations, but only to the degree that is also available outside sluicing constructions. And as the multiple sluicing examples that were ungrammatical above, where sluicing alone couldn't save multiple island violations, are ok with pied-pipping, as in (80) and (81), we have another argument to suggest, that there's something about sluicing that blocks amelioration of multiple island violations.

### 4.1.2 CSC

Just like it is the case with LBE, it seems possible to avoid a violation of CSC by fronting the entire coordination as in (86), regardless of the position of the wh-word.

- (86) a. Koga in Janeza je povabil Peter? who and Janez aux invited Peter 'Who and Janez did Peter invite?'
  - b. Janeza in koga še je povabil Peter? Janez and who else aux invited Peter 'Janez and who else did Peter invite?'

But fronting of the entire coordination is not possible in sluicing constructions, (87).

- (87) Peter je povabil Janeza in še nekoga, pa ne vem ... Peter aux invited Janez and also someone but not know 'Peter invited Janez and someone else, but I don't know ...'
  - A. \* Janeza in še koga. Janez and also who
  - B. \* Janeza in koga še. Janez and who also
  - C. \* Janeza in koga. Janez and who 'Janez and who (else).'

At first sight this is surprising. So far we have only seen cases where sluicing construction was more permissive than regular questions, so how is it possible that sluicing doesn't allow something regular questions seem to allow? As it turns out, this strategy is not available in embedded contexts, (88), which suggests that what we see in (86) is not an instance of a regular wh-movement and since slluicing does involve wh-movement, the two things simply do not go together. The coordination containing the wh-phrase in (86) is potentially just scrambled to the front of the sentence or else it has moved to a lower wh-position that is not part of the left periphery (as in Mišmaš 2015).

- (88) a. \* Žodor se sprašuje, kdo in Peter sta povabila Janeza na zabavo? Žodor refl ask who and Peter aux invited Janez to party 'Žodor is wondering, who and Peter invited Janez to the party?'
  - b. \*Ilija bi rad vedel, koga in Janeza je povabil Peter? Ilija cond like know who and Janez aux invite Peter 'Ilija would like to know who and Janez did Peter invite.'
  - c. \* Meliso zanima, Janeza in koga je povabil Peter? Melisa interested Janez and who aux invite Peter 'Melisa is interested in Peter invited Janez and who.'

So we can stop here. Pied-piping does not really help CSC violations as pied-piping of the entire coordination is apparently not an instance of regular wh-movement to the left periphery.

### 4.1.3 Other islands

All other islands seem the same, even though they seem to allow pied-piping to avoid them, the process most likely doesn't involve proper wh-movement and is thus incompatible with sluicing. See (89) for commitatives, (90) for adjunct islands, and (91) for complex DP islands.

- (89) a. \*Janez hoče zvedeti, midva s kom iz Bat smo dobra ekipa?

  Janez wants know us-two with who from Bate aux good team

  'Janez wants to know two of us with who from Bate make a good team?'
  - b. \*Onadva z nekom iz Bat sta dobra ekipa, ampak ne vem they-two with someone from Bate aux good team but not know več onadva s kom iz Bat. anymore they-two with whom from Bate 'The two of them with someone from Bate make up a good team, but I don't know anymore the two of them with who.'
- (90) a. \* Janeza zanima, ko je Peter videl koga, se je Micka usedla?

  Janez interested when aux Peter see who refl aux Micka sit-down

  'Janez is interested in when Peter saw who did Micka sit down?'
  - b. \* Micka se je usedla, ko je Peter videl nekoga, ampak ne vem Micka refl aux sit-down when aux Peter see someone but not know več ko je videl koga? anymore when aux see who 'Micka sat down when Peter saw someone, but I don't know anymore when Peter saw who.'
- (91) a. \* Janez se sprašuje, konja, ki je brcnil koga, je Peter včeraj videl?

  Janez refl asks horse which aux kick who aux Peter yesterday saw

  'Janez is wondering the horse that kicked whom did Peter see yesterday?'
  - b. \* Peter je včeraj videl konja, ki je brcnil nekoga, ne vem pa
    Peter aux yesterday saw horse which aux kick someone not know ptcl
    konja, ki je brcnil koga.
    horse which aux kicked who
    'Yesterday, Peter saw the horse that kicked someone, but I don't know the
    horse that kicked who.'

### 4.2 Phase-Extension

Bošković (2011) argues that traces do not head islands, in other words that phrases which typically act as islands, stop acting like islands once their head moves out and are consequently headed by traces. This seems again an untestable situation in sluicing as everything gets deleted, including the head of the potentially violated island. But if we construct the sentence in such a way that the antecedent clause also contains the island whose head got moved out of the island, we would also expect the overt version of the sluicing construction to be ok, so we have again not tested anything specific to sluicing. In effect sluicing contruction of this particular setup, as in (92a) is grammatical, but regular wh-question is not, (92b).

- (92) a. Peter je kupil nekaj velikega rdečega iz nekakšnega porcelana,
  Peter aux bought something big red from some-type china
  ampak ne vem kaj iz katerega porcelana.
  but not know what from what-type china
  'Peter bought something big and red from some sort of china, but I don't know what made from which type of china.'
  - b. ...what from what-type of China [Peter bought [ \_\_\_\_\_ big red \_\_\_\_ ]]
  - c. \*Kaj iz katerega porcelana je Peter kupil velikega rdečega? what from what-type china aux Peter bought big red 'What made from which type of china did Peter buy big red?'

One could argue that (92a) is grammatical because the fronted 'what' opened up the gates for the complex wh-phrase inside the DP, and that the movement of 'what' was allowed because this movement is allowed in sluicing, but this does not appear to be the simplest solution. A much simpler explanation would see the fronted 'what' as a replacement for the first part of the noun phrase nekaj velikega rdečega 'something big red' so that (92a) would simply be an instance of pied-piping of the entire noun phrase and thus understandably grammatical. Notice that (93) is perfectly possible, suggesting this is indeed the source of the sluicing example in (92a).

(93) Kaj iz katerega porcelana je Peter kupil? what from what-type china aux Peter bought 'What made from which type of china did Peter buy?'

Transparent islands - Truswell (2007) notes that certain islands in some cases cease to act like islands. Concretely, he notes that, "if the event denoted by the adjunct occupies an event position in the argument structure encoded in the matrix verb, then extraction of the complement from within that adjunct is possible." (Truswell 2007, p. 3). So for example, the English example in (94) and the Slovenian examples in (95-97) are acceptable even though the wh-word comes from inside the adjunct as shown by the trace inside the square brackets.

- (94) What did John drive Mary crazy [trying to fix t]?
- (95) Kaj je Črt prišel domov [ pojoč t]? what aux Črt came home singing 'What did Črt come home singing?'
- (96) Kaj je Mirko spravil ob živce Metko [ poskušujoč popraviti t]? what aux Mirko bring next-to nerves Metka trying fix 'What did Mirko drive Metka crazy trying to fix?'
- (97) Koga je Zdravko prišel domov [ opevajoč t]? who aux Zdravko came home singing-about 'Who did Zdravko came home singing about?'

According to Truswell (2007), in all these examples, it's the relation between the embedded and the matrix predicate that makes the adjunct transparent for movement. Regardless of the actual reason for such transparency, the fact is that given the choice of the correct embedded and matrix predicate, adjuncts cease to act like islands. So this is not really a process that makes an island transparent but simply a type of contruction that doesn't behave on par with constructions that appear to be syntactically similar. This tells us something about the nature of islands, what are the true causes of islandhood, but this is not our focus here.

If adjuncts of this type aren't really islands, we wouldn't them to behave like proper islands and would also not expect multiple sluicing to exhibit any unusual behavious. Indeed this is what we find. Multiple sluicing examples where one of the wh-remnants comes from such an adjunct and the other one from the matrix clause are acceptable, just like multiple wh-questions with the same predicates.

- (98) Nekdo je prišel domov opevajoč nekoga, ampak ne vem kdo someone aux came home singing-about someone but not know who.nom koga. who.acc
  'Someone came home singing about someone, but I don't know who about whom.'
- (99) Kdo je koga prišel domov opevajoč? who.nom aux who.acc came home singing-about

'Who came home singing about who?'

Here again we have come to the same conclusion confirming the generalization stated above that multiple sluicing is allowed only when multiple wh-movement is possible, which means sluicing doesn't ameliorate any island violations as it is only allowed when overt version of the sluicing construction is possible.

## 5 Towards an account

## 5.1 An old proposal

Merchant (2001) (p.209) proposes that propositional islands (relative clauses, adjuncts, anything clausal) are not fixed by sluicing since they are never even violated. The idea being that the ellipsis site in these cases does not include the entire antecedent but rather just the embedded propositional phrase, i.e. the relative clause, the adjunct etc. Something along these lines was already proposed by Baker and Brame (1972) and seems to be confirmed by the data above.

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(100) Merchant (2001):

NOT: ...who [Vid sold the horse [that kicked _____]]

BUT RATHER: ...who [the horse kicked _____]
```

This proposal seems to make some testable predictions. If the sluiced part of the sentence only consists of the embedded clause, then any element that is present in the matrix clause insite the antecedent, should not have any efect. We can try testing this prediction with binding theory, concretely with Principle C.

Principle C violations can be observed in regular sluicing examples as in (101), which further means Principle C violations are not subject to island repair.

- (101) a. Vid je brcnil enega svojega prijatelja. Vid aux kicked one his friend 'Vid kicked one of his friends.'
  - b. Sprašujem se katerega \*Vidovega / svojega prijatelja. ask refl which Vid's his friend 'I wonder which one of his friends.'

But if we place the referring expression inside the matrix clause of the antecedent and the correlate inside an island, there is no priciple C effect in the sluicing construction. Prediction made by this proposal is thus confirmed.

- (102) a. Vid je kupil konja, ki je brcnil enega njegovega prijatelja. Vid aux bought horse, that aux kicked one his friend 'Vid bought a horse that kicked one of his friends.'
  - b. Sprašujem se katerega Vidovega prijatelja.
     ask refl which Vid's friend
     'I wonder which Vid's friend.'
- (103) a. Vid je šel, ravno ko je Črt brcnil enega njegovega prijatelja. Vid aux left, just when aux Črt kicked one his friend 'Vid left just when Črt kicked one of his friends.'
  - Sprašujem se katerega Vidovega prijatelja.
     ask refl which Vid's friend
     'I wonder which Vid's friend.'

## 5.2 Another prediction

If sluicing always uses a short construal to avoid island violations, than if the matrix predicate is something that affects "pressupositon projections" like deny, the overt short construal (without deny) should become impossible. Without the matrix predicate the short construal alone would pressupose the truth of the proposition, but the proposition is actually false as the island is inside the scope of the pressuposition altering predicate (Boban Arsenijević p.c.), as shown in (104).

- (104) \*John denied that Vid bought a car, but I forgot which car Vid bought.
- (105) \* Črt je včeraj povedal laž, da je enkrat lani preplezal Jugov steber, Črt aux yesterday told lie that aux once last-year climbed Jug's pillar, ampak ne vem kdaj. but not know when
  - "Črt told a lie yesterday that he climbed Jug's pillar sometime last year, but I don't know when."

As shown in (105) this prediction is borne out.

### 5.3 Extension of the old proposal

So far we have seen that regardless of the type of island, multiple sluicing constructions, as schematized in (106), were fine only if the corresponding wh-question, schematized in (107), was fine too.

(106) ...who what 
$$\frac{V[island X Y ]}{V[island X Y ]}$$
.

(107) Who what 
$$[$$
  $\_\_$   $V [$   $_$   $I$   $X Y  $\_\_$   $]]?$$ 

Merchant (2001)'s proposal is only about propositional islands, but given that all islands seem to behave alike when it comes to this, we want to suggest whenever an apparent extraction out of an island is observed, the ellipsis site does not contain the entire antecedent clause, but that what is deleted is actually a short source that avoids island violation.

Something similar has already been proposed for certain islands in various languages. In Dutch and German, for example, the adjective that apparently violates LBE in sluicing contructions carries morphology of predicative adjectives (Merchant 2001). Thus, the ellipsis cite cannot contain the proper antecedent clause but it apparently only contains a simple predicative structure. This seems to be true also in Slovenian. The adjectives that participate in sluicing receive predicative semantics (p.c. Erik Schoorlemmer, Klaus Abels), as shown in (108), which is also the only one avilable with null Ns.

(108) Srečal je enega starega prijatelja, ampak ne vem kako starega. met aux one old friend but not know how old 'He met an old friend, but I don't know how old.' = how old he is / ≠ how long they have been friends

At this point we do not have a ready analysis for each individual type of island. Nevertheless we want to suggest the following. PP-inside-DP islands potentially involve a cleft, as in (109).

(109) Vid je razlagal teorijo o nečem, pa ne vem, o čem (je bila Vid aux explained theory about something but not know about what aux was teorija).

theory

'Vid was explaining a theory about something, but I don't know about what the theory was.'

A cleft source is impossible for DP-inside-DP islands, (49), but here the remnant most likely involves a null N as in exemplified in (111).

(110) Vid je razlagal teorijo nečesa, pa ne vem, česa (\*je bila teorija). Vid aux explained theory something<sub>GEN</sub> but not know what<sub>GEN</sub> aux was theory 'Vid was explaining the theory of something, but I don't know what (was it about).'

(111) ..., pa ne vem, (teorijo) česa (je razlagal Vid). but not know theory what $_{GEN}$  aux explain Vid '..., but I don't know (theory of) what (Vid was explaining).'

Violations of Coordinate structure constraint could be avoided simply with the use of a single conjunct:

(112) NOT: ...who [Vid invited Peter and \_\_\_\_ ]
BUT RATHER: ...who [Vid invited \_\_\_\_ ]

This seems to be confirmed also by the fact that if we control for collective reading, CSC violations turn out much more restricted (p.c. Klaus Abels).

- \*Peter in nek Italijan sta se pogledala izpod čela, si popravila
  Peter and some Italian aux refl looked from-under forehead, refl fix
  brke in se spoprijela, ampak ne vem kateri Italijan.
  mustache and refl grabbed but non know which Italian

  'Peter and some Italian looked at each other angrily, fixed their mustache and started a fight, but I don't know which Italian.'
- (114) \*Osem in nekaj je petindvajset, ampak ne vem kaj / koliko. eight and something aux 25 but not know what / how-much 'Eight and something makes 25, but I don't know how much.'

## 6 Conclusion

We hope to have provided another argument against island repair under sluicing.

If sluicing doesn't repair improper movement, it falls out naturally why the availability of sluicing depends on the availability of wh-movement.

More work needs to be done to properly understand what trully happens in sluicing, but as island repair has been such a prominent topic, we believe by avoiding discussion of it we have made good progress.

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