On ellipsis:
Is material that is phonetically absent but semantically present present or absent syntactically?

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I. Three approaches to fragments

(1) Mary will see someone, but I don't know who

(2) .....DP who WYSIWYG: No structure to the ellipsis site at any level.

OR

(3) LF copying approach: Elided and corresponding non-elided sentences are identical at LF and only at LF.

(4) ......CP Overt syntax

<table>
<thead>
<tr>
<th>DP</th>
<th>C'</th>
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<tr>
<td>who</td>
<td>C</td>
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<td>IP</td>
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(5) ......CP LF

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OR
(6) **PF deletion** approach: Elided and corresponding non-elided sentences are identical except at the level of PF.

(7) ........CP Overt syntax and LF

```
        DP  C'
       who  C
     IP  
```

PF deletion

```
        DP  I'
       Mary  I
     VP  |
        V'  
```

V  NP

see  t

(8) Classic argument, due to Ross (1969), for internal structure in an ellipsis site (Sluicing in this case):

(9) We were supposed to do some problems for tomorrow, but which problems isn't (*aren't) clear

Compare

(10) We were supposed to do some problems for tomorrow, but which problems we were supposed to do isn't (*aren't) clear

(11) Even when the Sluicing fragment is plural, agreement is invariably singular, indicating that the fragment is not just a DP, but an entire CP.

(12) Culicover and Jackendoff (2005), in arguing for a WYSIWYG approach, respond by conceding that the fragment is a clause, but a very rudimentary clause containing only a DP.

(13) Another class of arguments for internal structure involves so-called connectivity effects. Such effects are straightforward with a classical movement and deletion account of Sluicing, for example (and also for an LF copying approach, under the assumption that anaphors are licensed at LF). A representative instance is:

(14) They found some pictures of themselves, but I don't know exactly how many pictures of themselves,

(15) With respect to connectivity, C&J counter-argue that such effects are also found in constructions with no plausible movement analyses, such as clefts:

(16) It was pictures of themselves, that they found
One of the main connectivity effects C&J mention is one alluded to by Ross, and explored in great detail by Merchant (2001) - Case matching.

In overtly Case inflected languages (such as German), the Case of the survivor is just what the Case of the fronted WH expression would have been in the non-elliptical form.

Er will jemandem schmeicheln, aber sie wissen nicht, he wants someone.DAT flatter but they know not
  *wer / *wen / wem
  who.NOM who.ACC who.DAT
  'He wants to flatter someone, but they don't know who'

Er will jemanden loben, aber sie wissen nicht, he wants someone.ACC praise but they know not
  *wer / wen / *wem
  who.NOM who.ACC who.DAT
  'He wants to praise someone, but they don't know who'

Compare

Consider now C&J's suggestion that such connectivity could be handled in the way connectivity is handled in clefts (whatever that way may be). The difficulty with that suggestion is that clefts generally don't show Case connectivity. Much more often, there is a specific invariant Case for the pivot in a cleft, usually nominative.

For example, Greek has Case matching in Sluicing. Yet cleft pivots are invariably nominative, as Merchant notes:

I astinomia anerkrine enan apo tous Kiprious prota, ala dhén ksero the police interrogated oneacc from the Cypriots first but not I.know
  {*pjos / pjon}. whichnom / whichacc
  {pjos itan / *pjon itan}. whichnom it was / whichacc it was

Turkish shows the same pattern, as reported by Ince (2005) (though Jaklin Kornfilt questions whether this construction really is clefting):

-3-
   yesterday Ahmet-nom one-acc call-pst-3s
   ‘Yesterday Ahmet called someone’
B: Kim-i?
   who-acc
   ‘Who?’

(28) Ahmet-in oku-dugu kitap(dir).
   A-gen read-comp book-nom-(is)
   ‘It’s a book that Ahmet read’

(29) Craenenbroeck (2004) observes the same thing in the Dutch dialects (such as the
    Waubach dialect) that overtly mark Case on wh-pronouns.

(30) A: 't Kumt murrege inne noa 't fees
   it comes tomorrow someone to the party
B: Wea? / *Wem?
   who_nom / who_acc
   A: Someone is coming to the party tomorrow. B: Who?

   I have someone seen who_nom / who_acc
   A: I saw someone. B: Who?

(32) Wea / *Wem is dat dea noa 't fees kemp
    who_nom / who_acc is that REL to the party comes
    Who is it that is coming to the party?
(33) Wea / *Wem is dat dea-s-te gezieē has
    who_nom / who_acc is that REL-AGR-you seen have
    Who is it that you saw?

(34) An additional (indirect) argument, due to Chung (2005), for internal structure in an
    ellipsis site.

(35)a They’re jealous, but it’s unclear of who
   b *They’re jealous, but it’s unclear who
(36)a Joe was murdered, but we don’t know by who(m)
   b *Joe was murdered, but we don’t know who(m)
(37)a Last night he was very afraid, but he couldn’t tell us of what
   b *Last night he was very afraid, but he couldn’t tell us what
(38)a Mary was flirting, but they wouldn’t say with who(m)
   b *Mary was flirting, but they wouldn’t say who(m)
(39)a We’re donating our car, but it’s unclear to which organization
   b *We’re donating our car, but it’s unclear which organization
(40)a U.N. is transforming itself, but into what is unclear
   b *U.N. is transforming itself, but what is unclear [All from Chung (2005)]
Even when the preposition is completely predictable, it still must show up in the 'Sprouting' construction (Sluicing with no antecedent for the wh).

This is in contrast with standard Sluicing (in a language allowing preposition stranding, like English):

They’re jealous of someone, but it’s unclear (of) who

Joe was murdered by someone, but we don’t know (by) who

Last night he was very afraid of something, but he couldn’t tell us (of) what

Mary was flirting with someone, but they wouldn’t say (with) who

We’re donating our car to some organization, but it’s unclear (to) which organization

U.N. is transforming itself into something, but (into) what is unclear

The presence of some prepositions seems entirely formally motivated, as in (35) and (37) but even these must show up in Sprouting. A possibly even clearer case is:

She proved a theorem
Her proof *(of) a theorem

He proved something, but I don't know what
He was evaluating a proof, but I don't know of what
*He was evaluating a proof, but I don't know what

This pattern in Chung's examples is not unique to English. It shows up, as Chung observes, in other languages with preposition stranding:

**DANISH**

Peter råber til en eller anden, men jeg ved ikke (til) hvem

Peter was shouting to one or other, but I know not (to) who

Peter er jaloux på en eller anden, men jeg ved ikke (på) hvem

Peter is jealous of one or other, but I know not (on) who

**NORWEGIAN**

Per har snakket med noen, men jeg vet ikke (?med) hvem

Per has spoken with someone, but I know not (with) who

Per er sjalu på noen, men jeg vet ikke (?på) hvem

Per is jealous on someone, but I know not on who

**COMPARE**

**COMPARARE**

He was evaluating a proof of something, but I don't know (of) what

Per har snakket med noen, men jeg vet ikke (?med) hvem

Per has spoken with someone, but I know not (with) who

Per er sjalu på noen, men jeg vet ikke (?på) hvem

Per is jealous on someone, but I know not on who
Per is jealous, but I know not on who

"The message seems to be that we must look beyond semantics and pragmatics to account for the contrasts..."

Thus, LF copying (4)-(5) or PF deletion (7), and not WYSIWYG (2).

II. Distinguishing the LF Copying Approach from the PF Deletion One

A. A standard argument for LF copying: Missing ambiguities

i. Specific/non-specific ambiguities

Mary wants to catch a fish

There is a certain fish that Mary wants to catch

Mary hopes her fishing is successful

(64) is two-ways ambiguous. But (67) is not four-ways ambiguous, only two. The interpretation of the ellipsis target must parallel that of the antecedent.

Mary wants to catch a fish and John does too

Suppose, as extensively argued by May (1977) among many others, that quantificational ambiguities are resolved by LF configuration. In particular, LF movement operations (movement between S-Structure and LF) create 2 different LF structures for (64), each corresponding to one of the 2 indicated readings. A fish is ultimately realized as a restricted existential quantifier and its trace as a variable bound by the operator. (PRO is the silent subject 'controlled' by the higher subject Mary.)

[A fish] [Mary wants [PRO to catch t]]

Mary wants [a fish [ PRO to catch t]]

Then, the reasoning goes, the LF movement operation (Quantifier Raising - QR) takes place in the first clause of (67), and the resulting VP structure is copied into the missing VP position in the second clause.

ii. Scope ambiguities with two quantifiers

Some linguist admires every philosopher

For each philosopher, there is some linguist who admires him or her

There is a linguist who has universal admiration for philosophers

Unsurprisingly, (74) has the same ambiguity:

Some psychologist admires every philosopher

Here again, combining (71) with an elliptical version of (74) gives a sentence that is not four-ways ambiguous:

Some linguist admires every philosopher and some psychologist does too
Some linguist, every philosopher [\(t_1\) loves \(t_2\)]

Every philosopher, some linguist [\(t_1\) loves \(t_2\)]

The same line of reasoning as in (70) could apply here as well.

**iii. Questions about the argument**

The result crucially depends on a particular ordering of operations: First, movement in the antecedent, then copying the resulting structure. Does this follow from any deeper principle?

The copying process provides a trace (=variable) in the right position. But the moved item (=operator) is generally outside of the ellipsis site. So how does the elliptical clause get an operator?

Perhaps most importantly, the argument relies on the assumption that the parallelism phenomenon is a special property of ellipsis. But as already observed in Lasnik (1972), it arises with or without ellipsis. (See Tancredi (1992) for extensive discussion.)

Mary wants to catch a fish and John wants to catch a fish too

There is a certain fish that Mary want to catch, and there is a certain fish that John wants to catch

Mary hopes her fishing is successful, and John hopes his fishing is successful

Similarly for:

Some linguist admires every philosopher and some psychologist admires every philosopher too

Thus, the parallelism phenomenon doesn't tell us anything about ellipsis per se. In fact, as suggested by Chomsky and Lasnik (1993), it becomes a mild argument against an LF copying approach:

We need some principle, call it PARR, that gives parallel interpretation in the non-elliptical sentences. The null hypothesis would be that the same principle is at work in the elliptical sentences. But then an additional mechanism ensuring parallelism would be redundant.

**B. Arguments for PF deletion**

i. Sluicing and preposition stranding  
Ross (1969), as developed by Merchant (2001)

Some languages (mostly Germanic ones) allow WH-movement of the object of a preposition 'stranding' the preposition.

Who has Peter talked with \(t\)

Vem har Peter talat med \(t\)  
**Swedish**

Hvem har Peter snakket med \(t\)  
**Danish**

Other languages (the large majority) do not allow preposition stranding.
Sluicing mirrors these properties, arguing, as noted by Ross and by Merchant, for an analysis involving internal structure in general and movement followed by deletion in particular. C&J observe that obedience to constraints on movement "would be impressive evidence of the reality of the invisible structure". And that is just what we find with the P-stranding constraint.

Peter was talking with someone, but I don't know who

Under the LF copying approach, extra machinery is needed to guarantee Case matching, as the wh-phrase is base-generated in Spec of IP.

Merchant presents data indicating that (some) island violations persist under ellipsis, VP ellipsis this time (another argument of the sort that C&J concede would be an argument for internal structure).

*They want to hire someone who speaks a Balkan language, but I don't know which they do [\(\text{vp want to hire someone who speaks}\) ]*  
Merchant (2001)
III. Problem: Repair of island violations

(107) I believe that he bit someone, but they don't know who (I believe that he bit)
(108)a *I believe the claim that he bit someone, but they don't know who I believe the claim that he bit [Complex NP Constraint, noun complement]
   b (??)I believe the claim that he bit someone, but they don't know who
(109)a *Irv and someone were dancing together, but I don't know who Irv and were dancing together [Coordinate Structure Constraint]
   b (??)Irv and someone were dancing together, but I don't know who
(110)a *She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends she kissed a man who bit [Complex NP Constraint, relative clause]
   b (??)She kissed a man who bit one of my friends, but Tom doesn't realize which one of my friends
(111)a *That he'll hire someone is possible, but I won't divulge who that he'll hire is possible [Sentential Subject Constraint]
   b (??)That he'll hire someone is possible, but I won't divulge who [All from Ross (1969)]

(112) The judgments in parentheses are Ross's. Note that those judgments indicate some sensitivity to islands with Sluicing, though lessened from non-elliptical analogues. That would actually constitute an argument for movement and deletion, though the improvement still would have to be explained.
(113) However, most recent researchers on the topic report that the Sluiced versions are perfect. So the question arises as to why there are no island effects, if there was movement and deletion.
(114) Lasnik (2001a) and Merchant (2001), basically following and modernizing a proposal of Chomsky (1972), indicate that islands (or some of them) are PF effects, so PF deletion 'repairs' them by eliminating the offending portion of the structure.
(115) C&J challenge this: "To say that the constraint is phonological, and therefore only holds for 'pronounced' structures, is sophistic, since it has yet to be determined that the invisible structure actually exists ..."

IV. Responses to the C&J challenge: Some PF approaches to island constraints and repair by deletion

(116) Multiple Spell Out (Uriagereka (1999)): Instead of one level of representation (LF) interfacing with semantic interpretation, the syntactic derivation cyclically interfaces with semantics and phonology.
(117) Assume with Kayne that linear order is a PF interface property.
(118) Assume the first step of Kayne's Linear Correspondence Axiom (LCA) deducing linear order from hierarchy:
   a. If A c-commands B then A precedes B (defined on terminals).
(119) Then for complex A, SO ‘flattens’ the structure C that contains A and c-commands B, destroying internal phrasal boundaries. This essentially turns C into a terminal and allows it to linearize via (118)a.
(120) This deduces many islands (basically all non-complements).
Now suppose this flattening is optional. If it is not done, extraction will be possible, but, of course, linearization will ultimately fail (as the cycle demands that there will be no later opportunity to flatten).

But it won't fail if the problematic material is rendered invisible to phonetics. Thus, repair of (at least these) islands by deletion.

Fox and Pesetsky (2003) propose that at each spell-out domain, linear ordering statements are added to an ever growing Ordering Table.

This enforces successive cyclic movement:

When movement does not proceed from each successive phase edge (for example, if this is prevented by an island), contradictory ordering statements ultimately appear in the Table.

When deletion takes place, it can have a salvation effect by eliminating all ordering statements involving deleted material, including the contradictory statements that can result from moving too far in one jump. Island violation repair is one such situation.

So what of the failure of VP deletion to repair island violations, as in (106)?

Lasnik (2001b) points out that the generalization is actually stranger even than that, at least at first blush.

Apparently parallel 'failure of repair' obtains even when there was no violation in the first place.

Extraction out of an embedded clause is typically fine and Sluicing is just as good, but VPE is bad:

They said they heard about a Balkan language, but I don't know which Balkan language they said they heard about

They said they heard about a Balkan language, but I don't know which Balkan language

*They said they heard about a Balkan language, but I don't know which Balkan language they did

Similarly for extraction out of an object NP:

They heard a lecture about a Balkan language, but I don't know which Balkan language they heard a lecture about

They heard a lecture about a Balkan language, but I don't know which Balkan language

*They heard a lecture about a Balkan language, but I don't know which Balkan language they did

The nature of Sluicing (based on Fox and Lasnik (2003))

Fred said that Mary talked to a certain girl, but I don't know which girl <Fred said that Mary talked to t>

Suppose, following Chung et al. (1995), that the indefinite in the antecedent of Sluicing must be bound by existential closure in a way that is parallel to the wh-dependency in the sluiced clause
And suppose, contra Merchant (2001), that formal parallelism is required for ellipsis. This is satisfied since the variables in the antecedent and the elided clause are bound by parallel operators and from parallel positions.

Now notice that in the structure shown, there are no intermediate traces in the elided portion (in angle brackets), indicating that there were no intermediate landing sites in the movement.

If there had been successive movement, under plausible assumptions the relevant portions of the antecedent and the ellipsis site would not be parallel, and this would prevent ellipsis.

This seems to be problematic under the assumption that successive cyclic movement is required by considerations of locality.

But as discussed earlier, considerations of locality are nullified under deletion (island repair).

Why is there no 'repair' with VPE?

VPE involves deletion of a smaller constituent than the clause that is elided in sluicing (VP vs. TP):

which girl \[TP he T [AspP did <VP say that I talked to g(girl)>]]

Fred said that Mary talked to a certain girl, but I don't know which girl he did

The unacceptability of VPE follows if we assume that one of the two remaining maximal projections, perhaps AspP or TP, is an 'island' that must be circumvented by adjunction or repaired by deletion. [This roughly follows the claim of Chomsky (1986) that all XPs are potential barriers.] Since the island is not deleted, the escape hatch is required, and a violation of Parallelism is unavoidable.

Under the Fox and Pesetsky proposal, at least some contradictory ordering statements will appear in the Table even after VP ellipsis.

Since this account of the contrast between VPE and sluicing relies crucially on the fact that there is movement in the elided constituent but not in the antecedent constituent, a prediction is that if the antecedent clause is replaced with a clause that involves movement, both VPE and sluicing would be possible.

I know which book John said that Mary read, but you don't know which one

* I know which book John said that Mary read, but you don't know which one he did.

Compare:

I know that John said that Mary read a certain book, but I don't know which one.

* I know that John said that Mary read a certain book, but I don't know which one he did.

Judgments seem to go in the predicted direction. To the extent that this is so, it reinforces the idea that parallelism is implicated in at least certain instances of ellipsis, hence provides another argument for internal structure in the ellipsis site.
V. A new question: P-stranding

(154) As noted earlier, P-stranding violations evidently cannot be repaired by ellipsis. This is mysterious, in fact paradoxical, if the P-stranding constraint is an 'island constraint'.

(155) Speculation: Suppose that the P-stranding constraint is derivational: the A-over-A.

(156) Chomsky (1973) proposed this in anticipation of Postal's argument against successive cyclic wh-movement (Postal (1972)).

(157)a. To whom do you think (that) John talked
   b  Who do you think (that) John talked to
   c  *Who do you think to (that) John talked

(158) To allow (157)a and (157)b, Chomsky proposes that the wh-feature on who(m) can 'percolate' to the PP to whom.

(159) (157)c is still not possible, since the initial move of the PP means the feature has percolated, so the second step is impossible, by the A-over-A condition.

(160) Suppose then that the difference (or one of the differences) between languages that do and don't allow P-stranding in initial position is whether the wh-feature can or must percolate from DP to immediately dominating PP.

(161) In the latter type of language, even the first P-stranding step would violate the A-over-A. And if we continue to take that as a constraint on the operation of the transformation, P simply couldn't be stranded, so repair would never be a possibility.

VI. Tentative conclusion

(162) At least some ellipsis phenomena involve an ellipsis site with silent internal syntactic structure.

(163) And for at least some of these, PF deletion provides the most straightforward account.

References


