

Invisible Last Resort

A note on clefts as the underlying source for sluicing

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abstract:

Merchant (2001:120-127) presents ten arguments against an analysis of sluicing that posits an elided cleft in the ellipsis site. This seems at odds with the growing body of literature that argues sluicing can resort to underlying clefts in order to circumvent otherwise illicit instances of preposition stranding. In this short paper I reexamine Merchant's arguments and show (a) that some of them are orthogonal to the issue at hand, and (b) that the remaining ones are compatible with the Last Resort scenario adopted by the sluicing-as-cleft literature. As such, the discussion sheds new light on the precise form of the unpronounced syntactic structure found in sluicing.

keywords: sluicing, clefts, Last Resort, preposition stranding

1. Introduction: the hidden syntax of sluicing

Consider a basic sluicing example in (1).

- (1) John saw someone, but I don't know who.

Assuming that the resolution of ellipsis requires the postulation of unpronounced syntactic structure inside the ellipsis site (*pace* Culicover & Jackendoff 2005; see Merchant 2001 and Van Craenenbroeck to appear for argumentation), two possible analyses for (1) readily come to mind. Either this example is the elliptical version of a full-fledged wh-question as in (2), or of a short cleft in (3).^{1,2}

- (2) John saw someone, but I don't know who <John saw>.
(3) John saw someone, but I don't know who <it was>.

Although both approaches have been proposed in the ellipsis literature—see e.g. Ross 1969, Merchant 2001 for the analysis in (2) and Erteschik-Shir 1977, Pollman 1975 for the approach in (3)—it is the former that has become mainstream. This undoubtedly has to do with the fact that Merchant (2001:120-127) presents no less than ten arguments against a cleft-analysis of sluicing. What is surprising from this perspective, though, is that there is a growing body of literature arguing that sluicing *does* make use of an underlying cleft when it needs to circumvent an otherwise fatal preposition stranding violation (see Rodrigues e.a. 2009; Szczegelnia 2005, 2008; Vicente 2008). In this short paper I attempt to resolve the tension between these two approaches by reexamining Merchant's arguments and by showing (a) that some of them are orthogonal to the issue at hand, and (b) that the remaining ones are all compatible with a scenario in which sluicing derives from clefts only as a Last Resort. As such, the discussion presented in this paper sheds new light on the precise characterization of the unpronounced syntactic structure found in sluicing.

This paper is organized as follows. In the next section I introduce Merchant's (2001:120-127) arguments against postulating clefts as the underlying source for sluicing. Section three introduces the approach that does posit elided clefts in sluicing contexts, thus setting up the central tension of the paper.

¹ For expository purposes I refer to examples such as (3) as 'short clefts' or simply 'clefts' throughout this paper. This use of terminology is not intended to reflect a particular analysis. For example, it might well be that such examples are more adequately characterized as copular clauses (see Mikkelsen 2004:173-192 and Vicente 2008).

² The type of analysis illustrated in (3) is sometimes inaccurately referred to as 'pseudosluicing'. See Merchant 1998, 2001:115-120 and Van Craenenbroeck to appear:79-81 for discussion.

In section four I then return to Merchant's arguments and show that on closer inspection some of them are irrelevant for the issue at hand, while all the others are compatible with a Last Resort scenario. Section five sums up and concludes.

2. Against the cleft analysis of sluicing: Merchant (2001)

2.1 Introduction

In the following subsections, I present Merchant's arguments against the analysis illustrated in (3). I will keep the discussion fairly brief, on the one hand because I assume at least some of the arguments will be familiar, on the other because the logic of the argumentation is the same in every case—except for one, which I discuss in subsection 2.10. Given that I will be re-using that same logic in section four, though, it is worth making it explicit here. What Merchant does in all but one of the cases outlined below, is examine how a particular phenomenon X behaves in sluicing on the one hand and clefts on the other. Whenever this yields divergent results—e.g. because X is well-formed in sluicing but ruled out in clefts or vice versa—Merchant concludes that sluicing cannot be derived from an underlying cleft, i.e. that (3) cannot be the correct representation of (1).

2.2 Adjuncts and implicit arguments

The example in (4)a shows that the *wh*-remnant in sluicing can be an adjunct, while the b-example illustrates that such a remnant need not necessarily have an overt correlate in the antecedent clause. That is, you can create sluices based on implicit arguments (a construction dubbed *sprouting* by Chung e.a. 1995). If sluicing were derived from short clefts, one would expect to find the same judgments in non-elliptical short clefts, but as the examples in (5) illustrate, this expectation is not borne out.³ As such, sluicing with adjuncts and implicit arguments constitute a first argument against the cleft-analysis of this construction.

- (4) a. He fixed the car, but I don't know how.
 b. They served the guests, but I don't know what.
- (5) a. * He fixed the car, but I don't know how it was.
 b. * They served the guests, but I don't know what it was.

2.3 Prosody

It is an old and well-established observation that sluiced *wh*-phrases are stressed. This is illustrated in (6), where the use of capital letters indicates stress.

- (6) Someone gave me a valentine, but I don't know WHO/*who.

Once again, clefts behave differently, i.e. it is not the *wh*-pivot, but rather the copula that receives extra stress:

- (7) Someone gave me a valentine, but
 a. * I don't know WHO it was.
 b. I don't know who it WAS.

Just like the adjunct and implicit argument facts, then, these data argue against a cleft source for sluicing.

2.4 Aggressively non-D-linked *wh*-phases

So-called aggressively non-D-linked *wh*-phrases (Pesetsky 1987) are disallowed in sluicing (cf. (8)a), but perfectly fine in clefts ((8)b). As such, they constitute Merchant's third argument against the analysis sketched in (3).

³ As pointed out to me by Mark Baltin (p.c.), the examples in (5) are fine if a 'long' cleft is used, as in (i).

(i) a. He fixed the car, but I don't know how it was that he fixed the car.
 b. They served the guests, but I don't know what it was that they served the guests.

However, given that the impact of this observation on the evaluation of Merchant's arguments is minimal—see note 10 for discussion—I leave it undiscussed in the main text and focus on Merchant's data instead. See also note 4 for a related observation.

- (8) Someone dented my car last night.
 a. * I wish I knew who the hell!
 b. I wish I knew who the hell it was!

2.5 ‘Mention some’-modification

The argument in this and the following two subsections are closely related. They all hinge on a meaning difference that I have glossed over so far between clefts with a *wh*-phrase as pivot and regular *wh*-questions. In particular, while a felicitous answer to the interrogative cleft in (9)b requires that I give an exhaustive list of all the (contextually relevant or salient) people that I saw, the *wh*-question in (9)a imposes no such requirement. This means that clefts should be incompatible with modification signaling non-exhaustivity, but perfectly fine when combined with exhaustive modifiers. Non-exhaustive modification is discussed in this subsection and in subsection 2.7, while subsection 2.6 deals with exhaustive modifiers.

- (9) a. Who did you see?
 b. Who is it that you saw?

As predicted by the preceding discussion and illustrated in (10)Bb, an interrogative cleft cannot be combined with a modifier such as *for example*, since the latter explicitly indicates that the answer to the question need not be exhaustive. Contrary to the expectations of the cleft-analysis of sluicing, however, such modification is perfectly fine in sluicing. These facts thus present a fourth argument against such an account.

- (10) A: You should talk to somebody in the legal department for help with that.
 B: a. Who, for example?
 b. * Who is it, for example?

2.6 ‘Mention all’-modification

With respect to modifiers signaling exhaustivity, we find the opposite data pattern. As the examples in (11) show, such modification is “degraded in sluicing in some examples” (Merchant 2001:122) but perfectly fine in clefts. Thus, they constitute a fifth case where sluicing diverges from clefts.

- (11) A bunch of students were protesting,
 a. * and the FBI is trying to find out who all.
 b. and the FBI is trying to find out who all it was.

2.7 *else*-modification

A special case of ‘mention some’-modification are sluices in which the *wh*-phrase is modified by *else*. Just like *for example*, this modifier signals that the expected response is partial and hence non-exhaustive, but it differs from the cases discussed above in that the correlate of a sluiced *wh*-phrase modified by *else* is not an indefinite, but rather a focused XP. Apart from that difference, however, the judgments run completely parallel to those in subsection 2.5. That is, *else*-modification is out in clefts but fine in sluicing. The relevant examples are given below. They represent Merchant’s sixth argument against deriving sluicing from clefts.

- (12) Harry was there, but
 a. I don’t know who else.
 b. * I don’t know who else it was.

2.8 Swiping

As was first observed by Ross (1969), sluicing allows the unmarked order between a preposition and its *wh*-complement—i.e. the former precedes the latter—to be inverted. This phenomenon was dubbed *swiping*—an acronym which stands for Sluiced Wh-word Inversion with Prepositions In Northern Germanic—by Merchant (2002) and it is illustrated in (13) (cf. Rosen 1976, Merchant 2002, Hartman 2007 and Van Craenenbroeck to appear for detailed discussion).

- (13) She bought a robe, but God knows who for.

If sluicing were derived from clefts, we might expect such inversion to occur there as well. As the example in (14) makes clear, however, this is a false prediction. That means that swiping constitutes Merchant's seventh argument.

- (14) * She bought a robe, but God knows who for it was.

2.9 Languages with limited or no cleft strategy

If sluicing is derived from clefts, then languages without clefts (in certain contexts) should disallow sluicing (in those contexts). This too is a false prediction. Romanian, for example, is a language that disallows clefts of the English type (Merchant 2001:125) but nevertheless allows sluicing. German disallows PP wh-phrases as pivots of clefts (cf. (15)), but displays no such restriction in sluicing (cf. (16)).⁴

- (15) * Mit wem war es, daß er gesprochen hat?
with who was it that he spoken has
INTENDED: 'With whom was it that he spoke?' (German)
- (16) Er hat mit jemandem gesprochen – rate mal mit wem!
he has with someone spoken guess PRT with who
'He spoke with someone – guess with whom!' (German)

2.10 Case matching

The data discussed in this section concern languages in which wh-phrases are morphologically marked for case. As was first observed by Ross (1969) and further developed by Merchant (2001), sluiced wh-phrases always bear the same case as they would in the corresponding non-elliptical wh-question. This is illustrated in (17), where the wh-phrase obligatorily bears the accusative case assigned by the (elided) verb *anekrine* 'interrogated'.

- (17) I astinomia anekrine enan apo tous Kiprious prota,
the police interrogated one.ACC from the Cypriots first
ala dhen ksero { *pjos / pjon} ~~anekrine-i astinomia.~~
but not I.know who.NOM who.ACC interrogated the police
'The police interrogated on of the Cypriots first, but I don't know which.' (Greek)

Clefts on the other hand show a different case pattern. The wh-pivot of a cleft is always marked nominative, regardless of the grammatical function of its correlate. This is illustrated in (18).

- (18) I astinomia anekrine enan apo tous Kiprious prota,
the police interrogated one.ACC from the Cypriots first
ala dhen ksero { pjos / *pjon} itan.
but not I.know who.NOM who.ACC it.was
'The police interrogated on of the Cypriots first, but I don't know which (it was).' (Greek)

The data in (17)–(18) thus constitute a ninth argument against the cleft analysis of sluicing: if sluicing were derived from an underlying cleft, a sluiced wh-phrase would invariably surface in the nominative case, contrary to fact. Note that the logic of the argumentation here differs from that of the other cases: it is not the case that a certain phenomenon X is well-formed in clefts and ill-formed in sluicing or vice versa. Rather, both are well-formed, but yield a different morphological output—accusative for the sluice, nominative for the cleft. I return to this difference in section 4.1.

⁴ Note that this is the only one of the ten arguments where Merchant relies on 'long' clefts to make his point. If we restrict our attention to short clefts, however, the argument based on German is weakened, as the non-elliptical short cleft version of (16) is perfectly well-formed:

(i) Er hat mit jemandem gesprochen – rate mal mit wem es war!
he has with someone spoken guess PRT with who it was
'He spoke with someone – guess with whom it was!' (German)

See note 10 for discussion and note 3 for a related observation with respect to Merchant's first argument.

2.11 Left-branch sluices

Merchant's tenth and final argument concerns the fact that sluicing allows—otherwise illegitimate—extraction from left branches (cf. (19)a), whereas clefts do not (cf. (19)b). Left branch extraction thus constitutes yet another empirical domain in which sluicing and clefts differ.

- (19) He married a rich woman –
a. wait till you hear how rich!
b. * wait till you hear how rich it is!

2.12 Conclusion

I have outlined Merchant's (2001:120-127) arguments against the cleft analysis of sluicing. In the next section I discuss a set of facts that argues in favor of such an analysis.

3. In favor of the cleft analysis of sluicing: violations of the P-stranding generalization

3.1 Introduction: Merchant's (2001) P-stranding generalization

As pointed out by Merchant (2001), there is a striking correlation between the behavior of sluicing and that of non-elliptical wh-questions when it comes to the (im)possibility of preposition stranding. The correlation can be formulated as in (20).

- (20) **P-stranding generalization (PSG)** (Merchant 2001:92)⁵
A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular wh-movement.

In order to see how this generalization works, consider the English data in (21)-(22) and the Greek data in (23)-(24).

- (21) Who was Peter talking with?
(22) Peter was talking with someone, but I don't know (with) who.
(23) * Pjon milise me?
who she.spoke with
INTENDED: 'Who did she speak with?'
(24) I Anna milise me kapjon, alla dhe ksero *(me) pjon.
the Anna spoke with someone but not I.know with who
'Anna spoke with someone, but I don't know with who.' (Greek, Merchant 2001:94)

The example in (21) illustrates the fact that English is a language that allows preposition stranding under wh-movement. What (22) shows is that—conform the PSG—this same phenomenon is attested under sluicing. Here it manifests itself as optionality of the preposition next to the sluiced wh-phrase, the idea being that when *with* is absent, it has been stranded inside the ellipsis site. In Greek on the other hand, we get the exact opposite pattern. The example in (23) shows that preposition stranding is not allowed in non-elliptical wh-questions, and (24) illustrates that the preposition cannot be left out under sluicing either. In short, both in English and in Greek there is a full parallel between sluicing and non-elliptical wh-questions with respect to the (im)possibility of preposition stranding.

The next subsections show that there are a number of languages that at first sight seem to violate the PSG in that they allow P-stranding under sluicing but not in non-elliptical wh-questions. On closer inspection, though, it will turn out that the P-stranding sluices are not derived from an underlying wh-question—with a concomitant illegitimately stranded preposition—but rather from a cleft.

3.2 Apparent exceptions to the PSG⁶

As evidenced by the data in (25) and (26), Spanish is a language that—at least at first sight—violates the PSG. In particular, while (25) shows that P-stranding is not allowed in non-elliptical wh-questions, (26) illustrates that it is perfectly fine under sluicing.

⁵ Merchant calls this generalization the "Form-identity generalization II: Preposition-stranding", but given that it is commonly—and more succinctly—referred to as the 'Preposition stranding generalization', I adopt that terminology here as well.

⁶ This section relies heavily on Rodrigues e.a. (2009) and Vicente (2008), both in terms of data and in terms of analysis.

- (25) * ¿Qué chica rubia ha hablado Juan con?
 what girl blonde has talked Juan with
 INTENDED: ‘What blonde girl did Juan talk to?’

- (26) Juan ha hablado con una chica rubia, pero no sé cuál
 Juan has talked with a girl blonde but not know which
 ‘Juan talked to a blonde girl, but I don’t know which.’

In spite of first appearances, however, Vicente (2008) argue that the sluicing example in (26) is not derived from a—P-stranding and hence illicit—wh-question, but rather from a short cleft (cf. also Rodrigues e.a. 2009 for a related account). His analysis can be schematically represented as in (27).

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

In this example, the ellipsis site does not contain a stranded preposition. As such, it can be legitimately deleted by sluicing, thus yielding the impression of P-stranding under sluicing—and a concomitant PSG-violation—in (26). Although I refer the reader to the references given above for the full details of this analysis, I present one argument in its favor here, as it involves one of Merchant’s ten data sets introduced in the previous section, i.e. *else*-modification. Consider the example in (28).

- (28) Juan ha hablado con una chica rubia, pero no sé
 Juan has talked with a girl blonde but not know
 *(con) qué chica más.
 with what girl else
 ‘Juan talked to a blonde girl, but I don’t know to what other girl.’

This example shows that while modification with *más* ‘else’ is generally allowed in Spanish sluicing, it becomes illicit when combined with P-stranding under sluicing. Rodrigues e.a. (2009) and Vicente (2008) take this to be strong support in favor of their analysis. In particular, they argue that apparent PSG-violations are derived from clefts, and as (29) illustrates, modification by *más* ‘else’ is disallowed in clefts. As such, the judgment in (28) follows straightforwardly in their analysis from the judgment in (29).⁷

- (29) * Juan ha hablado con una chica rubia, pero no sé
 Juan has talked with a girl blonde but not know
 qué chica más es *pro*.
 what girl else is it
 *‘Juan talked to a blonde girl, but I don’t know to what other girl it was.’

In short, there are good reasons to assume that at least some cases of sluicing are derived from clefts. Moreover it should be pointed out that this is by no means an isolated quirk of Spanish. In particular, the cleft analysis of sluicing has recently received support from a growing number of languages, including French, Italian (Vicente 2008), Polish (Szczegielniak 2005, 2008), Dutch and possibly Brazilian Portuguese (Rodrigues e.a. 2009, *pave* Almeida & Yoshida 2007) and English (Van Craenenbroeck 2004:122).

3.3 Conclusion

It is clear that there is a tension between the data discussed in this section and those outlined in section two. On the one hand Merchant seems to make a strong case against the cleft analysis of sluicing, while on the other there are contexts and languages where such an analysis seems unavoidable. In the next section I attempt to reconcile these two data sets by reconsidering Merchant’s arguments from a slightly different perspective.

⁷ Many thanks to Violeta Vazquez Rojas for providing me with the example in (29).

4. Merchant’s arguments revisited: the Last Resort scenario

4.1 Introduction: four possible scenarios

In order to fully evaluate Merchant’s argumentation, we need to make explicit (a) what scenario exactly he is arguing against, and (b) which one he is proposing instead. These two scenarios are represented as (30)a and (30)b respectively.

- (30) a. **ALWAYSCLEFT:** The structure underlying sluicing is always a cleft.
 b. **ALWAYSWH:** The structure underlying sluicing is always a full wh-question.

The scenario sketched in (30)a is the one Merchant is explicitly taking issue with: a generalized cleft analysis of sluicing, whereby every single instance of sluicing is derived from a cleft. The one in (30)b is the analysis that he is adopting instead—implicitly in the section reviewed above, but explicitly in the rest of his book—i.e. a generalized wh-analysis of sluicing, whereby this construction is always derived from a full wh-question. These two options, however, do not exhaust the logical space of possibilities when it comes to analyzing the underlying structure in sluicing. In particular, one can also think of more ‘mixed’ approaches such as the ones in (31).

- (31) a. **OPTIONALITY:** The structure underlying sluicing can be either a cleft or a wh-question (and the choice between them is completely free).
 b. **LASTRESORT:** An underlying cleft is only used in sluicing when the corresponding wh-question is independently unavailable.

In the remainder of this section I reexamine Merchant’s arguments, but this time with the four scenarios in (30)-(31) in mind. This implies that the data set under consideration will have to be expanded as well: instead of just looking at clefts and sluicing, we will also systematically take non-elliptical wh-questions into account. Note that the predictions made by the scenarios in (31) are slightly more subtle than the ones made by those in (30). Abstractly, the full range of logical possibilities can be represented as in the following table.

(32)

sluicing	cleft	wh	ALWAYSCLEFT	ALWAYSWH	OPTIONALITY	LASTRESORT
*	*	*	☺	☺	☺	☺
*	*	ok	☺	☹	☹	☹
*	ok	*	☹	☺	☹	☹
*	ok	ok	☹	☹	☹	☹
ok	*	*	☹	☹	☹	☹
ok	*	ok	☹	☺	☺	☺
ok	ok	*	☺	☹	☺	☺
ok	ok	ok	☺	☺	☺	☺

Table 1: Predictions made by the four scenarios based on grammaticality judgments

The first three columns in this table indicate the eight possible judgment combinations for sluicing, clefts and wh-questions.⁸ The final four columns indicate which of the four scenarios introduced above is compatible with which judgment combination—whereby a smiley face indicates compatibility and an unhappy face incompatibility. Before turning to the actual data in the following subsections, let us explore these compatibility options in somewhat more detail here. In particular, we should make clear what exactly the four scenarios boil down to. The first one, **ALWAYSCLEFT**, only compares the judgment of sluicing with that of clefts. Only if these two match is the data compatible with this scenario. In the table in (32) this means we get smiley faces in the first two and the last two judgment combinations, and unhappy faces in all the others. The second scenario, **ALWAYSWH**, follows the exact same reasoning, but this time with respect to wh-questions instead of clefts. Accordingly, we get compatibility (smiley faces) in the first, third, sixth and eighth combination and incompatibility in the rest. The third scenario, **OPTIONALITY**, states that a sluice is well-formed if and only if at least one of two possible underlying structures—i.e. clefts and wh-questions—is well-formed. That condition is met in the first row and in the final three. The fourth scenario finally, **LASTRESORT**, states that sluicing is well-formed if the corresponding wh-question is well-formed, and that it bears the same judgment as the cleft if the corresponding wh-question is ill-formed. In this

⁸ I am limiting myself to the two extreme judgments here (full acceptability vs. full unacceptability). On the one hand this is done so as to not unnecessarily complicate the table, on the other because the data discussed in the remainder of this section warrant such a simplification.

table, this yields the same compatibility pattern as **OPTIONALITY**. In other words, as it stands, the table in (32) is unable to distinguish between the two last scenarios. Recall, though, that for one of Merchant’s data sets—i.e. case matching—the logic of the argumentation was slightly different than for the other nine (cf. *supra*, section 2.10). Specifically, it was not the judgments of the various constructions that mattered, but rather the morphological output they yielded. Now, while a construction cannot be optionally well-formed, it can optionally yield different morphological outcomes.⁹ This means that we have to consider these cases as well in evaluating the four scenarios introduced in this subsection. The table in (33) summarizes the results of this line of reasoning.

(33)

sluicing	cleft	wh	ALWAYSCLEFT	ALWAYSWH	OPTIONALITY	LASTRESORT
A	A	B	☺	☹	☹	☹
B	A	B	☹	☺	☹	☺
A/B	A	B	☹	☹	☺	☹
C	A	B	☹	☹	☹	☹

Table 2: Predictions made by the four scenarios based on the morphological outcome of sluicing

Assume that clefts yield a particular morphological outcome—labeled A here—which differs from that found in wh-questions—annotated as B. The corresponding sluice can then yield one of the four following outcomes: A, B, A and B—i.e. optionality between the two morphological outcomes—or a completely different form—labeled C in (33). With respect to the first two scenarios, nothing much changes. They still only compare the output of sluicing with that of clefts and wh-questions respectively, and only if there is a complete match is the data compatible with this scenario. This means a smiley face for **ALWAYSCLEFT** when sluicing yields A, one of **ALWAYSWH** when sluicing yields B, and unhappy faces in all the other cells. For **OPTIONALITY** and **LASTRESORT**, however, there is a substantial difference compared to the previous table. If clefts and wh-questions yield grammatical but morphologically different outputs, **OPTIONALITY** predicts both forms to surface, while **LASTRESORT** only expects the form found in wh-questions to surface in sluicing. That is, the two scenarios differ in their compatibility with the second and third row in the table in (33). Looking ahead, this means the data from case matching will be crucial in distinguishing between these two scenarios.

Summing up, in this subsection I have shown that as soon as one takes into account a slightly more elaborate set of possible sluicing analyses, the reasoning becomes more complex. Not only do we have to take into account more data—in particular, non-elliptical wh-questions—the precise conclusions to be drawn from these data become less straightforward as well. In the remainder of this section, I argue that this extra complexity is warranted, in that the **LASTRESORT**-scenario will turn out to be as compatible with Merchant’s data as the **ALWAYSWH**-option. In the subsections that follow, I revisit each of Merchant’s arguments, but this time from the point of view of the four scenarios discussed above. This means that the data I examine includes not only sluicing and clefts, but also non-elliptical wh-questions.

4.2 Adjuncts and implicit arguments

When non-elliptical wh-questions are added to the adjunct and implicit argument data from subsection 2.2, the resulting data pattern is as in (34) and (35): clefts are ill-formed, but sluicing and wh-questions are fine. This corresponds to the sixth row of the table in (32). That is, these data are incompatible with the **ALWAYSCLEFT**-scenario, but compatible with the other three.

- (34)
- a. **sluicing:** He fixed the car, but I don’t know how.
 - b. **cleft:** * He fixed the car, but I don’t know how it was.
 - c. **wh:** He fixed the car, but I don’t know how he fixed the car.
- (35)
- a. **sluicing:** They served the guests, but I don’t know what.
 - b. **cleft:** * They served the guests, but I don’t know what it was.
 - c. **wh:** They served the guests, but I don’t know what they served the guests.

⁹ Note that I do not intend to make any claims here about the role of optionality in natural language (cf. Fukui 1993 for relevant discussion). I am only using the term as a basic descriptive device.

4.3 Prosody

The exact same reasoning applies to the prosody argument of subsection 2.3: sluicing and wh-questions pattern alike and yield a well-formed result, while clefts are out. The only scenario with which such a data constellation is incompatible is ALWAYSLEFT.

- (36) Someone gave me a valentine, but
- a. **sluicing:** I don't know WHO.
 - b. **cleft:** * I don't know WHO it was.
 - c. **wh:** I don't know WHO gave me a valentine.

4.4 Aggressively non-D-linked wh-phrases

The argument based on aggressively non-D-linked wh-phrases yields a different result, and one which at first sight is quite surprising. Consider the basic facts:

- (37) Someone dented my car last night–
- a. **sluicing:** * I wish I knew who the hell!
 - b. **cleft:** I wish I knew who the hell it was!
 - c. **wh:** I wish I knew who the hell dented my car!

Aggressively non-D-linked wh-phrases are allowed in clefts and wh-questions, but illicit under sluicing. This corresponds to the fourth line of the table in (32). Such a data pattern is incompatible with ALWAYSLEFT and ALWAYSWH because the judgment in sluicing differs from that in clefts and wh-questions respectively. Moreover, given that both OPTIONALITY and LASTRESORT predict a sluice to be well-formed if the corresponding wh-question is well-formed (cf. (37)c), these two scenarios are out as well. That means that the data in (37) is incompatible with all four scenarios envisioned above.

4.5 'Mention some'-modification

The data pattern we get with respect to 'mention some'-modification is identical to those attested for adjuncts and implicit arguments: only the cleft version is ill-formed. This means that only the ALWAYSLEFT-scenario is ruled out.

- (38) A: You should talk to somebody in the legal department for help with that.
B: a. **sluicing:** Who, for example?
b. **cleft:** * Who is it, for example?
c. **wh:** Who should I talk to, for example?

4.6 'Mention all'-modification

'Mention all'-modification patterns with the aggressively non-D-linked wh-phrases: it is disallowed under sluicing, but fine in clefts and non-elliptical wh-questions. Once again, then, none of the four scenarios can account for these data.

- (39) A bunch of students were protesting,
- a. **sluicing:** * and the FBI is trying to find out who all.
 - b. **cleft:** and the FBI is trying to find out who all it was.
 - c. **wh:** and the FBI is trying to find out who all was protesting.

4.7 *else*-modification

Else-modification patterns with adjuncts and implicit arguments in ruling out only the ALWAYSLEFT-scenario. This is illustrated in (40).

- (40) Harry was there, but
- a. **sluicing:** I don't know who else.
 - b. **cleft:** * I don't know who else it was.
 - c. **wh:** I don't know who else was there.

4.8 Swiping

Just like aggressively non-D-linked wh-phrases and ‘mention all’-modification, swiping is not compatible with any of the four scenarios. The patterning of the judgments is different, though. In particular, swiping is well-formed under sluicing, but disallowed in both clefts and wh-questions—i.e. it corresponds to the fifth row of the table in (32).

- (41) She bought a robe, but
 a. **sluicing:** God knows who for.
 b. **cleft:** * God knows who for it was.
 c. **wh:** * God knows who for she bought a robe.

4.9 Languages with limited or no cleft strategy

The eighth argument once again tracks the one based on adjuncts and implicit arguments. Specifically, clefts are bad, but sluicing and wh-questions are well-formed. Accordingly, only the ALWAYSLEFT-scenario is ruled out.

sluicing

- (42) Er hat mit jemandem gesprochen – rate mal mit wem!
 he has with someone spoken guess PRT with who
 ‘He spoke with someone – guess with whom!’ (German)

cleft

- (43) * Mit wem war es, daß er gesprochen hat?
 with who was it that he spoken has
 INTENDED: ‘With whom was it that he spoke?’ (German)

wh

- (44) Mit wem hat er gesprochen?
 with who has he spoken
 ‘With whom did he speak?’ (German)

4.10 Case matching

The argument based on case matching requires a bit more discussion. As pointed out above, the logic of the argument is slightly different here in that it does not involve the grammaticality judgments of the various constructions, but rather the specific morphological output they produce (cf. the table in (33)). Let us first consider what the facts are:

- (45) I astinomia anekrine enan apo tous Kiprious prota,
 the police interrogated one.ACC from the Cypriots first
 ala dhen ksero
 but not I.know
 a. **sluicing:** { *pjos / pjon }
 who.NOM who.ACC
 b. **cleft:** { pjos / *pjon } itan.
 who.NOM who.ACC it.was
 c. **wh:** { *pjos / pjon } anekrine i astinomia.
 who.NOM who.ACC interrogated the police

In both the sluice ((45)a) and the non-elliptical wh-question ((45)c), the wh-phrase is obligatorily marked accusative, while in the cleft ((45)b) it can only bear nominative. This corresponds to the second line of the table in (33). As such, these data are compatible with ALWAYSWH and LASTRESORT, but incompatible with ALWAYSLEFT—which would predict nominative in the sluice—and OPTIONALITY—which would predict a choice between nominative and accusative in the sluice.

4.11 Left branch sluices

Left branch sluices, finally, pattern with swiping in being incompatible with all four scenarios: left branch extractions are allowed under sluicing, but illicit in both clefts and non-elliptical wh-questions.

- (46) He married a rich woman –
 a. **sluicing:** wait till you hear how rich!
 b. **cleft:** * wait till you hear how rich it is!
 b. **wh:** * wait till you hear how rich he married a woman!

4.12 Summary and conclusions

In the preceding ten subsections I have reexamined Merchant’s (2001:120-127) arguments against the cleft analysis of sluicing with a slightly extended data set and four possible sluicing analyses (instead of two). The main findings of this section are summarized in the table in (47).

(47)

	ALWAYSLEFT	ALWAYSWH	OPTIONALITY	LASTRESORT
adjuncts & implicit arguments	☹	☺	☺	☺
prosody	☹	☺	☺	☺
aggressively non-D-linked wh-phrases	☹	☹	☹	☹
‘mention some’-modification	☹	☺	☺	☺
‘mention all’-modification	☹	☹	☹	☹
<i>else</i> -modification	☹	☺	☺	☺
swiping	☹	☹	☹	☹
languages with limited or no cleft strategy	☹	☺	☺	☺
case matching	☹	☺	☹	☺
left branch sluices	☹	☹	☹	☹

Table 3: (In)compatibility of the four sluicing scenarios with Merchant’s ten data sets

There are three conclusions I want to draw from these data. The first is the least surprising one. It concerns the fact that the column headed by ALWAYSLEFT contains nothing but unhappy faces. That is, all the data discussed by Merchant are incompatible with the assumption that all instances of sluicing are derived from clefts. This is not surprising because this is precisely the scenario Merchant was arguing against when presenting these data. What the table in (47) shows, then, is that Merchant’s arguments were successful in this respect.¹⁰

The second conclusion is less straightforward or expected. Recall that four of Merchant’s criteria—aggressively non-D-linked wh-phrases, ‘mention all’-modification, swiping and left branch sluices—are incompatible with all four scenarios under consideration. When taken at face value, these data seem to suggest that none of these four analyses can be on the right track. There is another way out, however. If the discrepancy between ellipsis—sluicing—and non-ellipsis—clefts and wh-questions—can be shown to be due to an independent interfering factor, these data simply become irrelevant with respect to the issue at hand, i.e. they do not reveal anything about the syntactic structure underlying the ellipsis site in sluicing. Interestingly, for three out of these four data sets, such an alternative account has indeed been proposed. For example, Sprouse (2006) argues that aggressively non-D-linked wh-phrases are disallowed in sluicing, but allowed in non-elliptical questions because of their phonological or prosodic properties. In a nutshell, *the hell* cannot bear sentence accent, but in sluicing it ends up in a position where it must bear such accent. As a result, aggressively non-D-linked wh-phrases are disallowed in sluicing (cf. the original paper for more details and cf. also Den Dikken & Giannakidou 2002:42-43 for relevant discussion). What is important from the present perspective, is that Sprouse’s account renders the sluicing behavior of aggressively non-D-linked wh-phrases irrelevant for the issue under investigation here. That is, they are uninformative as to whether the structure underlying sluicing is a cleft or a wh-question. A similar fate befalls the swiping data

¹⁰ One caveat is in order here: if we envision a cleft analysis in which the underlying structure for sluicing is either a long or a short cleft, then the data discussed in notes 3 and 4 would render two of Merchant’s arguments—adjuncts/implicit arguments and languages with limited or no cleft strategy—without force, as the data would then be compatible with all four scenarios. In other words, those data sets would simply cease to be arguments and Merchant’s total of ten would be reduced to eight. Even under that scenario, though, the case against ALWAYSLEFT would still be very strong.

of section 4.8. Van Craenenbroeck (to appear:64-66) argues that the absence of non-elliptical swiping is due to a repair effect induced by ellipsis (cf. also Merchant 2002, Hartman & Ai 2007 for alternative but similar accounts). Once again, this renders these data irrelevant for the present discussion, because elliptical repair should in principle work equally well with an underlying cleft as with an underlying wh-question. The same holds for left branch sluices. Kennedy & Merchant (2000) and Merchant (2001:163-183) have argued extensively that the absence of Left Branch Condition violations under sluicing is due to elliptical repair. The only data set that is incompatible with all four sluicing scenarios and for which I know of no alternative account concerns ‘mention all’-modification. Recall that such modification is out in sluicing—or rather, “degraded in sluicing in some examples” according to Merchant (2001:122)—but fine in clefts and non-elliptical wh-questions. It is tempting, though, to try and relate the ill-formedness of (11)a (repeated below as (48)) to the prosodic properties of *all*—parallel to Sprouse’s account of aggressively non-D-linked wh-phrases in sluicing.¹¹ In particular, assume that *all* cannot bear sentence accent, but that it is forced to bear such accent under sluicing. That would explain the ill-formedness of (48) and the well-formedness of its non-elliptical counterparts—whether cleft or wh-question.

(48) * A bunch of students were protesting, and the FBI is trying to find out who all.

There are two indications that this type of account is on the right track. First, the Dutch counterpart of *all*—i.e. *allemaal*—is perfectly fine under sluicing (see Van Craenenbroeck 2005). This suggests that the ill-formedness of (48) is not due to the universal quantifier being somehow semantically incompatible with the sluice. Second, as pointed out to me by C. Thiersch (p.c.), the judgment of (48) improves considerably when the wh-phrase is stressed:

(49) ? A bunch of students were protesting, and the FBI is trying to find out WHO all.

Although I will not attempt to give a full account of ‘mention all’-modification under sluicing here, it seems likely that this set of data will receive an alternative analysis as well, thus rendering it orthogonal to the discussion at hand.

The third conclusion I want to draw from the table in (47) is the most important one from the point of view of this paper. It turns out that when the four irrelevant data sets discussed above are factored out, there are two scenarios that are fully compatible with the data discussed by Merchant: ALWAYSWH and LASTRESORT. In other words, the data used by Merchant to argue that the syntactic structure underlying sluicing is a wh-question leaves room for a second, hitherto unconsidered option, namely that wh-questions are only used as the first option, and that clefts are available as Last Resort. Needless to say, this is precisely the type of leeway needed to allow for the accounts discussed in section three, as the underlying cleft only shows up under sluicing if the corresponding regular wh-question is ill-formed due to the ban on preposition stranding.¹²

5. Conclusion

This paper took as a starting point the tension between Merchant’s (2001:120-127) arguments that sluicing is not derived from an underlying cleft and the opposite claim found in such papers as Rodrigues e.a. (2009), Vicente (2008), Szczegelnik (2005, 2008). I have revisited Merchant’s arguments, pitting them against four possible analyses of sluicing: (i) all instances of sluicing are derived from the corresponding full wh-question, (ii) all instances of sluicing are derived from a short cleft, (iii) all instances of sluicing can be optionally derived from either the corresponding full wh-question or a short cleft, and (iv) all instances of sluicing are derived from the corresponding full wh-question, but a short cleft is available as Last Resort when the wh-question is not well-formed. When confronted with the full data set—which included not just sluicing and clefts, but also non-elliptical wh-questions—two of these analyses came out on top, i.e. the first and the fourth one. Put differently, Merchant’s argumentation is fully compatible with an analysis of sluicing that posits underlying clefts as a Last Resort option. Given that the data discussed in section three warrant precisely such an approach, the fourth analysis seems to have an edge over the first one. In short, in resolving the tension between the two approaches in sections two and three, we have gained more insight into the correct analysis of sluicing and the proper characterization of the unpronounced syntactic structure found in that type of ellipsis.

¹¹ Thanks to Øystein Nilsen (p.c.) and Craig Thiersch (p.c.) for suggesting this analysis.

¹² It is worth pointing out that the only data set distinguishing OPTIONALITY from LASTRESORT is morphological case marking. This seems to predict that languages like Greek should allow for Last Resort nominative marking on an otherwise accusative sluiced wh-phrase in cases where the corresponding non-elliptical wh-question is ill-formed, e.g. due to a violation of the ban on preposition stranding. As discussed by Van Craenenbroeck (2009), this prediction is not borne out. However, addressing those data here would lead me too far afield and hence go beyond the scope of this paper. I refer the reader to Van Craenenbroeck (2009) for a detailed analysis, which is compatible with the conclusion drawn in this paper.

Note, however, that the discussion in this paper also has theoretical consequences beyond those pertaining to sluicing proper. To name but one of them, to the extent that the above reasoning is on the right track, it suggests that the two derivations schematically represented in (2)-(3)—repeated here as (50)-(51)—can be in an Economy-relation to one another, i.e. that they can be in the same reference set. This implies that the definition of reference set cannot be based on the Numeration (*pace* Chomsky 1995:227), as the two derivations sketched below clearly have a different Numeration.

(50) John saw someone, but I don't know who <John saw>.

(51) John saw someone, but I don't know who <it was>.

Needless to say, I do not intend to work out this issue in full here, and instead leave it as a topic for further research. What should be clear, though, is that ellipsis once again serves as a useful probe into the workings of natural language grammar.

Acknowledgments

This paper has benefited greatly from useful comments and suggestions by Lobke Aelbrecht, Marcel den Dikken, Dany Jaspers, Marjo van Koppen, Anikó Lipták, Jason Merchant, Johan Rooryck, and Guido Vanden Wyngaerd, and from audiences at Leiden University (December 2007), New York University (December 2007), Utrecht University (April 2008), Yale University (October 2008), University of California at Santa Cruz (October 2008), University of Chicago (December 2008), the *Repairs*-workshop at DGfS (March 2009), MIT (April 2009), Princeton University (April 2009), University of Massachusetts at Amherst (April 2009), and UCL (April 2009). All shortcomings are mine.

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