One size doesn’t fit all:
What fragments can tell us about anaphoricity, and why reductionist monolithic theories fail

Jason Merchant
University of Chicago

Workshop on Fragments, Saarland University, Saarbrücken
October 2016
To resolve an ellipsis E:

1. If there is a linguistic antecedent A available for the ellipsis, and if A has the right form,
   a. then use A (e-givenness plus some syntactic identity)
   b. else if a copular or cleft structure C can be inferred, use C
   c. else adjust A to A’ and use A’ (accommodation)

2. Else (if there no linguistic antecedent)
   a. if a script is available, use its modes
   b. else, use slot-filling (type-shifting)

3. Maximize the conventional aspects of a context, where ‘conventional’ includes linguistic antecedents.

Cf. Kennedy 2007’s “Interpretive Economy”: Maximize the contribution of the conventional meanings of the elements of a sentence to the computation of its truth conditions.
A new algorithmic resolution approach to ellipsis

Stochastic ranked decision tree for resolving a putative ellipsis E:

Is there a linguistic antecedent A?

- yes
- Does A = E?
  - yes
    - Use A
  - no
  - Can a copular or cleft stx C be used?
    - yes
      - Use C
    - no
      - Adjust A to A' and use A'

- no
  - Is a script S available?
    - yes
      - Use S
    - no
      - Use type-shifting
= What’s in our syntax?
Syntactic ontology: A battle for the soul of syntax

= What’s in our syntax?

Null hypothesis: Surfacism:

1. Words and their parts
2. Phrase markers (groups of words)
3. Constrained relations among these (a system to regulate the combinatorics)
Syntactic ontology: A battle for the soul of syntax

What’s in our syntax?

Null hypothesis: Surfacism:

1. Words and their parts
2. Phrase markers (groups of words)
3. Constrained relations among these (a system to regulate the combinatorics)

Non-null hypothesis: ‘Abstract’ syntax

- Phonologically inactive (‘abstract’) versions of 1 and 2

What’s the evidence for the latter, and how secure are these conclusions?
The structure question

(4) In elliptical constructions, is there syntactic structure that is unpronounced?
Strings of words that appear not to be sentences can have sentential meaning:

(5) Bill should collect butterflies. Jill should, too.

(6) Bill should collect butterflies. Jill should collect butterflies, too.

How can *Jill should* mean *Jill should collect butterflies?*
(7) What is the relationship between the understood material in ellipsis and its antecedent?
The identity question

(8) What is the relationship between the understood material in ellipsis and its antecedent?

The antecedent VP is identical to the elliptical structure.
(9) What is the relationship between the understood material in ellipsis and its antecedent?

1. The antecedent VP is identical to the elliptical structure.
2. The ‘missing VP’ is ‘recovered’ or ‘resolved’ under identity (or under ‘parallelism’) to an (actual or inferred) antecedent.
The identity question

(10) What is the relationship between the understood material in ellipsis and its antecedent?

1. The antecedent VP is identical to the elliptical structure.
2. The ‘missing VP’ is ‘recovered’ or ‘resolved’ under identity (or under ‘parallelism’) to an (actual or inferred) antecedent
3. \( \text{VP}_A = \text{VP}_E \) or \( \llbracket \text{VP}_A \rrbracket = \llbracket \text{VP}_E \rrbracket \) or \( \text{VP}_A^d = \text{VP}_E^d \) or \( \mu(\text{VP}_E) \subset \mu(\text{VP}_A) \), or some combination or refinement?
Question: Is identity *perfect*?
Question: Is identity *perfect*?
Answer: Apparently not....
# 40 years of mixed results

<table>
<thead>
<tr>
<th><strong>Imperfect matches</strong></th>
<th><strong>Perfect matches</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>voice in English VP-ellipsis</td>
<td>voice in sluicing</td>
</tr>
<tr>
<td>ellipsis in code-switching?</td>
<td>ellipsis in code-switching</td>
</tr>
<tr>
<td>tense morphology in VPE</td>
<td>Warner’s facts about <em>be</em></td>
</tr>
<tr>
<td>gerunds=nonfinites etc.</td>
<td>scope facts, Dahl puzzles</td>
</tr>
<tr>
<td>copular/cleft/spading analyses (cuál &lt;es con la que habló&gt;, wou da &lt;was da Jef gezien eit&gt;)</td>
<td>structural facts (<em>Abby hates visiting relatives, and Ben does too: 2- not 4-ways ambig</em>)</td>
</tr>
<tr>
<td>Malagasy voice switches</td>
<td></td>
</tr>
<tr>
<td>category switches (robber vs thief, refusal &gt; refuse)</td>
<td></td>
</tr>
<tr>
<td>implicit arguments in sluicing</td>
<td></td>
</tr>
<tr>
<td>polarity <em>no/any/some</em> etc.</td>
<td></td>
</tr>
<tr>
<td>‘vehicle change’</td>
<td></td>
</tr>
<tr>
<td>missing expressives</td>
<td></td>
</tr>
<tr>
<td>island repair, extractions</td>
<td></td>
</tr>
<tr>
<td><em>ϕ</em>-feature agrmt (&amp; sloppy id) (Juan es alto, y Maria también)</td>
<td></td>
</tr>
<tr>
<td>disjunctive sluices</td>
<td></td>
</tr>
</tbody>
</table>
The upshot

If the identity (or ‘recoverability’) condition on ellipsis includes at least some syntactic identity component (in addition to or instead of a semantic component), then
If the identity (or ‘recoverability’) condition on ellipsis includes at least some syntactic identity component (in addition to or instead of a semantic component), then

abstract syntactic structures exist
Hypothesis A: Deletion
Full sentence structure, but part of the sentence is unpronounced.

The missing words are not really missing.
If the deletion/copying analysis is correct, elliptical material has abstract structure, but no pronunciation.
Hypothesis B: WYSIWYG (or better, WYHIWYG) structure
The missing words are really missing.

\[
S \\
NP \quad \text{Aux} \\
\quad \text{Jill} \quad \text{should}
\]

Context fills in the missing parts of the meaning.
<table>
<thead>
<tr>
<th>Is identity syntactic or semantic?</th>
<th>Is there syntax in the ellipsis site?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntactic</td>
<td>Sag 1976, Williams 1977,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fiengo &amp; May 1994, Chung et al. 1994, Fox 2000, etc.</td>
<td></td>
<td>N/A (incoherent)</td>
</tr>
<tr>
<td>Both/hybrid</td>
<td>Kehler 2002, Chung 2013, Merchant 2013, etc.</td>
<td>N/A (incoherent)</td>
<td></td>
</tr>
</tbody>
</table>

**Table:** Some previous research on the two ellipsis questions
In search of structure: Domains of evidence

(11) a. Lower origin effects
b. Locality effects
c. Distribution of complementizers
d. Distribution of infinitivals
e. Distribution of predicate answers
f. Agreement
g. Case (also under code-switching)
h. Voice mismatches
i. Preposition-stranding
j. Syntactic priming
k. Binding theoretic effects (Ott 2014, Ott and de Vries 2015)
l. Intermediate reconstruction effects in sluicing (Agüero-Bautista 2007)
m. ‘spading’ (evidence for an underlying cleft, as van Craenenbroeck 2010 argues)
n. the licensing of parasitic gaps inside ellipses (Yoshida et al. 2015)
But *De Amicitia* I could make a stab at, and could have at any time in the last thirty-four years. (Wallace Stegner, 1987, *Crossing to Safety*)

Dúirt mé go gceannóinn é agus cheannaigh. ‘I said that I would buy it and I did.’ (McCloskey 1991:273)
(14) **VP-ellipsis:**

a. We need to know which films Anna refused to review, and which ones she agreed to.

b. We need to know which films Anna agreed to review, and which ones she refused to.

(15)

(16) **Null Complement Anaphora:**

We asked Anna to review these five films, and she agreed. (sc. to review them)

(17) *We need to know which films Anna refused to review, and which ones she agreed.*
(18)  a. *I read every book you introduced me to a guy who did.
   b. *Abby wants to hire someone who speaks a Balkan language, but I don’t remember which (Balkan language) Ben does.  
   c. *Abby knows five people who have dogs, but cats, she doesn’t know five people who have.
   d. *Which film did you refuse to see because Roger was so revolted when he did after renting?
Locality effects: Fragment answers

(19) a. Will each candidate talk about taxes?
   b. No, about foreign policy.
   c. No, each candidate will talk about foreign policy.

(20) a. Did each candidate$_2$ agree on who will ask her$_2$ about taxes (at tonight’s debate)?
   b. *No, about foreign policy.
   c. No, each candidate$_2$ agreed on who will ask her$_2$ about foreign policy (at tonight’s debate).
(21) a. The man stole the car after midnight, but not the diamonds.
b. *They caught the man who’d stolen the car after searching for him, but not the diamonds.

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

(23) *SHE discussed my question which LETTERS we wrote and HE which BOOKS. (Winkler 2005:61 (22b))
(24) She knows a guy who has *five dogs*, but I don’t know how many *cats*.

a.  $= \langle \text{he [=}\text{the guy who has the five dogs}] \text{ has } t \rangle$

b.  $\neq \langle \text{she knows a guy who has } t \rangle$
Complementizer deletion

(25) What does no-one believe?
   # (That) I’m taller than I really am.
   a. No-one believes (that) I’m taller than I really am.
   b. *(That) I’m taller than I really am, no-one believes.

(26) What are you ashamed of?
   *(That) I ignored you.
   a. *I’m ashamed of that I ignored you.
   b. That I ignored you, I’m ashamed of.
Infinitivals: Raising vs. control

(27)  
  a. *It’s [to get asylum in Europe] that the refugees tend.
  b. Q: What do the refugees tend to do?
     A: *To get asylum in Europe.

(28)  
  a. It’s [to get asylum in Europe] that the refugees want.
  b. Q: What do the refugees want to do?
     A: To get asylum in Europe.

This is expected if the control CP can be fronted, but the raising TP cannot be; see Landau 2013.
(29)  

a. A: What did he do for his sister?  
   B: Funded *(her).

b. He did [fund(ed) her] for his sister.
Subject-verb agreement is a syntactic phenomenon; agreement is not (always) about meaning:

(30) Beth’s wedding was in Bond Chapel, and Rachel’s wedding was in Rockefeller Chapel.

(31) Beth’s nuptials were in Bond Chapel, and Rachel’s nuptials were in Rockefeller Chapel.
Subject-verb agreement is a syntactic phenomenon; agreement is not (always) about meaning:

(34) Beth’s wedding was in Bond Chapel, and Rachel’s wedding was in Rockefeller Chapel.

(35) Beth’s nuptials were in Bond Chapel, and Rachel’s nuptials were in Rockefeller Chapel.

(36) *Beth’s wedding was in Bond Chapel, and Rachel’s wedding were in Rockefeller Chapel.

(37) *Beth’s nuptials were in Bond Chapel, and Rachel’s nuptials was in Rockefeller Chapel.
Nominal ellipsis preserves the syntactic properties of agreement:

(38) Beth’s wedding was in Bond Chapel, and Rachel’s was in Rockefeller Chapel.

(39) Beth’s nuptials were in Bond Chapel, and Rachel’s were in Rockefeller Chapel.
Nominal ellipsis preserves the syntactic properties of agreement:

(42) Beth’s wedding was in Bond Chapel, and Rachel’s was in Rockefeller Chapel.

(43) Beth’s nuptials were in Bond Chapel, and Rachel’s were in Rockefeller Chapel.

(44) *Beth’s wedding was in Bond Chapel, and Rachel’s were in Rockefeller Chapel.

(45) *Beth’s nuptials were in Bond Chapel, and Rachel’s was in Rockefeller Chapel.
Agreement is sensitive to abstract structure (the unpronounced head N, \(=\text{nuptials}\)):
Case in German:

(46) Anke hat jemandem gedroht, aber ich weiss nicht, {wem / *wen} sie gedroht hat.
     ‘Anke threatened someone, but I don’t know who she threatened.’

(47) Anke hat jemanden gelobt, aber ich weiss nicht, {*wem / wen} sie gelobt hat.
     ‘Anke praised someone, but I don’t know who she praised.’
Sluicing in German:

(48) Anke hat jemandem dat gedroht, aber ich weiss nicht, Anke has someone.dat threatened but I know not {wem / *wen}.
    who.dat who.acc
    ‘Anke threatened someone, but I don’t know who.’

(49) Anke hat jemanden acc gelobt, aber ich weiss nicht, {*wem / wan}.
    who.acc
    ‘Anke praised someone, but I don’t know who.’
The case of the object is determined by the deleted verb:

\[ \text{wem}: \text{ dative} \]

\[ \text{wen}: \text{ accusative} \]
In WYSIWYG analysis, the structure is the same in both cases:

\[
S' \\
| \\
NP \\
| \\
wem/\text{wen}?
\]

- The verb is not part of the structure, so there's no obvious way to assign the right case to the NP.
In WYSIWYG analysis, the structure is the same in both cases:

```
S'
  | NP
  | wem/wen?
```

- The verb is not part of the structure, so there’s no obvious way to assign the right case to the NP.

- A non-obvious way: Introduce a special constructional feature for sluicing, put in on the NP₁, call it ‘SAL(ient)-UTT(erance)’ and let it range over correlate NPs and their features, then impose a requirement for the sluicing-construction that there be a correlate NP₂ and that the feature value of \( \text{CASE(SAL-UTT(NP₂))=CASE(NP₁)} \) (Ginzburg and Sag 2000)
Important point: Other anaphoric devices (e.g., pronouns) do not agree in case with their antecedents:

(50) Anke hat jemandem$_1$ gedroht, aber ich weiss nicht, ob Anke has someone.dat threatened but I know not whether er$_1$ reagierte hat.
he.nom reacted has
‘Anke threatened someone, but I don’t know whether he reacted.’

(51) Anke hat jemanden$_1$ gelobt, aber ich weiss nicht, ob Anke has someone.acc praised but I know not whether er$_1$ reagierte hat.
he.nom reacted has
‘Anke praised someone, but I don’t know whether he reacted.’
Code-switching: switching from one language system to another, typically within a single sentence or utterance:

(52) Juan amenazó a alguien, aber ich weiss nicht, wem
Juan threatened someone.acc but I know not who.dat
Juan gedroht hat.
he threatened has

(53) Juan amenazó a alguien, aber ich weiss nicht, wen
Juan threatened someone.acc but I know not who.acc
Juan amenazó.
Juan threatened

‘Juan threatened someone, but I don’t know who Juan threatened.’
Gonzalez and Ramos (2012): Tested speakers’ ratings for sluiced, Spanish, and German continuations:

Test sentences:

(54) Juan amenazó a alguien, aber ich weiss nicht, wem.
Juan threatened someone.acc but I know not who.dat

(55) Juan amenazó a alguien, aber ich weiss nicht, wen.
Juan threatened someone.acc but I know not who.acc
‘Juan threatened someone, but I don’t know who.’
Table 1. Verbs that assign accusative in Spanish (ratings on a 1-5 Likert scale, M=mean, SD=standard deviation)

<table>
<thead>
<tr>
<th>NOM</th>
<th>NOM M</th>
<th>NOM SD</th>
<th>ACC M</th>
<th>ACC SD</th>
<th>DAT M</th>
<th>DAT SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sluiced</td>
<td>1.38</td>
<td>0.58</td>
<td>4.00</td>
<td>1.29</td>
<td>2.08</td>
<td>1.21</td>
</tr>
<tr>
<td>Spanish</td>
<td>1.21</td>
<td>0.66</td>
<td>4.00</td>
<td>1.25</td>
<td>2.17</td>
<td>1.43</td>
</tr>
<tr>
<td>German</td>
<td>1.13</td>
<td>0.34</td>
<td>1.71</td>
<td>0.81</td>
<td>5.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
(56)  *Juan amenazó a alguien, aber ich weiss nicht, wem
Juan threatened someone. acc but I know not who. dat
Juan gedroht hat.
Juan threatened has

(57)  Juan amenazó a alguien, aber ich weiss nicht, wen
Juan threatened someone. acc but I know not who. acc
Juan amenazó.
Juan threatened
‘Juan threatened someone, but I don’t know who.’
(58) **Hypothesis:** All cross-language ellipses involve code-switching at the ellipsis site (into the language of the antecedent).
(60) **Hypothesis:** All cross-language ellipses involve code-switching at the ellipsis site (into the language of the antecedent).

(61) An XP $\epsilon$ may be elided only if $\epsilon$ is $\epsilon'$-GIVEN, where

a. an expression $\epsilon$ is $\epsilon'$-GIVEN iff $\epsilon$ has a salient antecedent $A$ such that $A$ and $E$ have the same meaning representation (modulo focus) and the same syntactic representation
(62) Greek-English bilinguals
   a. *Mother: *Pinás?
      hunger.2s.pres
      ‘Are you hungry?’
   b. Daughter: Yes, I do.

(63) *Yes, I do *pináo.
      hunger.1s.pres
Ineffable phrases and Late Insertion

(64)  

\[
\begin{array}{c}
\text{TP} \\
\downarrow \\
\text{I} \\
\downarrow \\
do \\
\downarrow \\
\text{VoiceP} \\
\downarrow \\
\text{Voice} \\
\downarrow \\
E \\
\downarrow \\
v \\
\downarrow \\
\text{VP} \\
\downarrow \\
\sqrt{\text{pin}}
\end{array}
\]

(65)  

a. $\sqrt{\text{pin}} \leftrightarrow \text{pin} / _T [+\text{past}]$

b. No elsewhere Vocabulary Item such as: $\sqrt{\text{pin}} \leftrightarrow \text{pin}$
(66) [A son attempts to turn on the air-conditioning one morning]

a. **Mother:** To prói ðe xriázete  
   *the morning* neg *need*.nonact.imperf.pres.3sg  
   klimatizmó.  
   *air-conditioning*.acc  
   ‘In the morning there’s no need for air-conditioning.’

b. **Son:** Yes, it does!

c. **Mother:**  Êxi ðrosúla.  
   *have*.act.imperf.pres.3sg *coolness*.dim  
   ‘It’s a little cool.’

d. **Son:** No, it doesn’t.
A: Éxi ðrosúla.
    have.nonpast.imperf.act.3s coolness.dim
    ‘It’s a little cool.’

N: No, it doesn’t.

  a. *No, it doesn’t be a little cool.
  b. #No, it doesn’t have a little coolness.
  c. *No, there doesn’t be a little coolness.
  d. #No, there isn’t a little coolness.
  e. *No, it doesn’t éxi ðrosúla.
      have.pres.3sg coolness.dim
  f. #No, there isn’t.
  g. #No, it isn’t. (viz. kind of cool)
  h. No, it isn’t kind of cool.
(68) A: Éx-i ḏrosúla.
    have.act.imperf-nonpast.3s coolness.dim
    ‘It’s a little cool.’

N: No, it doesn’t.
(70) A: Éx-i ðrosúla.
    have.act.imperf-nonpast.3s coolness.dim
    ‘It’s a little cool.’

N: No, it doesn’t.

(71) a. *It’s a little cool today, but it didn’t yesterday.

b. *It’ll be a little cool today, but it didn’t yesterday.
In general, English verbs in $VP_A \sim VP_E$ pairs (both regular and irregular) don’t require morphological identity.

(72)  

a. Emily played beautifully at the recital and her sister will, too.  
   \texttt{<play beautifully at the recital>}
  
  b. Emily took a break from her studies, and her sister will, too.  
   \texttt{<take a break from her studies>}
  
  c. Emily sang the song \{because|the way\} she wanted to.  \texttt{<sing the song>}
  
  d. Emily underwent the procedure because she wanted to.  \texttt{<undergo the procedure>}.
(73) a. Maria will be at the party, and her sister will, too. \(<\text{be at the recital}>\>

b. *Maria was at the party and her sister will, too.

c. Maria was at the party, and her sister will be, too.

d. Maria was at the party, and her sister was, too.
I’m America, and so can you!

(74) In cases of ellipsis of a VP headed by an auxiliary verb, the auxiliary must have the exact same morphological form as its antecedent. (Warner 1985:63)

(75) Forms of be are inserted into the derivation fully inflected; other verbs get their inflection later (at PF). Ellipsis requires full syntactic matching, ruling out mismatches of be (Lasnik 1995)
You and I are a lot alike ... Just a common bird and a common dog. Of course, if we had wanted to be great, we could have been great ... But we didn’t need to be great. (Potsdam 1997)


He might be rude to the guests; I know he has been rude to the guests in the past! (Thoms 2015:181)

John is being examined but Jack really should be examined also.

Forms of auxiliary verbs in English must be identical under ellipsis to their antecedents if those antecedents are finite.
*I’m America, and so can you!

(78) Potsdam’s hypothesis: “A trace of verb movement cannot serve as part of a VPE antecedent” (Potsdam 1997:362)

(79) Thoms 2015:187: “A variable cannot provide an antecedent for ellipsis of a non-variable”. (Supposed to follow from ‘Parallelism’)}
‘Variables’ can antecede nonvariables in ellipsis

(80) $[CP \ Nu \ gaat [lP \ zij \ t_{nu} \ t_{gaat}]],$ maar ik weet niet waarom.  
now goes she but I know not why  
‘She’s going now, but I don’t know why.’ (Merchant 2001:21)  
a. $\neq * \ldots \ waarom \ zij.$  
b. $= \ldots \ waarom \ zij \ nu \ gaat.$

(81) a. The FBI knows which truck$_4$ they rented $t_4,$ but figuring out from where they rented it$_4$ has proven difficult. (Merchant 2001:206)  
b. This is Washington, where everyone keeps track of who$_1$ $t_1$ crossed whom$_2$ and when they$_1$ crossed them$_2$. (Merchant 2001:202)

(82) These facts should be carefully studied, but it’s clear you haven’t carefully studied these facts. (Merchant 2013)
(83)  a. I Maria tha agapai to spiti, and her the Maria fut love.imperf.nonpast.3s the house sister will, too.

‘Maria will love the house…’

b. I Maria agapai to spiti, and her sister the Maria love.imperf.nonpast.3s the house will, too.

‘Maria loves the house…’

c. I Maria agapuse to spiti, and her sister will, the Maria love.imperf.past.3s the house too.

‘Maria loved the house…’
(84) a. I Maria tha ine sto spiti, and her the Maria fut be.imperf.nonpast.3s in.the house sister will (be), too.

‘Maria will be at home...’

b. I Maria ine sto spiti, and her sister the Maria be.imperf.nonpast.3s in.the house will *(be), too.

‘Maria is at home...’

c. I Maria itan sto spiti, and her sister will the Maria be.imperf.past.3s in.the house *(be), too.

‘Maria was at home...’
*Ich bin Amerika, and so can you!

(85)

Box = possible target for ellipsis
*Ich bin Amerika, and so can you!*

(86)
*Ich bin Amerika, and so can you!*

(87)

```
T
  └── tha
      └── ine
          └── vP
              └── PredP
                  └── Pred
                      └── PP
```

```
T
  └── will
      └── vP
          └── PredP
              └── Pred
                  └── PP
```
Voice mismatches in VP-ellipsis

(Sag 1976, Hardt 1993, Kim, Kobele & Runner 2011, Merchant 2013)

(88) *Paul denied the charge, but the charge wasn’t by his friends.

(89) *John had observed many of the enemy’s soldiers, but hadn’t been by them.

---

Voice mismatches in VP-ellipsis

(Sag 1976, Hardt 1993, Kim, Kobele & Runner 2011, Merchant 2013)

(93) *Paul denied the charge, but the charge wasn’t by his friends.
(94) *John had observed many of the enemy’s soldiers, but hadn’t been by them.
(95) It engaged them in a way that I did not think they could be that early in the morning.¹
(96) “No-one can hypnotize me.”
“Usually the people who are certain they can’t be are the easiest to do it to.”²
(97) This problem was to have been looked into, but obviously nobody did.

(98) Sluicing:
   a. *Joe was murdered, but we don’t know who.
   b. *Someone murdered Joe, but we don’t know by whom.

(99) Nonelliptical controls:
   a. Joe was murdered, but we don’t know who murdered him.
   b. Someone murdered Joe, but we don’t know by whom he was murdered.
This problem was to have been looked into, but obviously nobody did.

This problem₁ was to have ...

```
(100)  This problem was to have been looked into, but obviously nobody did.

This problem₁ was to have ...
```
(101) This problem was to have been looked into, but obviously nobody did.
A structural difference between VP-ellipsis and sluicing: amount of missing structure

(102) *Someone murdered Joe, but we don’t know by whom.

\[
\text{TP}_A
\]

\[
\text{someone}
\]

\[
\text{T}
\]

\[
\text{VoiceP}
\]

\[
\text{Voice[Active]}
\]

\[
\text{VP}
\]

\[
\text{murder}
\]

\[
\text{Joe}
\]
A structural difference between VP-ellipsis and sluicing: amount of missing structure

(103) *Someone murdered Joe, but we don't know by whom.
Figure: The basic geometry of licit vs. illicit voice mismatches
(104)  a. Ferte mu (enan) kafe (parakalo)! (Greek)
   bring.imp me a coffee.acc please
   ‘Bring me (a) coffee (please)!’

   b. Dajte mne vody (požalujsta)! (Russian)
   give.imp me water.gen please
   ‘Give me (some) water (please)!’

(105)  a. (Enan) kafe (parakalo)! (Greek)
   a coffee.acc please
   ‘(A) coffee (please)!’

   b. Vody (požalujsta)! (Russian)
   water.gen please
   ‘(Some) water (please)!’
(106) Short directives: Left! Higher! Scalpel!
(107) Exclamations: Wonderful! Nonsense! Fate! For Pete’s sake!
(109) Utterance idioms: Up yours. ‘Gewitter im Mai—April vorbei’ (lit. ‘storms in May?April over’; from Klein 1985)
(111) telegrams, headlines, weather reports, recipes, diary reports, and instructions
Three kinds of bare fragments

(112) Properties applied to a manifest object

a. Sanjay and Silvia are loading up a van. Silvia is looking for a missing table leg. Sanjay says, ‘On the stoop.’

b. Jack holds up a letter and says, ‘From Spain!’

c. A car dealer points at a car and says, ‘Driven exactly 10,000km.’

d. On a bottle of cold medicine: ‘Recommended for ages 6 and older.’

e. She looked up at Nok Lek, who watched the forest nervously. “I told you, one of Anthony Carroll’s best men.” (Daniel Mason, The piano tuner, Vintage: New York, 2002, p. 159)
Three kinds of bare fragments

(113) Individuals as arguments of a manifest property

a. A woman is coming through a door, and a linguist turns to her friend and identifies the new arrival by saying, ‘Barbara Partee.’

b. After some weeks one summer of unusually cold weather in Manitoba (a part of Canada where the summers are usually warm), Alice, looking at the sky, says to Bruce (who has just returned from a trip to Spain), ‘Nova Scotia.’

c. Edgar didn’t have time to ask what this was, for at that instant, from behind the stage rose a plaintive wail. He caught his breath. It was the same tune he had heard that night when the steamer had stopped on the river. He had forgotten it until now. “The ngo-gyin, the song of mourning,” said Nash-Burnham at his side. (Daniel Mason, *The piano tuner*, Vintage: New York, 2002, p. 140)
Three kinds of bare fragments

(114) Quantifiers as arguments of a manifest property

a. I’m at a linguistics meeting, talking with Andy. There are some empty seats around a table. I point at one and say, ‘An editor of *NLLT*.’ (modified from p. 209)

b. At a bar: ‘Three pints of lager.’

c. He continued to walk, the children following at a distance. ... At the side of the road, a pair of men [who are Shan, and know no English, –JM] sat... One of the men pointed to the group of children and said something, and Edgar answered, “Yes, quite a lot of children,” and they both laughed although neither understood a word the other had said. (Daniel Mason, *The piano tuner*, Vintage: New York, 2002, p. 235)
(115) Definition [Typed λ-terms]. Let \( \text{VAR}_a \) be a countably infinite set of variables of type \( a \) and \( \text{CON}_a \) a collection of constants of type \( a \). The set \( \text{TERM}_a \) of \( \lambda \)-terms of type \( a \) is defined by mutual recursion as the smallest set such that the following holds:

i. \( \text{VAR}_a \subseteq \text{TERM}_a \)
ii. \( \text{CON}_a \subseteq \text{TERM}_a \)
iii. \( (\alpha(\beta)) \in \text{TERM}_a \) if \( \alpha \in \text{TERM}_{a,b} \) and \( \beta \in \text{TERM}_b \),
iv. \( \lambda x.\alpha \in \text{TERM}_{a,b} \), if \( x \in \text{VAR}_a \) and \( \alpha \in \text{TERM}_b \).

(116) a. \( \lambda x_2[on\text{-}the\text{-}stoop(x_2)] \)
b. \( \lambda P_{et}[P\text{(partee)}] \)
c. \( \lambda Q_{et}[\exists z[\text{quite\text{-}a\text{-}lot}^*_C(z) \land children(z) \land Q(z)]] \)
Type-shifting rule (Free variable introduction):
Let $\alpha(\beta) \in \text{TERM}_a$ if $\alpha \in \text{TERM}_{<a,b>}$ and $\beta \in \text{VAR}_b$

(118)  
\begin{enumerate}
\item $\lambda x_2[\text{on.the.stoop}(x_2)]$
\item $\lambda x_2[\text{on.the.stoop}(x_2)](x_3) \rightsquigarrow$
\item $\text{on.the.stoop}(x_3)$
\end{enumerate}

(119)  
\begin{enumerate}
\item $\lambda P_{et}[P(\text{partee})]$
\item $\lambda P_{et}[P(\text{partee})](Q_{et}) \rightsquigarrow$
\item $Q(\text{partee})$
\end{enumerate}

(120)  
\begin{enumerate}
\item $\exists z[\text{quite.a.lot}^*_C(z) \land \text{children}(z) \land P(z)]$
\end{enumerate}
Taking stock: The properties of sentences cannot be modeled solely by treating them as strings of words. We need ‘abstract’ structures:

- Unpronounced nodes (and entire syntactic structures), with their usual properties, can explain some of the important properties of ellipsis (there is no succor in surfacism)
Conclusions

Taking stock: The properties of sentences cannot be modeled solely by treating them as strings of words. We need ‘abstract’ structures:

- Unpronounced nodes (and entire syntactic structures), with their usual properties, can explain some of the important properties of ellipsis (there is no succor in surfacism)
- Identity is at least partially sensitive to the abstract syntactic form of the antecedent: most elliptical identity may be perfect after all
Taking stock: The properties of sentences cannot be modeled solely by treating them as strings of words. We need ‘abstract’ structures:

- Unpronounced nodes (and entire syntactic structures), with their usual properties, can explain some of the important properties of ellipsis (there is no succor in surfacism)
- Identity is at least partially sensitive to the abstract syntactic form of the antecedent: most elliptical identity may be perfect after all
- We need an algorithmic approach to ellipsis resolution: some fragments are just fragments, not elliptical or sentential
Taking stock: The properties of sentences cannot be modeled solely by treating them as strings of words. We need ‘abstract’ structures:

- Unpronounced nodes (and entire syntactic structures), with their usual properties, can explain some of the important properties of ellipsis (there is no succor in surfacism)
- Identity is at least partially sensitive to the abstract syntactic form of the antecedent: most elliptical identity may be perfect after all
- We need an algorithmic approach to ellipsis resolution: some fragments are just fragments, not elliptical or sentential

Danke sehr!


McCloskey, James. 1991. Clause structure, ellipsis and proper government


Voice mismatch problems are ellipsis-specific

1. Kehler 2000: the distinction between the attested licit voice mismatches in VP-ellipsis and those that have been judged unacceptable by linguists is due to discourse conditions:

2. If A and E are in a ‘resemblance’ relation, then syntactic identity must hold; otherwise, only semantic identity

3. Prediction: The effect should be the same no matter the size of the ellipsis site

1. Kertz 2013: all degradation is due to general, non-ellipsis-specific, constraints on information structure; there are no syntactic identity conditions at all

2. Prediction: The effect should be the same in both elliptical and non-elliptical conditions
Voice (mis)matches, big vs. small ellipses, and discourse relations (resemblance vs. cause/effect):

SanPietro, Xiang, and Merchant 2012
80 16-condition items, 40 fillers, Latin Square, N = 51, 1-7 scale, MTurk

(121) Jean was trying to sell her car. I know that someone bought it,

Nonelliptical conditions

a. and Lisa knows who bought it. (big, resemb., match)
b. and Lisa knows who it was bought by. (big, resemb., mismatch)
c. because she told me who bought it. (big, cause/eff., match)
d. because she told me who it was bought by. (big, cause/eff., mismatch)
e. and Lisa also knows that someone bought it. (small, resemb., match)
f. and Lisa also knows that it was bought. (small, resemb., mismatch)
g. because she told me that someone bought it. (small, cause/eff., match)
h. because she told me that it was bought. (small, cause/eff., mismatch)
Voice (mis)matches, big vs. small ellipses, and discourse relations (resemblance vs. cause/effect):

SanPietro, Xiang, and Merchant 2012
80 16-condition items, 40 fillers, Latin Square, N = 51, 1-7 scale, MTurk

(122) Jean was trying to sell her car. I know that someone bought it,

Elliptical conditions

a. and Lisa knows who. (big, resemb., match)
b. and Lisa knows by who. (big, resemb., mismatch)
c. because she told me who. (big, cause/eff., match)
d. because she told me by who. (big, cause/eff., mismatch)
e. and Lisa also knows that someone did. (small, resemb., match)
f. and Lisa also knows that it was. (small, resemb., mismatch)
g. because she told me that someone did. (small, cause/eff., match)
h. because she told me that it was. (small, cause/eff., mismatch)


McCloskey, James. 1991. Clause structure, ellipsis and proper government...


