Wh-in-situ and sluicing-like constructions in English

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1   Introduction

1.1   Background

• **Canonical Sluicing.**   Everything but the preposed *wh*-constituent of an embedded question can be deleted on the promise of recoverability (Ross 1969:252).

(1)   He is writing something, but you can't imagine **what** ~~he is writing~~.

• **Move-and-Delete.**   An influential analysis proposes that expected $\overline{\text{A}}$-movement extracts the *wh*-element from an elided IP/TP constituent (Ross 1969, Merchant 2001).

(2)   He is writing something, but you can't imagine **what** ⟨$_{\text{IP}}$ ~~he is writing~~ *x* ⟩

           remnant   *ellided constituent*

• **Sluicing-Like Constructions.**   Constructions that resemble canonical sluicing are observed in *wh*-in-situ languages, such as Japanese (e.g., Takahashi 1994:266, (3); see also Merchant & Simpson 2012, Gribanova & Manetta 2016).

(3)   Mary-ga   nanika-o   katta   rasii   ga, boku-wa [**nani(-o)   ka**] wakaranai
        Mary-NOM something-ACC bought likely but I-TOP   what-ACC Q   not.know
        'It is likely that Mary bought something, but I don't know what.'

• **Derivational Possibilities for SLCs.**   Several derivational possibilities have been proposed for SLCs.

  – *Scramble-and-Delete.* Scrambling escapes subsequent IP-deletion (Takahashi 1994, Hasegawa 2006).

    (4)   Boku-wa [**nani-o**$_1$ ~~kanojo-ga~~ *x*$_1$ ~~katta~~ **ka**] wakaranai
            'I don't know what$_1$ ~~she bought~~ *x*$_1$.'

  – *Pseudosluicing.* The reduction operation targets (pseudo)cleft constructions (Nishiyama et al. 1996, Abe 2006).

    (5)   Boku-wa [*expl* **nani** ~~da~~ **ka**] wakaranai
            'I don't know what ~~it is~~.'

  – *Selective Deletion.* IP-deletion spares in-situ focus-marked elements (Kimura 2010, Abe 2015).

    (6)   Boku-wa [~~kanojo-ga~~ **nani(-o)** ~~katta~~ **ka**] wakaranai
            'I don't know ~~she bought~~ what.'

1.2   Outlook

• **Sluicing-Like Constructions in English.**   *Wh*-in-situ phenomena in English give rise to sluicing-like constructions, whereby clausal ellipsis leaves a bare *wh*-remnant.

(7)   A: Anne invited someone.

B: Yeah, and you think ⟨$_{IP}$ ~~Anne invited~~ ⟩ **who**?

• **Movement Plus Deletion.**   Bare *wh*-remnants are derived by way of a Move-and-Delete derivation (Ross 1969, Merchant 2001; though see Valmala 2007, Ott & Struckmeier 2018, and references).

> **Scramble-and-Delete**
>
> *Wh*-scrambling extracts the *wh*-remnant from an elided clausal constituent.

(8)   ... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who**$_1$ C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited~~ ~~x_T~~ ⟩]] ?

• **Ellipsis-Licensed Pronunciation.**   *Wh*-scrambling chains are exceptionally pronounced at the higher copy under ellipsis (Richards 1997, Temmerman 2013, Gribanova & Manetta 2016).

> **Exceptional Chain Realization**
>
> Covert partial *wh*-scrambling is pronounced exceptionally high in the context of ellipsis.

(9)   a.   Wh-*in-situ involves partial covert* wh-*scrambling*

... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ <~~who~~> C$^0_{[-Q]}$ Anne invited **who**]] ?

b.   *Partial* wh-*scrambling is rendered overt in the context of ellipsis*

... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who** C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited~~ ~~<who>~~ ⟩]] ?

2   English Sluicing-Like Constructions

2.1   *Wh*-in-situ in English

• **English *Wh*-in-situ.**   English has semantico-pragmatically and prosodically distinguished *wh*-in-situ constructions (see also Bartels 1999 and references).

– *Echo Questions* : Utterances that echo an immediately preceding utterance and mark an issue in the discourse known to have been resolved previously (Sobin 2010, Beck & Reis 2018).

(10)   A: Randall invited Dracula.

B: Randall invited ↗**WHO**?

(11)   A: Did Randall invite Dracula.

B: Did Randall invite ↗**WHO**?

– *Follow-up Questions* : Utterances that presuppose an open issue in the discourse and signal to resolve that issue next (Pires & Taylor 2009, Biezma 2020).

(12)	A:	Carrie is having a party this weekend.

B:	And she invited ↘**who**?

• **Compositional Distinctness.**   *Wh*-in-situ and *wh*-fronting strategies are compositionally distinct from the perspective of clause-embedding predicates (Bobaljik & Wurmbrand 2015).

(13)	*[−Q]-embedding predicates select for* wh-*in-situ*

a.	Anne invited someone and Susie <u>thinks</u> [$_{CP}$ C$^0_{[-Q]}$ she invited **who**]?

b.	*Anne invited someone and Susie <u>thinks</u> [$_{CP}$ **who**$_1$ C$^0_{[+Q,wh]}$ she invited x_1].

(14)	*[+Q]-embedding predicates select for* wh-*ex-situ*

a.	*Anne invited someone and Susie <u>asked</u> [$_{CP}$ C$^0_{[-Q]}$ she invited **who**]?

b.	Anne invited someone and Susie <u>asked</u> [$_{CP}$ **who**$_1$ C$^0_{[+Q,wh]}$ she invited x_1].

• **Root Scope Interpretation.**   In-situ *wh*-elements appear in embedded environments and are interpreted as taking root scope (Pires & Taylor 2009, Sobin 2010, Bobaljik & Wurmbrand 2015; cf. Beck & Reis 2018, Biezma 2020).

(15)	Wh-*in-situ is interpreted with matrix scope*

So, Anne invited someone and <u>Susie said [$_{CP}$ she invited **who**]</u>?

a.	*Matrix Scope* : " ... and who did Susie say that she invited?"

b.	**Embedded Scope* : " ... and Susie said who she invited."

(16)	*Partial* wh-*movement is interpreted with embedded scope*

So, Anne invited someone and <u>Susie said [$_{CP}$ **who**$_1$ she invited x_1]</u>

a.	**Matrix Scope* : " ... and who did Susie say that she invited?"

b.	*Embedded Scope* : " ... and Susie said who she invited."

## 2.2	Bare *Wh*-Remnant Ellipsis

• **Bare Remnant Ellipsis.**   Several embedded environments have independently been argued to permit bare remnant ellipsis (i.e., Stripping; Hankamer 1979).

(17)	*Non-Factive complement clauses*					(e.g., Weir 2014, Wurmbrand 2017)

So, Anne invited someone and Susie { thinks / believes / suspects } [~~she invited~~ **Mark**]

(18)	*Temporal adverbial clauses*					(e.g., Larson 1987, Overfelt 2021)

Paul read the article [{ before / after } ~~he read~~ **the abstract**]

(19)	*Comparative clauses*					(e.g., Lechner 2004)

Carla fixed the computer { faster / more often } [than ~~she fixed~~ **the printer**]

• **English Sluicing-Like Constructions.**   These same embedded environments, which are otherwise obligatorily *wh*-in-situ, permit a bare *wh*-remnant.

(20)   *Non-factive complement clauses*
        So, Anne invited someone and Susie { thinks / believes / suspects } [~~she invited~~ **who**]?

(21)   *Temporal adverbial clauses*
        Paul read the article [{ before / after } ~~he read~~ **the what**]?

(22)   *Comparative clauses*
        Carla fixed the computer { faster / more often } [than ~~she fixed~~ **the what**]?

3   Structured Ellipsis

• **Extraction from Elided Content.**   Bare *wh*-remnants are derived by way of a Move-and-Delete derivation (Ross 1969, Merchant 2001).

> **Scramble-and-Delete**
> *Wh*-scrambling extracts the *wh*-remnant from an elided clausal constituent.

(23)   ... and [$_{CP}$ $C^0_{[\sim Q]}$ you think [$_{CP}$ **who**$_1$ $C^0_{[-Q]}$ $\langle$ $_{IP}$ ~~Anne invited x_1~~ $\rangle$]] ?

• **Diagnostics for Ellipsis.**   Standard diagnostics link an ex-situ bare *wh*-remnant to elided material:

  – *Selectional Constraints* : Bare *wh*-remnants satisfy the requirements on clausal complements.

  – *Connectivity Effects* : Bare *wh*-remnants behave like constituents of elided content.

  – *Island Sensitivity* : Bare *wh*-remnants are sensitive to island boundaries.

3.1   Selectional Constraints

• **S-Selection for Bare Wh-Remnants.**   The restricted scope of bare *wh*-remnants suggests that embedding predicates select for distinct *wh*-strategies (cf. Ross 1969, Merchant 2001).

(24)   *[−Q]-embedded predicate selects for matrix scope* wh-*remnant*
        So, Anne invited someone and Susie <u>thinks</u> [$_{CP}$ $C^0_{[-Q]}$ $\langle$ $_{IP}$ ~~Anne invited~~ $\rangle$ **who**] ?
        a.   *Matrix Scope* : " ... and who does Susie think that she invited?"
        b.   **Embedded Scope* : " ... and Susie thinks who she invited."

(25)   *[+Q]-embedded predicate selects for embedded scope* wh-*remnant*
        So, Anne invited someone and Susie <u>asked</u> [$_{CP}$ **who** $C^0_{[+Q,wh]}$ $\langle$ $_{IP}$ ~~Anne invited~~ $\rangle$] ?
        a.   **Matrix Scope* : " ... and who did Susie ask that she invited?"
        b.   *Embedded Scope* : " ... and Susie asked who she invited."

3.2 Connectivity Effects

• **C/L-Selectional Connectivity.** The *wh*-remnant is sensitive to the C/L-selectional restrictions of antecedent material, not the embedding predicate.

(26)   *Elided material selects for the lexical content of the* wh-*remnant*

    a.   So, Lois <u>reacted</u> to something and you think [⟨ ~~she reacted~~ ⟩ **to what**] ?

    b.   *So, Lois <u>reacted</u> to something and you think [⟨ ~~she reacted~~ ⟩ **of what**] ?

3.3 Island Constraints

• **Island Sensitivity.** The sensitivity of the *wh*-remnant to island boundaries under ellipsis suggests the *wh*-remnant is extracted from elided structure (Barros et al. 2014, Abels 2019; cf. Griffiths 2019).

(27)   Wh-*Remnant is sensitive to island boundaries*
    *So, Denise hired [$_{DP}$ the person that runs a non-profit] but
                           you think [$_{CP}$ ⟨ ~~she hired [$_{DP}$ the person that runs]~~ ⟩ **a what**]?

(28)   Wh-*Remnant can replace an island environment*
    So, Denise hired [$_{DP}$ the person that runs a non-profit] but
                           you think [$_{CP}$ ⟨ ~~she hired~~ ⟩ [$_{DP}$ **who**]]?

4 Exceptional Move-and-Delete

• **Extraction of the Remnant.** The connectivity effects above are compatible with a standard Move-and-Delete derivation (Ross 1969, Merchant 2001).

> **Scramble-and-Delete**
> *Wh*-scrambling extracts the *wh*-remnant from an elided clausal constituent.

(29)   … and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who**$_1$ C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited x_1~~ ⟩]] ?

• **Non-Interrogative Environments.** The lack of independent overt *wh*-movement in the relevant environments is problematic for Move-and-Delete analyses.

(30)   *[−Q]-embedding predicates do not select for* wh-*ex-situ*
    *Anne invited someone and Susie <u>thinks</u> [$_{CP}$ **who**$_1$ C$^0_{[-Q]}$ she invited x_1].

• **Ellipsis-Licensed Movement?** A standard Move-and-Delete analysis that relies on focus movement undesirably stipulates the availability of movement that is unattested in non-ellipsis configurations (see Valmala 2007, Ott & Struckmeier 2018).

• **Ellipsis-Licensed Pronunciation.**   Independently motivated clause-bounded *wh*-scrambling chains are exceptionally pronounced at the higher copy under ellipsis (Richards 1997, Temmerman 2013, Gribanova & Manetta 2016).

> **Exceptional Chain Realization**
> Covert partial *wh*-scrambling is pronounced exceptionally high in the context of ellipsis.

(31)   a.   Wh-*in-situ involves partial covert* wh-*scrambling*

... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ ~~\<who\>~~ C$^0_{[-Q]}$ Anne invited **who**]] ?

   b.   *Partial* wh-*scrambling is rendered overt in the context of ellipsis*

... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who** C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited \<who\>~~ ⟩]] ?

4.1   A Theory of *Wh*-in-situ

• **Mechanisms for *Wh*-in-Situ.**   There are several mechanisms for deriving *wh*-in-situ configurations:

– <u>*Covert Movement*</u> : A *wh*-constituent undergoes syntactic movement that is not reflected at the Phonological Form of the utterance (e.g., Huang 1982, Pesetsky 2000, Cable 2010).

(32)   [$_{CP}$ \<wh\> C$^0_{[+Q,wh]}$ [... **wh** ...]]

– <u>*In-situ Interpretation*</u> : A *wh*-constituent is interpreted in-situ via material associated with the left periphery (e.g., Hamblin 1973, Cheng 1991, Reinhart 1998).

(33)   [$_{CP}$ C$^0_{[\sim Q]}$ [... **wh** ...]]

– <u>*Pragmatic Interpretation*</u> : A *wh*-constituent is interpreted in-situ and conventionally implies a question-like speech act (e.g., Bobaljik & Wurmbrand 2015, Beck & Reis 2018, Biezma 2020).

(34)   [$_{CP}$ C^0 [... **wh** ...]]

• **Scramble into Position.**   Phonologically in-situ *wh*-constituents undergo scrambling to a position in which they are interpretable via a dedicated matrix C$^0_{[\sim Q]}$ (see Kotek 2019, Abels & Dayal 2022).

(35)   *Root in-situ* wh-*constituents scramble locally*

[$_{CP}$ C$^0_{[\sim Q]}$ ... [$_{vP}$ \<wh\> ... **wh** ...]]

(36)   *Embedded in-situ* wh-*constituents scramble to the edge of their clause*

[$_{CP}$ C$^0_{[\sim Q]}$ ... [$_{CP}$ \<wh\> C^0 ... [... **wh** ...]]]

• **Selective Intervention Schema.**   *Wh*-in-situ can avoid intervention effects from tauto-clausal negation, but not negation in a higher clause.

(37) $[_{CP}$ $C^0_{[\sim Q]}$ ... $[_{CP}$ **wh** ... **not** ... [... x ...]]]   (38)   *$[_{CP}$ $C^0_{[\sim Q]}$ ... **not** ... $[_{CP}$ **wh** [... x ...]]]

• **Selective Sensitivity to Intervention.**   In-situ *wh*-constituents are sensitive to intervention effects from tauto-clausal negation, but not negation in a higher clause.

(39)   *Intervention effects arise in* wh-*in-situ constructions with matrix but not embedded negation*

    a.   So, Phil did**n't** read one of the articles and

                                        Beth <u>thinks</u> $[_{CP}$ he did**n't** read **which article**] ?

    b.   ??So, Phil read one of the articles but Beth does**n't** <u>think</u> $[_{CP}$ he read **which article**] ?

• **Covert *Wh*-Scrambling.**   Covert *wh*-scrambling in English is island-sensitive and clause-bounded (see Kotek 2019, Abels & Dayal 2022; see also section 5).

(40)   *Clause-bounded* wh-*scrambling escapes the scope of an embedded but not a matrix intervenor*

    a.   ... $[_{CP}$ $C^0_{[\sim Q]}$ Beth <u>thinks</u> $[_{CP}$ **which article** $C^0_{[-Q]}$ Phil $\boxed{\text{did}\textbf{n't}}$ read x]]

    b.   *... $[_{CP}$ $C^0_{[\sim Q]}$ Beth $\boxed{\text{does}\textbf{n't}}$ <u>think</u> $[_{CP}$ **which article** $C^0_{[-Q]}$ Phil read x]]
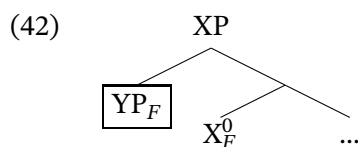
4.2   A Theory of Chain Pronunciation

• **Copy-Theory of Movement.**   Syntactic movement is the creation of a chain consisting of multiple copies of a syntactic element (Chomsky 1993).

(41) $[_{CP}$ Susie asked $[_{CP}$ **who** $C^0_{[+Q,wh]}$ Anne $[_{vP}$ **who** invited **who**]]]?

• **A Strong-Weak Distinction.**   The featural content of heads determine whether links in a movement chain are strong or a weak positions (e.g., Chomsky 1993, 2001, Richards 1997; see Richards 2010).

    • <u>*Strong Position*</u> : The specifier of a head X^0_F that Agrees with the content of that specifier YP_F.

(42)

    • <u>*Weak Position*</u> : A constituent in the projection of a head X^0 that does not Agree with that constituent YP_F.

(43)   i.

• **Chain Pronunciation Algorithm.**   Adopting insights from Gärtner (2002) and Abels & Dayal (2022), we adapt the system of chain pronunciation proposed in Richards 1997 to fit a single-output syntax.

(44)   *Conditions on Chain Realization*

    i.   PF must receive unambiguous instructions about which copy in a chain to pronounce.

    ii.   The highest strong position instructs PF to pronounce the copy of a chain in that position.

    iii.   If there is no strong position, PF pronounces the copy in the lowest possible weak position.

• **Ellipsis Eliminates Candidates.**   A movement chain may be pronounced in a higher position if ellipsis eliminates lower candidates (Richards 1997, Temmerman 2013, Gribanova & Manetta 2016).

(45)   *Scrambled* wh-*constituent is pronounced in-situ*

    ... and [$_{CP}$ $C^0_{[\sim Q]}$ Susie thinks [$_{CP}$ <who> $C^0_{[-Q]}$ Anne invited **who**]] ?

(46)   *Scrambled* wh-*constituent is pronounced ex-situ under ellipsis*

    ... and [$_{CP}$ $C^0_{[\sim Q]}$ Susie thinks [$_{CP}$ **who** $C^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited <who>~~ ⟩]] ?

4.3   (Exceptional) Chain Pronunciation

• **Overt v. Covert *Wh*-Movement.**   Overt and covert movement are predictable on the basis of the featural content of the local C^0.

– <u>*Embedded Constituent Question*</u> : An agreeing $C^0_{[+Q,wh]}$ provides PF unambiguous instructions to pronounce the highest copy of the *wh*-constituent.

    (47)   a.   ... and Susie said **who** Anne invited.
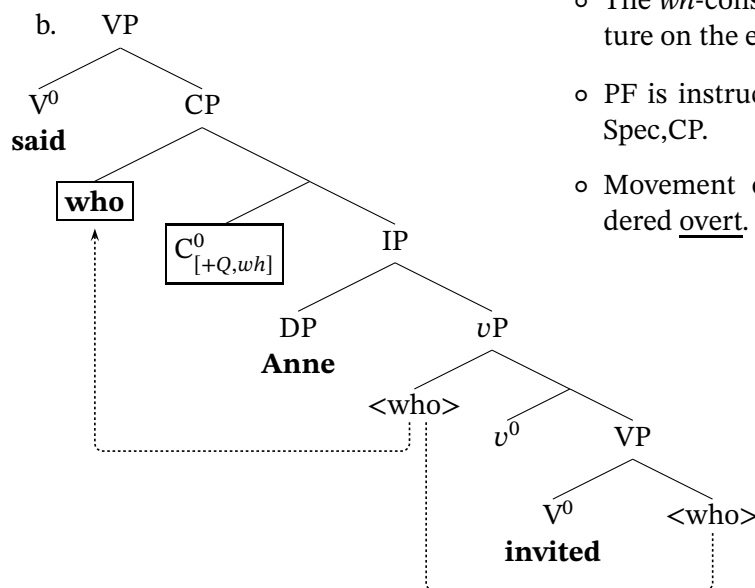
        b.

○ The *wh*-constituent agrees with a $[wh]$ feature on the embedded $C^0_{[+Q,wh]}$.

○ PF is instructed to pronounce the copy in Spec,CP.

○ Movement of the *wh*-constituent is rendered <u>overt</u>.

– <u>Wh-*in-Situ Configuration*</u> : With a non-agreeing $C^0_{[-Q]}$, PF receives unambiguous instruction to pronounce the lowest copy of the scrambled *wh*-constituent.
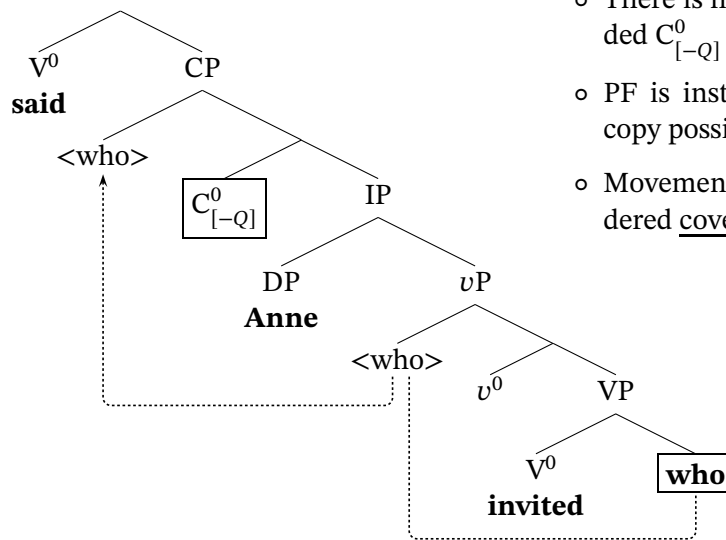
(48) a. ... and Susie said Anne invited **who**?

   b.

- There is no agreeing feature on the embedded $C^0_{[-Q]}$ (i.e., *wh*-scrambling).
- PF is instructed to pronounce the lowest copy possible.
- Movement of the *wh*-constituent is rendered <u>covert</u>.

• **Displacement Licensed by Ellipsis.** Ellipsis eliminates candidates for pronunciation, allowing the pronunciation of higher, typically unpronounced copies.

– <u>*Canonical Sluicing*</u> : An agreeing $C^0_{[+Q,wh]}$ provides PF instructions that are compatible with ellipsis to pronounce the highest copy of the *wh*-constituent.

(49) a. ... and Susie asked **who**.

   b.

- The *wh*-constituent agrees with a $[wh]$ feature on the embedded $C^0_{[+Q,wh]}$.
- PF is instructed to pronounce the copy in Spec,CP.
- IP-Ellipsis instructs PF to delete all IP-internal copies.
- Movement of the *wh*-constituent is rendered <u>overt</u>.

– *Sluicing-Like Construction* : With a non-agreeing $C^0_{[-Q]}$, PF receives instruction to pronounce the lowest copy that is a viable candidate for pronunciation given ellipsis.

(50) a. ... and Susie thinks **who**?

b.

```
              VP
           /      \
        V⁰          CP
      thinks      /    \
            [who]       \
              C⁰_{[-Q]}  ⟨ IP ⟩
                       /      \
                    DP         vP
                    Anne      /   \
                     <who>         \
                          v⁰        VP
                        invited  /      \
                              V⁰         <who>
                            invited
```
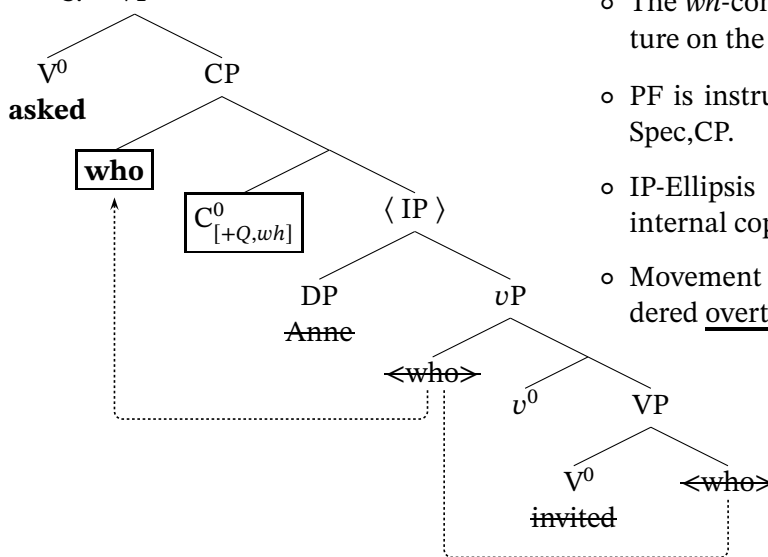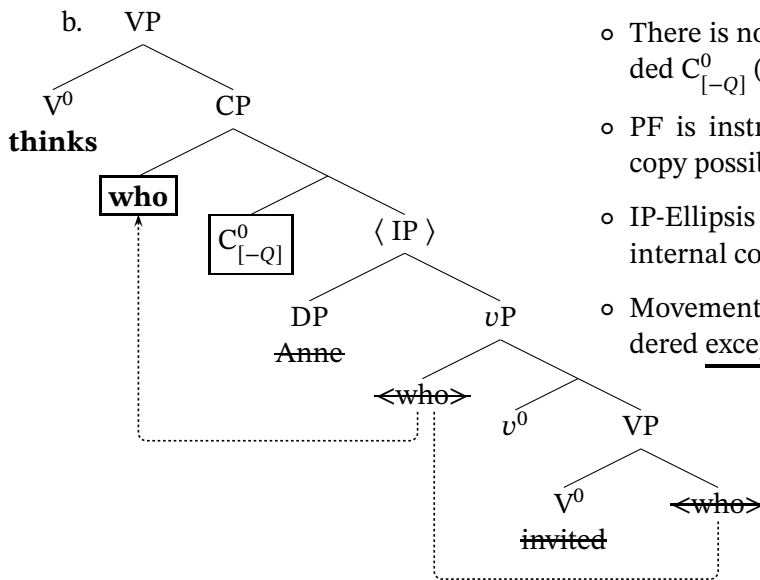
- There is no agreeing feature on the embedded $C^0_{[-Q]}$ (i.e., *wh*-scrambling).

- PF is instructed to pronounce the lowest copy possible.

- IP-Ellipsis instructs PF to delete all IP-internal copies.

- Movement of the *wh*-constituent is rendered exceptionally overt.

5 Detecting Covert Movement

• **Stay-and-Delete Approaches?**   The literature provides various in-situ approaches that could be applied to English SLCs (e.g., Weir 2014, Abe 2015, Ott 2018, Griffiths 2019, Griffiths et al. 2022).

– *Selective Deletion* : SLCs involve IP-deletion that spares in-situ focus-marked constituents.

(51)   ... and Susie thinks [$_{CP}$ $C^0_{[-Q]}$ ⟨ ~~she invited~~ ⟩ **who**]?

• **Movement Diagnostics.**   Contrary to received wisdom, standard indicators of movement converge on the conclusion that bare *wh*-remnants undergo syntactic movement out of the ellipsis site.

– *Selective Island Effects* : Bare *wh*-remnants are sensitive to island boundaries.

– *Selective Intervention Effects* : Bare *wh*-remnants are sensitive to intervention effects.

5.1 Selective Island Sensitivity

• **No Island Effects?**   The conventional wisdom is that single *wh*-in-situ configurations in English are not sensitive to islands boundaries (Pires & Taylor 2009:13, (25), Beck & Reis 2018).

(52)   So, you will interview [$_{DP}$ the man [$_{CP}$ that won the lottery **when**]] ?

• **Island-Violating Displacement.**   The in-situ *wh*-constituent becomes sensitive to island boundaries under ellipsis.

(53)   Wh-*Remnant is island-sensitive only under ellipsis*
       So, Denise hired [$_{DP}$ the person that runs a non-profit] but ...

    a.   you think [$_{CP}$ she hired [$_{DP}$ the person that runs **a what**]] ?

    b.   *you think [$_{CP}$ ⟨ ~~she hired [$_{DP}$ the person that runs~~ ⟩ **a what**]?

• **Island Violating Movement under Ellipsis.**   Movement to a position that would be eligible for pronunciation under ellipsis induces an island violation (Abels & Dayal 2022; cf. Kotek 2019).

(54)   *Partial covert* wh-*scrambling respects island-boundaries*
       ... [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ she hired [$_{DP}$ the person [$_{CP}$ <a what> that runs **a what**]]]] ?

(55)   *Scrambling to a position that licenses pronunciation induces and island violation*
       *... [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **a what** ⟨$_{IP}$ ~~she hired [$_{DP}$ the person [$_{CP}$ that runs <a what>]]~~ ⟩]] ?
       ⌐————— Subjacency ———————————⌐

5.2   Intervention Effects

• **No Intervention Effects?**   The conventional wisdom is that single *wh*-in-situ configurations in English do not show intervention effects (Pires & Taylor 2009:11, (20), Beck & Reis 2018).

(56)   You think John does**n't** eat **what**?

• **Local Covert *Wh*-Scrambling**   The lack of intervention effects is consistent with the claim that the *wh*-constituent undergoes additional covert scrambling outside the scope of negation.

(57)   *Covert partial* wh-*scrambling avoids intervention effects*
       You think [$_{CP}$ <what> John does**n't** eat **what**] ?

• **Selective Sensitivity to Intervention.**   The bare *wh*-remnant of SLCs but not Sluicing selectively shows intervention effects.

(58)   *Intervention effects arise in SLCs with matrix but not tauto-clausal negation*

    a.   So, Phil did**n't** read one of the articles and
       Beth <u>thinks</u> [$_{CP}$ **which article**$_1$ ⟨ ~~Phil didn't read x_T~~ ⟩] ?

    b.   *So, Phil read one of the articles but
       Beth does**n't** <u>think</u> [$_{CP}$ **which article**$_1$ ⟨ ~~Phil read x_T~~ ⟩] ?

(59)   *No intervention effects arise in Sluicing constructions*

    a.   Phil didn't read one of the articles and
       Beth <u>asked</u> [$_{CP}$ **which article**$_1$ ⟨ ~~Phil didn't read x_T~~ ⟩]

    b.   Phil read one of the articles but Beth did**n't** <u>ask</u> [$_{CP}$ **which article**$_1$ ⟨ ~~Phil read x_T~~ ⟩]

• **SLCs are *Wh*-Scrambling.**   The bare *wh*-remnant in SLCs undergoes clause-bounded movement that is interpreted by a matrix $C^0_{[\sim Q]}$.

(60)   *Clause-bounded* wh-*scrambling escapes the scope of tauto-clausal negation*

   ... [$_{CP}$ $C^0_{[\sim Q]}$ Beth <u>thinks</u> [$_{CP}$ **which article** $C^0_{[-Q]}$ ⟨ ~~Phil didn't read~~ x ⟩]]

(61)   *Clause-bounded* wh-*scrambling cannot escape the scope of matrix negation*

   *... [$_{CP}$ $C^0_{[\sim Q]}$ Beth doesn't <u>think</u> [$_{CP}$ **which article** $C^0_{[-Q]}$ ⟨ ~~Phil read~~ x ⟩]]

• **Sluicing is *Wh*-Movement.**   The bare *wh*-remnant of canonical sluicing moves to a position local to its interpreting $C^0_{[+Q]}$.

(62)   Wh-*movement is interpreted by a local C^0 and avoids intervention from tauto-clausal negation*

   ... [$_{CP}$ $C^0_{[-Q]}$ Beth asked [$_{CP}$ **which article** $C^0_{[+Q,wh]}$ ⟨ ~~Phil didn't read~~ x ⟩]]

(63)   Wh-*movement is interpreted by a local C^0 and avoids intervention from matrix negation*

   ... [$_{CP}$ $C^0_{[-Q]}$ Beth didn't ask [$_{CP}$ **which article** $C^0_{[+Q,wh]}$ ⟨ ~~Phil read~~ x ⟩]]

6   Predicting *Wh*-Remnant Pseudogapping

• **Possible Overgeneration with VP-Ellipsis.**   Exceptionally high pronunciation of movement chains under ellipsis should be more widespread than it appears to be (Abels & Dayal 2022).

(64)   *So, Marcel can read the book and you think [$_{CP}$ **the what** Tina can [$_{vP}$ ⟨ ~~read~~ x ⟩]] ?

• ***Wh*-Remnant Pseudogapping.**   VP-Ellipsis does permit exceptionally high pronunciation, but necessarily at the edge of the predicate.

(65)   So, Marcel can read the book and you think [$_{CP}$ Tina can [$_{vP}$ **the what** ⟨ ~~read~~ x ⟩]] ?

• **Some Assumptions.**   This is an expected contrast given:

– *Successive-Cyclicity* : Scrambling moves successive-cyclically through Spec,*v*P.

   (66)   ... [$_{CP}$ **the what** $C^0_{[-Q]}$ Tina can [$_{vP}$ **the what** read **the what**]]]?
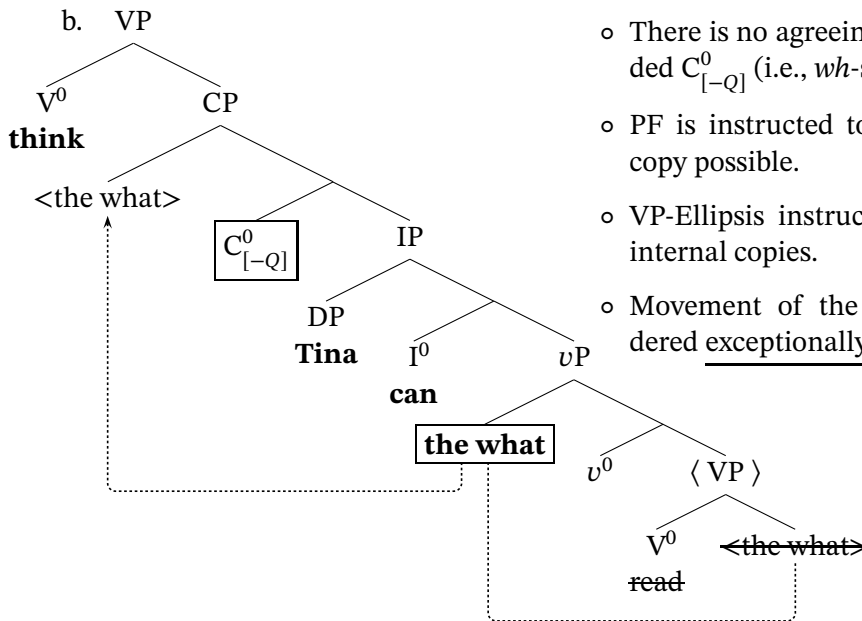
– *Predicate Ellipsis* : Predicate ellipsis, which derives pseudo-gapping constructions, deletes the VP.

   (67)   [$_{CP}$ Tina can [$_{vP}$ **the what** ⟨$_{VP}$ ~~read~~ x ⟩]]

• **Exceptionally Intermediate Pronunciation.**   VP-Ellipsis is expected to permit pronunciation in an intermediate Spec,vP position but not in the initial Spec,CP position.

– Wh-*Remnant Pseudogapping* : With a non-agreeing $C^0_{[-Q]}$, PF receives instruction to pronounce the lowest copy that is viable candidate for pronunciation given ellipsis.
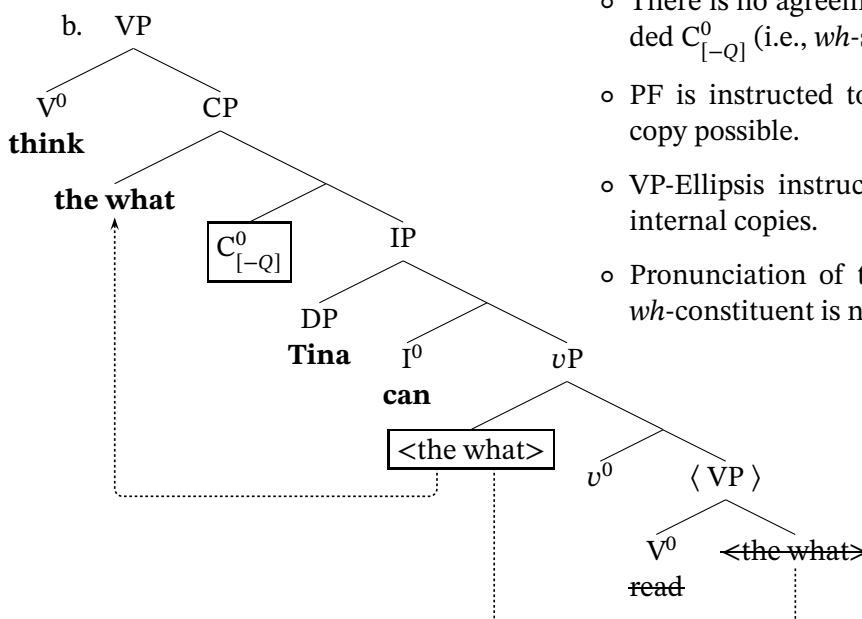
(68)   a.   ... and you think Tina can **the what**?

b.   VP tree:

- V^0 **think**
- CP
  - <the what>
  - C$^0_{[-Q]}$
  - IP
    - DP **Tina**
    - I^0 **can**
    - vP
      - **the what**
      - v^0
      - ⟨ VP ⟩
        - V^0 ~~read~~
        - ~~<the what>~~

○ There is no agreeing feature on the embedded $C^0_{[-Q]}$ (i.e., *wh*-scrambling).

○ PF is instructed to pronounce the lowest copy possible.

○ VP-Ellipsis instructs PF to delete all VP-internal copies.

○ Movement of the *wh*-constituent is rendered exceptionally overt in Spec,vP.

– *Sluicing-Like Construction* : With a non-agreeing $C^0_{[-Q]}$, PF cannot receive unambiguous instruction to pronounce the highest copy of the *wh*-constituent in Spec,CP.

(69)   a.   *... and you think **the what** Tina can?

b.   VP tree:

- V^0 **think**
- CP
  - **the what**
  - C$^0_{[-Q]}$
  - IP
    - DP **Tina**
    - I^0 **can**
    - vP
      - <the what>
      - v^0
      - ⟨ VP ⟩
        - V^0 ~~read~~
        - ~~<the what>~~

○ There is no agreeing feature on the embedded $C^0_{[-Q]}$ (i.e., *wh*-scrambling).

○ PF is instructed to pronounce the lowest copy possible.

○ VP-Ellipsis instructs PF to delete all VP-internal copies.

○ Pronunciation of the highest copy of the *wh*-constituent is not licensed.

• **Selective Intervention Again.**   Selective intervention effects suggests that syntactic movement still targets the edge of the embedded clause.

(70)   *Clause-bounded* wh-*scrambling escapes the scope of tauto-clausal negation*

So, Marcel ca**n't** read the book and
[$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ <the what> Tina can't [$_{vP}$ **the what** ⟨ ~~read <the what>~~ ⟩]]] ?

(71)   *Clause-bounded* wh-*scrambling cannot escape the scope of matrix negation*

*So, Marcel can read the book but
[$_{CP}$ C$^0_{[\sim Q]}$ you don't think [$_{CP}$ <the what> Tina can [$_{vP}$ **the what** ⟨ ~~read <the what>~~ ⟩]]] ?

7   Conclusion

• **Sluicing-Like Constructions in English.**   *Wh*-in-situ phenomena in English give rise to sluicing-like constructions.

(72)   A: Anne invited someone.

B: Yeah, and you think ⟨$_{IP}$ ~~Anne invited~~ ⟩ **who**?

• **Movement Plus Deletion.**   Bare *wh*-remnants are derived by way of a Move-and-Delete derivation (Ross 1969, Merchant 2001; though see Valmala 2007, Ott & Struckmeier 2018, and references).

> **Scramble-and-Delete**
> *Wh*-scrambling extracts the *wh*-remnant from an elided clausal constituent.

(73)   ... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who**$_1$ C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited x_1~~ ⟩]] ?

• **Ellipsis-Licensed Pronunciation.**   *Wh*-scrambling chains are exceptionally pronounced at the higher copy under ellipsis (Richards 1997, Temmerman 2013, Gribanova & Manetta 2016).

> **Exceptional Chain Realization**
> Covert partial *wh*-scrambling is pronounced exceptionally high in the context of ellipsis.

(74)   a.   Wh-*in-situ involves partial covert* wh-*scrambling*
    ... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ <~~who~~> C$^0_{[-Q]}$ Anne invited **who**]] ?

b.   *Partial* wh-*scrambling is rendered overt in the context of ellipsis*
    ... and [$_{CP}$ C$^0_{[\sim Q]}$ you think [$_{CP}$ **who** C$^0_{[-Q]}$ ⟨$_{IP}$ ~~Anne invited <who>~~ ⟩]] ?

• **The Lesson.**   Exceptional focus-driven movement is not the only analytic possibility for Move-and-Delete analyses faced with "immoveable" remnants.

> **Movement Revealed by Deletion**
> Otherwise covert movement of a constituent may be revealed by ellipsis.

Acknowledgements

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