On a non-argument for cleft sources in Sluicing*

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Abstract

Based on certain semantic intuitions, Barros 2012 argues that we must conclude that ellipsis does not require structural isomorphism between elided structure and its antecedent. We tackle this claim. Semantic intuitions cannot be a pointer to the analysis of silent structure. We provide empirical evidence that raises the question of to which extent our semantic intuitions about plausible articulable syntax must inform our analysis of silent structure. Here we conclude the answer to such a question must be cross-linguistically informed. We conjecture that ellipsis introduces ellipsis-specific interpretive mechanisms, so that intuitions about “how the un-elided structure would be interpreted” are not empirically relevant.

Keywords: sluicing, contextual restriction, ellipsis identity, inheritance of content

This paper is dedicated to the memory of Luis Vicente
1 A Semantic argument for non-isomorphic ellipsis

A flurry of studies over the last two decades has provided crosslinguistic support for the idea that clefts and copular clauses can underlie certain instances of clausal ellipsis (see, among many others, Merchant 1998, Potsdam 2007, Rodrigues et al. 2009, van Craenenbroeck 2010, Hiraiwa & Ishihara 2012, Paul & Potsdam 2012, Gribanova 2013, Barros 2014, Gribanova & Manetta 2016, and references). Among these studies, Barros 2012 stands alone in developing a purely semantic argument in favor of a cleft source. His argument is based on the observation that the incongruence of the non-elliptical wh-question in (1a) (called a *pre-sluice*), disappears under sluicing (1b). We will refer to this particular repair-by-ellipsis effect as a *Barros effect*.

(1) Jack kissed Sally, and he also kissed someone else...

   a. # ...but I don’t know who he kissed.
   b. ...but I don’t know who.

The source of incongruence in (1a) is easy to pinpoint. If one says *I don’t know who Jack kissed*, one is asserting ignorance of the identity of all of the people that Jack kissed (Romero 1998 and references); but this is inconsistent with the speaker’s previous assertion, that *Jack kissed Sally*, which commits the speaker to knowing the identity of at least one such person. The congruence of the minimally different (2) supports this analysis: here the assertion that I know some of the people Jack kissed is not contradicted by the subsequent assertion of Peter’s ignorance.

(2) I know that Jack kissed Sally, and that he then kissed someone else, but Peter doesn’t know who Jack kissed.

To explain why ellipsis repairs the incongruence of (1a), Barros proposes that (1b) doesn’t stem from deletion in (1a), but from deletion of the cleft in (3), which is independently
felicitous. The cleft pre-sluice is congruent because it is possible to write a semantics for *it* that is roughly paraphrasable as “the person other than Sally that Jack kissed”.

(3) Jack kissed Sally, and he also kissed someone else, but I don’t know who it is.

This analysis is based on the fact that E-type pronouns like those found in cleft constructions can be consistently paraphrased with definite descriptions containing a relative clause that tracks the meaning of the clause that contains the antecedent of the pronoun (Cooper 1979, Evans 1980, Heim 1990, Neale 1990, Heim & Kratzer 1998, Elbourne 2005). This can be done by introducing a contextually sensitive variable in the subject DP of the cleft sentence, R which picks up salient properties in the discourse. R will compose with the determiner and hence the entire DP will denote the unique individual that has that salient property. This is shown in (4):

\[
\lambda P. i x [P(x)] \quad \lambda y. R_i(y)
\]

Let us take the antecedent sentence from (1) (repeated below):

(5) Jack kissed Sally, and he also kissed someone else... 

Given this antecedent, the cleft pronoun would denote the property in (6a). That is the property of being kissed by Jack and, assuming an exceptive semantics for *else* (von Fintel 1994), the property of not being Sally. Embedding that property into the structure of the pronoun in (4) will yield the meaning in (6b), that is, a unique individual that Jack kissed and is not Sally.

(6) a. \([R_i]_g = \lambda x. [x \neq \text{Sally} \ \& \ \text{Jack kissed } x \ \& \ \text{human}(x)]\) 

b. \([it]_g = i x [x \neq \text{Sally} \ \& \ \text{Jack kissed } x \ \& \ \text{human}(x)]\)
Barros then assumes the LF for the elided cleft in (7) for Barros sentences, adopting a standard Hamblin/Karttunen semantics for questions. Wh-movement of who $\lambda$-binds its trace via predicate abstraction, and interrogative $C^0$ introduces a propositional variable which may then be abstracted over generating a set of propositions:

(7) \[ \lambda p. \exists x [\text{human}(x) \& p = [(6b) = x]] \]

Once we plug in the meaning of the cleft pronoun, we end up with (8) which is paraphrasable as ‘Who the unique non-Sally human that Jack kissed is’:

(8) \[ \lambda p. \exists x [\text{human}(x) \& p = \iota z [z \neq \text{Sally} \& \text{Jack kissed } z \& \text{human}(z)] = x] \]

Now, compare this to non-cleft pre-sluice below. Remember that this continuation is unacceptable because it imposes inconsistent knowledge states on the speaker; the speaker both denies knowledge of the question “who Jack kissed” while committing themselves to knowing a partial answer (that Jack kissed Sally) in the same breath.

(9) # Jack kissed Sally, and he kissed someone else too, but I don’t know who Jack kissed.

With a cleft, however, R picks up the property contributed by else (the property of being distinct from Sally); hence we are claiming we don’t know the answer to the question ‘who is the non-Sally individual that Jack kissed?’ and then the infelicity does not arise.
Here, we show on morphosyntactic grounds that Barros’s cleft analysis is untenable. We argue that it is the non-cleft pre-sluice that is elided in (1b). The question is then how a non-cleft pre-sluice manages to receive a cleft-like semantics in sluicing, so that it may avoid the infelicity characteristic of non-cleft pre-sluices in paradigms like (1).

From the above discussion, clearly the ability of R to pick out salient properties plays a crucial role in the cleft analysis of Barros sentences. We suggest that R may be introduced into the semantics of elided material as an ellipsis specific reflex, and furthermore, that Barros effects can be seen as a special case of Inheritance of Content effects (Chung et al. 1995; Romero 1998), where sluices inherit aspects of the interpretation of their antecedents.

2 A problem for Barros’s account: Matching effects

Barros’s proposal, while intuitive, lacks generality: Lipták (2013) and Saab (2015) show that paradigms analogous to (1) can be constructed in environments where a cleft source like (3) is not available. In both cases, this is accomplished by using sluicing remnants that are illicit cleft pivots. Saab, for example, exploits the distribution of Spanish DPs bearing the differential object marker a.

Examples (10a) and (10b) are analogous to (1a) and (1b), respectively, and need no additional comment. The interesting example is (10c), which shows that a-marked objects may not function as cleft pivots. The ungrammaticality of (10c) then implies that (10b) cannot stem from deletion of an underlying cleft.

(10) Juan besó a María, y también besó a alguien más…

Juan kissed DOM María and also kissed DOM someone else

a. # … pero no sé a quién besó.
   but not know.ISG DOM who kissed

b. … pero no sé a quién.
   but not know.ISG DOM who
Additionally, the Barros effect in (10b) cannot be analyzed in terms of a covert *else*.
Borrowing an argument from Lipták (2013), we note that the unsluiced version of such a sentence in (11) has a different meaning — i.e., where the wh- phrase alludes to a third person that Juan kissed, in addition to María and the unspecified *alguien más* of the antecedent.3

(11) Juan besó a María y también besó a alguien más, pero no sé quién es.

Juan kissed DOM María and also kissed DOM someone else but not know a quién más besó.

DOM who else kissed

“Juan kissed María, and he also kissed a second person, but I don’t know which third person he kissed”

Importantly, the paradigm in (10) is not a quirk of Spanish. As Saab points out, it can be replicated across languages with any type of phrase that constitutes a licit sluicing remnant but not a licit cleft pivot. The paradigm in (12), from Lipták (2013), illustrates this pattern with Hungarian accusative-marked objects (12), and the one in (13), with German PPs.

(12) Mari meg hívta Jánost, és meg hívott még valaki...

Mari PV invited Janos.ACC and PV invited also someone.ACC

a. # ... de nem tudom kit hívott meg.

but not know.ISG who.ACC invited PV

b. ... de nem tudom kit.

but not know.ISG who.ACC

c. * ... de nem tudom kit volt az.

but not know.ISG who.ACC was that
It is also worth noting that the Barros effects in (10) through (13) cannot be accommodated by assuming that sluicing exceptionally licenses otherwise illicit cleft pivots, as Elliott & Murphy (2019) propose for sluices embedded under *egal* ‘no matter’ in German. This line of attack would fail to account for the fact that Barros effects also obtain in Romanian, which lacks clefts entirely (Dobrovie-Sorin 1990, 1994).

3 Barros’s effects as inheritance of content

The hypothesis that underlies this squib is that Barros effects are part of a larger class of sluices that exhibit a cleft- or copular-like interpretation, even in languages and
environments where such underlying clefts and copular clauses are demonstrably unavailable. In particular, we propose that Barros effects form a natural class with inheritance of content, i.e., the fact that sluicing remnants inherit the restriction of their indefinite correlates, even if wh- items in the corresponding unsluiced questions do not (Ginzburg 1992, Chung et al. 1995, Romero 1998). The unsluiced question in (15a) means that Jack didn’t see any of the people who left the party early, whether they were students or not. In contrast, the sluice in (15b) means that Jack didn’t see any of the students that left early, without any assertion as to whether he failed to see any non-student early-leavers.

(15) Some students left the party early…
   a. …but Jack didn’t see who left the party early.
   b. …but Jack didn’t see who. 

Jacobson (2016) and Weir (2014) discuss an analogous pattern with fragment answers. Just as above, the non-elliptical reply in (16B) doesn’t entail that the Germans dancing in the quad were students (if anything, this meaning is a conversational implicature); in contrast, the fragment in (16B’) necessarily comes with this entailment. For conciseness, we will focus on the sluicing case and assume that our analysis carries over to fragments (this much is uncontroversial under an analysis of fragments along the lines of Merchant 2004 and Weir 2014 where the fragment moves to a left-peripheral position prior to TP deletion, just as wh- words do under sluicing).

(16) A: Which students were dancing in the quad?
   B: Some Germans were dancing in the quad.
   B’: Some Germans.

It is tempting to analyze inheritance of content by requiring (15b) to stem from a copular clause like (17), which is also a question exclusively about students. Here, they, like it in
(3), gives us a meaning paraphraseable as “the students just mentioned”.

(17) Some students left the party early, but Jack didn’t see who they were.

This analysis, however, suffers from the same lack of generality as Barros’s cleft-based account of Barros effects. To begin with, it forces us to say that (17) is the only source for (15b), and while English does allow copular clauses along the lines of (17) to be sluicing sources, it does not restrict sluices to just these sources (see especially Merchant 2001 §4.2, Merchant 2010). Moreover, we can use the same line of argumentation we deployed in (10) through (14) to show that inheritance of content is not contingent on the availability of an underlying copular source. The Spanish examples (18a) and (18b) have the same meanings as (15a) and (15b), respectively; however, they cannot be derived from a copular clause because a-marked phrases are illicit copular pivots (18c). Just as is the case with Barros effects, comparable examples in other languages can be constructed with any phrase that is a licit sluicing remnant and an illicit cleft/copular pivot.

(18) Juan vio a unos estudiantes en la fiesta...

   Juan saw DOM some students in the party

   a. . . . pero Pedro no sabe a quién(es) vio Juan en la fiesta.
      but Pedro not knows DOM who.PL saw Juan in the party
      [= Pedro doesn’t know who (whether student or not) Juan saw at the party]

   b. . . . pero Pedro no sabe a quién(es).
      but Pedro not knows DOM who.PL
      [= Pedro don’t know which students Juan saw at the party]

   c. * . . . pero Pedro no sabe a quién(es) eran.
      but Pedro not knows DOM who.PL were

Another analysis of Barros effects to consider is Saab’s (2015), who proposes that the sluicing site takes the entire coordination in (10) as its antecedent, with the wh- phrase undergoing asymmetric extraction from the second conjunct (19). We refer readers to
Saab's paper for a discussion of the semantics of this structure. Note that the syntax in (19) should yield a CSC violation: though Saab takes this as support for the hypothesis that ellipsis can repair locality violations (contra the conclusions of Abels [2011] Barros et al. [2014] and especially Merchant [2001] §5.4.3 for the narrow case of CSC violations).

(19) no sé [a quién], [[Juan besó a María] y [besó t; también]].

There are many reasons to consider alternatives to Saab's proposal. First, it doesn't offer a way to group Barros effects together with inheritance of content as instantiations of a more general phenomenon. Another problem stems from Saab's implicit hypothesis that the congruence of (10b) is contingent on the congruence of (19). Consider, in this light, (20B), which a number of speakers (including the first author of this paper) find congruent under the indicated reading. ⁴

(20) A: Juan besó a María, y también besó a alguien más.

Juan kissed DOM María and also kissed DOM someone else

B: Sólo a Susana.

only DOM Susana

[= Susana is the only person besides María that Juan kissed]

Under Saab's analysis, (20B) would be derived from deletion of (21B). Notably, (21B) is incongruent: one cannot assert that Juan kissed María and then follow up with an assertion that he only kissed Susana. Given that the contradiction inherent to (21B) is not a locality problem, one would have to assume a semantic repair mechanism on top of the island repair mechanism that Saab already assumes.

(21) A: Juan besó a María, y también besó a alguien más.

Juan kissed DOM María and also kissed DOM someone else

B: # Juan besó a María y besó sólo a Susana

Juan kissed DOM María and kissed only DOM Susana
An account that treats Barros effects as a subtype of inheritance of content, on the other hand, doesn’t encounter this problem. The indicated reading of (20B) can be derived in the same manner as (10b), i.e., by deletion of Juan besó sólo a Susana, where the ellipted clause inherits the property of being someone other than María that Juan kissed. This results in the restriction of Susana’s focus alternatives in (20B) to non-María alternatives, yielding the intuitively correct interpretation, where the only non-María individual that Juan additionally kissed was Susana.

4 Inheritance of content meets Barros effects

By treating inheritance of content and Barros effects as different manifestations of the same underlying phenomenon, we predict the existence of apparent semantic-repair under deletion in inheritance of content environments as well. In other words, we predict that sluicing can rescue incongruent questions even when the correlate is not modified by else. This prediction is borne out. First, consider (22) and (23), below.³⁵

(22) Jack saw Sally, and then he saw a colleague...
    a. # ... but I don’t know who he saw.  b. ... but I don’t know who.

(23) Juan vio a María y luego vio a un colega...

    Juan saw DOM María and then saw DOM a colleague
    a. # ... pero no se a  b. ... pero no sé a
    but not know.1SG DOM but not know.1SG DOM
    quién vio. quién.  
    who saw who

Just as with else-modification, the same repair effect appears to be available under sluicing. The pre-sluice is incongruent because the antecedent already constitutes a partial answer, just as in the Barros examples discussed in §1.™ the (b) examples show that
sluicing can repair this incongruence. Below, we see that repair cannot be attributed to deletion of an underlying cleft.

(24) Sé que Juan vio a un colega…

know.1SG that Juan saw DOM a colleague

a. #… pero no sé a quién vio.

but not know DOM who saw

b. … pero no sé a quién.

but not know DOM who

c. *… pero no sé a quién fue (que vio).

but not know DOM who was that saw

Similarly, consider the following contrast, modeled after (2) in §1 (the following judgments also hold for English). Example (25a) is grammatical for the same reason as (2), i.e., the assertion that I know the identity of some of the people that Juan kissed is not contradicted by Pedro’s ignorance. Note, however, that this example means that Pedro is unaware of the identity of any of the people Juan kissed; whereas the sluiced counterpart (25b) means that Pedro is unaware of the identity of the non-María individual that Juan kissed. Again, this asymmetry can be accounted for by assuming that the sluice is contextually restricted; as in the prototypical Barros effects examples, the meaning for (25b) is paraphraseable as “Pedro doesn’t know the identity of the individual x, where x is not María, such that Juan kissed x”.

(25) Sé que Juan besó a María y que también besó a alguien más…

know.1SG that Juan kissed DOM María and that also kissed DOM someone else
a. ... pero Pedro no sabe a quién besó Juan.
   but Pedro not knows DOM who kissed Juan

b. ... pero Pedro no sabe a quién.
   but Pedro not knows DOM who

We conclude that inheritance of content and Barros effects are simply different manifestations of the same general phenomenon, and should receive a unified analysis.

We independently showed Barros’s cleft analysis to be untenable, even though inheritance of content in sluices lends them a cleft-like interpretation, they do not have a cleft-like syntax.

Before ending, let us consider a possible analysis for inheritance of content that does not rely on a cleft syntax. In previous analyses of inheritance of content, Romero (1998) and Barros (2013) take the remnant to be the target of contextual restriction — cf. Barros’s (2013:208) characterization of R, which we previously saw as part of the cleft pronoun, as an optional modifier in the wh-phrase. This is sketched in (26). If we had an antecedent like in (1), just as in the previous discussion, R would pick up the property in (6a), repeated below. This would result in the entire question having the meaning in (27), which is once again paraphrasable as ‘Who the non-Sally human that Jack kissed is’.

\[
\text{who}^g = \lambda Q [\exists x [\text{human}(x) \& Q(x) \& R_i(x)]]
\]

\[
[R_i]^g = \lambda x. [x \neq \text{Sally} \& \text{Jack kissed} x \& \text{human}(x)]
\]

\[
\lambda p. \exists x [\text{human}(x) \& x \neq \text{Sally} \& p = \text{Jack kissed} x]
\]

Such an analysis does allow for us to take the crucial semantic contribution of the cleft pronoun, namely the contextual restriction of R, and divorce it from the cleft syntax, but by treating contextual restriction as a property of wh- items, it predicts incorrectly that inheritance-of-content effects will also arise freely in unelided sentences, so long as suitably salient antecedent is available. A way to rein in this overgeneration problem is to tie the presence of R directly to ellipsis licensing.
There are few possibilities that could make the presence of R contingent on ellipsis licensing. For instance, perhaps wh-phrases with R must be checked in an agreement relationship with Merchant’s (2001) E-feature on C along the lines of an agreement-based approach to ellipsis licensing (Aelbrecht 2010 et seq.). With this relation between R and the E-feature, we overcome the shortcomings of the analyses of Romero (1998) and Barros (2013) because the presence of R is directly tied to the feature that licenses ellipsis. This way R is only introduced when the E feature is present, hence inheritance of content only ever occurs when ellipsis occurs.7

5 Conclusion

To conclude, this paper has shown that Barros effects, despite appearing to necessitate a cleft syntax in the ellipsis site, do not constitute an argument for cleft sources in sluicing. We also showed that such constructions do not provide an argument for an island repair mechanism in ellipsis (contra Saab 2015). Instead, we demonstrated that Barros effects are just a manifestation of inheritance of content effects. As inheritance of content effects seem obligatory in sluicing and are rare if not impossible in unelided presluices,8 we suggested, that the R variable that provides the contextual restriction that underlies inheritance of content is present only when the element that licenses ellipsis is present.

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Notes

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1 Barros follows Bittner (1998) and Dayal (2016) in having the abstraction over the proposition variable \( p \) happen at the root node. This is accomplished by the Binding Rule of Bittner (1998:8,16). See also Dayal (2016:8-9,27-30) for relevant discussion.

2 For space reasons, we abbreviate the denotation of the cleft pronoun in (7) by making explicit reference to (6b), so that, e.g., “(6b) = \( x_i \)” in TP should be read as “\( x \ [x \neq \text{Sally & Jack kissed } x \ \& \ \text{human}(x)] = x_i \).”

3 An anonymous reviewer asks about the possibility of a covert also or an also included in the ellipsis site. This type of analysis runs into problems because also (and its German counterpart auch) are infelicitous in typical information seeking wh-questions (Umbach 2012, Grubic 2017, Theiler to appear). Instead, wh-questions with also are said to give rise to special interpretations, referred to as showmaster questions and summoning questions. While going into the exact nature of these questions goes beyond the scope of the paper (we refer the reader to the citations above for further discussion), it is important to note that sluicing examples discussed throughout the paper do not have either of these two interpretations. This suggests that the sluicing site does not contain also.

4 Those speakers who do not accept the indicated reading interpret (20B) as a denial of (20A), i.e., “it is not the case that Juan kissed María and someone else; the only person he kissed at all was Susana”. We do not have anything interesting to say as to why this division exists.

5 An anonymous reviewer notes that (22a) is only mildly degraded for them (assigning a question mark), and suggests that perhaps some speakers (including themselves) allow for a kind of “covert adverbial” to be accommodated in the non-elliptical question. For (22a), this could be something with an interpretation like “then,” or “on that second occasion,” the semantics of which would render (22a) congruent and felicitous.

6 Dayal & Schwarzchild (2010:108) provide a comparable example (Joan was talking to a phonologist, but I don’t know who (exactly) she was talking to) and claim it is felicitous. The speakers we have consulted...
disagree with this judgment, although the infelicity of this example seems to be less strong than that of (24a). We have nothing to say as to why English and Spanish judgments differ in this way.

Interestingly, a very similar idea to the one sketched above is found in [Elbourne (2008)], where it is independently argued that ellipsis sites in NP ellipsis and VP ellipsis are embedded under a functional head THE that in turn also introduces the R variable. Elbourne (2008:202) also suggests that THE may in fact be Merchant’s 2001 ellipsis licensing E-feature and [Bentzen et al. (2013)] extend this analysis to account for deep predicate anaphora in Norwegian. Once again, the presence of the R variable then is directly tied to the element licensing ellipsis.

Though see the discussion in footnote 5. It appears that some speakers do allow for limited contextual restrictions outside of sluicing. Note that in these cases such a restriction is not obligatory, unlike the sluicing examples discussed throughout the paper. We tentatively suggest that contextual restriction can come from two distinct means: grammatical encoding via an R variable in the syntax/semantics like in sluicing or via an optional pragmatic mechanism. See [Cappelen & Lepore (2004)] for discussion of a similar idea.