0 Do we need unpronounced syntactic structures?

1 What kind of unpronounced syntactic structure? Ellipsis.

1.1 What is it?

(2) John can play something, but I don’t know what. sluicing
(3) John can play the guitar and Mary can, too. VP-ellipsis
(4) John can play five instruments, and Mary can play six. NP-ellipsis
(5) John can play the guitar, (and Mary, too) and Mary as well/ stripping/ Bare Argument Ellipsis
(6) a. Mary can play the guitar better than John. Comparative ellipsis
    the M NOM plays guitar better than the CLAUSAL the Giannis.
    ‘Mary plays the guitar better than John does.’
   b. Greek clausal comparatives
   I Maria pezi kithara kalitera apoti o Giannis.
   the M NOM plays guitar better than CLAUSAL the Giannis.NOM
   ‘Mary plays the guitar better than John plays guitar.’
(7) a. John can play the guitar, and Mary the violin. gapping
    b. John can play the guitar better than Mary the violin.
(8) Q: What can John play?
    A: The guitar.

In each case, the second clause can be understood as in (9)-(15):

(9) John can play something, but I don’t know what John can play.
(10) John can play the guitar and Mary can play the guitar, too.
(11) John can play five instruments, and Mary can play six.
(12) John can play the guitar, and Mary can play the guitar, too.
(13) a. Mary can play the guitar better than John can play the guitar.
    b. Greek
    I Maria pezi kithara kalitera apoti pezi o Giannis.
    the M NOM plays guitar better than CLAUSAL plays the G NOM
    ‘Mary plays the guitar better than John plays guitar.’
(14) John can play the guitar and Mary can play the violin.
(15) A: John can play the guitar.
Approaches to the syntax of ellipsis

Is there unpronounced syntactic structure in ellipsis sites?

a. Nonstructural approaches  b. Structural approaches

2.1 Nonstructural approaches (Ginzburg and Sag 2000, Schlagen 2003, Jacobson 2003, Culicover and Jackendoft to appear, et multi alii)

... I don’t VP

2.2 Structural approaches


a. I don’t know \([\alpha] \text{ what } [\alpha e] \) (Spell-Out/S-structure)

b. I don’t know \([\alpha] \text{ what } [\alpha e] \text{ if } [\alpha e] \) (LF/interpreted structure)


Likewise for fragment answers: (Brunetti 2003, Merchant 2004)

Q: What can John play?
A: the guitar

And for clausal comparatives:

(30) a. Greek

i. Maria pezi kithara kalitera apoti violi. the \( M.NOM \) plays guitar better than CLAUSE violin

‘Mary plays the guitar better than (she plays) the violin.’

b. ... apoti

3 Evidence for structure

3.1 Locality effects


... *I read every book you introduced me to a guy who did.

b. *They want to hire someone who speaks a Balkan language, but I don’t remember which (Balkan language) they do. <want to hire someone who speaks \( t \) >

c. *Which film did you refuse to see because Roger was so revolted when he did after renting?

d. *They met a five inches taller man than you did.
(32) *… but I don’t remember

... CP

[or which]

C

C

TP

do

<VP>

want to hire [or [someone] CP]

who speaks $t_j$

striping (Reinhart 1991)

(41) *They caught the man who’d stolen the car after searching for him, but not the diamonds.

(42) *… but not they caught the man who’d stolen $t_i$ [the diamonds].

gapping (Johnson 1996, Coppock 2001)

(43) *Some wanted to hire the woman who worked on Greek, and others Albanian.

sluicing from inside subjects (Lasnik and Park 2004)

(44) *Books were sold to John, but I don’t know on which shelf.

sluicing over implicit antecedents (Chung, Ladusaw, and McCloskey 1995)

(45) Tony sent Mo a picture that he painted, but it’s not clear with what.

a. = <Tony sent him the picture $t_{eso, wh.}>$

b. = <Tony sent him a picture that he [painted $t_{eso, wh.}>$

c. *Tony sent Mo a picture that he painted

contrast sluicing (Merchant 2001)

(46) She knows a guy who has five dogs, but I don’t know how many cats.

a. = <the guy who has the five dogs] has $\ell$-

b. = <she knows a guy who has $\ell$-

• "If cases such as [(31)-(46)] were ungrammatical, that would be impressive evidence of the reality of invisible structure" (Culicover and Jackendoff to appear, ch. 4 p. 11 fn 8).

3.2 Case-matching

German (schmeicheln assigns dative, loben assigns accusative; Ross 1969)

(47) Er will jemanden schmeicheln, aber sie wissen nicht, [*wer / he wants someone DAT flatter but they know not who.SOM

*wen / wen].

*who.SOM who.DAT

*He wants to flatter someone, but they don’t know who.

(48) Er will jemanden loben, aber sie wissen nicht, [*wer / he wants someone ACC praise but they know not who.SOM who.ACC

*wen].

who.DAT

*He wants to flatter someone, but they don’t know who.

Also in Greek, Finnish, Hungarian, Russian, Polish, Czech, Slovene, Hindi, Basque, Turkish

(49) English The police found someone’s car, but they wouldn’t tell us {whose / *who}.
Case:
(50) Er will jemanden schmeicheln,
he wants someone.DAT to flatter
aber sie wissen nicht, wom谁 who.DAT he flatter wants
‘He wants to flatter someone, but they don’t know who.’

Likewise in fragment answers:

German: (examples modeled on those in Hankamer 1979:394)
(51) Q: Wem folgt Hans?
who.DAT follows Hans
the.DAT teacher
b. A: Den Lehrer.
the.ACC teacher

(52) Q: Wen sucht Hans?
who.ACC seeks Hans
the.DAT teacher
b. A: Den Lehrer.
the.ACC teacher

Greek:
(53) Q: Pjós idhe tin Maria?
who.NOM saw the Maria
the Giannis.NOM
the Giannis.ACC

(54) Q: Pjón idhe i Maria?
who.ACC saw the Maria
the Giannis.NOM
b. A: Ton Gianni.
the Giannis.ACC

Korean: (from Morgan 1989)
(55) Q: Nu-ka ku cheok-ul sa-ass ni?
who-NOM this book-ACC bought
a. A: Yong-su-ka.
Yongsu-NOM
b. A: *Yongsu-nul.
Yongsu-ACC

(56) Q: Nuku-rul po-ass-ni?
who-ACC saw
Yongsu-NOM
Yongsu-ACC

English:
(57) Q: Whose car did you take?
who
a. A: John’s.

Hebrew: (from Ginzburg and Sag 2000:299)
(58) Q: Et mi shibax?
DEF.ACC who you.praised
a. A: Et Moti.
DEF.ACC Moti

Russian:
(59) Q: Kornu pomogla Anna?
who.DAT helped Anna
Ivan.DAT
Ivan.DAT / Ivan.ACC

Tagalog:
(60) Q: Ano ang binili ni Ferdinand?
what
a. A: Ang sapatos.
ang shoes
b. A: *Sapatos.

3.3 Paraphrasing

(61) English
a. Peter was talking with someone, but I don’t know (with) who.
b. Who was he talking with?

(62) Swedish
a. Peter har talat med någon; jag vet inte (med) vem.
Peter has talked with someone I know not with who
b. Vem har Peter talat med?

(63) Greek
a. I Anna milise me kapjion, alla dhe ksero *(me) pjon.
the Anna spoke with someone but not I know with who
b. * Pjon milise me?

(64) Russian
a. Anja govorila s kem-to, no ne znaju *(s) kem.
Anja spoke with someone, but not I know with who
b. * Kem ona govorila s?
Parallel facts are found in fragment answers:

(65) English
a. Who was Peter talking with?
   b. Mary.

(66) Swedish
a. Vem har Peter talat med?
   b. Mary.

(67) Norwegian
a. Hvem har Per snakket med?
   b. Mary.

(68) Danish
a. Hvem har Peter snakket med?
   b. Mary.

(69) Greek
a. Me pjon milise i Anna?
   b. Me ton Kosta.
   c. *Ton Kosta.
   with the Kostas

(70) German
a. Mit wem hat Anna gesprochen?
   b. Mit dem Hans.
   with the Hans

(71) Russian
a. S kem ona govorila?
   b. S Ivan.
   c. * Ivan.
   with whom she spoke

(72) Bulgarian
a. S koj e govorila Anna?
   b. S Ivan.
   c. * Ivan.
   with who aus spoken Anna

(73) Hebrew
a. Le-mi hixmeta? (Ginzburg and Sag 2000:299)
   b. Le-Moti.
   c. *Moti.
   to-who you flattered

Preposition-stranding:
(74) Q: Me pjon milise i Anna?
   with whom spoke the Anna?

   b. * Ton Kosta <milise t1>.
   with the Kostas she spoke

More on P-stranding: Chung 2005 points out that a preposition stranded inside an ellipsis site needs an overt correlate in the antecedent clause:

(75) a. Max was afraid *(of something), but I don't know what, <Max was afraid of t1>.
   b. Seems to require structural matching of elided material with antecedent structure.

3.4 Binding Theory: Principles C, B, A (Morgan 1973)

(76) Where is he staying?
   a. *In John’s apartment.
   b. *He, is staying in John’s apartment.

(77) Who did John try to shave?
   a. *Him,.
   b. *John, tried to shave him..

(78) Who does John like?
   a. Himself.
   b. John likes himself.

3.5 Scope, bound pronouns:

(79) A: How many diplomats did every translator greet?
   B: a. Three.
   b. Every translator greeted three (diplomats).

(80) A: Who does every Englishman, admire?
   B: a. His, mother.
   b. Every Englishman, admires his, mother.

3.6 Complementizer deletion (Morgan 1973):

(81) What does no-one believe?
   #(That) I’m taller than I really am.

(82) No-one believes (that) I’m taller than I really am.

(83) #(That) I’m taller than I really am, no-one believes.

(84) What are you ashamed of?
   *(That) I ignored you.

(85) *I’m ashamed of that I ignored you.

(86) That I ignored you, I’m ashamed of.
3.7 Polarity items  (Giannakidou 2000)


(88) a. Max didn’t read anything.  b. *Anything, Max didn’t read.

vs. Greek ‘emphatic’ polarity items:

(89) TIPOTA dh’ idha.

n-thing, emphatic not I saw

‘I didn’t see anything.’

(90) LEKSI dh’ ipe!

word not he said

‘He didn’t say a word’

(91) Q: Ti idhes?

what you saw

‘What did you see?’

A: TIPOTA.

n-thing, emphatic

‘Nothing.’

(92) Q: Ti egine? Ipe tipota oti tin nixia?

what happened he said anything all the night

‘What happened? Did he say anything all night?’

A: LEKSI.

word

‘Not a word’

3.8 Turkish bare objects vs. subjects  (Hankamer 1979:395)

(93) Q: Hasan ne yazyor? A: *(Bi) metiup. ‘What is Hasan writing?’ *(A) letter

(94) Q: Hayvanlarım en aptal ne-dir? A: Ayi. ‘Of the animals, the most stupid is what?’ ‘Bear’

3.9 C-selection effects and raising vs. control infinitivals

(95) A: What has John done?  (Morgan 1973)

B: Broken the vases.

(96) A: What is John doing?

B: Washing his car.

Raising vs. control (< Chomsky 1981:62)

(97) a. ‘It’s [to procrastinate] that people tend.

b. Q: How to people tend to behave?

A: ‘To procrastinate.

(98) a. It’s [to get a job in Europe] that she wants.

b. Q: What does she really want?

A: To get a job in Europe.

3.10 Predicate answers

(99) A: What did he do to the car?

B: Totaled *(it).

(100) A: What did she do with the spinach?

B: Washed *(it).

(101) A: What did he do for his sister?

B: Funded *(her).

(102) *He did [total(ed) it] to the car.

(103) *She did [wash(ed) it] with the spinach.

(104) *He did [fund(ed) her] for his sister.

4 Evidence against structure

4.1 Lack of locality effects in movement whose understood origin site is internal to the elliptis


(105) They want to hire someone who speaks a Balkan language, but I don’t remember which.

(106) She bought a big car, but I don’t know how big.

(107) Ben will get arrested if Abby talks to one of the teachers, but she couldn’t remember which.

(108) Brio wrote a more interesting novel than Pico did.

And some cases from Culicover & Jackendoff to appear, Stainton to appear:

(109) Did Susan say that she saw PAT Smith?  --No, KIM.

(110) Is that a Navy flight suit?  --No, Army.

(111) Is Sviatoslov pro-communist or anti-communist these days?  --Pro.

(112) A: John met a woman who speaks French.

B: And Bengali?  *[And Bengali, did John meet a woman who speaks French and?]

(113) but I don’t remember

\[
\begin{array}{c}
\text{CP} \\
\text{[or which]}. \\
\end{array}
\]
One solution: Elliptical repair effects (islands as a feature of intermediate traces, Merchant to appear; otherwise one-fell-swoop movement, Fox and Lamkin 2001; Fox and Pesetsky to appear)

(114) a. They want to hire someone who speaks a Balkan language, but I don’t remember which.
   b. ... CP
   \[10 \text{ which } \]
   \[
   \begin{array}{c}
   \text{C} \\
   \text{C} \\
   \text{TP} \\
   \text{TP} \\
   \text{they} \\
   \end{array}
   \]
   \( \text{\text{\textcolor{red}{\leftarrow TP-deletion eliminates all } \ast \text{-traces}} \text{\textcolor{red}{\rightarrow vP-deletion leaves } \ast \text{-traces}} \text{\textcolor{red}{\leftarrow vP-deletion leaves } \ast \text{-traces}} \)  

Absence of elliptical repair indicates additional structure:

(115) a. Did each candidate, agree on who will ask him, about affirmative action (at the debate)?
   b. *No, [about foreign policy], each candidate agreed on who will ask him \( t_1 \).

(116) [\text{or foreign policy}]
   \[
   \begin{array}{c}
   \text{F} \\
   \text{CP} \\
   \text{TP} \\
   \end{array}
   \]
   \( \text{\textcolor{red}{\leftarrow TP-deletion leaves } \ast \text{-traces}} \)  

Cf. Clitic-left dislocation structures: (here, in Greek)

(117) a. Ton Gianni, pote ton idha?
   the Giannis when him you saw
   "When did you see Giannis?"
   b. Dhen ksero ton Gianni pote ton idha.
   not I.know the Giannis when him I.saw
   'I don’t know when I saw Giannis.'

A cross-linguistic comparative puzzle (with thanks to A. Giannakidou):

\section*{clausal vs. phrasal comparatives}

(118) a. Peribosoteri anthropon men sto kratos pu kivernai o Putin more people live in the state that governs the Putin
   (apoti o Bush. than.CLUAL the Bush
   (apo ton Bush. than.PHRASAL the Bush.ACC

   'More people live in the country that Putin governs than live in the country that Bush governs.'

(119) *More people live in the country that Putin governs than Bush. (=than live in the country that Bush governs)

(120) [Giannis’s father and his cousin each have a restaurant;)
   Tu Gianni tu arei perissoteret a estiario tu exi o paterus tu
   the gianni him pleases more the restaurant that has the father his
   (apoti o ksaderio tu / *apo ton ksaderio tu),
   than.CL the cousin his than.PH the cousin his
   'Giannis likes the restaurant that his father has more than he likes the restaurant his
cousin has.'

(121) *Giannis likes the restaurant that his father has more than his cousin. (=than the one his
cousin has)

(122) O Nikolos idhe perisuteteres tenies pu tu sistise i Nana
   the NIKOS saw more movies that him recommended the Nana
   (apoti i Elena/*apo tin Elena).
   than.CL the Elena than.PH the Elena
   'The number of movies that NIKOS saw that Nana recommended to him is greater than
   the number of movies he saw that Elena recommended to him.' (or, 'NIKOS saw more
   of the movies Nana recommended to him than he saw of the ones Elena
   recommended to him.)

(123) *NIKOS saw more movies that Nana recommended to him than Elena.

(124) More people, in Florida in 2000 thought they, voted for Gore than Bush. (=than thought
they, voted for Bush)

\begin{itemize}
\item Phrasal comparatives involve movement and ellipsis after all? (Lechner 2004)
\item Movement of the remnant in phrasal comparatives leaves a \( \tau \) outside the ellipsis site
(structurally equivalent to fragment answers), but movement of the remnant in
clausal comparatives does not (structurally equivalent to sluicing)?
\end{itemize}

(125) ... ap' \[10 \text{ of}, \] \[10 \text{ o Bush, } \]
   <13, t, \ast [t, menen sto kratos pu kivernai t, ]]>

(126) ... apo \[10 \text{ ton Bush, } \]
   <13, Op, 10 t, \ast [t, menen sto kratos pu kivernai t, ]]>
   than the Bush the Bush live in.the state that governs
4.2 ‘Vehicle change’ effects

(127) Who did you tell t about Bill’s raise?
   a. Him.
   b. *I told him, about Bill’s raise.
(128) The police arrested Alex, but he didn’t know who the police arrested him.

- Solution: Define the equivalence relation between the elided material E and its antecedent A in terms of semantic equivalence, not syntactic (e.g., LF-phrase structural) identity

4.3 Lack of case connectivity

Korean (Morgan 1989)

(129) Q: Nu-ka ku check-ul sa-ass-ni?
   A: Yong-su.
   “Who bought this book?”

(130) Q: Nuku-nil po-ass-ni?
   A: Yong-su.
   “Who did you see?”

(Sadock 2004 reports similar data for younger speakers of Greenlandic Eskimo.)


(131) Yong-su <estta>.
(132) Yong-su was

4.4 Distribution of aggressively non-D-linked modifiers (‘on earth’, ‘the hell’, etc.)
(Merchant 2001, Ginzburg and Sag 2000)

(133) Someone parked on my lawn: I wish I knew
   a. who!
   b. *who the hell!
   c. who the hell (did that/parked on my lawn)!

A continuing mystery:

(134) Bill was shouting to someone: but God only knows
   a. who to.
   b. who the hell to.
   c. who the hell he was shouting to.

- Generalization seems to be that ‘the hell’ etc. need to be followed by a pitch rise.

5 Evidence against ‘deletion’

The sloppy ellipsis puzzle and why it’s a problem

5.1 The PUZZLE (Hardt 1999, Schwarz 2000)

(134) I’ll help you if you want me to. I’ll kiss you even if you don’t <.
   a. < = <want me to help you> STRICT
   b. <= = <want me to kiss you> SLOPPY

(135) I’ll help you if you [VP want me to <[VP help you]>.
   I’ll kiss you even if you don’t [VP want me to kiss you]>

Generally:

(136) An elided VP, embedded inside a VP, where VP, is the antecedent to a VP, can get a ‘sloppy’ interpretation inside VP.

Ellipsis in the antecedent VP is necessary; there’s no ‘sloppy deaccenting puzzle’:

(137) I’ll help you if you want me to help you. I’ll kiss you even if you don’t <=.
   a. < <= <want me to help you> STRICT
   b. <= <= <want me to kiss you> SLOPPY

5.2 The VARIABLE SOLUTION

Hardt and Schwarz: Ellipsis is a variable in the semantics and absent or an empty proform in the syntax

(138) I’ll help you if you [VP want me to e2]. I’ll kiss you even if you don’t e2.
   a. e2 = λx.help(you)(x)
   b. [[VP]] = λy.want(e2)(me)(y)
   c. e2 = [[VP]] = λy.want(e2)(me)(y) SLOPPY

For Hardt, e2 in (138c) can be assigned a new value via center shift;
For Schwarz, the antecedent VPs help you and kiss you scope out of their clauses, providing distinct binders for the variable

d. Hardt: λy.want(e2)(me)(y), where e2 = λx.kiss(you)(x)
   ⇒ λy.want(kiss(you)(me))(y) SLOPPY

Schwarz: LF: [kiss you], I’ll help you even if you don’t <want me to e2>
Why there’s no sloppy reading for the deaccented VP in (137):

(139) I’ll help you if you  [VP1 want me to help you]. I’ll kiss you even if you don’t e.

\[ e \in [\text{VP}] \implies \lambda y. \text{want}(\text{help}(\text{you})(\text{my})(\text{you})) \]

How the variable solution works: By analyzing the elided VP2 as a variable over VP-meanings. Both Hardt and Schwarz take it that the easiest way to get this to work in the semantics is if in the syntax, the missing VP is simply an unpronounced pronominal.

5.3 Tomioka 2003’s PROBLEMS for the variable solution:
1. No weak crossover effects, 2. Sloppy ellipsis in NP-ellipsis and sluicing (where movement of the antecedent is much less plausible), 3. Island-violating VP movement

5.4 A deletion solution

Merchant 2001, 2004: PF deletion is triggered by an E feature on the licensing head (generally T for VP-ellipsis); call the ‘deleted’ constituent ‘E-marked’ (shown by e). (Cf. Elbourne 2004 for a similar view)

(140) I’ll help you if you  [VP1 want me TP ]

\[ \text{to} [E] \quad \text{help you} \]

(141) I’ll kiss you even if you TP

\[ \text{don’t} [E] \quad \text{help you} \]

(142) A constituent α can be elided if α is e-given.

(143) e-givenness: An expression X is e-given iff X has a salient antecedent A and, modulo existential type-shifting, (i) A entails E-clo(A), and (ii) A entails E-clo(α).

(144) The E-closure of α (E-clo(α)) is the result of replacing all E-marked subelements of α with variables of the appropriate type

VP1 and VP2 are E-marked, hence by (143) are replaced by a bound variable, P, allowing VP1 to satisfy (144):

(145) E-clo(\text{VP1}) = E-clo(\text{VP2}) = \exists x. \exists P. x \text{ wants me to P}

No sloppy reading in (137) because there is no E-feature in the antecedent:

(146) E-clo(\text{VP1}) = \exists x. x \text{ wants me to help you}
E-clo(\text{VP2}) = \exists x. \exists P. x \text{ wants me to P}
E-clo(\text{VP1}) \neq E-clo(\text{VP2}), hence VP cannot be elided

Conclusions

- There is silent structure in at least some ellipses
- The structure is silent because it is unpronounced (via ‘deletion’)
- A structure-based ‘deletion’ account of ellipsis is consistent with the sloppy ellipsis puzzle: the ellipsis site behaves like a variable in the semantics, but need not in the syntax

References

Elbourne, Paul. 2004. Ellipsis and focus. Ms., NYU.


