

One size doesn't fit all:

What fragments can tell us about anaphoricity, and why reductionist monolithic theories fail

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Workshop on Fragments, Saarland University, Saarbrücken
October 2016

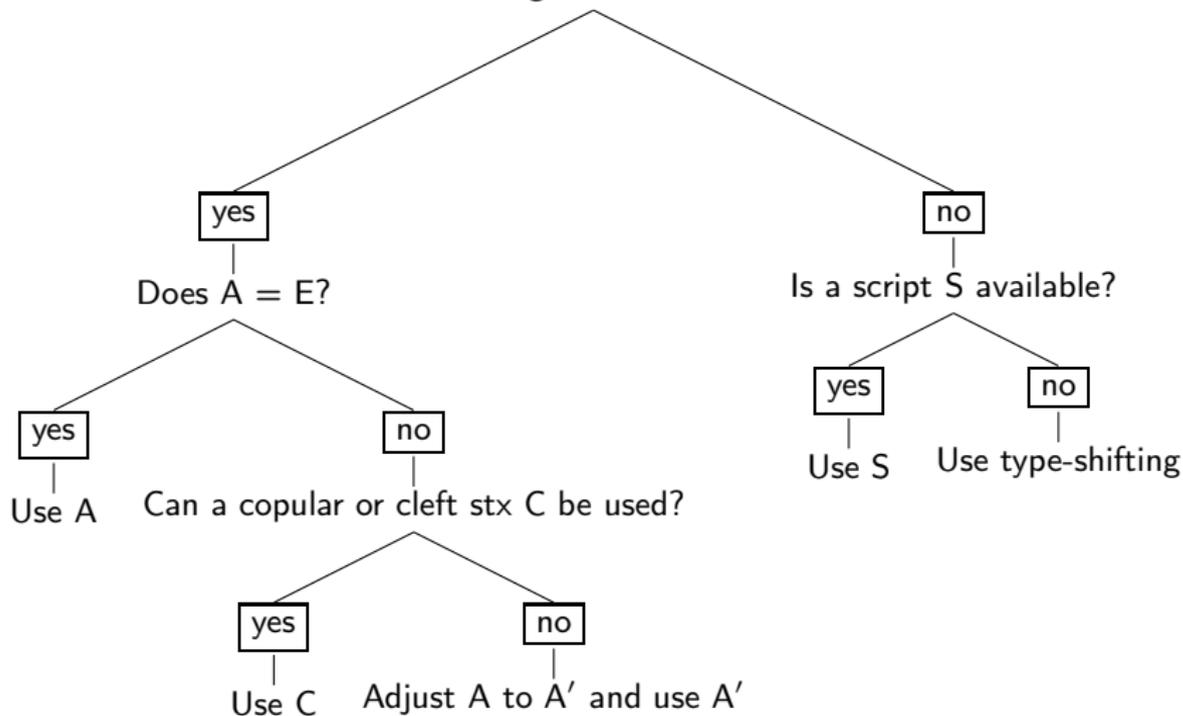
A new algorithmic resolution approach to ellipsis

To resolve an ellipsis E:

- (1)
 - a. If there is a linguistic antecedent A available for the ellipsis, and if A has the right form,
 - i. then use A (e-givenness plus some syntactic identity)
 - ii. else if a copular or cleft structure C can be inferred, use C
 - iii. else adjust A to A' and use A' (accommodation)
 - b. Else (if there no linguistic antecedent)
 - i. if a script is available, use its modes
 - ii. else, use slot-filling (type-shifting)
- (2) Maximize the conventional aspects of a context, where 'conventional' includes linguistic antecedents.
- (3) 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?



Syntactic ontology: A battle for the soul of syntax

= What's in our syntax?

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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?

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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?

The battlefield: Ellipsis

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*?

The **identity** question

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

The **identity** question

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- 1 The antecedent VP is identical to the elliptical structure.

The **identity** question

- (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 $VP_A = VP_E$ or $\llbracket VP_A \rrbracket = \llbracket VP_E \rrbracket$ or $VP_A^d = VP_E^d$ or $\mu(VP_E) \subset \mu(VP_A)$, or some combination or refinement?

The battlefield: Ellipsis

Question: Is identity *perfect*?

The battlefield: Ellipsis

Question: Is identity *perfect*?

Answer: Apparently not....

40 years of mixed results

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

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

The upshot

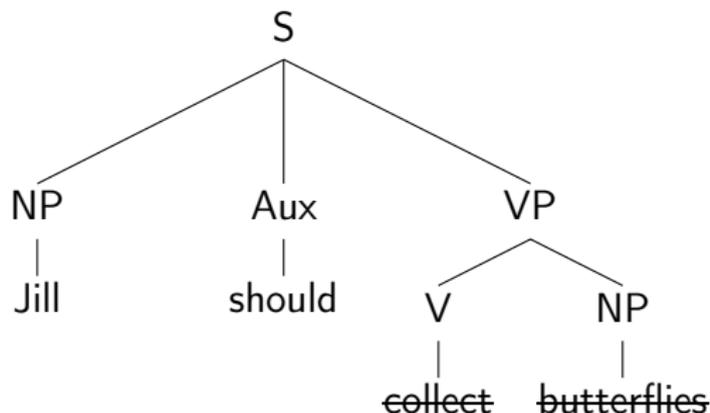
If the identity (or 'recoverability') condition on ellipsis includes at least some syntactic identity component (in addition to or instead of a semantic component), then

abstract syntactic structures exist

Some hypotheses

Hypothesis A: Deletion

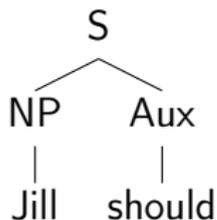
Full sentence structure, but part of the sentence is unpronounced.



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.



Context fills in the missing parts of the meaning.

		Is there syntax in the ellipsis site?	
		Yes	No
Is identity syntactic or semantic?	Syntactic	Sag 1976, Williams 1977, Fiengo & May 1994, Chung et al. 1995, Fox 2000, etc.	N/A (incoherent)
	Semantic	Sag and Hankamer 1984, Merchant 2001, van Craenenbroeck 2010, Aelbrecht 2010, etc.	Keenan 1971, Hardt 1993, Dalrymple et al. 1991, Ginzburg & Sag 2000, Culicover & Jackendoff 2005, etc.
	Both/hybrid	Kehler 2002, Chung 2013, Merchant 2013, etc.	N/A (incoherent)

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)

- (12) 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*))
- (13) Dúirt mé go gceannóinn é agus cheannaigh.
said I that buy. Condit. Is it and bought
'I said that I would buy it and I did.' (McCloskey 1991:273)

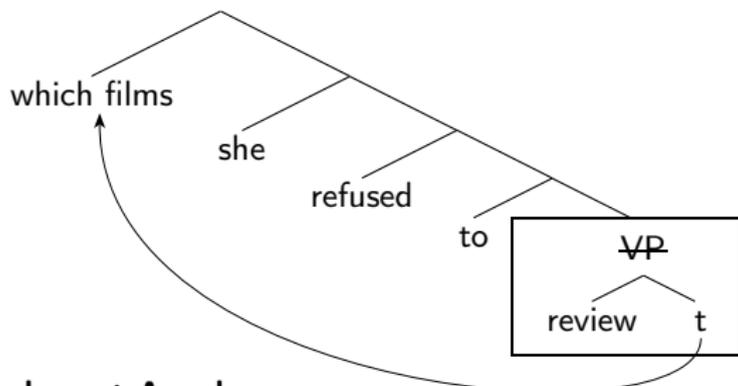
Lower origin effects

(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.
<want to hire someone who speaks *t* >
 - 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 candidate₂ agree on who will ask her₂ *about taxes* (at tonight's debate)?
 - b. *No, *about foreign policy*.
 - c. No, each candidate₂ agreed on who will ask her₂ *about foreign policy* (at tonight's debate).

Locality effects: Bare argument ellipsis/stripping and gapping

- (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))

Locality effects: Contrast sluicing

- (24) She knows a guy who has *five dogs*, but I don't know how many *cats*.
- a. = <he [=the guy who has the five dogs] has *t*>
 - b. ≠ <she knows a guy who has *t*]>

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.

Agreement

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.

Agreement

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.

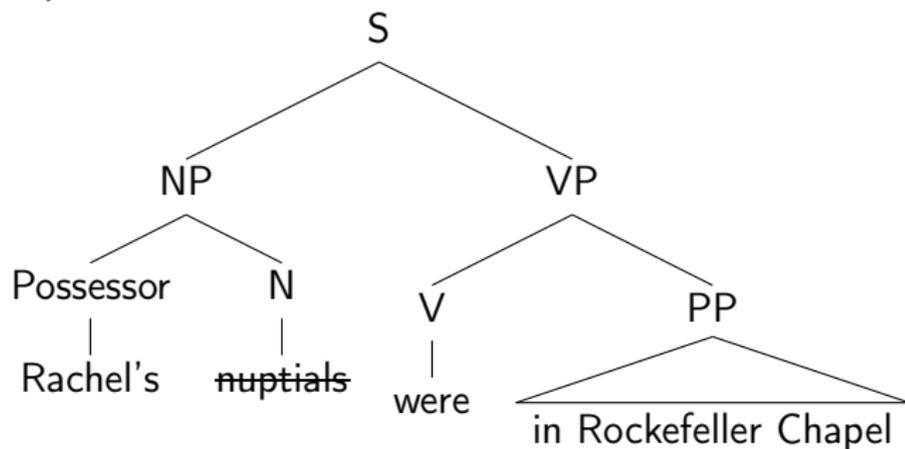
Nominal ellipsis preserves the syntactic properties of agreement:

- (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, =*nuptials*):



Case in German:

- (46) Anke hat jemandem gedroht, aber ich weiss nicht,
Anke has someone.dat threatened but I know not
{wem / *wen} sie gedroht hat.
who.dat who.acc she threatened has
'Anke threatened someone, but I don't know who she threatened.'
- (47) Anke hat jemanden gelobt, aber ich weiss nicht, {*wem /
Anke has someone.acc praised but I know not who.dat
wen} sie gelobt hat.
who.acc she praised has
'Anke praised someone, but I don't know who she praised.'

Sluicing in German:

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

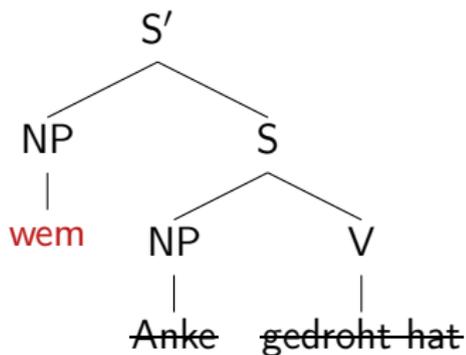
'Anke threatened someone, but I don't know who.'

- (49) Anke hat **jemanden** gelobt, aber ich weiss nicht, {***wem** /
Anke has someone.acc praised but I know not who.dat
wen}.
who.acc

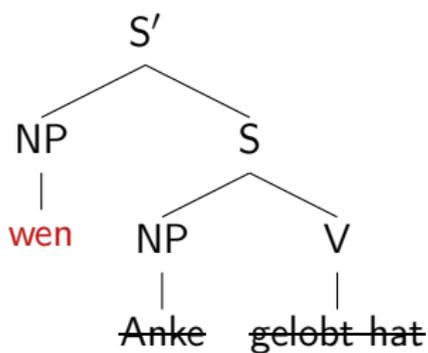
'Anke praised someone, but I don't know who.'

The case of the object is determined by the deleted verb:

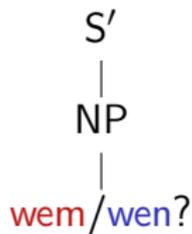
wem: dative



wen: accusative

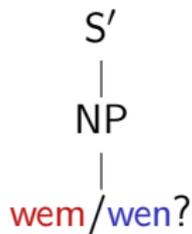


In WYSIWYG analysis, the structure is the same in both cases:



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

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- 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 NP_1 , 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 NP_2 and that the feature value of $CASE(SAL-UTT(NP_2))=CASE(NP_1)$ (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
er₁ reagiert 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
er₁ reagiert hat.
he.nom reacted has
'Anke praised someone, but I don't know whether he reacted.'

Code-switching

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.'

Results:

Table 1. Verbs that assign accusative in Spanish (ratings on a 1-5 Likert scale, M=mean, SD=standard deviation)

	NOM		ACC		DAT	
	M	SD	M	SD	M	SD
Sluiced	1.38	0.58	4.00	1.29	2.08	1.21
Spanish	1.21	0.66	4.00	1.25	2.17	1.43
German	1.13	0.34	1.71	0.81	5.00	0.00

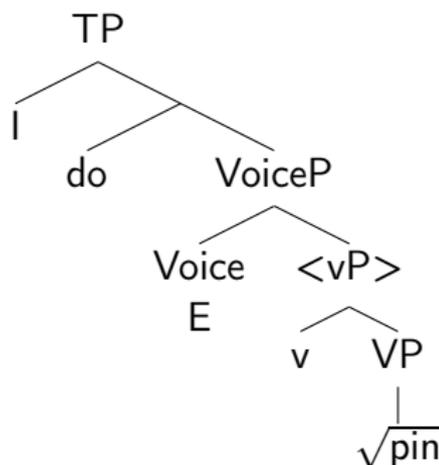
- (56) *Juan amenazó a alguien, aber ich weiss nicht, wem
Juan threatened someone.acc but I know not who.dat
~~Juan gedroht hat.~~
Juan threatened has
- (57) Juan amenazó a alguien, aber ich weiss nicht, wen
Juan threatened someone.acc but I know not who.acc
~~Juan amenazó.~~
Juan threatened
'Juan threatened 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 ϵ may be elided only if ϵ is e' -GIVEN, where
- an expression ϵ is e' -GIVEN iff ϵ 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

(64)



(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:* Éxi ðrosúla.
have.act.imperf.pres.3sg coolness.dim
'It's a little cool.'
- d. *Son:* No, it doesn't.

Root identity, not morphological identity

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.
<play beautifully at the recital>
 - b. Emily took a break from her studies, and her sister will, too.
<take a break from her studies>
 - c. Emily sang the song {because|the way} she wanted to. <sing the song>
 - d. Emily underwent the procedure because she wanted to.
<undergo the procedure>.

*I'm America, and so can you!

- (73)
- a. Maria will be at the party, and her sister will, too. <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)

*I'm America, and so can you!

- (76) a. [Snoopy talking to Woodstock, Peanuts cartoon] 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)
- b. "Don't be coy," says the Tenured One, but I'm not ~~being coy~~. David Mitchell, *The Bone Clocks*, Random House: NY, 2014, p. 390
- c. He might be rude to the guests; I know he has ~~been rude to the guests~~ in the past! (Thoms 2015:181)
- d. John is being examined but Jack really should ~~be examined~~ also.
- (77) 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 [_{IP} 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)
- \neq *... waarom ~~zij~~.
 - = ... waarom ~~zij nu gaat~~.
- (81) a. The FBI knows which truck₄ they rented t_4 , but figuring out from where ~~they rented it₄~~ has proven difficult. (Merchant 2001:206)
- b. This is Washington, where everyone keeps track of who₁ t_1 crossed whom₂ and when ~~they₁ crossed them₂~~. (Merchant 2001:202)
- (82) These facts should be carefully studied, but it's clear you haven't ~~carefully studied these facts~~. (Merchant 2013)

Warner/Lasnik/Potsdam facts

- (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...’

*Ich bin Amerika, and so can you!

- (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.

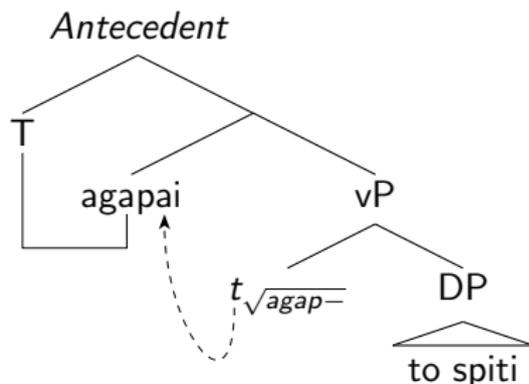
‘Maria is at home...’

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

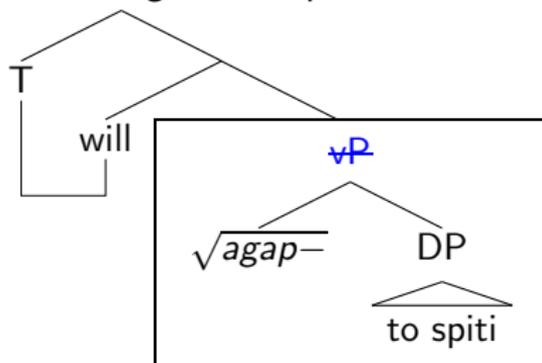
‘Maria was at home...’

*Ich bin Amerika, and so can you!

(85)

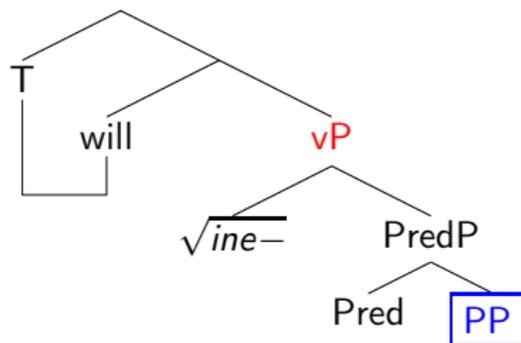
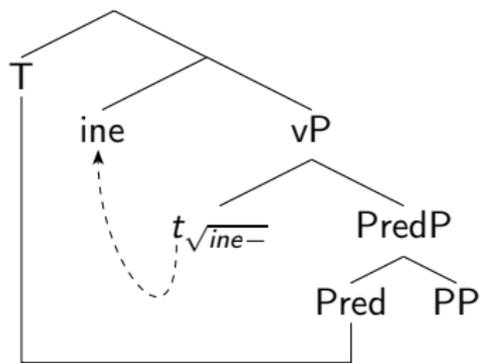


Box=possible target for ellipsis



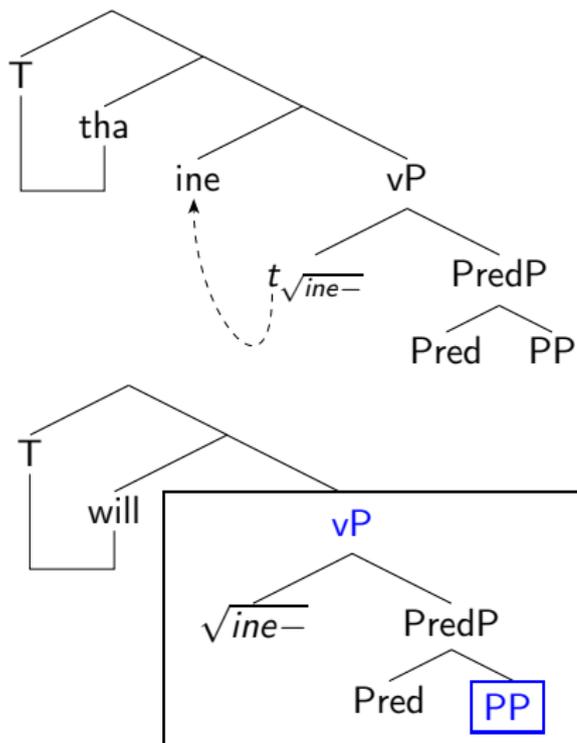
*Ich bin Amerika, and so can you!

(86)



*Ich bin Amerika, and so can you!

(87)



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.

¹Barbara Hagerty, "A pulpit for the masses", National Public Radio, February 7, 2012.

²David Baldacci, *Simple genius* (2007), Grand Central: New York, p. 300. 

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.

¹Barbara Hagerty, "A pulpit for the masses", National Public Radio, February 7, 2012.

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Voice mismatches in sluicing

(98) Sluicing:

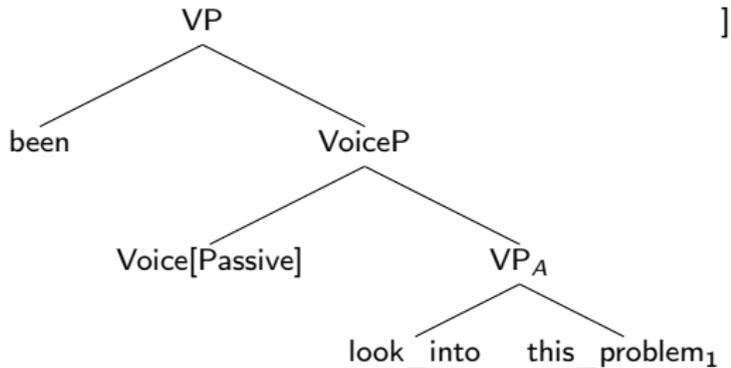
- a. *Joe was murdered, but we don't know who.
- b. *Someone murdered Joe, but we don't know by whom.

(99) Nonelliptical controls:

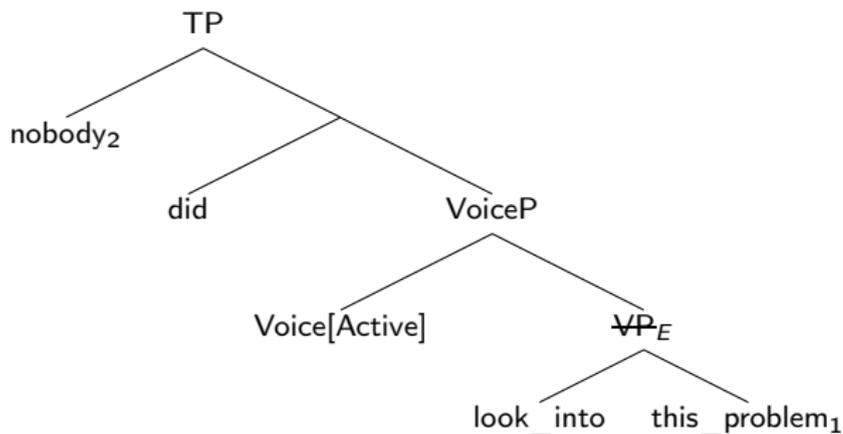
- a. Joe was murdered, but we don't know who murdered him.
- b. Someone murdered Joe, but we don't know by whom he was murdered.

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

This problem₁ was to have ...

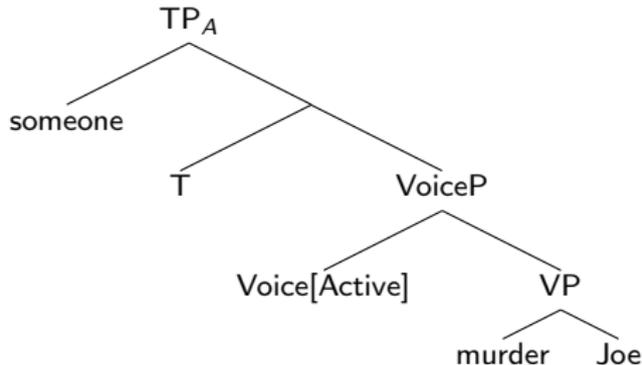


(101) This problem was to have been looked into, but obviously nobody did.



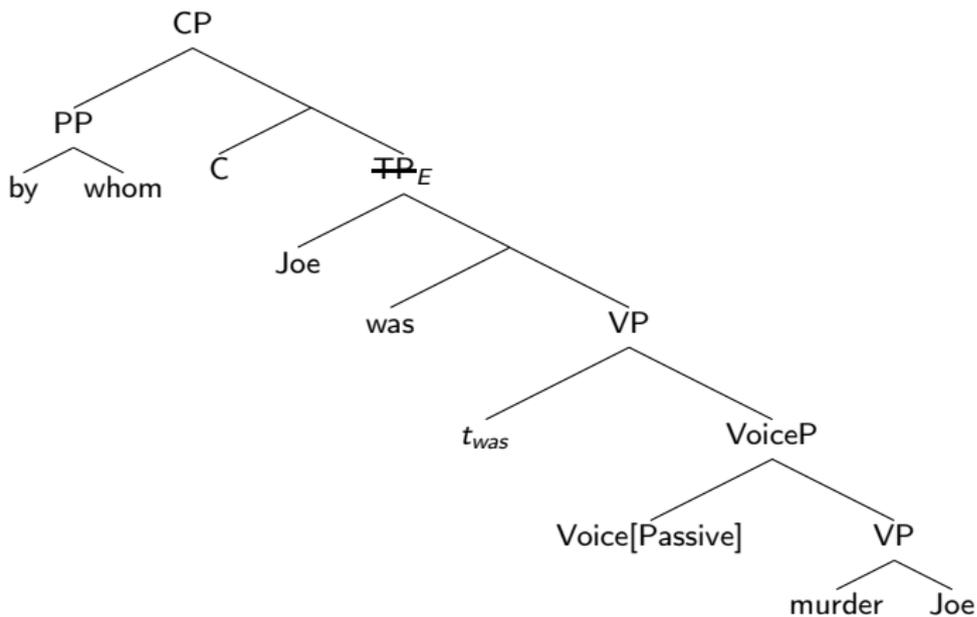
- ① A structural difference between VP-ellipsis and sluicing: amount of missing structure

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(103) *Someone murdered Joe, but we don't know by whom.



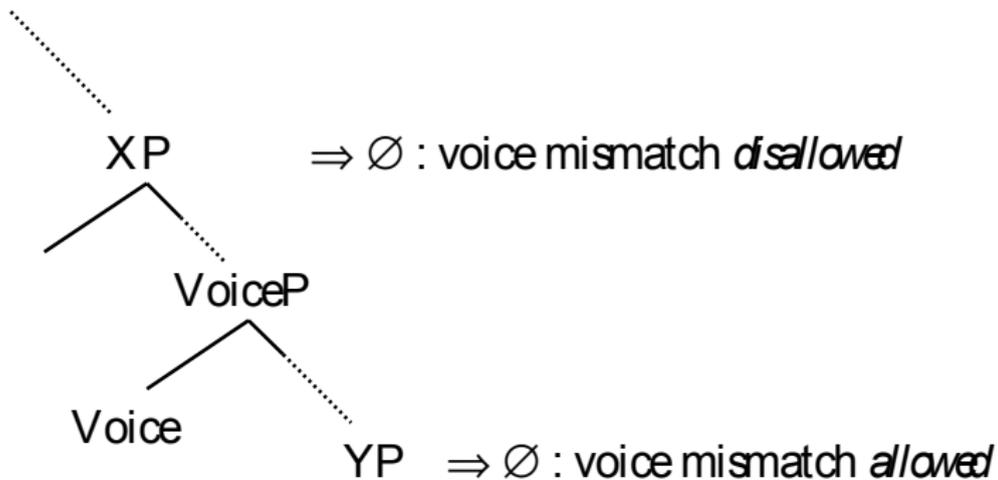


Figure: The basic geometry of licit vs. illicit voice mismatches

Scripts, special registers, domain-specific constructions, etc.

- (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)!'

Scripts, special registers, domain-specific constructions, etc.

- (106) Short directives: Left! Higher! Scalpel!
- (107) Exclamations: Wonderful! Nonsense! Fate! For Pete?s sake!
- (108) Greetings: Hello. Good-bye. Roger. Over. Out.
- (109) Utterance idioms: Up yours. 'Gewitter im Mai— April vorbei' (lit. 'storms in May ? April over'; from Klein 1985)
- (110) Labels/titles: Campbell Soup. Starbucks. And now: the first act of the night: The Rolling Stones! To kill a mockingbird. Der Zauberberg. The dancer from the dance. The last report on the miracles at Little No Horse. Thief! Thief! Fire!
- (111) telegrams, headlines, weather reports, recipes, diary reports, and instructions

Three kinds of bare fragments

- (112) Properties applied to a manifest object
- Sanjay and Silvia are loading up a van. Silvia is looking for a missing table leg. Sanjay says, 'On the stoop.'
 - Jack holds up a letter and says, 'From Spain!'
 - A car dealer points at a car and says, 'Driven exactly 10,000km.'
 - On a bottle of cold medicine: 'Recommended for ages 6 and older.'
 - 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 woman is coming through a door, and a linguist turns to her friend and identifies the new arrival by saying, 'Barbara Partee.'
 - 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.'
 - 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 VAR_a be a countably infinite set of variables of type a and CON_a a collection of *constants* of type a . The set TERM_a of λ -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 $\alpha \in \text{TERM}_{\langle a,b \rangle}$ and $\beta \in \text{TERM}_b$,
- iv. $\lambda x.\alpha \in \text{TERM}_{\langle a,b \rangle}$, if $x \in \text{VAR}_a$ and $\alpha \in \text{TERM}_b$.

- (116)
- a. $\lambda x_2[\text{on.the.stoop}(x_2)]$
 - b. $\lambda P_{et}[P(\text{partee})]$
 - c. $\lambda Q_{et}[\exists z[\text{quite.a.lot}_C^*(z) \wedge \text{children}(z) \wedge Q(z)]]$

- (117) Type-shifting rule (Free variable introduction):
 Let $(\alpha(\beta)) \in \text{TERM}_a$ if $\alpha \in \text{TERM}_{\langle a,b \rangle}$ and $\beta \in \text{VAR}_b$
- (118) a. $\lambda x_2[\text{on.the.stoop}(x_2)]$
 b. $\lambda x_2[\text{on.the.stoop}(x_2)](x_3) \rightsquigarrow$
 c. $\text{on.the.stoop}(x_3)$
- (119) a. $\lambda P_{et}[P(\text{partee})]$
 b. $\lambda P_{et}[P(\text{partee})](Q_{et}) \rightsquigarrow$
 c. $Q(\text{partee})$
- (120) a. $\exists z[\text{quite.a.lot}_C^*(z) \wedge \text{children}(z) \wedge P(z)]$

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)

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Danke sehr!

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Yoshida, Masaya, Tim Hunter, and Michael Frazier. 2015. Parasitic gaps licensed by elided syntactic structure. *Natural Language and Linguistic Theory* 33:1439–1471.

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)

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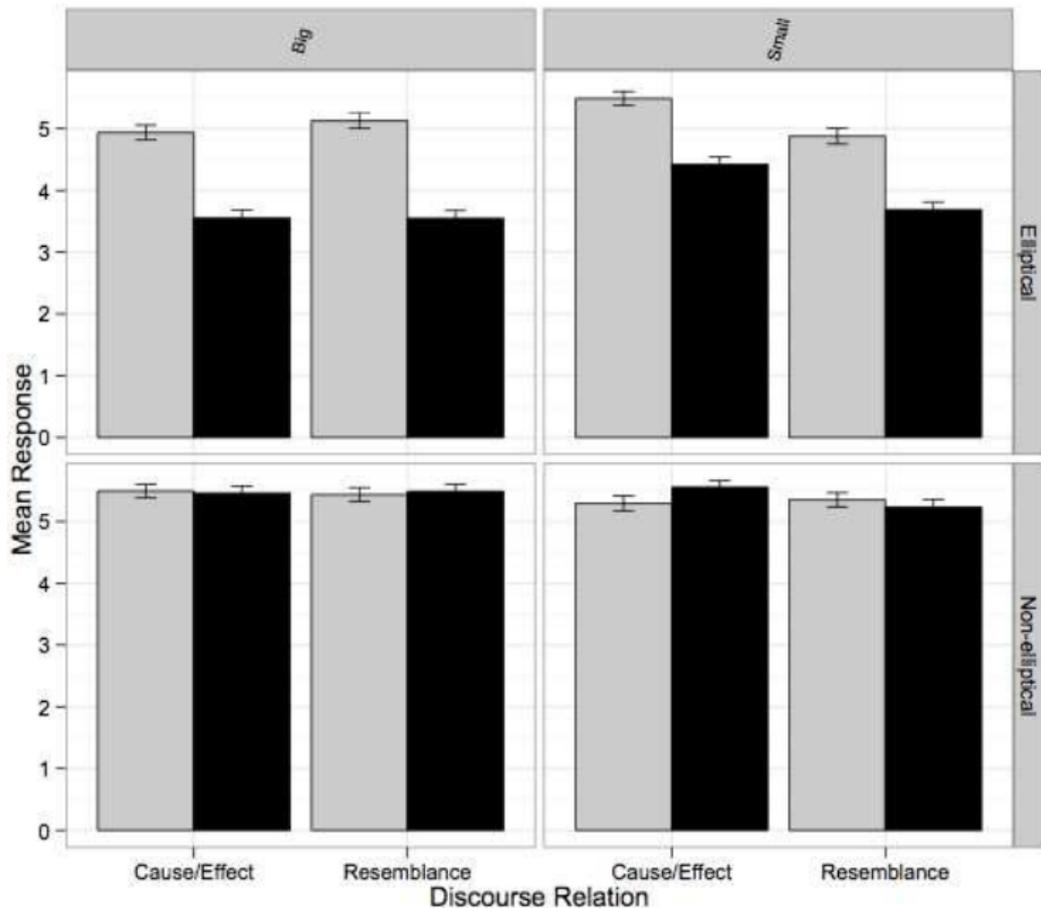
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Elliptical conditions

- | | |
|--|-------------------------------|
| 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) |

match mismatch



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