

## Sluicing as sharing\*

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### 1 Introduction: ellipsis-antecedent mismatches vs. morphological case

One of the central questions in the literature on sluicing—and ellipsis in general—concerns the nature of the identity relation between an ellipsis site and its antecedent ([Vicente to appear](#), [Merchant to appear](#)). Consider the example in (1).

(1) Kyle insisted on eating nattō, and I couldn't understand why \_\_\_.

It seems plausible that the sluicing site (indicated by the underscore) contains something like 'Kyle insisted on eating nattō' by virtue of being identical to the clause in the first conjunct, but what is less clear is whether this identity relation is a syntactic or a semantic one. One type of argument that is frequently used in this respect revolves around mismatches between the ellipsis site and its antecedent: if they can be shown to differ in form, but not in meaning, then this is an argument in favor of a semantic identity requirement, while if a change in form with no effect on the meaning results in ill-formedness, the identity relation is arguably formal-syntactic in nature. An area where such mismatches are readily detectable concerns (apparent) violations of the Preposition Stranding Generalization (PSG; [Merchant 2001: 92](#)):

(2) A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular *wh*-movement.

The PSG states that there is a correlation between the optional or obligatory presence of prepositions in sluiced *wh*-phrases on the one hand and the possibility of preposition stranding in non-elliptical *wh*-questions on the other. While the PSG is cross-linguistically well supported, some of the judgments and footnotes in [Merchant 2001: 94–100](#) already make clear that it is not always as well-behaved as one would like. Consider the Spanish data in (3) and (4).

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\* It gives me great pleasure to be able to dedicate this paper to Kyle Johnson. Talking to Kyle is always a bit of an adventure: you're trying to figure out if his linguistic ideas are crazy and incomprehensible or deep and complex (usually the latter), if he's mocking or praising you (typically a combination of both), or what he really thinks about girly cocktails (I'm still working on that one). I sincerely hope to be a part of that adventure for many years to come.

- (3) \*Qué chica rubia ha hablado Juan con?  
 what girl blonde has talked Juan with  
 INTENDED: ‘What blonde girl did Juan talk to?’
- (4) Juan ha hablado con una chica rubia, pero no sé cuál.  
 Juan has talked with a girl blonde but not I.know which  
 ‘Juan has talked to a blonde girl, but I don’t know which.’

As discussed in detail by Vicente (2008) and Rodriguez et al. (2009), Spanish presents a *prima facie* challenge to the PSG: this language disallows preposition stranding in non-elliptical *wh*-questions (3), but does seem to allow it under sluicing (4). What Vicente and Rodriguez et al. argue, however, is that the problem is only apparent: the structure underlying the ellipsis site in (4) is not one that is structurally isomorphic to the antecedent — and in which a preposition has been illegitimately stranded — but rather a short cleft or copular clause, as represented in (5) (see the papers cited for extensive argumentation in support of this analysis).<sup>1</sup>

- (5) Juan ha hablado con una chica, pero no sé cuál ~~es~~  
 Juan has talked with a girl but not I.know which is it  
 ‘Juan talked to a girl, but I don’t know which girl it was.’

In short, there is good evidence to suggest that certain instances of sluicing contain a short cleft or copular clause in their ellipsis site, even if the antecedent clause does not contain such a structure; i.e., sluicing sites need not be structurally isomorphic to their antecedents. This raises an interesting prediction for languages with morphological case marking on their *wh*-phrases. Take Greek for example:

- (6) Me pjon milise?  
 with who-ACC she.spoke  
 ‘With whom did she speak?’

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<sup>1</sup> In this paper, I remain agnostic about whether the structure underlying the sluice in (4)/(5) is a cleft or a copular clause. From the perspective of this paper it doesn’t matter much, given that both options involve a mismatch between the ellipsis site and its antecedent.

- (7) Dhen ksero pjos itan.  
not I.know who-NOM it.was  
'I don't know who it was.'

The *wh*-phrase 'who' is marked accusative when it appears as the complement of the preposition *me* 'with' (6), but nominative when it is the pivot of a short cleft (7). If, as suggested by the Spanish data, short clefts can be used to circumvent preposition stranding violations under sluicing, we would expect Greek to feature the nominative form *pjos* 'who' in a PSG-violating context. As is shown in (8), this prediction is not borne out (van Craenenbroeck 2010).<sup>2</sup>

- (8) \*I Anna milise me kapjon, alla dhen ksero pjos.  
the Anna spoke with someone, but not I.know who-NOM  
INTENDED: 'Anna spoke with someone, but I don't know who.'

The ill-formedness of (8) is puzzling given that its non-elliptical counterpart, the short cleft in (9), is perfectly well-formed. In other words, there is a perfectly acceptable underlying structure for the sluicing site in (8), and yet ellipsis is still disallowed.

- (9) I Anna milise me kapjon, alla dhen ksero pjos itan.  
the Anna spoke with someone, but not I.know who-NOM it.was  
'Anna spoke with someone, but I don't know who it was.'

The interaction of non-isomorphic ellipsis sites and morphological case thus presents something of a puzzle: on the one hand there is good evidence suggesting that short clefts and/or copular clauses can serve as the source for sluicing sites, but on the other, whenever these non-isomorphic sites could be directly detected via the morphological case marking on the *wh*-phrase, ellipsis is blocked. This puzzle has not gone unnoticed in the literature, but has so far been dealt with via stipulation, in particular by requiring that the *wh*-phrase have some special morphosyntactic relationship with the antecedent clause (see for example Chung's (2013: 30) Case condition or Abels' (2017) Fit condition). This paper wants to derive the facts laid out in this section from the general analysis of sluicing. It will do so by adapting Johnson's (2013) analysis of Andrews amalgams and extending it to all cases of sluicing.

## 2 Johnson's (2013) analysis of Andrews amalgams

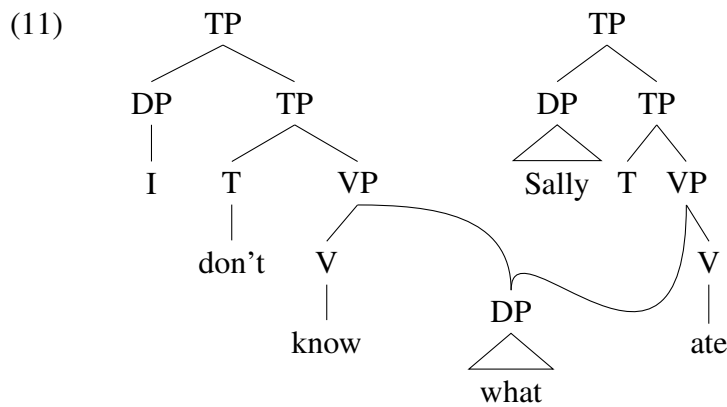
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<sup>2</sup> Note that the variant of this example with the accusative form of the *wh*-pronoun is also ruled out, but unsurprisingly so, as it violates the PSG.

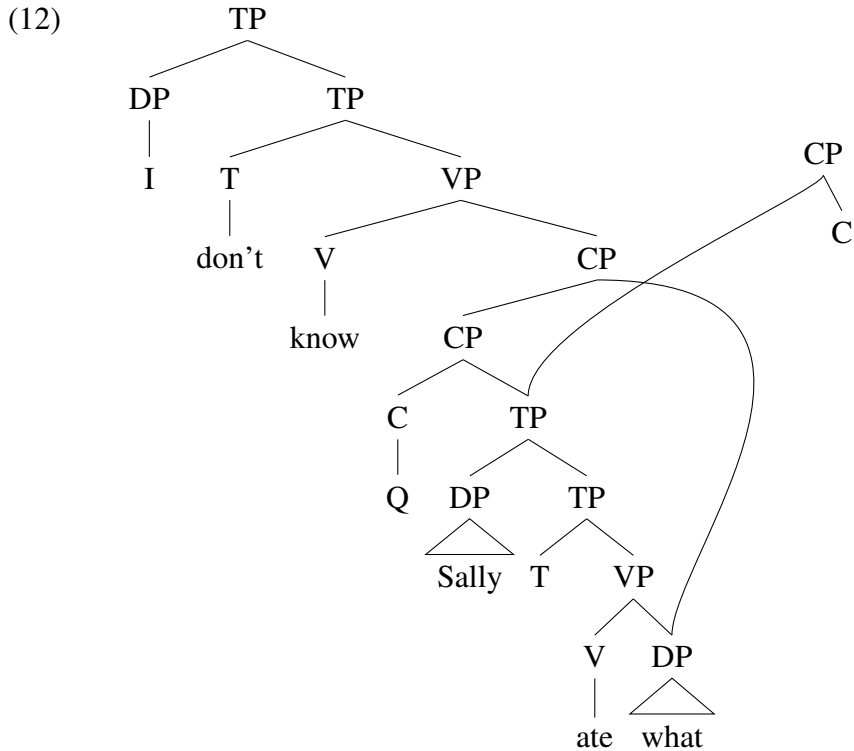
Johnson (2013) is concerned with the analysis of so-called Andrews amalgams (AAs), an example of which is given in (10).

(10) Sally ate I don't know what.

Inspired by Guimarães (2004) and Kluck (2011), Johnson considers two possible multidominant analyses of AAs: either the sluiced *wh*-phrase is shared between two clauses, or the entire sluiced TP is. The structure in (11) represents the first option for the example in (10) (Johnson 2013: 75), and the structure in (12) the second one (Johnson 2013: 92).<sup>3</sup>



<sup>3</sup> Note that the structure in (11) is “overly simplified” (Johnson 2013: 75) in that it doesn’t acknowledge the fact that the verb *know* should have an interrogative clausal complement. For now, though, what I’m interested in is the contrast between DP-sharing as in (11) and TP-sharing as in (12).



Johnson ends up choosing the second option.<sup>4</sup> A side-effect of that analysis, though, is that it predicts that the ellipsis site in AAs should always be structurally isomorphic to its antecedent:<sup>5</sup> given that there is only one TP, it is impossible for it to have multiple distinct morphosyntactic structures. As pointed out by Kluck (2011: 194), however, exactly the same (apparent) PSG-violations that are attested in non-AA-slucing surface in AAs as well. Consider for example the following AA from Spanish:

- (13) Juan estaba bailando con no te            was a creer   quién.  
 Juan was   dancing with not you.DAT go to believe who  
 ‘Juan was dancing with you wouldn’t believe who.’

Completely parallel to the ‘regular’ sluicing example in (4), the *wh*-phrase *quién* ‘who’ in (13) appears to have stranded its preposition inside the ellipsis site. If the

4 His main reason for doing so is the fact that sluicing is obligatory in AAs: \**Sally ate I don't know what Sally ate*. Under the approach developed here, the obligatory nature of that ellipsis process must have a different reason.

5 It should be clear that from the point of view of Johnson’s analysis, the terms ‘ellipsis site’ and ‘antecedent’ are necessarily used metaphorically, given that AAs do not involve ellipsis in any strict sense.

Vicente/Rodriguez et al. analysis of the data in (4) is on the right track, this would suggest that in (13) too we are dealing with a non-isomorphic ellipsis site. That in turn would mean that the elided TP cannot be shared in this example, contrary to Johnson’s proposal.<sup>6</sup>

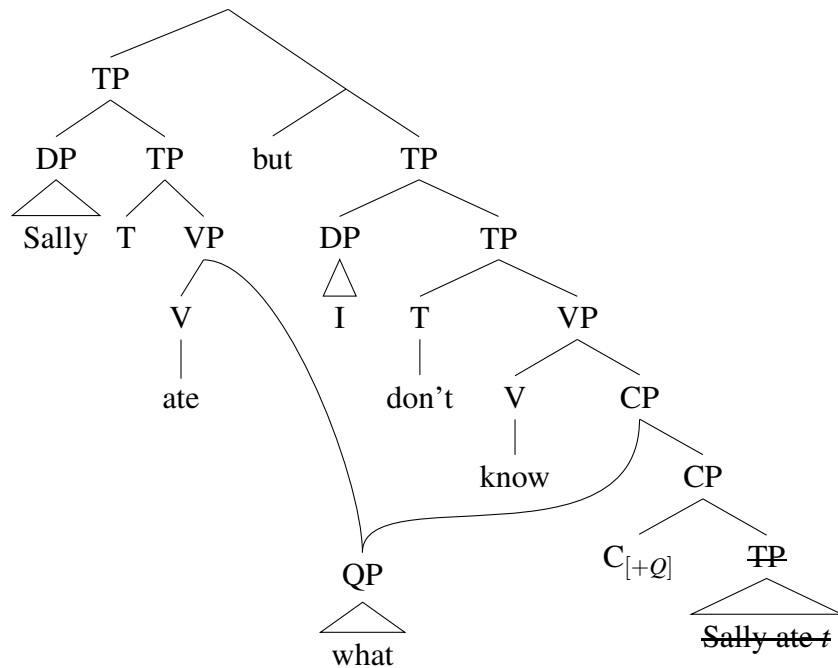
Summing up, Johnson’s (2013) intuition that a sluiced clause and its antecedent share a certain amount of structure is appealing, but wholesale sharing of the entire sluiced TP wrongly predicts that there should be no mismatches between a sluicing site and its antecedent.

### 3 The new analysis: sluicing as sharing

The analysis proposed in this paper is an expansion of Johnson’s (2013) structure in (11): I want to pursue the idea that every instance of sluicing — rather than only AAs — involve shared structure between the ellipsis-containing clause and its antecedent. In order to see how this works, consider the analysis in (15) of the sprouting example in (14).

(14) Sally ate, but I don’t know what.

(15)



<sup>6</sup> Further corroborating evidence for this conclusion comes from preposition stranding under sluicing in Dutch (Kluck 2011: 199–206) and the island-insensitivity of AAs (Kluck 2011: 174–179).

The sluiced *wh*-phrase is shared between the antecedent clause and the ellipsis-containing one: *what* is simultaneously the direct object of *ate* in the antecedent, and it occupies the specifier of the CP complement of *know*.<sup>7</sup> The rest of that complement clause is elided (indicated here by means of strikethrough). The *wh*-phrase *what* is linearized to the right of the entire coordination, and the resultant string is the one in (14).<sup>8</sup> Note that this analysis, while arguably unconventional, provides a straightforward account for what is informally known as Chung's puzzle, which concerns data such as those in (16) (first discussed in Chung 2006).

- (16) a. John was jealous, but I don't know \*(of) who.  
 b. John was jealous of someone, but I don't know (of) who.

While English generally allows preposition stranding under sluicing (16b) (in accordance with the PSG), it doesn't do so under sprouting (16a), i.e., when the sluiced *wh*-phrase has no overt correlate. These facts prompt Chung (2006: 83) to propose that there is an irreducible lexical component to ellipsis identity in that an ellipsis site cannot make use of lexical items that are not already in the antecedent. This principle not only adds an additional stipulation to the formulation of the principle regulating ellipsis identity, it also makes the wrong prediction for the type of data discussed earlier. For example, in the Spanish case in (5), the *es* 'is' that is contained in the ellipsis site has no corresponding lexical item in the antecedent clause, and yet this instance of ellipsis is perfectly legitimate. Under the account developed in this paper, however, Chung's puzzle falls out naturally: in the ungrammatical version of (16a), the *wh*-phrase *who* is shared between the ellipsis-containing clause and the antecedent. However, in the latter it fails to satisfy the formal selectional requirements of the adjective *jealous* and so the example is correctly ruled out.

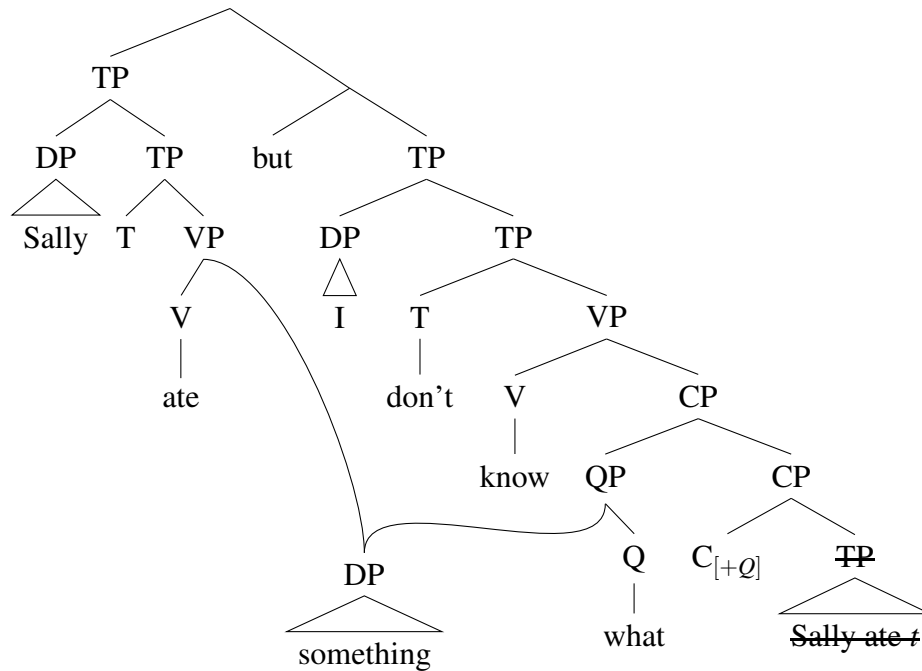
Now let's turn to the merger type of sluicing (Chung et al. 1995), in which the sluiced *wh*-phrase has an overt correlate. Here it looks like the shared element has a double spell-out: once as the sluiced *wh*-phrase, and once as the correlate. What I want to propose is that merger sluicing differs from sprouting in the amount of structure that is shared: the entire QP in sprouting vs. the DP-complement of Q in sluicing. The DP is spelled out as the correlate in the antecedent clause, and the Q-head is spelled out as the sluiced *wh*-phrase. This is illustrated in (18) for the example in (17).

- (17) Sally ate something, but I don't know what.

<sup>7</sup> In addition, it has moved from the complement position of the to-be-elided verb *ate* in the ellipsis site. Arguably this step also involves sharing/multidominance (Johnson 2012). I gloss over it here for expository purposes.

<sup>8</sup> In this paper I remain agnostic about how the linearization of multidominant tree structures proceeds. See Johnson 2012, 2013 and Citko 2011 for discussion.

(18)



Interestingly, the structure in (18) solves the puzzle this paper started out with: given that the DP is multiply dominated, it needs to satisfy the morphosyntactic requirements of two clauses. As is well-known from the literature on multidominant structures (see, for example, Citko 2011 for an overview), this implies that it needs to bear a case form that simultaneously satisfies its two Merge positions. In the Spanish example in (4) the correlate *una chica rubia* ‘a blonde girl’ — and by extension the sluiced *wh*-phrase *cuál* ‘which’<sup>9</sup> — can satisfy the case requirements of both clauses and the example is well-formed. In the Greek sluice in (8) on the other hand, the correlate has a form which is only compatible with the antecedent clause — and the *wh*-phrase one which is only compatible with the ellipsis-containing clause — and the result is ill-formed.

Analyzing sluicing on a par with bona fide multidominant structures such as ATB-movement or free relatives makes an additional prediction regarding case matching. As is well-known, the case identity required for multiply dominated DPs can also — at least for some speakers and in some contexts — be satisfied by synthetic case forms (see Citko 2011 for examples and references). If case matching in sluicing is indeed to be reduced to multidominance, then we expect the same effects to show up in this construction. As is illustrated in (19), this is indeed the case.

<sup>9</sup> I’m assuming there’s case concord between Q and DP.



- (19) ?I Anna milise me kapja kopela, alla dhen ksero pja.  
the Anna spoke with a girl, but not I.know which-NOM/ACC  
'Anna spoke with a girl, but I don't know which.'

The feminine singular forms used in this example are syncretic between nominative and accusative and the result — i.e., the apparent case of preposition stranding under sluicing — is markedly better.<sup>10</sup> This example thus provides strong support for the approach adopted in this paper.

#### 4 Summary and remaining elephants in the room

This paper has taken as a starting point one of the analyses proposed by Johnson (2013) for Andrews amalgams and has extended it to sluicing more generally. The central proposal is that sluicing involves structure sharing between the ellipsis-containing clause and its antecedent. While certainly non-standard as a general approach to sluicing, it straightforwardly resolves the tension between case matching on the one hand and lack of isomorphism between ellipsis site and antecedent on the other, and it provides a simple account for Chung's puzzle. In addition, it correctly predicts that case syncretism can have an ameliorating effect on (apparent) PSG-violations under sluicing.

Needless to say, many elephants remain in the room just created. One — raised by Kyle Johnson, unaware he was discussing a contribution to his own super-secret-don't-tell-anyone festschrift — concerns the existence of cross-speaker sluicing:

- (20) A: I saw someone.  
B: Who?

If this paper is on the right track, these two utterances should form a single syntactic structure, perhaps not unlike the inter-speaker *wh*-movement chain in (21). This, and many other elephants, will have to await another occasion.

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<sup>10</sup> The ameliorating effects of case syncretism on (apparent) PSG-violations under sluicing can also be seen in Zurich German, German, and Russian. Many thanks to Artemis Alexiadou, Anastasia Giannakidou, Maria Gouskova, Vera Gribanova, Stella Gryllia, Timo Klein, Marika Lekakou, Lutz Marten, Ora Matushansky, Martin Salzmann, Arhonto Terzi, and Malte Zimmermann for kindly providing me with native speaker judgments. Note that a general caveat is in order. As pointed out by Pullum & Zwicky (1986: 759) and Ingria (1990: 203), judgments about syncretism and morphological case are notoriously subtle and subject to inter-speaker variation. While to a certain extent this is also the case for my data (see, for example, Abels 2017: (48) for a German example where syncretism does not have an effect), the general trend is clear: syncretic sluiced *wh*-phrases can be prepositionless more easily than their non-syncretic counterparts. The fact that for some speakers syncretism has no ameliorating effect might be due to variation in the way syncretism is represented in their mental grammar, i.e., variation as to which forms represent 'the same element'.

- (21) A: How many books did Ben say —  
 B: He was going to take? Five.

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