

# The Dissociability of Recoverability and Identity in Double Ellipsis

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## 0 Introduction

### 0.1 Ellipsis

- <Ellipsis> (1):

- (1) a. John bought a book, and Mary did too <buy a book>. *VP ellipsis*  
b. John bought something, but I don't know what <he bought  $t_{\text{what}}$ >. *sluicing / TP ellipsis*  
c. John bought one book, while Mary bought four <books>. *NP ellipsis*

- Ellipsis might seem to radically undermine form-meaning mapping – missing form, understood meaning.
- But meaning is recovered from spoken form, subject to identity (Hankamer 1971, Sag 1976, Williams 1977, Sag & Hankamer 1984, Dalrymple et al. 1991, Fiengo & May 1994).

### 0.2 Recoverability

- Fiengo & Lasnik (1972):

*us, 1101, KNECHT AND WHISTON, NEW YORK.*  
Ryle, G. (1963) *The Concept of Mind*, Penguin Books, Harmondsworth.

ON NONRECOVERABLE  
DELETION IN SYNTAX  
*Robert Fiengo,*  
*MIT*  
*Howard Lasnik,*  
*MIT*

BEWARE  
*Tanet Dean Fodor.*

In “On the Nature of Syntactic Irregularity” (Lakoff 1965, henceforth ONSI) G. Lakoff remarks that the verb *beware*

### 0.3 Identity

- Further to recoverability, ellipsis requires identity (though cf. 1).
- Example: sluicing requires identity in voice (Merchant 2013).

- The matches in (2) are grammatical; active-active in (a), passive-passive in (b):
- (2) a. Someone saved Alex, but we don't know who  $\langle t_{\text{who}} \text{ saved Alex} \rangle$ .  
 b. Alex was saved, but we don't know by whom  $\langle \text{Alex was saved} \rangle$ .
- Identity holds in (2), as in (3):
- (3) a. [Someone saved Alex] = [ $\langle t_{\text{who}} \text{ saved Alex} \rangle$ ]  
 b. [Alex was saved] = [ $\langle \text{Alex was saved} \rangle$ ]
- But the mismatches in (4) are ungrammatical; from active to passive in (a), passive to active in (b):
- (4) a. \* Someone saved Alex, but we don't know by whom  $\langle \text{Alex was saved} \rangle$ .  
 b. \* Alex was saved, but we don't know who  $\langle t_{\text{who}} \text{ saved Alex} \rangle$ .
- Identity fails in (4), as in (5):
- (5) a. [Someone saved Alex]  $\neq$  [ $\langle \text{Alex was saved} \rangle$ ]  
 b. [Alex was saved]  $\neq$  [ $\langle t_{\text{who}} \text{ saved Alex} \rangle$ ]

#### 0.4 Dissociation

- Insofar as active and passive are truth-conditionally equivalent, we might think that recoverability is satisfied just as much in (4) as in (2).
- The further requirement for identity – as met in (2) but failed in (4) – is already dissociated from recoverability in the sense of being additional.
- But can recoverability and identity be dissociated more radically?
- Must ellipsis be identical with the same material from which it is recoverable?
- Cf. e.g. Craenenbroeck & Merchant (2013: 710):

“... the question of recoverability: To what extent and in what way is the abstract elliptical structure identical to the overt syntax of the ellipsis antecedent?”

#### 0.5 Double ellipsis

- Today: recoverability ( $\uparrow$ ) and identity (=) are radically dissociable in cases of double ellipsis.
- Survey cases where ellipsis is bad on its own (6)...

(6) Spoken material  
 $\uparrow, *=$   
 bad  $\langle \text{ellipsis} \rangle$

- ... but the very same ellipsis becomes good after adding a second, intermediate ellipsis (7):

(7) Spoken material  
 $\uparrow$   
 intermediate  $\langle \text{ellipsis} \rangle$   
 =  
 previously bad  $\langle \text{ellipsis} \rangle$  becomes good

$\uparrow$  Recover from the spoken material.

= Identity between the two ellipses.

## 0.6 Outline

1. Voice mismatch
2. Other argument structure alternations
3. Exceptive ellipsis
4. Dahl's puzzle
5. Elliptical answers

## 1 Voice mismatch

- Merchant (2013): sluicing requires structural identity in voice; e.g. (8) = (4a):

(8) \* Someone saved Alex, but we don't know by whom <Alex was saved>.

- Nakamura (2016) observes (9):

- (9) a. Not so much whether to teach the Bible in public schools, but how? And by whom?  
(Corpus of Contemporary American English)
- b. GE Capital and Xerox in Stamford responded to inquiries about their use of extended-stay hotels by saying that they use them from time to time, but they were not sure how much or by whom.  
(The New York Times, Aug 9, 1998)

- The naturally occurring sluices in (9) look to be counterexamples to structural identity in voice.
- The final sluices are passive despite the preceding spoken material being active (10):<sup>1</sup>

- (10) a. Active: ... teach the Bible in public schools ...  
Passive: And by whom <the Bible should be taught>?
- b. Active: ... they use them from time to time ...  
Passive: ... or by whom <they are used>.

- Nakamura (2016): faced with (9), we should abandon the structural identity condition on sluicing.
- Here: structural identity holds in (9), though dissociated from recoverability.
- Notice first that both examples in (9) involve double ellipsis (11):<sup>2</sup>

- (11) a. ..., but how? And by whom?  
b. ... how much or by whom.

- Double ellipsis is in fact crucial to (9). With single ellipsis, the active-passive mismatches laid out in (10) result in ungrammaticality (12):

- (12) a. \* Not so much whether to teach the Bible in public schools, but by whom?  
b. \* They use them from time to time, but they were not sure by whom.

<sup>1</sup>See Anand et al. (2021) regarding the appearance of the modal in the ellipsis site in (10a).

<sup>2</sup>See Citko & Gračanin-Yuksek (2020) for robust argumentation that coordinated sluices involve two separate instances of clausal ellipsis.



- Constructed examples (16, 17).
- In (16), like in (9), the spoken material is active.
- While a passive sluice first (or alone) is ungrammatical in (a), a passive sluice is grammatical following an intermediate sluice in (b), per the analysis in (c).
- ‘?’ status; cf. reanalysis in the box above:

(16) The university appoints vice chancellors, but the regulations don't say...

a. \* by whom(, or when).

b. ? when, or by whom.

c. 

The university appoints vice chancellors
↑
when <they are appointed>
=
by whom <they are appointed>

- In (17), voice mismatch goes in the other direction.
- With passive spoken material, an active sluice first (or alone) is ungrammatical (a); but an active sluice second is grammatical (b), per (c):

(17) Vice chancellors are appointed, but the regulations don't say...

a. \* which committee(, or why).

b. why, or which committee.

c. 

Vice chancellors are appointed
↑
why <someone appoints VCs>
=
which committee < <i>t</i> <sub>which committee</sub> appoints VCs>

- Narrow conclusion regarding voice mismatch: structural identity conditions on ellipsis can be maintained in the face of apparent counterexamples.
- Broad conclusion regarding ellipsis: recoverability and identity are dissociable.

↑ Recover meaning from spoken material.

= Identity between mutually licensing ellipses.

- The rest of this talk: other cases where recoverability and identity come apart in double ellipsis.

## 2 Other argument structure alternations

- Double ellipsis mediates other argument structure mismatches that are impossible in single ellipsis.
- Ditransitive diathesis (18):

(18) a. They served Alex the Chasselas.

b. They served the Chasselas to Alex.

- Further to voice mismatch, other argument structure alternations are also disallowed in sluicing (19) (Merchant 2013):



### 3 Exeptive ellipsis

- The single ellipsis in (26) is clearly unambiguous:

(26) Everybody liked the movie, but I don't know why. . .

- a. . . . <everybody liked the movie>.
- b. \* . . . <John liked/didn't like the movie>.

- But compare (27) with an *except*-phrase, where the *why*-sluice is ambiguous between the readings in (a) and (b) (cf. Rudin 2019: sect. 2.2.4, ex. 39; ccf. Merchant 2001: 22, ex. 32i):

(27) Everybody liked the movie, except John, but I don't know why. . .

- a. . . . <everybody liked the movie, except John>. (People usually hate trashy movies.)
- b. . . . <John didn't like the movie>. (He usually likes trashy movies.)

- The 'universal reading' (a) is uninteresting; sluicing draws straightforwardly on the first conjunct, as in (26).
- The 'exeptive reading' (b), however, begs the question – how is ellipsis of *John didn't like the movie* possible? Nowhere is *John, liked the movie*, and negation all in the same place.
- Partial solution (Stockwell & Wong 2020): the exeptive reading is supported by clausal ellipsis inside the *except*-phrase (28):<sup>3</sup>

(28) Everybody liked the movie, except John <didn't like the movie>, but I don't know why <John didn't like the movie>.

- There is in fact double ellipsis in (27), supporting a reading that was not available with single ellipsis in (26).
- While *John* and *liked the movie* are apart in the spoken material, they are together in the (elliptical) *except*-phrase.
- Outstanding problem: negation mismatch between the spoken material and the ellipses.<sup>4</sup>
- Further observation (29) (Jarvis 2021): *why not* disambiguates (27) to the exeptive reading:

(29) Everybody liked the movie, except John, but I don't know why not . . .

- a. \* . . . <everybody liked the movie, except John>.
- b. . . . <John didn't like the movie>.

- Two facts about *why not* (29)-(32) show that the negation really is syntactically present in the two ellipses in (28).

<sup>3</sup>Precedents for *except*-phrases containing elided clausal structure: Spanish (Pérez-Jiménez & Moreno-Quibén 2012), Egyptian Arabic (Soltan 2016), Malagasy (Potsdam 2018), English (Potsdam & Polinsky 2019, cf. Moltmann 1995), Bulgarian and Persian (Vostrikova 2019).

<sup>4</sup>Polarity mismatches are in principle possible in sluicing (Kroll 2019); e.g. (i):

(i) Either turn in your final paper by midnight or explain why <you didn't turn it in by midnight>!

However, these mismatches are possible in single ellipsis only in very circumscribed circumstances – e.g. *either . . . or*, neg-raising – and are not accepted by all speakers.

1. The *not* of *why not* is a concordant rather than new negation (Hofmann 2018):

(30) John didn't leave.

- a. Why didn't John leave?
- b. = Why <John didn't leave>?
- c. = Why not<sub>[uNeg]</sub> <John didn't<sub>[iNeg]</sub> leave>?
- d. ≠ Why did John leave?

- With respect to (29), there is a syntactic negation inside the elliptical *why not* sluice:

(31) ... but I don't know why not<sub>[uNeg]</sub> <John didn't<sub>[iNeg]</sub> like the movie>.

2. *Why not* requires a syntactically negative antecedent (Stockwell in revision):

(32) I'm really disappointed by John. I thought he would arrive on time.

- a. Do you know why he didn't arrive on time?
- b. Do you know why he didn't <arrive on time>?
- c. \* Do you know why not <he arrived on time>?

- With respect to (29), there is a syntactic negation inside the elliptical *except*-phrase:

(33) ... except John <<sub>t<sub>John</sub></sub> didn't like the movie>.

- Overall solution here (34):

↑ recover meaning from the spoken material, including *except* requiring polarity reversal  
 = identity holds between the two ellipses; there is no negation mismatch

(34)

Everybody liked the movie	
	↑
except John < <sub>t<sub>John</sub></sub> didn't like the movie>	=
	why <John didn't like the movie>

- Double ellipsis supports exceptive readings of sluices by dissociating recoverability and identity.
- So far: clausal ellipsis.
- Final two case studies: verb phrase ellipsis (VPE).

## 4 Dahl's puzzle

- Consider (35), fixing *he* to be *John*. The single ellipsis has two readings:

(35) John realises that he<sub>(John)</sub> is a fool, though Sam doesn't < >.

- The 'strict' reading (a) takes the pronoun to be referential – 'John realises that John is a fool':
  - a. John realises that he<sub>→John</sub> is a fool, though Sam doesn't <realise that John is a fool>.
- The 'sloppy' reading (b) takes the pronoun to be bound – 'x realises that x is a fool':
  - b. John<sub>x</sub> realises that he<sub>x</sub> is a fool, though Sam<sub>x</sub> doesn't <realise that x=Sam is a fool>.

- There is no reading (c) that takes the pronoun to point to someone else, e.g. Bill:
  - c. \* John realises that he<sub>(John)</sub> is a fool, though Sam doesn't <realise that Bill is a fool>.
- Yet double ellipsis supports a Sam-Bill reading like (c).
- Dahl (1973) presents an example like (36) (whose shape he attributes to Schiebe 1973).
- As before, there are strict (a) and sloppy (b) readings.
- But in addition, there is a 'mixed' reading (c), that appears to be sloppy for the first ellipsis, but strict for the second:

(36) John realises that he<sub>(John)</sub> is a fool, and Bill does too < >, though Sam doesn't < >.

- a. Both strict: John realises that he<sub>→John</sub> is a fool,  
and Bill does too <realise that John is a fool>,  
though Sam doesn't <realise that John is a fool>.
- b. Both sloppy: John<sub>x</sub> realises that he<sub>x</sub> is a fool,  
and Bill<sub>x</sub> does too <realise that x=Bill is a fool>,  
though Sam<sub>x</sub> doesn't <realise that x=Sam is a fool>.
- c. Mixed reading: John<sub>x</sub> realises that he<sub>x</sub> is a fool,  
sloppy ↗ and Bill<sub>x</sub> does too <realise that x=Bill is a fool>,  
strict ↗ though Sam doesn't <realise that Bill is a fool>.

- Double ellipsis supports a mixed Sam-Bill reading in (36) that was not available with single ellipsis in (35).
- The mixed reading is a problem to the extent that recoverability and identity are intertwined:
  - each ellipsis independently establishes identity with the recoverable spoken material
  - the structure of the recoverable spoken material must be fixed as either strict (a) or sloppy (b); structure cannot oscillate between its ambiguities, as apparently needed for (c)
- The mixed reading is not a problem if recoverability is dissociated from identity (37):
  - ↑ recover the 'Bill meaning' sloppily from the spoken material
  - this meaning can be syntactically represented with a referential pronoun rather than binding
  - i.e. [ $\lambda x$ . x thinks x is a fool](b) = b thinks b is a fool
  - = the representation with a referential pronoun allows for identity with a 'strict' second ellipsis

(37) John<sub>x</sub> realises that he<sub>x</sub> is a fool  
 ↑  
 and Bill does too <realise that Bill is a fool>  
 =  
 though Sam doesn't <realise that Bill is a fool>

- A 'reverse mixed' reading (38) is correctly predicted to be unavailable:

(38) \*Reverse mixed: John realises that he<sub>→</sub> is a fool,  
 strict and Bill does too <realise that John is a fool>,  
 sloppy though Sam<sub>x</sub> doesn't <realise that x=Sam is a fool>.

- The ellipses are not identical; John ≠ Sam.
- In sum: the availability of mixed readings in double ellipsis is no longer puzzling once recoverability and identity are dissociated.

## 5 Elliptical answers

- In answer to a polar (39) or subject (40) question, verb phrase ellipsis (VPE) (b) is good:<sup>5</sup>

(39) Did John go shopping?

- He DID go shopping.
- He DID <go shopping>.

(40) Who went shopping?

- SAM went shopping.
- SAM did <go shopping>.

- But in answer to an alternative (41) or adjunct question (42), VPE (b) is bad:

(41) Did John recommend Mary with a phone call or with a letter?

- He recommended her with a LETTER.
- \* He did <recommend her> with a LETTER.

(42) Where did John go shopping?

- He went shopping in PARIS
- \* He did <go shopping> in PARIS.

- I can't account for why single ellipsis is bad in (41) and (42) – though see Kuno (1975), Levin (1979), Stockwell (2020: sect. 5.7) for discussion.

- But double ellipsis is good in the corresponding (43) and (44).

- VPE becomes good when followed by another elliptical clause with contrasting polarity (Stockwell 2020: 232f.):

(43) Did John recommend Mary with a phone call or with a letter?

- He DIDN'T recommended her with a PHONE CALL;  
he DID recommend her with a LETTER.
- He DIDN'T <recommend her> with a PHONE CALL;  
he DID <recommend her> with a LETTER.

(44) Where did John go shopping?

- He DIDN'T go shopping in PARIS, but he DID go shopping in LONDON.
- He DIDN'T <go shopping> in PARIS; but he DID <go shopping> in LONDON.

- Double ellipsis is good where single ellipsis is bad since identity and recoverability are dissociable.

- The two ellipses mutually license one another as identical, while the elided content is recovered from the preceding question (45, 46):

↑ recover from the question

= identity between the two elliptical constituents

(45)

Where did John go shopping?  
↑  
he DIDN'T <go shopping> in PARIS  
=  
he DID <go shopping> in LONDON

<sup>5</sup>SMALL CAPS = focus.

- (46) Did John recommend Mary with a phone call or with a letter?  
 ↑  
 he DIDN'T <recommend her> with a PHONE CALL  
 =  
 he DID <recommend her> with a LETTER

- The elliptical constituents are identical up to focus: *DIDN'T* vs. *DID*, *PARIS* vs. *LONDON*, *PHONE CALL* vs. *LETTER*.<sup>6</sup>

## 6 Conclusion

- Recoverability and identity are dissociable in double ellipsis.
- An ellipsis that is impossible alone can become possible with respect to the same preceding material when bridged by an intermediate ellipsis with which it can establish identity.
- In abstract, recall (6) vs. (7):

(6) Spoken material  
 ↑, \*=  
 bad <ellipsis>

(7) Spoken material  
 ↑  
 intermediate <ellipsis>  
 =  
 previously bad <ellipsis> becomes good

↑ Recover from the spoken material.

= Identity between the two ellipses.

- Structural identity conditions on ellipsis can be maintained in the face of apparent counterexamples.
- Clausal ellipsis: voice mismatch and other argument structure alternations; ellipsis and negation in *except*-phrases.
- VPE: Dahl's puzzling mixed reading, elliptical answers to questions.
- Broader conclusion: there is syntactic structure inside ellipsis sites.
- Opposing view (e.g. Dalrymple et al. 1991, Hardt 1993, Ginzburg & Sag 2000) could enforce structural identity as part of recoverability in single ellipsis.
- But if structural identity can be satisfied with respect to ellipsis sites in double ellipsis, then there must be structure inside them.

<sup>6</sup>In the terminology of Stockwell (2020, 2022), building on Rooth (1992a,b), the elliptical constituents are 'proper alternatives' to each other.

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