# BE and the domain of matching in ellipsis

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### Introduction

- <Ellipsis> must be 'identical' with an antecedent:
- (1) Verb phrase ellipsis
  - a. John bought a book, and Mary did too <buy a book>.
  - b. \* This can <u>freeze</u>. Please do <<u>freeze it</u>>.
- (2) 'Sluicing'
  - a. John bought something, but I don't know what <he bought  $t_{what}>$ .
  - b. \* John <u>was saved</u>, but I don't know who  $< t_{who}$  <u>saved him</u>>.
- I. There must be an antecedent 'recoverability' (Fiengo & Lasnik 1972).
- II. Identity usually cares less about morphology (a) than argument structure (b).

(Hankamer 1971, Sag 1976, Williams 1977) (Johnson 2004)

(aka clausal ellipsis, TP ellipsis)

(Ross 1969)

(Merchant 2001)

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

- (1) a. John bought a book, and Mary did too <buy a book>.
  - b. \* This can <u>freeze</u>. Please do  $\langle \underline{freeze it} \rangle$ .
- (2) a. John bought something, but I don't know what <he bought  $t_{what}>$ .
  - b. \* John <u>was saved</u>, but I don't know who  $< t_{who}$  <u>saved him</u>>.
  - · How much material is considered for identity in ellipsis?
  - By investigating ellipsis of *BE*, this paper argues that: (*BE* covers all forms and auxiliary/main verb copular uses)
    - i. the domain of matching in sluicing can be smaller than in verb phrase ellipsis;
    - ii. but must be as large as there is antecedent material available.
- I. *BE* requires an antecedent in verb phrase ellipsis but not in sluicing, where syntactic identity can be satisfied over a smaller domain (Rudin 2019, Anand et al. 2025).
- II. However, sluicing is, like verb phrase ellipsis, vulnerable to 'Warner effects', whereby a finite antecedent for ellipsis of non-finite *BE* is ungrammatical (Warner 1993, Potsdam 1997). This shows that sluicing evaluates higher structure for identity where available, even if ungrammaticality results.

## I. Antecedent *BE* necessary?

#### 1. Verb phrase ellipsis – Yes

- Verb phrase ellipsis of *BE* requires an antecedent (3):
- (3) a. \*Since John is very gullible, he considers smart anyone who seems to  $<\underline{be}$  smart>.
  - b. \*Sam convened a seminar involving every linguist who wanted to < be involved >.
  - c. \*The panel made Mary Associate Professor, since it was clear to everyone that she should have <<u>been</u> Associate Professor> for some time.
  - Elided *BE* is the problem; speaking it makes (3) good in (4):
- (4) a. Since John is very gullible, he considers smart anyone who seems to be <smart>.
  - b. Sam convened a seminar involving every linguist who wanted to be <involved>.
  - c. The panel made Mary Associate Professor, since it was clear to everyone that she should have been <Associate Professor> for some time.
- On the one hand of course, elided things need antecedents. On the other ...

### 2. Sluicing – No

- In sluicing, however, ellipsis of BE does not require an antecedent (5-7).1
- Anand et al. (2025) argue that sluicing requires identity over 'argument domains' as small as small clauses (SC).
- In (5), the sluice has as its antecedent just a small clause (MODAL of vague or ambiguous force or flavour):
- (5) With [SC the campaign on hold] and who knows for how long <the campaign<sub>i</sub> MODAL <u>be</u> [SC t<sub>i</sub> on hold]> Biden is left without a way to connect with the electorate.
  - There is even less antecedent material in (6) only the subject of the elided small clause has an antecedent, while the predicate is extracted as the *wh*-remnant:
- (6) Bradley said that he has not shut the door to [a presidential race], though he would not say when<sub>i</sub> <that presidential race<sub>i</sub> MODAL <u>be</u> [<sub>SC</sub> t<sub>i</sub> t<sub>j</sub> ]>.
- And in (7), only the small clause predicate has an antecedent:
- (7) [Veganism] is easy if you know how  $< PRO_i$  to <u>be</u> [<sub>SC</sub>  $t_i$  vegan]>.
- Crucially, there is no antecedent for elided <u>be</u> throughout.

<sup>&</sup>lt;sup>1</sup>(Anand et al. 2025: (5) 3e, 7, (6) 18a, 20a, 22-24, from the Santa Cruz sluicing data set, Anand et al. 2021; (7) cf. Stockwell 2023)

#### 3. Argument domains

- Anand et al.'s (2025) argument that sluicing requires identity over argument domains as small as small clauses is a development of Rudin (2019).
- Rudin (2019) argued that sluicing requires identity over vP based on the wide variety of mismatches sluicing allows in the TP domain (for an opposing view, see Ranero 2021).
- For example, finiteness/modality (8) (Merchant 2001), polarity (9) (Kroll 2019):
- (8) a. Decorating for the holidays is easy if you know how  $< t_{how}$  to decorate for the holidays>.
  - b. Eat (something), if you can figure out what  $<\underline{to} \text{ eat } t_{what} > !$
  - c. This is a problem<sub>i</sub> that physics <u>must</u> solve  $t_i$ , but for a long time it wasn't clear how <it might/could solve it<sub>i</sub>>.
- (9) Either turn in your final paper by midnight or explain why <you didn't turn it in by midnight>!
- In sum, sluicing enforces identity over a much smaller domain that it elides.

- Incorporating our findings about the necessity of *BE* antecedents, it seems that the domain of matching for sluicing can be smaller even than for verb phrase ellipsis (10).
- Verb phrase ellipsis requires an antecedent for its *BE* head, suggesting a domain of matching roughly equal in size to what is elided (a).
- Sluicing requires matching over argument domains, which can be as small as small clauses; i.e. below BE (b):
- (10) a. Verb phrase ellipsis: [CP C [TP T < [VP BE [SC subj pred]] > ]]
  b. Sluicing: [CP C < [TP T [VP BE [SC subj pred]]] > ]
  - Rudin (2019) suggested, generalizing from his findings for sluicing, that the domain of matching might always be smaller than what is elided. According to (10), this is not so for verb phrase ellipsis.
  - Instead, and more oppositely, their contrasting sensitivity to the presence of an antecedent for *BE* shows that the domain of matching for sluicing can be smaller than for verb phrase ellipsis; i.e. more ellipsis ~ less identity.

= (1a)

# II. BE mismatches

#### 1. Warner's Generalization

- Even in the presence of an antecedent for elided BE, verb phrase ellipsis is constrained by 'Warner's Generalization'.
- Ellipsis does not usually care about morphology (11):
- (11) a. John bought a book, and Mary did too  $\langle buy a book \rangle$ .
  - b. John <u>went</u> to the shops yesterday, and Mary will <go to the shops> tomorrow.
  - c. John is still finishing his assignment, whereas Mary already has <finished her assignment>.
  - d. The candidate was dogged by charges of infidelity and avoiding the draft, or at least trying to <a void\_the draft>.</a>

     (Hardt 1993: 35, ex. 120)
  - Ellipsis does, however, care about the morphology of elided forms of BE.2

<sup>2</sup>Further to *BE*, verb phrase ellipsis also cares about the morphology of elided forms of *HAVE* (i):

(i) \* Chris has been to Rome and his wife might < have been to Rome> as well. Potsdam (1997: 353, ex. 2b)

But examples with *HAVE* often have other, good readings not involving the offending mismatched auxiliary; e.g. in (i), 'his wife might go to Rome as well'. There's also a great deal of dialectal variation as to whose main verb *HAVE* is auxiliary-like, so I'll leave *HAVE* aside and stick with *BE* here.

- In particular, non-finite *BE* cannot be elided on the basis of a finite antecedent (12) (Warner 1985, 1993).
- (12) a. \*I am confused about ellipsis, and today you will < be confused about ellipsis>, too!
  - b. \*John was picked by the panel, even though he clearly shouldn't have < been picked>.
  - c. \*John is tidying up now, but he mustn't  $\leq \underline{be}$  tidying up> by the time Mary arrives.
  - As before, speaking the offending elided *BE*s would make (12) good.
  - The problem is specific to finite *BE* antecedents; non-finite antecedents, whether matching (13) or mismatching (14), are fine (Potsdam 1997):
- (13) a. Today I will <u>be</u> confused about ellipsis, and you will <<u>be</u> confused about ellipsis>, too!
  - b. John has <u>been</u> picked by the panel, even though he clearly shouldn't have <<u>been</u> picked>.
  - c. John might <u>be</u> tidying up now, but he mustn't  $\leq \underline{be}$  tidying up> by the time Mary arrives.
- (14) a. I have <u>been</u> confused about ellipsis for years; now you will < <u>be</u> confused about ellipsis>, too!
  - b. Of course, if we had wanted to  $<\underline{be}$  great>, we could have  $\underline{been}$  great.
  - c. He might <u>be</u> attending AA sessions. I know his mother has < <u>been</u> attending AA sessions>.

- Why are *finite*  $\rightarrow$  *non-finite BE* mismatches bad?
- Potsdam (1997), cf. Lasnik (1995) a trace of head movement cannot antecede ellipsis of a head (15):
- (15) \* A: [CP C [TP T-*BE*<sub>i</sub> [VP *t*<sub>i</sub> ...]]] E: [CP C [TP T [VP *BE* ...]]]
  - Thoms (2015) because ellipsis requires syntactic identity; if not directly with the antecedent A, then indirectly with an accommodated antecedent A' that is at most as complex as A; and heads are more complex than traces.
  - Cf. the verbal identity requirement in verb-standing verb phrase ellipsis (Goldberg 2005, Gribanova 2013, et seq.).

### 2. Warner effects in sluicing

- Given (10) from part I, it might be reasonable to assume that sluicing should be immune to 'Warner effects', since *BE* is outside the matching domain in (b):
- (10) a. Verb phrase ellipsis: [CP C [TP T < [VP BE [SC subj pred]] > ]]
  b. Sluicing: [CP C < [TP T [VP BE [SC subj pred]]] > ]
  - In fact, sluicing exhibits the same pattern as verb phrase ellipsis in being subject to Warner's Generalization (16-18).

- A finite antecedent for ellipsis of non-finite *BE* is ungrammatical (a), while other permutations are fine (b-d):
- (16) a. \* I <u>am</u> nice, because my mother taught me how < to <u>be</u> nice>. (also: \*I am nice because I know how.)
  - b. I want to <u>be</u> nice, but I don't know how <to <u>be</u> nice>.
  - c. Being nice is easy, if you know how <to <u>be</u> nice>.
  - d. I <u>am</u> nice, but I don't know why <I <u>am</u> nice>.
- (17) a. \* John <u>was</u> admitted by the club, despite no-one telling him how <to <u>be</u> admitted by the club>.
  - b. Being admitted by the club is difficult unless you know how <to be admitted by the club>.
  - c. John will <u>be</u> admitted by the club, but he doesn't know why <he will <u>be</u> admitted by the club>.
  - d. John <u>was</u> admitted by the club, but he doesn't know why <he <u>was</u> admitted by the club>.
- (18) (John is very punctual.)
  - a. \* He <u>is</u> ready, but you still should have told him when <to <u>be</u> ready>.
  - b. He will <u>be</u> ready if you tell him when <to <u>be</u> ready>.
  - c. He would have <u>been</u> ready if you had told him when <to <u>be</u> ready>.

#### 3. The domain of matching in ellipsis

- Sluicing and its sensitivity to Warner effects can be reconciled by extending (10) to (19), corresponding to the examples of *finite* → *non-finite* mismatches collected in (20):
- (19) a. Verb phrase ellipsis: [CP C [TP T <[VP BE [SC subj pred]]>]]
  - b. Sluicing, minimally: [CP C <[TP T [VP BE [SC subj pred]]]>]
  - c. Sluicing, usually: [CP C <[TP T [VP BE [SC subj pred]]]>]
- (20) a. \* Since John is very gullible, he considers smart anyone who<sub>i</sub> seems to  $\langle be [SC t_i smart] \rangle$ .
  - b. Veganism is easy if you know how  $\langle PRO_i$  to be [SC  $t_i$  vegan]>.
  - c. \* I <u>am</u> nice, because my mother taught me how  $\langle PRO_i$  to be [<sub>SC</sub>  $t_i$  nice]>.
  - As we saw in part I, verb phrase ellipsis is ungrammatical absent an antecedent for *BE*, due to its VP-sized matching domain (a).
  - Sluicing, by contrast, can use a very small matching domain (b) when there is little antecedent material; in particular, no antecedent for *BE*.
  - What Warner effects show is that sluicing usually has a VP-sized matching domain (c), like verb phrase ellipsis. When there is an antecedent for *BE*, it must be considered, even if ungrammaticality results.

# Conclusion

- Sluicing enforces matching over the largest argument domain for which antecedent material is in principle available:
- (19) a. Verb phrase ellipsis: [CP C [TP T < [VP BE [SC subj pred]] > ]]
  - b. Sluicing, minimally: [CP C <[TP T [VP BE [SC subj pred]]]>]
  - c. Sluicing, usually: [CP C < [TP T [VP BE [SC subj pred]]] >]
  - I. When there is no antecedent for VP-level structure, verb phrase ellipsis is bad (a), but a small clause suffices for sluicing (b).
  - II. An argument domain of that small size would be blind to Warner effects. But when VP-level antecedent material is present, sluicing must evaluate it for identity (c), even at the expense of ungrammaticality.
- III. Matter arising: copular sources for sluicing.

# III. Copular sources for sluicing

- Sluices whose *wh*-remnant has been extracted from a left branch, e.g. adjectives, necessitate copular 'short sources' (21) (Barros et al. 2014, Abels 2018):
- (21) They hired a diligent worker, but I don't know how diligent.
  - a. \*...[how diligent]<sub>i</sub> < they hired [ $_{DP}$   $t_i$  a worker]>. \*left branch extraction
  - b. ... [how diligent]<sub>i</sub> < that worker is  $t_i$  >.

 $\checkmark$  evasive copular source

- The extraction violation in (21) is not 'repaired' (a) but 'evaded' (b). When the evasive source is unavailable (22), sluicing is bad:
- (22) \* They hired a hard worker, but I don't know [how hard]<sub>i</sub> < that worker is  $t_i$  >. \*evasive copular source
- $\rightarrow$  Elided *BE* in (21b) does not have an antecedent.
  - Copular short sources involve 'minimal sluicing' (23) (Anand et al. 2025); only the nominal small clause subject has an antecedent (cf. 6):
- (23) [CP [how diligent]<sub>i</sub> C <[TP T [VP BE [SC [that worker]  $t_i$  ]]]>]

- In Spanish (24), prepositions must be pied-piped (a). Apparent preposition stranding violations in sluicing (b) are evaded via cleft copular sources (c) (Rodrigues et al. 2009; though cf. Stigliano 2022):
- (24) Juan ha hablado con una chica, pero no sé (con) cuál.
  - J. has talked with a girl but not know with which
  - a. ... con cuál < ha hablado Juan  $t_{PP} >$ . with which has talked J.
  - b. \* ... cuál < ha hablado Juan con  $t_{\text{DP}}$  >. which has talked J. with
  - c. ... cuál  $< \underline{es}$  la chica con la que ha hablado Juan >. which is the girl with the that has talked J.

✓Pied-piping

\*P-stranding

✓ evasive copular source

 $\rightarrow$  As in (21), elided *BE* in (24c) does not have an antecedent.

- But if the antecedent is itself a cleft, the preposition cannot be pronounced (25) (Vicente 2008). The copular antecedent supports only a DP remnant and not a PP (a). It is apparently not possible (X) to invoke a non-copular short source that would otherwise grammatically support a PP (b):
- (25) La chica con la que Juan ha hablado es una de estas, pero no sé (\*con) cuál. The girl with the that J. has talked is one of these but not know with which
  - a. ... (\*con) cuál < <u>es</u> la chica con la que ha hablado Juan >. matching copular antecedent with which is the girl with the that has talked J.
  - b. X ... con cuál < ha hablado Juan  $t_{PP} >$ . with which has talked J.
- → Sluicing enforces matching over the largest argument domain for which antecedent material is in principle available.
  - When there is an antecedent for *BE* (25), it must be considered (a, not b), even if ungrammaticality results (\**con*).
  - Vicente (2008): a non-isomorphic elliptical clause is licensed only if it leads to a more informative statement with respect to the antecedent cf. cleft exhaustivity in (24c).
  - But meaning strength was not at stake with the *BE* mismatches in English sluicing in part II, nor the 'plain copular' sources for adjectival sluices like (21).

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