On the limits of elliptical repair
Sluicing, clefts and LF-copy

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1. Introduction: unpronounced syntactic structure?
   (1) John saw someone, but I don’t know who.
   (2) form: John saw someone, but I don’t know who.
       meaning: John saw someone, but I don’t know who John saw.
   Question: How are form and meaning linked in ellipsis? What role – if any – does syntax play, i.e. is there unpronounced syntactic structure in ellipsis sites?
   (3) Is there unpronounced syntactic structure in ellipsis sites?

   nonstructural approaches
   structural approaches
     Is the nonpronunciation due to lexically null elements?
     LF-copy, null anaphora
     e.g. Hardt 1993;
     Chung e.a. 1995
     et multi alii
     PF-deletion
     e.g. Merchant 2001;
     Ross 1969
     et multi alii

   → this talk assumes the general correctness of the structural approach to ellipsis, and explores some of its consequences

2. The hidden syntax of sluicing: Merchant (2001)
   Question: Assuming there is unpronounced syntactic structure in sluicing, how can we determine what exactly it looks like?
   (4) John saw someone, but I don’t know who.
   (5) a. option (i): John saw someone, but I don’t know who.
       b. option (ii): John saw someone, but I don’t know who it was (that John saw)
       (Erteschik-Shir 1977; Pollman 1975)
Merchant (2001:115-127): 10 arguments against option (ii)

1. adjuncts and implicit arguments

(6) 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.

(7) 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.

2. prosody

(8) Someone gave me a valentine, but
a. sluicing: I don’t know WHO.
b. cleft: * I don’t know WHO it was.
c. cleft: I don’t know who it WAS.

3. aggressively non-D-linked wh-phrases

(9) 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!

4. ‘mention some’-modification

(10) 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?

5. ‘mention all’-modification

(11) 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.

6. else-modification

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

7. swiping (sluiced wh-word inversion with prepositions in northern Germanic)

(13) She bought a robe, but
  a. sluicing: God knows who for.
b. cleft: * God knows who for it was.

8. languages with limited or no cleft strategy

sluicing

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

cleft

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

9. case matching

(16) 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} which.NOM which.ACC
  b. cleft: { pjos / * pjon} itan.
which.NOM which.ACC it.was (Greek)
  ‘The police interrogated one of the Cypriots first, but I don’t know which (it was)’

10. left-branch sluices

(17) He married a rich woman –
  a. sluicing: wait till you hear how rich!
b. cleft: * wait till you hear how rich it is!
3. Merchant’s arguments revisited: the Last Resort scenario

3.1 Four possible scenarios

Note: Merchant’s arguments are explicitly presented as problems for the scenario in (18)a, implicitly as support for the scenario in (18)b, and they remain agnostic about the scenarios in (18)c-d.

(18)

a. **ALWAYSLEFT**: The structure underlying sluicing is always a cleft.
b. **ALWAYSWH**: The structure underlying sluicing is always a wh-question.
c. **OPTIONALITY**: The structure underlying sluicing can be either a cleft or a wh-question (and the choice between them is free).
d. **LASTRESORT**: An underlying cleft is only used when the wh-question is independently unavailable.

3.2 Revisiting Merchant’s arguments from a multi-scenario perspective

1. adjuncts and implicit arguments

(19)

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.

(20)

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.

2. prosody

(21)

a. sluicing: Someone gave me a valentine, but
b. cleft: * I don’t know WHO.
c. wh: I don’t know WHO gave me a valentine.

3. aggressively non-D-linked wh-phrases

(22)

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!

4. ‘mention some’-modification

(23)

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?

5. ‘mention all’-modification

(24)

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.
6. else-modification

(25) 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.

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7. swiping (glided wh-word inversion with prepositions in northern Germanic)

(26) 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.

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8. languages with limited or no cleft strategy

sluicing

(27) Er hat mit jemandem gesprochen – rate mal mit dem! He has with someone spoken – guess PRT with who
     He spoke with someone – guess with whom! (German)

cleft

(28) * Mit wen wares, daß er gesprochen hat? with who was that he spoken has
     Intended: 'With whom was that he spoke?' (German)

wh

(29) Mit wen hat er gesprochen? with who has he spoken
     'With whom did he speak?' (German)

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9. case matching

(30) I astinomia anekrine enan apo tous Kiprious prota, the police interrogated one ACC from the Cypriots first
     a. sluicing: * { * pjoos / pjon} who, NOM who, ACC
     b. cleft: { pjoos / * pjon} it was who, NOM who, ACC
     c. wh: * { * pjoos / pjon} anekrine i astinomia. who, NOM who, ACC interrogated the police

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10. left-branch sluices

(31) 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!

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3.3 Summary and conclusions

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Conclusions:

(i) When taken at face value, four of Merchant’s arguments are incompatible with all scenarios ⇒ in those cases the discrepancy between ellipsis (sluicing) and non-ellipsis (wh-question and cleft) must be due to independent factors

- e.g. the lack of aggressively non-D-linked wh-phrases in sluicing follows from the prosodic properties of the hell (Sprouse 2005, cf. also Den Dikken & Giannakidou 2002:42-43 for discussion)
- e.g. the lack of non-elliptical swiping is due to a repair effect induced by ellipsis (Van Craenenbroeck 2004:73-75), or to the e-GIVENness of ellipsis forcing overt focus movement (Hartman & Ai 2007) (cf. also Merchant 2002 for discussion)

(ii) The Last Resort scenario fares just as well as the scenario in which all sluicing is derived from an underlying wh-question ⇒ we might expect to find cases in which sluicing derives from a cleft when there is no wh-question antecedent available

4. Part one of the puzzle: clefts as Last Resort

4.1 Introduction: Merchant’s (2001) P-stranding generalization

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

English: P-stranding

(33) Peter was talking with someone, but I don’t know (with) who.
(34) Who was Peter talking with?

Greek: no P-stranding

(35) * I Anna milise me kapjon, alla dhiesero *(me) pjon. the Anna spoke with someone but not I.know with who
‘Anna spoke with someone, but I don’t know with who.’
(36) * Pjon milise me? who she.spoke with
INTENDED: ‘Who did she speak with?’ (Greek, Merchant 2001:94)

4.2 Exceptions to the PSG: clefts to the rescue

4.2.1 Spanish (Nevins, Rodriguez & Vicente 2007)

no P-stranding in regular wh-questions

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

P-stranding under sluicing

(38) 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.’
Nevins e.a.: P-stranding violations under sluicing in Spanish do not derive from a regular wh-question, but from an underlying cleft:

(39) Juan ha hablado con una chica
Juan has talked with a girl
pero no sé cuál es la chica con la que ha hablado Juan.
but not know which is the girl with the that has spoken Juan
‘Juan talked to a girl, but I don’t know which (girl it was with which he spoke).’

important note: the grammaticality of (43) (= (40) partially repeated) shows that it is not the case that all sluicing in Spanish derives from an underlying cleft (cf. the ALWAYSLEFT-scenario)

(43) 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 talked to a blonde girl, but I don’t know to what other girl.’

4.2.2 Brazilian Portuguese (Nevins, Rodriguez & Vicente 2007, pass Almeida & Yoshida 2007)

no P-stranding in regular wh-questions
(44) * Quem que a Maria dançou com?
who that the Maria danced with
INTENDED: ‘Who did Maria dance with?’

P-stranding under sluicing
(45) A Maria dançou com alguém, mas eu não sei quem
the Maria danced with someone but I not know who
‘Mary danced with someone, but I don’t know who.’

Nevins e.a.: P-stranding violations under sluicing in BP do not derive from regular wh-questions, but from an underlying cleft. The relative clause in such a cleft independently allows P-drop in BP (cf. (45)).

(46) A Maria dançou com alguém, mas eu não sei a
the Mary danced with someone but I not know
a. * quem — Maria dançou com
who that the Maria danced with
b. quem — Maria dançou
who who that the Maria danced
‘Mary danced with someone, but I don’t know who.’

(47) A menina (com) que o João dançou na festa estava bêbada
the girl with that the João danced in the party was drunk
‘The girl Juan danced with at the party was drunk.’

supporting evidence: no P-stranding in multiple sluicing

multiple sluicing in BP
(48) O João deu algo para alguém, mas eu não sei o que
the João gave something to somebody but I not know the what
para quem
to whom
‘João gave something to somebody, but I don’t know what to whom’
no P-stranding in multiple sluicing

(49) Ela falou sobre alguma coisa para alguém, she talked about some thing to someone
mas eu não sei *(sobre) o que *(para) quem but I not know about the what to whom
‘She talked about something to someone, but I don’t know about what to whom.’

Nevins e.a. (following Lasnik 2006): in multiple sluicing in a non-multiple wh-movement language like BP, the second wh-phrase is moved via extraposition, not wh-movement. The ungrammaticality of the P-stranded version of (49) then follows under the cleft analysis as a violation of the Right Roof Constraint (the second wh-phrase having been extraposed from the relative clause inside the cleft).

4.2.3 Polish (Szczegelniak 2005)

no P-stranding in regular wh-questions

(50) * Którym Anna tańczyła z mężczyzną? which Anna danced with man
INTENDED: ‘Which man did Anna dance with?’

(51) * Którym mężczyzną Anna tańczyła z? which man Anna danced with
INTENDED: ‘Which man did Anna dance with?’

P-stranding under sluicing

(52) Anna tańczyła z jednym mężczyzną ale nie wiem którym. Anna danced with one man but not know which
‘Anna danced with a man, but I don’t know which.’

Szczegelniak (2005): P-stranding violations under sluicing in Polish do not derive from regular wh-questions, but from an underlying cleft:

(53) Anna tańczyła z jednym mężczyzną ale nie wiem którym to z mężczyzną (ona) tańczyła which it with man she danced
‘Anna danced with a man, but I don’t know which (man it was with which she danced.’

supporting evidence (I): no cleft rescue with simple wh-phrases

no P-stranding under sluicing with simple wh-phrases

(54) * Anna tańczyła z jednym mężczyzną ale nie wiem kim. Anna danced with one man but not know who
INTENDED: ‘Anna danced with a man, but I don’t know who.’

no clefts with simple wh-phrases as pivots

(55) * Kim to z ona tańczał? who it with she danced
INTENDED: ‘Who was it that she danced with?’

supporting evidence (II): clitic climbing

(auxiliary) clitic climbing is degraded in P-stranding clefts

(56) ? Ktoregoś to do mężczyznę ty podszeďł? which-AUX it to man you approached
‘Which man was it that you approached?’

(57) Ktoregoś to do mężczyznę ś ty podszeďł? which it to man-AUX you approached
‘Which man was it that you approached?’

(58) Ktoregoś do mężczyznę ty sfotografowałś? which-AUX it man you photographed
‘Which man was it that you photographed?’

auxiliary clitic degraded in P-stranding sluicing

(59) ?? Ty wysłał książkę do jednego chłopca, ale nie wiem któregoś you sent book to one boy but not know which-AUX
‘You sent a book to a boy, but I don’t know which boy.’

(60) Ty dał książkę jednemu chłopcu, ale nie wiem któremuś you gave book one boy but not know whom-AUX
‘You gave one boy a book, but I don’t know which.’
supporting evidence (III): no P-stranding in multiple sluicing

multiple sluicing

(61) Jan dał jednemu mężczyźnie jakieś książkę ale nie wiem komu którą Jan gave one man some book but not know whom which
‘Jan gave a book to some man, but I don’t know which book to which man.’

no P-stranding in multiple sluicing

(62) Jan napisał jakieś list do jakiegokolwiek ale nie wiem Jan wrote some letter to some student but not know który *(do) którego.
which to which
‘John wrote some letter to some student, but I don’t know which letter to which student.’

no multiple pivots in a cleft

(63) *Co to było komu to ona dala?
what it was who it she gave

important note: the grammaticality of (64) (= (61) repeated) shows that it is not the case that all sluicing in Polish derives from an underlying cleft (cf. the ALWAYSCLEFT-scenario); compare the multiple wh-movement in (65)

(64) Jan dał jednemu mężczyźnie jakieś książkę ale nie wiem komu którą Jan gave one man some book but not know whom which
‘Jan gave a book to some man, but I don’t know which book to which man.’

(65) Kto komu dał książkę?
who whom gave book
‘Who gave a book to whom?’

4.2.4 English (Rosen 1976, Fortin 2007:215-217, D. Maier p.c.)

no P-stranding in regular wh-questions with certain prepositions

(66) a. * Which city did you sleep in a car in?
b. * Whose wishes did he get married against?

(67) a. In which city did you sleep in a car?
b. Against whose wishes did he get married?

P-stranding under sluicing with those prepositions

(68) a. Pat slept in a car in some city, but I don’t know which city.
b. Terry got married against someone’s wishes, but I don’t know whose.

Van Craenenbroeck (2004:122): P-stranding violations under sluicing in English do not derive from regular wh-questions, but from an underlying cleft:

(69) a. Pat slept in a car in some city, but I don’t know which city.
b. Terry got married against someone’s wishes, but I don’t know whose.

supporting evidence: pied-piping the preposition

pied-piping under sluicing is degraded with ‘unstrandable’ prepositions

(70) a. ?? Pat slept in a car in some city, but I don’t know in which city.
b. ?? Terry got married against someone’s wishes, but I don’t know against whose wishes.

the same degradation is found in clefts

(71) a. ?? Pat slept in a car in some city, but I don’t know in which city it was.
b. ?? Terry got married against someone’s wishes, but I don’t know against whose wishes it was.

important note: the data reviewed in section 2 (Merchant’s 10 arguments) show that it is not the case that all sluicing in English derives from an underlying cleft (cf. the ALWAYSCLEFT-scenario)

4.3 Conclusion

The fact that sluicing in Spanish, Brazilian Portuguese, Polish and English resorts to an underlying cleft when the corresponding wh-question is not available (due to a P-stranding violation) provides strong support for the Last Resort scenario.
5 Part two of the puzzle: morphological case blocks rescue

5.1 Introduction: no P-stranding under sluicing in Greek


Note: if clefts are used to circumvent an otherwise unavoidable P-stranding violation, this
should be easily detectable in languages with morphological case marking on wh-phrases, e.g. Greek

setting the scene: case, clefts and P-stranding in Greek

accusative case for the object of a proposition

(72) Me pjon mîlise?
with who.ACC she.speoke
‘With whom did she speak?’

nominative case for the pivot of a cleft

(73) Dhen ksero pjos itan.
not I.know who.NOM it.was
‘I don’t know who it was.’

no P-stranding in regular wh-questions

(74) * Pjon mîlise me?
who.ACC she.speoke with
INTENDED: ‘Who did she speak with?’

testing the prediction: P-stranding under sluicing in Greek

P-stranding under sluicing with an accusative wh-phrase

(75) * I Anna mîlise me kapjon, alla dheksero pjion.
the Anna spoke with someone but not I.know who.ACC
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

P-stranding under sluicing with a nominative wh-phrase

(76) * I Anna mîlise me kapjon, alla dheksero pjos.
the Anna spoke with someone but not I.know who.NOM
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

Note: the ill-formedness of (75) is expected given (74), but the ill-formedness of (76) is
puzzling, esp. given the fact that (77) is perfectly well-formed, i.e. Greek has a perfectly
acceptable cleft alternative for the P-stranding violation in (75), but doesn’t use it.

(77) I Anna mîlise me kapjon, alla dheksero pjos itan.
the Anna spoke with someone but not I.know who.NOM it.was
‘Anna spoke with someone, but I don’t know who it was.’

Question: Why can’t sluicing apply in (77) to yield the surface string in (76)?

5.2 Expanding the data set

5.2.1 Czech (Merchant 2001:96; J. Dotlačil p.c., R. Šimik p.c., cf. also infra, section 9.6)

no P-stranding in regular wh-questions

(78) * Kým mlâvila Anna s?
who.INSTR speak Anna with
INTENDED: ‘Who did Anna speak with?’

no P-stranding under sluicing with a non-nominative wh-phrase

(79) * Anna mlâvila s nîkým, ale nevím kým.
Anna spoke with someone but not I.know who.INSTR
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

no P-stranding under sluicing with a nominative wh-phrase

(80) * Anna mlâvila s nîkým, ale nevím kdo.
Anna spoke with someone but not I.know who.NOM
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

non-elliptical cleft alternative

(81) Anna mlâvila s nîkým, ale nevím kdo to byl.
Anna spoke with someone but not I.know who.INSTR
it.was
‘Anna spoke with someone, but I don’t know who it was.’

5.2.2 Slovene (Merchant 2001:97; T. Marvin p.c.)

no P-stranding in regular wh-questions

(82) * Kom je govorilaAnna s?
who.INSTR AUX spoke Anna with
INTENDED: ‘Who did Anna speak with?’
no P-stranding under sluicing with a non-nominal wh-phrase

(83) * Anna je govorila z nekom, ampak ne vem kom.
    Anna AUX spoke with someone but not I know who.
    INTENDED: 'Anna spoke with someone, but I don’t know who.'

(84) * Anna je govorila z nekom, ampak ne vem kdo.
    Anna AUX spoke with someone but not I know who.NOM
    INTENDED: 'Anna spoke with someone, but I don’t know who.'

non-elliptical cleft alternative

(85) Anna je govorila z nekom, ampak ne vem
    Anna AUX spoke with someone but not I know
    kdo je to bil.
    who.NOM AUX it been
    'Anna spoke with someone, but I don’t know who it was.'

5.2.3 Serbo-Croatian (Merchant 2001:97; B. Arsenijević, cf. also infra, section 9.6)

no P-stranding in regular wh-questions

(86) * Kim je govorila Ana sa?
    who.INSTR AUX spoke Ana with
    INTENDED: 'Who did Ana speak with?'

no P-stranding under sluicing with a non-nominal wh-phrase

(87) * Ana je govorila sa nekim, ali ne znam kim.
    Ana AUX spoke with someone but not I know who.
    INTENDED: 'Ana spoke with someone, but I don’t know who.'

(88) * Ana je govorila sa nekim, ali ne znam ko.
    Ana AUX spoke with someone but not I know who.NOM
    INTENDED: 'Ana spoke with someone, but I don’t know who.'

non-elliptical cleft alternative

(89) Ana je govorila sa nekim, ali ne znam
    Ana AUX spoke with someone but not I know
    ko je to bio.
    who.NOM AUX it been
    'Ana spoke with someone, but I don’t know who it was.'

5.2.4 Hungarian (A. Lipták p.c.)

no P-stranding in regular wh-questions

(90) * János kin kapott híreket keresztül?
    János who.SUBL got news across
    INTENDED: 'Via who did János get some news?'

no P-stranding under sluicing with a non-nominal wh-phrase

(91) * János híreket kapott valakin keresztül,
    János news got someone.SUBL across
    de nem tudom ki.
    but not. I know who.NOM
    INTENDED: 'János got some news via someone, but I don’t know who.'

(92) * János híreket kapott valaki keresztül,
    János news got someone.SUBL across
    de nem tudom ki.
    but not. I know who.NOM
    INTENDED: 'János got some news via someone, but I don’t know who.'

non-elliptical cleft alternative

(93) János híreket kapott valaki keresztül,
    János news got someone.SUBL across
    de nem tudom ki voltaz, akin keresztül híreket kapott.
    but not. I know who.NOM was that REL across news got
    'János got some news via someone, but I don’t know who it was via whom he got
    some news.'

5.2.5 Hindi (Merchant 2001:100; Dave et al. 2002:29; R. Bhatt p.c.)

no P-stranding in regular wh-questions

(94) * Kis dukaan John gayaa mein?
    which shop John go to
    INTENDED: 'Which shop did John go into?'
no P-stranding under sluicing with a non-nominative wh-phrase

(95) * Gautamne kisi se baat kii thii,
    Gautam.ERG someone with talk do PAST
lekin mujhe pataa nahii kis.
but I.DAT knowledge NEG who.OBL
INTENDED: ‘Gautam spoke with someone, but I don’t know who.’

no P-stranding under sluicing with a nominative wh-phrase

(96) * Gautamne kisi se baat kii thii,
    Gautam.ERG someone with talk do PAST
lekin mujhe pataa nahii kaun.
but I.DAT knowledge who.NOM
INTENDED: ‘Gautam spoke with someone, but I don’t know who.’

non-elliptical ‘cleft’ alternative

(97) Gautamne kisi se baat kii thii,
    Gautam.ERG someone with talk do PAST
lekin mujhe nahii pataa ki vo kaun tha.
but I.DAT NEG knowledge that he who.NOM
‘Gautam spoke with someone, but I don’t know who he was.’

5.3 Exceptions: one apparent and one real

5.3.1 The apparent exception: Polish

(98) premise 1: Polish uses clefts to salvage P-stranding under sluicing (cf. section 5.2.3)
premise 2: Polish has morphological case marking on wh-phrases
conclusion: Polish violates the generalization that morphological case blocks cleft rescue

However: note that the particular cleft strategy that Polish employs is case-sensitive, i.e. it bears the case assigned by the preposition (Szczegelniak 2005:18):

(99) Którym to z mężczyzną ona tańczyła?
    which.INSTR it with man she danced
‘Which man was it with which she danced?’

Conclusion: the generalization seems to be that cleft rescue is blocked when the morphological form of the wh-phrase in the cleft is not identical to the morphological form of the wh-phrase in a regular wh-question

5.3.2 The real exception: German

no P-stranding in regular wh-questions (Merchant 2001:94)

(100) * Wem hat sie mit gesprochen?
    who has she with spoken
INTENDED: ‘Who did she speak with?’

no P-stranding under sluicing with a non-nominative wh-phrase (Merchant 2001:94)

(101) * Anna hat mit jemandem gesprochen, aber ich weiß nicht wer.
    Anna has with someone spoken but I know not who
INTENDED: ‘Anna has spoken with someone, but I don’t know who.’

P-stranding under sluicing with a nominative wh-phrase for some speakers (Szczegelniak 2005:15)

(102) % Anna hat mit jemandem gesprochen, aber ich weiß nicht wer.
    Anna has with someone spoken but I know not who
‘Anna has spoken with someone, but I don’t know who.’

non-elliptical cleft alternative (Szczegelniak 2005:15)

(103) Anna hat mit jemandem gesprochen,
    Anna has with someone spoken
aber ich weiß nicht wer es war.
but I know not who it was
‘Anna has spoken with someone, but I don’t know who it was.’

Conclusion: those speakers for whom (102) is well-formed form a true exception to the generalization that a difference in morphological case marking between clefts and regular wh-questions blocks cleft rescue of P-stranding violations

5.4 Conclusion

P-stranding violations under sluicing cannot be salvaged with an underlying cleft when the morphological case of the wh-phrase in a cleft is not identical to that in a regular wh-question.

6. Interim summary: the puzzle

Part one: an underlying cleft can function as Last Resort in sluicing when the corresponding wh-question is unavailable (due to the ban on P-stranding)
Part two: this rescue strategy is unavailable when it involves changing the case morphology of the wh-phrase
7. Towards an analysis (I): two failed attempts

7.1 Parallelism as a transderivational constraint

Starting point: part one of the puzzle seems to suggest that the derivation involving an underlying cleft and the one involving an underlying wh-question are in competition; the relevant transderivational constraint choosing between them would then be as in (104).

(104) Parallelism
If two derivations D₁ and D₂ are in the same reference set and D₁ involves strict structural isomorphism between ellipsis site and antecedent while D₂ doesn’t, then D₁ is preferred over D₂.

(105) Evidence: Two derivations D₁ and D₂ are in the same reference set iff:

a. D₁ and D₂ have the same S-structure representation
b. D₁ and D₂ do not violate local or global constraints

Note: in order for Parallelism to yield the right result in (105), the definition of the reference set has to be based on surface representations, not on Numerations or LF-representations:

(106) Reference Set (Müller 2005:85)
Two derivations D₁ and D₂ are in the same reference set iff:

a. D₁ and D₂ have the same S-structure representation
b. D₁ and D₂ do not violate local or global constraints

P-stranding under cleft rescue

(107) Evidence: two failed attempts

P-stranding under sluicing and morphological case (I): a non-nominative wh-phrase

(108) D₁: * I Anna milise me kapjon, the Anna spoke with someone alla dhekse ro pion, me milise me but not I know who ACC she.spoke with.

Note: D₁ violates the ban on P-stranding and there is no other derivation in the reference set ⇒ the example is correctly predicted to be ill-formed.

P-stranding under sluicing and morphological case (II): a nominative wh-phrase

(109) D₁: * I Anna milise me kapjon, alla dhekse ro pion, the Anna spoke with someone but not I know who.NOM me.

Note: D₁ does not violate any local or global constraints and Parallelism does not apply because D₁ is the only derivation in the reference set (compare with (107)) ⇒ this example is incorrectly predicted to be well-formed.

Conclusions: - implementing Parallelism as a transderivational constraint cannot explain why morphological case marking languages do not allow cleft rescue of P-stranding violations - implementing Parallelism as a transderivational constraint implies defining the reference set on S-structure representations, which seems incompatible with other, more likely candidates for transderivational constraints such as Fewest Steps (cf. Müller 2005 for discussion) - transderivational constraints are theoretically dubious to begin with and hence preferably avoided (cf. also Baltin 2005 for discussion)

7.2 PF-deletion

Central problem for a PF-deletion approach:

Why is PF-deletion possible in (110), but not in (111)?

(110) John got married against someone’s wishes, but we don’t know whose.

(111) * I Anna milise me kapjon, alla dhekse ro pion, the Anna spoke with someone but not I know who.NOM me.

Possible reply: in English, ellipsis is conditioned by semantic identity (cf. Merchant 2001) and in Greek by structural identity (cf. Fiengo & May 1994)
Problems:
- how can this difference be linked to the presence/absence of morphological case marking on wh-phrases?
- other known cases of non-isomorphism (tense mismatches, vehicle changes, etc.; cf. Merchant 2001:10-38 for examples and discussion) apply both in languages with morphological case marking and in languages without morphological case marking.
- how can such a difference be implemented/parametrized/acquired?

8. Towards an analysis (II): LF-copy

8.1 Introduction

The basic intuition behind the analysis:
Determining the precise structure underlying the ellipsis site can only take place after the surface representation is completed. In languages without morphological case marking, this surface representation is compatible with both underlying structures and hence cleft rescue is an option. In languages with morphological case marking, a surface representation with a non-nominative wh-phrase is only compatible with a non-cleft source, and hence cleft rescue is not an option.

→ LF-copy offers precisely such an ordering of events

8.2 LF-copy: the basic idea (Chung, Ladusaw & McCloskey 1995, 2006; Forrin 2007)

Key ingredients:
- in narrow syntax and at Spell-Out the TP portion of a sluiced clause is taken up by an empty slot (TP-proform, null lexical category, ...):

\[(112) \text{John loves someone and I know } [_{CP} \text{ who } C^* \text{ TP } e] \]

- at LF, the TP of the antecedent is re-used/recycled: it is copied/moved into (or shared with) the TP-position of the sluiced clause:

\[(113) \text{John loves someone and I know } [_{CP} \text{ who } C^* \text{ TP John loves someone }] \]

- in the resulting structure the indefinite correlate gets coindexed with the wh-phrase and serves as the variable bound by the wh-operator:

\[(114) \text{John loves someone and I know } [_{CP} \text{ who } C^* \text{ TP John loves someone}] \]
8.3 A central problem for LF-copy: case matching

(117) I astinomia anekrine anan apo tous Kiprious prota, the police interrogated one and the Cypriots first
ala dhen ksero { *pijo / pion }
but not I know who, nom, who, acc
‘The police interrogated one of the Cypriots first, but I don’t know which.’

Problem: if the wh-phrase is base-generated in specCP, how does its case feature get checked (can’t be at LF, because unchecked case features cause a crash at Spell-Out/PF)? Moreover, how can we ensure that the wh-phrase will bear the ‘correct’ case (i.e. the case matching that of its correlate)?

8.4 Modifying LF-copy: a sluiced wh-phrase is (partly) recycled as well


(118) a. who = [WH+someone]
b. what = [WH+something]

Hypothesis: the indefinite part of the wh-phrase in a sluiced clause is copied from or shared with the indefinite correlate in the antecedent clause ⇒ this allows for its case feature to be checked and ensures that the case of the sluiced wh-phrase will match that of the correlate

8.5 Part one of the puzzle: clefts as last resort

(120) LF

(121) Pat slept in a car in some city, but I don’t know which city it was.

Question: how does LF-copy allow for the cleft in the ellipsis site in (121)?

Auxiliary assumption: in ‘filling in’ the empty TP-slot, LF has two operations at its disposal: copying/sharing (Move) and structure building (Merge). The former is costless and hence the default operation; the latter is constrained by recoverability/semantic parallelism with the antecedent

On the costlessness of copying/sharing: missing complexity effects in processing

(122) a. Sarah left her boyfriend last May. Tina did not leave her boyfriend last May too.
b. Sarah got up the courage to leave her boyfriend last May. Tina did not get up the courage to leave her boyfriend last May too. (Frazier & Clifton 2001:14)
Note: despite the fact that the ellipsis site contains one clause in (122)a and two clauses in (122)b, these two examples yield the same reading times for the VPE-containing clause.

On the constraints on LF structure building

(123) * Pat slept in a car in some city, but I don’t know which city. Mary visited last year.

Note: the structure that is built at LF cannot add any new information; it has to be completely recoverable from the antecedent (e.g. e-GIVEN in Merchant’s (2001) sense)

Aside: the approach adopted here is very reminiscent of/or compatible with the processing literature onellipsis (Frazier & Clifton 1998, 2001, 2005), cf. in particular Arregui e.a.’s (2006) recycling hypothesis:

(124) Recycling hypothesis (Arregui e.a. 2006:242)
The central idea behind the recycling hypothesis is that an antecedent verb phrase is copied and, if it is of the wrong shape, it is then altered. (...) The recycling or fixing up of the copied structure should be easy to the extent that the following hold:
- it involves only a few steps
- those steps are defined by the grammar
- the copied structure is related to the target structure by systematic operations available for systematic paraphrase relations

Conclusion:
In the example in (121) copying/sharing of the antecedent TP yields an ill-formed result (P-stranding violation). As a result, LF-structure building is called upon. It creates a maximally simple structure that is recoverable from/semantically parallel to the antecedent. As a result, the derivation converges with an underlying cleft.

8.6 Part two of the puzzle: morphological case blocks rescue

recap: the basic data pattern

no P-stranding under sluicing with a non-nominative wh-phrase
(125) * I Anne misse me kapjon, alla dhe ksero pjon.
the Anna spoke with someone but not I know who.ACC
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

no P-stranding under sluicing with a nominative wh-phrase
(126) * I Anna misse me kapjon, alla dhe ksero pjon.
the Anna spoke with someone but not I know who.NOM
INTENDED: ‘Anna spoke with someone, but I don’t know who.’

non-elliptical cleft alternative
(127) I Anna misse me kapjon, alla dhe ksero pjon itan.
the Anna spoke with someone but not I know who.NOM it.was
‘Anna spoke with someone, but I don’t know who it was.’

Analysis:
1. Given that the case of a sluiced wh-phrase is directly dependent on (i.e. recycled from) its indefinite correlate, the example in (126) is simply not generated (or even ‘generatable’)
2. The structure built at LF has to be syntactically compatible with the portion of the structure that was constructed in narrow syntax ⇒ a cleft cannot come to the rescue in (125) because the wh-phrase bears the wrong case (i.e. not nominative)

But wait a minute: doesn’t the wh-phrase also bear the wrong case (albeit abstractly, not morphologically expressed) in (128)?

(128) Pat slept in a car in [some city], but I don’t know [which city].

Solution: the LF-structure building mechanism is blind for case syncretism

Compare: case matching in free relatives (De Vries 2004; Groos & Van Riemsdijk 1981)

Case marking in German wh-phrases: partial syncretism

<table>
<thead>
<tr>
<th>Case</th>
<th>German</th>
<th>who’</th>
<th>‘what’</th>
</tr>
</thead>
<tbody>
<tr>
<td>nominative</td>
<td>wen</td>
<td>awr</td>
<td></td>
</tr>
<tr>
<td>accusative</td>
<td>wen</td>
<td>awr</td>
<td></td>
</tr>
</tbody>
</table>

Case marking in free relatives

(130) Ich grüßte wen ich sah.
I greeted who.ACC I saw
‘I greeted the person that I saw.’

(131) * Ich grüßte {wen} / wen dort stand.
I greeted who.ACC / who.NOM there stands
‘I greeted the person who was standing there.’
lack of case matching in case syncretism contexts

(132) Was er sage, kann nicht wahr sein.

“What he said cannot be true.”

8.7 Conclusion

- by recycling the indefinite correlate as part of the sluiced wh-phrase, the LF-copy theory of sluicing can account for case matching
- the fact that LF-copying is costless and LF-structure building is not accounts for the Last Resort nature of underlying clefts in sluicing
- given that these LF-operations cannot change (the output of) the narrow syntactic part of the derivation, cleft rescue is blocked when the morphological form of the sluiced wh-phrase is incompatible with a cleft source

9. Extensions, problems and open questions

9.1 Other cases of non-isomorphism to the rescue (I): Antecedent Contained Sluicing (Yoshida 2007)

example

(133) John kissed someone without knowing who.

the without-clause is VP-adjoined

(134) a. I thought John kissed someone without knowing who, and kiss someone without knowing who he did.
b. John kissed someone without knowing who, and Mary did so too.
c. John kissed someone without knowing who, and Mary did too.

the problem: infinite regress

(135) John kissed someone without knowing who [IP John kissed without knowing who [IP John kissed without knowing who [IP ... 

Yoshida’s solution: Antecedent Contained Sluicing takes a VP-antecedent

(136) [IP John –ed [VP [VP b, kiss someone] [VP without [CP PRO [VP knowing [CP who [IP ... ]]]]]]]

supporting evidence: no negation in the ellipsis site

(137) a. John doesn’t kiss anyone without knowing who.
b. John doesn’t kiss anyone without knowing who he kissed.
c. * John doesn’t kiss anyone without knowing who he doesn’t kiss.

compare: regular sluicing

(138) a. (I heard that) John didn’t kiss someone, but I don’t know who.
b. * John didn’t kiss someone, but I don’t know who he kissed.
c. John didn’t kiss someone, but I don’t know who he didn’t kiss.

Note: the ungrammaticality of (138)b shows that the possibility of using a VP-antecedent is only allowed when the corresponding IP-antecedent is unavailable (i.e. as Last Resort) \( \Rightarrow \) this is another case of non-isomorphism to the rescue

9.2 Other cases of non-isomorphism to the rescue (II): Swiping (Merchant 2002; Van Craenenbroeck forthcoming)

swiping generally requires the P(P) to be new information

(139) John gave a talk, but I don’t know what about.

exceptions

(140) % Howard shares the apartment with someone, but I don’t know who with.

Merchant’s solution: swiping can take a VP-antecedent for some speakers

(141) [IP Howard [VP shares the apartment [VP with someone]], but I don’t know [CP who with [IP ... ]] antecedent]

supporting evidence: no swiping with low VP-elements

(142) a. We were with somebody. I forget who (*with).
b. She got involved in something over her head, but I don’t know what (*in).

Note: the ungrammaticality of (138)b shows that the possibility of using a VP-antecedent is only allowed when the corresponding IP-antecedent is unavailable (i.e. as Last Resort) \( \Rightarrow \) this is another case of non-isomorphism to the rescue

9.3 Problems for LF-copy (I): contrast sluices (Merchant 2001:35-37)

(143) a. John has ten CATS, but I don’t know how many DOGS.
b. John invited Harry, but I don’t know who else.
Problem: if the antecedent clause does not contain an indefinite correlate, the sluiced wh-phrase will have no variable to bind and it can’t ‘recycle’ the case of the correlate

Possible way out: contrast sluices could be of a fundamentally different nature (and hence require a different analysis) than regular sluicing. In this respect it is worth pointing out that Indonesian has regular sluicing, but lacks contrast sluices (Fortin 2007:178-179).

9.4 Problems for LF-copy (II): sluicing across discourse

(144)
A: John invited someone.
B: Really? Who?

Problem: how can the TP of the antecedent be copied/moved from or shared with the TP of the sluiced clause? Speaker B would have to construct a full LF-representation of speaker A’s utterance.

9.5 Last Resort vs. Optionality: nominal antecedents (Beecher 2006, D. Maier p.c., N. Kula p.c.)

example

(145) The only thing I can come up with is contamination, but I don’t know what from.

the ellipsis site cannot be isomorphic to the antecedent

(146) a. * I don’t know what the only thing I can come up with is contamination from.
b. I don’t know what the contamination is from.

However: the judgements in (147) seem to suggest that such a copular source for sluicing is available even when the full IP is well-formed ⇒ this could be a case of optionality between isomorphism and non-isomorphism

(147) a. John was given a book, but I don’t know who by.
b. John was given a book, but I don’t know who the book was by.
c. John was given a book, but I don’t know who by.

9.6 Open question: non-cleft-related exceptions to the PSG

9.6.1 P-stranding violations under sluicing in Serbo-Croatian (Stjepanović 2008)

Stjepanović (2008:180-2): Mercham’s examples of (illicit) P-stranding violations under sluicing are out for independent reasons. On closer inspection, Serbo-Croatian is not so well-behaved with respect to the PSG:

no P-stranding in regular wh-movement

(148) < Protiv> ega je Petar glasao <* protiv>? against what AUX Petar voted against
‘Against what did Petar vote?’

P-stranding under sluicing

(149) Znam da je Petar glasao protiv ne ega, ali ne znam ega.
I know that AUX Petar voted against something but not I know what ‘I know Petar voted against something, but I don’t know what.’

Note: the example in (149) cannot be derived from an underlying cleft, as the wh-phrase is morphologically marked for genitive case. Pivots of clefts are nominative in SC, and (as was also pointed out in section 6.2.3) nominative wh-phrases do not allow for P-stranding under sluicing:

(150) Petar je glasao protiv ne ega, ali ne znam šta *(je Petar AUX voted against something but not I know what) NOM AUX to bilo protiv ega je on glasao), that been against what AUX he voted
‘Petar voted against something, but I don’t know what it was that he voted against.’

9.6.2 P-stranding violations under sluicing in Indonesian (Fortin 2007; C. Fortin p.c.)

no P-stranding in regular wh-questions

(151) < Dengan> siapa Pak Guru sedang berbicara <* dengan>? with who Mr. Teacher PROG INTR speak with
‘With whom is Mr. Teacher speaking?’
10 Summary and conclusions

1. The structure underlying slicing/IP-ellipsis is not always a wh-question (or more generally: structurally isomorphic with its antecedent).

2. There is a Last Resort condition on the use of non-isomorphic ellipsis sites: they are only used when the isomorphic antecedent is unavailable/ill-formed.

3. This rescue strategy is only available when the non-isomorphic unpronounced structure is syntactically fully compatible with the surface representation of the elliptical clause.

4. The LF-copy analysis of slicing is most straightforwardly suited to capture these facts.

References


Aronin, N., C. 


