“Silence is golden”

The syntax of ellipsis

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Yesterday's class

- Ellipsis is a mismatch between sound and meaning.

  → Important question: what is present in the syntax?

- Three possible analyses:

  ❶ WYSIWYG: no syntax at all
  ❷ proform analysis: a null proform
  ❸ deletion analysis: a full syntactic structure

- One of the most-used arguments for syntactic structure in the ellipsis site is extraction.
- (Islands: ellipsis repair effects)
- Reconciling proform and deletion:

  NCA vs sluicing, VP ellipsis
  donkey pronouns (and Danish *det*).

Overview

Class 1: "If you do not understand my silence, how will you understand my words?"

→ What is ellipsis and why study it?

Class 2: "Silence best speaks the mind."

→ Analyses for ellipsis

Class 3: "It's a great thing to know the season for speech and the season for silence."

→ Conditions on ellipsis

Class 4: "You have the right to remain silent."

→ The syntactic licensing of ellipsis

Class 5: "Nobody understands the silence of things."

→ VP ellipsis and other elliptical mysteries

“It’s a great thing to know the season for speech and the season for silence”

Seneca the Elder

EGG 2010

Class 3

Restrictions on ellipsis

Restrictions on ellipsis (1)

Two restrictions on ellipsis

1. Recoverability
2. Syntactic licensing

Restrictions on ellipsis (2)

❶ Recoverability

Ellipsis needs an antecedent; otherwise it is impossible for the hearer to interpret the ellipsis site.

(1) [uttered out of the blue]
*Jasmin has, too.

Restrictions on ellipsis (3)

(2) I found three old coins, and Oliver found two.

a. I found three old coins, and Oliver found two ~~old coins~~.

b.*I found three old coins, and Oliver found two ~~small sculptures~~.

Restrictions on ellipsis (4)

❷ Syntactic licensing

(Semantic) recoverability of the ellipsis site is not enough.

→ The syntactic environment also plays a role.

Restrictions on ellipsis (5)

→ Not all recoverable elements are elidable.

(3) a.*Ryan can make a good cocktail and Jasmin knows [$_{DP}$ ~~a good cocktail~~], too.

b.*It was painted, but it was not obvious that [$_{IP}$ ~~it was painted~~].

Restrictions on ellipsis (6)

→ Differences between languages in allowing ellipsis.

(4) Snoozy Suzy has danced the cha-cha-cha, but Foxy Freddy hasn't. (English)

(5)* Snoozy Suzy heeft de cha-cha-cha gedanst, maar Foxy Freddy heeft niet [$_{VP}$ ~~de cha-cha-cha gedanst~~]. (Dutch)

Snoozy Suzy has the cha-cha-cha danced but Foxy Freddy has not the cha-cha-cha danced

Restrictions on ellipsis (7)

Remember Rizzi (1986)?

Two conditions on empty elements

- Recovery condition: how traces, *pro*, ellipsis sites and PRO are identified.
- Formal licensing condition: Generalized ECP (Chomsky 1981)

Restrictions on ellipsis (8)

1. **Recoverability**
2. Syntactic licensing

Recoverability (1)

Where can you find an antecedent?

First hunch:
Preceding the ellipsis site, in the same sentence.

Recoverability (2)

! An antecedent can follow the ellipsis site, as long as it c-commands it.

Langacker (1966): Backwards anaphora constraint

An ellipsis can precede, but not c-command, its antecedent.

Recoverability (3)

Sluicing

(6) Although I don’t know who, I can hear someone is snoring.

VP ellipsis

(7) Although Gonzo doesn’t, Lola likes peas a lot.

Recoverability (4)

! An antecedent does not have to be contained in the same sentence as the ellipsis site: ellipsis can cross sentence (and speaker) boundaries.

(8) A: Do you take this woman to be your wedded wife, in sickness and in health, until death do you part?
B: I do.

Recoverability (5)

How do we know what ellipsis means?

1. Syntactically identical antecedent? (generally LF)
2. Semantically identical antecedent? (truth conditions)

→ How strict is the recoverability condition?

Recoverability (5)

1. Structural identity
2. Semantic identity
3. Voice mismatches

Recoverability: Structural identity (1)

Syntactic isomorphism condition:

Let E be a(n) LF phrase marker.
Then, E can be deleted only if there is a(n) LF phrase marker A, A distinct from E, such that A = E

(Fiengo & May 1994)

Recoverability: Structural identity (2)

(9) Snoozy Suzy can $[_A$ dance the cha-cha-cha], but Foxy Freddy can't $[_E$ dance the cha-cha-cha].

→ $[_A$ dance the cha-cha-cha] = $[_E$ dance the cha-cha-cha]

(9') Snoozy Suzy can $[_A$ dance the cha-cha-cha], but Foxy Freddy can't $[_E$].

Recoverability: Structural identity (3)

Arguments

- Sluicing doesn't allow for Voice mismatches:

(10)a. [$_A$ Someone murdered Joe], but we don't know who [$_E$ ~~t_{who} murdered Joe~~].

b. [$_A$ Joe was murdered by someone], but we don't know by who [$_E$ ~~Joe was murdered t_{by}~~ $\underline{\text{who}}$].

Recoverability: Structural identity (4)

→ Active antecedent, passive sluice

(11)a.*[$_A$ Someone murdered Joe], but we don't know by who [$_E$ ~~Joe was murdered $t_{by\ who}$~~].

→ Passive antecedent, active sluice

b.*[$_A$ Joe was murdered by someone], but we don't know who [$_E$ ~~t_{who} murdered Joe~~].

Recoverability: Structural identity (5)

- VP ellipsis doesn't allow for argument structure mismatches

(12) *Jeff was [reading a book] and Steve was [~~reading~~], too.

→ Truth conditionally, if you're reading a book, you're reading.

→ Structurally, however, a transitive VP differs from an intransitive one.

Recoverability: Structural identity (6)

Counterarguments

- VP ellipsis **does** allow for Voice mismatches:

→ Active antecedent, passive ellipsis clause

(13) The janitor should [$_A$ remove the trash] whenever it's apparent that it needs to be [$_E$ ~~removed~~].

Recoverability: Structural identity (7)

→ Passive antecedent, active ellipsis clause

(14) This problem was to have been [$_A$ looked into], but obviously nobody did [$_E$ ~~look into it~~].

No structurally identical antecedent!

Recoverability: Structural identity (8)

- Sluicing **does** allow for argument structure mismatches

(15) Jeff was [reading], but I don't know what [~~Jeff was reading t_{what}~~].

→ Antecedent is intransitive, ellipsis clause is transitive.

→ No structural identity

Recoverability: Structural identity (9)

- Vehicle change problem

Vehicle change (Fiengo & May 1994: 218)
Nominals can be treated as non-distinct with respect to their pronominal status under ellipsis.

[-pronominal] $=_e$ [+pronominal]
(where $=_e$ means "forms an equivalent class under ellipsis with")

Recoverability: Structural identity (10)

(16) a. They [arrested $Alex_i$], though he_i thought they wouldn't.

b. They [arrested $Alex_i$], though he_i thought they wouldn't arrest *$Alex_i$/him_i.

→ Because there are several ways to refer to the same referent, the R-expression in the antecedent can appear as a pronoun in the elided phrase.

→ The referent is just referred to by means of another 'vehicle'.

Recoverability: Structural identity (11)

→ Vehicle change was proposed as a solution, as a rescue for syntactic isomorphism

! However, this is not much more than a description of the problem, not really a solution.

Recoverability: Structural identity (12)

- Nonfinite verb forms

(17)a. [$_A$ Decorating for the holidays] is easy if you know how [$_E$ to decorate for the holidays].

b.*[$_A$ Decorating for the holidays] is easy if you know how [$_E$ decorating for the holidays].

→ Ellipsis:

(18) [$_A$ Decorating for the holidays] is easy if you know how [$_E$].

Recoverability: Structural identity (13)

- Categorial mismatches

(19) Susan is a great [$_A$ laugher] and when she does [$_E$], she gets cute wrickles around her eyes.

→ Elided VP takes a noun as its antecedent.

Recoverability (4)

1. Structural identity
2. Semantic identity
3. Voice mismatches

Recoverability: Semantic identity (1)

Semantic identity:

An ellipsis site must be *semantically* recoverable: it does not have to the exact same syntactic structure as its antecedent, but it has to have the same meaning, i.e. truth conditions.

Recoverability: Semantic identity (2)

Interaction between recoverability and syntactic structure in the ellipsis site:

		Recoverability condition?	
		syntactic	semantic
Syntactic structure?	yes	Fiengo & May	Merchant (2001)
	no	----------	Hardt (1993)

Recoverability: Semantic identity (3)

Hardt (1993):

A semantic condition on recoverability

No syntactic structure in ellipsis site

Hardt (1993: 45-6):

An elliptical VP is represented as a property variable that is bound in the discourse.

Recoverability: Semantic identity (4)

(20) {<P, def>} (P = property)

Antecedent VP = *indef* (≈ indefinite DP)

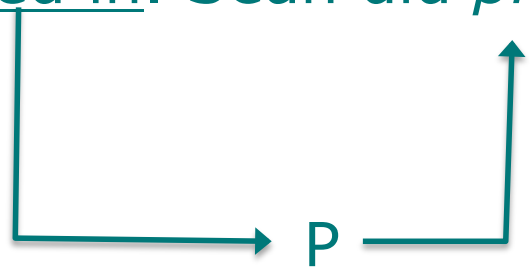
→ It adds the VP meaning to the discourse

Elided VP = *def* (≈ pronoun)

→ It selects the relevant meaning from the discourse

Recoverability: Semantic identity (5)

(21) Harry walked in. Sean did *pro* too.



→ No structure in the ellipsis site, so it cannot be syntactically identical to the antecedent.

Recoverability: Semantic identity (5b)

An elliptical VP is represented as a property variable:

{<P,def>}:P

The semantics for the auxiliary “do” is:

“do” { }: λ P.PRESENT(P)

Recoverability: Semantic identity (5c)

"John walked. Bill did too."

The semantic representation for the VP "walk" is:

"walk" {<indef>} : λx.walk(x)

The indef assumption is discharged, adding this object to the discourse model:

{ } : λx.walk(x)

We continue the derivation of the sentence, arriving at:

PAST(walk(John))

Recoverability: Semantic identity (5d)

→ The elliptical VP in "Bill did P too." is represented as:

P {< P,def >} :P

Next, the def assumption is discharged, and P is replaced with the stored property:

P { } : λx.walk(x)

This is combined with the subject:

Bill P { } :walk(Bill)

This is then combined with "did":

Bill did P { } :PAST(walk(Bill))

Recoverability: Semantic identity (6)

Merchant (2001):
A semantic condition on recoverability
Syntactic structure in ellipsis site

Semantic recoverability based on a focus condition

→ Focus condition on ellipsis:
An XP α can be elided if α is e-GIVEN.

Recoverability: Semantic identity (7)

E-GIVENness (Merchant 2001: 31):

An expression E counts as e-given iff E has a salient antecedent A and,

(i) A entails the F-closure of E, and

(ii) E entails the F-closure of A.

F-closure (Merchant 2001: 14):

The F-closure of α, written F-clo(α), is the result of replacing F(ocus)-marked parts of α with ∃-bound variables of the appropriate type.

Recoverability: Semantic identity (8)

(22) Sally called Steve an idiot after Susan did.
a. …after Susan did ~~call Steve an idiot~~.
b.*…after Susan did ~~insult Steve~~.

(23) $VP_A' = \exists x.x$ called Steve an idiot

(24) a. F-clo(VP_{Ea}) = $\exists x.x$ called Steve an idiot
b. F-clo (VP_{Eb}) = $\exists x.x$ insulted Steve

→ VP_A entails both F-clo(VP_{Ea}) and F-clo(VP_{Eb})

Recoverability: Semantic identity (9)

(25) a. VP_{Ea}' = ∃x.x called Steve an idiot
b. VP_{Eb}' = ∃x.x insulted Steve

(26) F-clo(VP_A) = ∃x.x called Steve an idiot

→ VP_{Ea} entails F-clo(VP_A)

→ VP_{Eb} does not entail F-clo(VP_A): insulting someone does not entail that you call them an idiot.

Antecedent and ellipsis site have to mutually entail each other.

Recoverability: Semantic identity (10)

Arguments

- VP Voice mismatches
- Sluicing argument structure mismatches
- Vehicle change
- Non-finite verb forms
- Categorial mismatches

Recoverability: Semantic identity (11)

Vehicle change

(27) a. They arrested Alex$_i$, though he$_i$ thought they wouldn't.

b. …he$_i$ thought they wouldn't [arrest him$_i$].

→ [arrested Alex$_i$] mutually entails [arrest him$_i$]

Recoverability: Semantic identity (12)

Counterarguments

- Ban on sluicing Voice mismatches
- Ban on VP argument structure mismatches

Recoverability: Semantic identity (13)

Sluicing Voice mismatches:

(28) *Someone murdered Joe, but I don't know by who.

→ [x murdered y] mutually entails [y was murdered by x]

→ Semantic identity condition rules this in.

Recoverability: Semantic identity (14)

Mismatches: problem for both approaches

Another problem for both syntactic and semantic approach:

Non-linguistic antecedents

(29) (Jen and Morris are both looking at a man standing on the roof of a high building, ready to jump. Jen shouts:)
Don't $[_E\ ]$.

Recoverability: Semantic identity (15)

Possible solutions:

- Implicit semantics
- Ellipsis of a light verb plus a dummy pronoun: [do it] (Merchant 2004)

→ Fairly ad hoc

→ Controversial data

Recoverability (5)

1. Structural identity
2. Semantic identity
3. Voice mismatches

Recoverability: Voice mismatches (1)

Recall this puzzle:

Sluicing does not allow for Voice mismatches:

(30) *Someone murdered Joe, but I don't know by who [~~Joe was murdered $t_{\text{by who}}$~~].

VP ellipsis does allow for Voice mismatches:

(31) The janitor takes out the trash whenever it is apparent that it should be [~~taken out~~].

Recoverability: Voice mismatches (2)

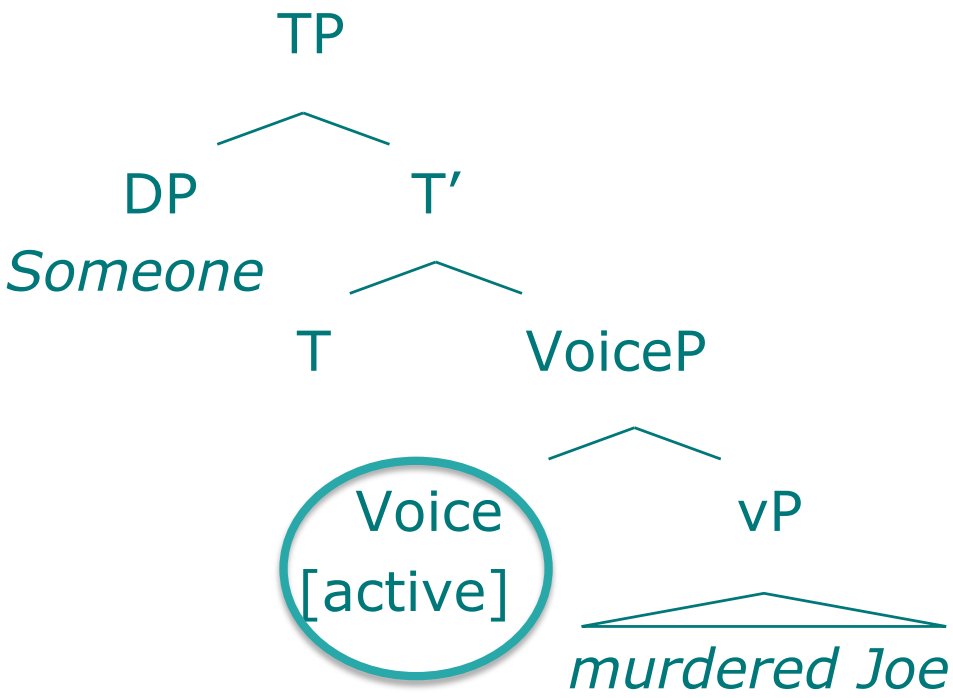
Merchant's solution (Merchant 2007, 2008):
The availability of Voice mismatches depends on the size of the ellipsis site.

Sluicing = high ellipsis

→ Voice head is included and cannot differ from Voice in the antecedent.

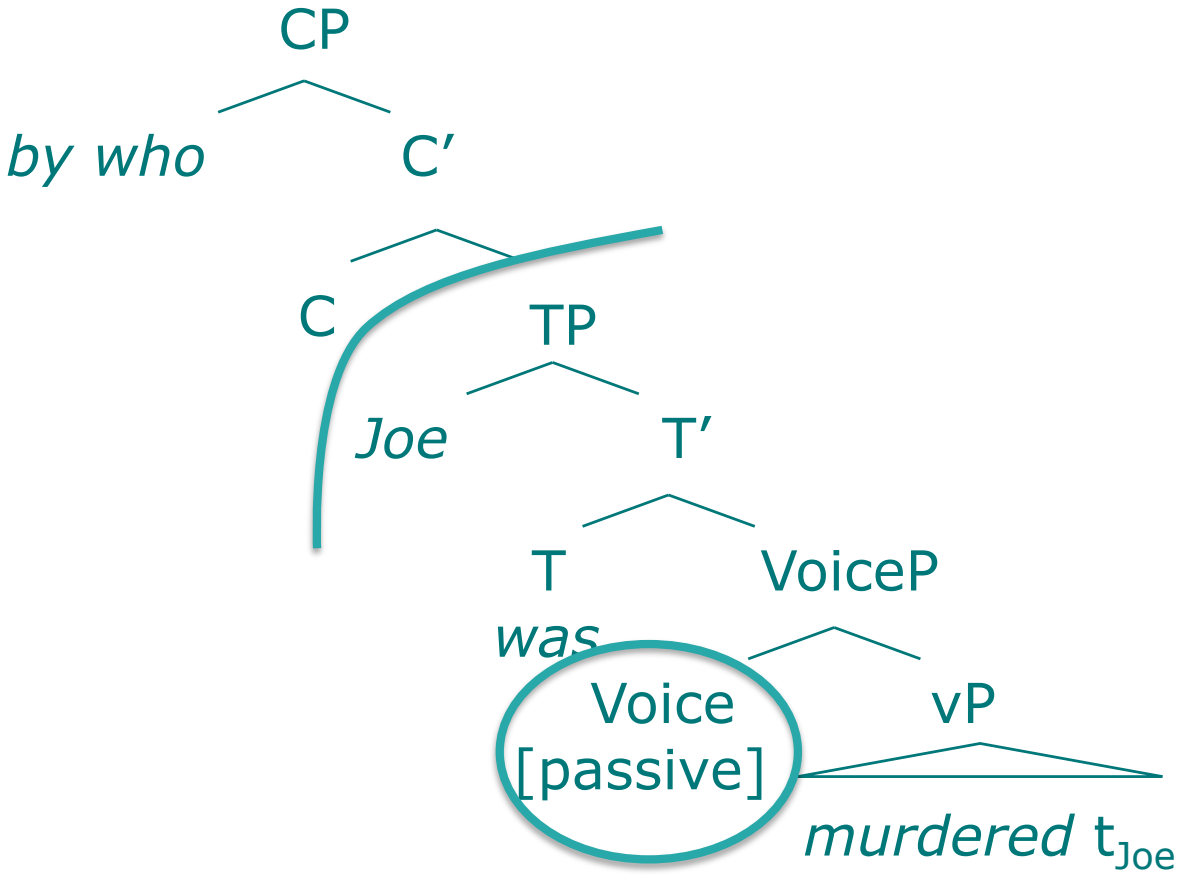
Recoverability: Voice mismatches (3)

Someone murdered Joe…



Recoverability: Voice mismatches (4)

*but I don't know by who [~~Joe was murdered $t_{by\ who}$~~].



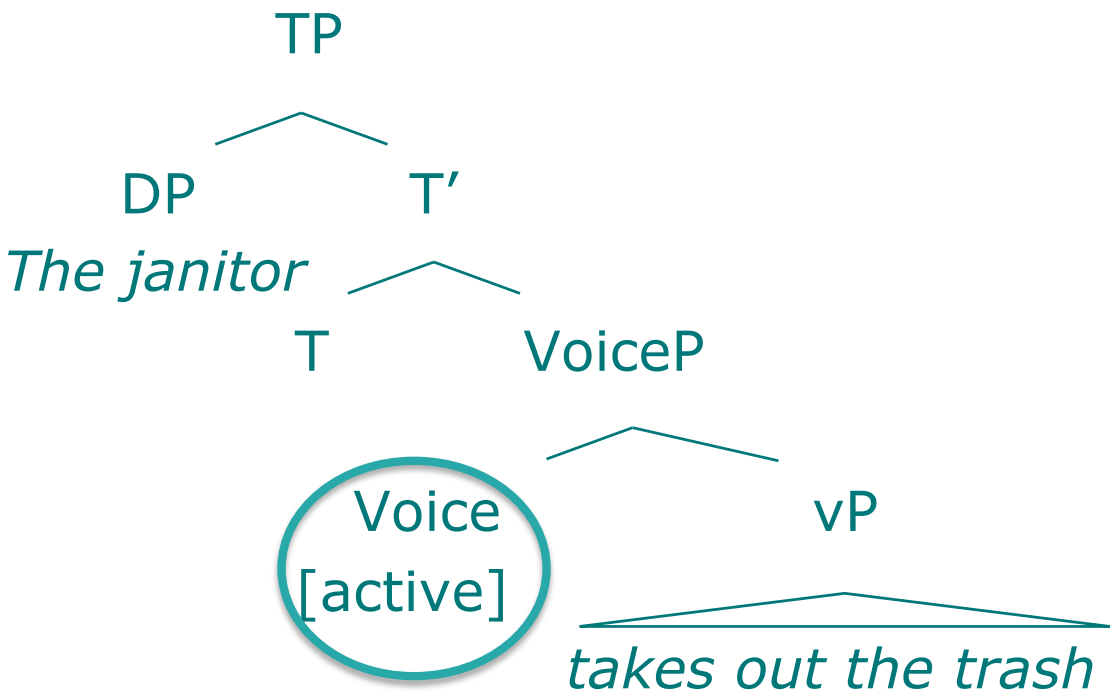
Recoverability: Voice mismatches (5)

VP ellipsis = low ellipsis

→ Voice head is not included and can hence differ from Voice in the antecedent.

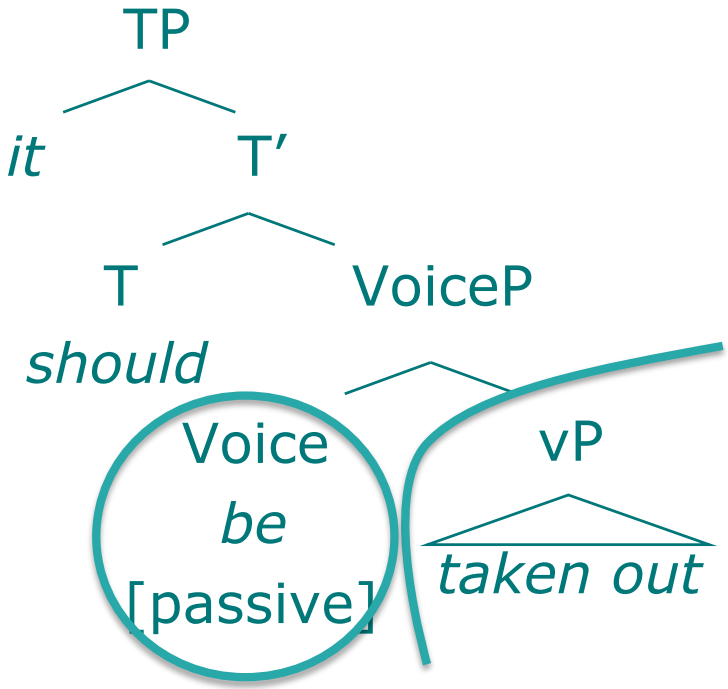
Recoverability: Voice mismatches (6)

The janitor takes out the trash…



Recoverability: Voice mismatches (7)

…it should be [~~taken out~~].



Recoverability: Voice mismatches (8)

! This solution implies that the recoverability condition on ellipsis is syntactic.

Restrictions on ellipsis (9)

1. Recoverability
2. **Syntactic licensing**

Syntactic licensing (1)

Even with a syntactically identical antecedent, not all ellipses are possible.

→ Ellipsis needs to be licensed in the syntactic structure.

Syntactic licensing (2)

Sluicing: only a specific set of IPs can be elided.

(24)a. Someone was singing, but I don't know who [t_{who} ~~was singing~~].

b. The cat broke something, but it's not clear what [~~the cat broke~~ t_{what}].

c. She was talking to someone, but I couldn't see (to) who [~~she was talking~~ $t_{(to)\ who}$].

d. He really wanted to go outside, but it's a mystery why [~~he really wanted to go outside~~ t_{why}].

Syntactic licensing (3)

Not without a *wh* element:

(25)a.*It was painted, but it wasn't obvious that [~~it was painted~~].

b.*I wanted her to live, but for [~~her to live~~] would be a miracle.

c.*The octopus predicted that Spain would win, but no-one knew for sure yet if/ whether [~~Spain would win~~].

Syntactic licensing (4)

Not in relative clauses or clefts:

(26)a.*Someone was singing, but I couldn't find the person who [~~was singing~~].

b.*She said Jeff asked for her phone number, but it was Patrick who [~~asked for her phone number~~].

→ (English) Sluicing is only allowed in *wh* questions

Syntactic licensing (5)

NP ellipsis:

(27)a. Jeff's alibi was much more credible than Steve's [~~alibi~~].

b. The bands at this festival are very diverse. Some [~~bands~~] play reggae, but many more [~~bands~~] play rock. Several [~~bands~~] are difficult to class with a musical style.

Syntactic licensing (6)

(28)a.*The alibi that Jeff gave was much more credible than the [~~alibi~~] that Steve gave.

b.*The smaller festivals are more fun than the big [~~festivals~~].

c.*A small festival is more fun than a big [~~festival~~].

d.*This festival is more fun than that [~~festival~~].

→ (English) NP ellipsis is only allowed with possessors, quantifiers and plural demonstratives.

Syntactic licensing (7)

VP ellipsis

(29)a. I wear colors and he does [~~wear colors~~], too.

b. I visited Romania and you should [~~visit Romania~~], too.

c. She said she wasn't sleeping, but she might have been [~~sleeping~~].

d. They'd eaten already, but I hadn't [~~eaten~~].

e. You shouldn't play with rifles, because it's dangerous to [~~play with rifles~~].

Syntactic licensing (8)

(30)a.*That student looks rather tired, and those students seem [~~tired~~], too.

b.*First fire began pouring out of the building, and then smoke began [~~pouring out of the building~~].

c.*You shouldn't play with rifles, because to [~~play with rifles~~] is dangerous.

→ (English) VP ellipsis is only allowed with a finite auxiliary or the infinitival marker *to*.

Syntactic licensing (9)

Several accounts for syntactic licensing:

- Lobeck (1995)
- Merchant (2001)
- Gengel (2007)/Gallego (2009)

Syntactic licensing (10)

Lobeck (1995) – proform approach:

An empty, non-arbitrary pronominal must be properly head-governed, and governed by an X specified for strong agreement.

→ ECP + strong agreement

↳ licensing

↳ identification

Syntactic licensing (11)

An X is specified for strong agreement iff X, or the phrase or head with which X agrees, morphologically realizes agreement in a productive number of cases.

→ Strong agreement in NP: [+poss] or [+plural]
Strong agreement in INFL: [(+Agr), +tense]
Strong agreement in COMP: [+WH]

Syntactic licensing (12)

VP ellipsis: licensed by strong agreement in I

→ Auxiliaries, modals, infinitival *to*, dummy *do* all sit in I in English: strong agreement

→ English main verbs don't raise to I: no strong agreement

Syntactic licensing (13)

Problem:
German, Dutch and French (and many other languages) have richer morphological agreement on finite verbs than English, and their main verbs also raise to I (Emonds 1976,1978; Pollock 1989).

→ Lobeck's theory predicts these languages to have VP ellipsis with all verbs.

→ In fact, these don't have VP ellipsis at all!

Syntactic licensing (14)

Merchant (2001):

Minimalist approach to ellipsis licensing

→ No notion of government anymore

→ E(llipsis)-feature

Syntactic licensing (15)

E-feature for sluicing:

(31) a. The syntax of $[E]_S$:

$E_{[u\text{wh}^*,\ u\text{Q}^*]}$

b. The phonology of [E]:

$\varphi_{IP} \rightarrow \emptyset$ / E_

c. The semantics of [E]:

$[\![E]\!] = \lambda p$: e-GIVEN(p) [p]

Syntactic licensing (16)

The syntax of $[E]_S$: $E_{[uwh^*,\ uQ^*]}$

= The [E]-feature for sluicing needs a [wh, Q] head to check its strong uninterpretable features.

= The [E]-feature for sluicing can only occur on the C head we find in constituent questions.

→ Sluicing is only possible in *wh* questions

Syntactic licensing (17)

The phonology of [E]: $\varphi_{IP} \rightarrow \emptyset$ / E_

= the phonological representation of the material dominated by the IP node (φ_{IP}) is null when it follows an [E]-feature.

= a familiar kind of morphologically triggered syncope: the morphological trigger is E and the syncopated element is TP.

→ The non-pronunciation is entirely controlled by the *actual* phonology

Syntactic licensing (18)

The semantics of [E]: ⟦E⟧ = λp: e-GIVEN(p) [p]

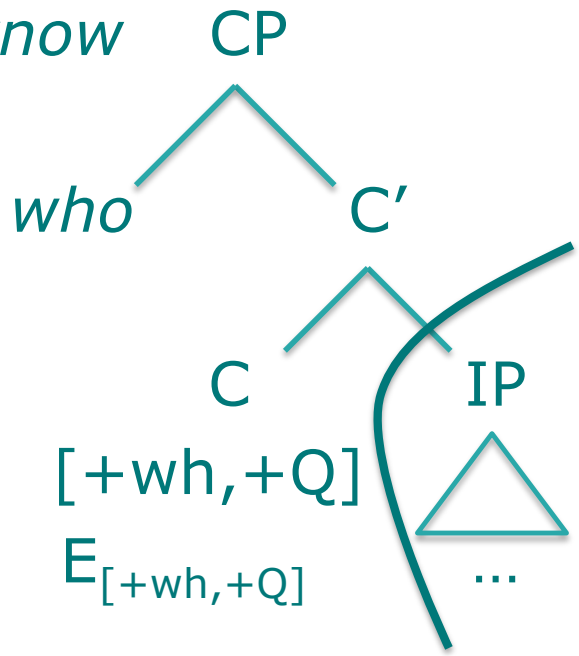
= [E] can only occur on a constituent p if p is e-GIVEN.

→ See recoverability condition

Syntactic licensing (19)

(32) Someone was singing, but I don't know who.

…, *but I don't know*



Syntactic licensing (20)

Gengel (2007)/Gallego (2009):
Ellipsis licensing and phases

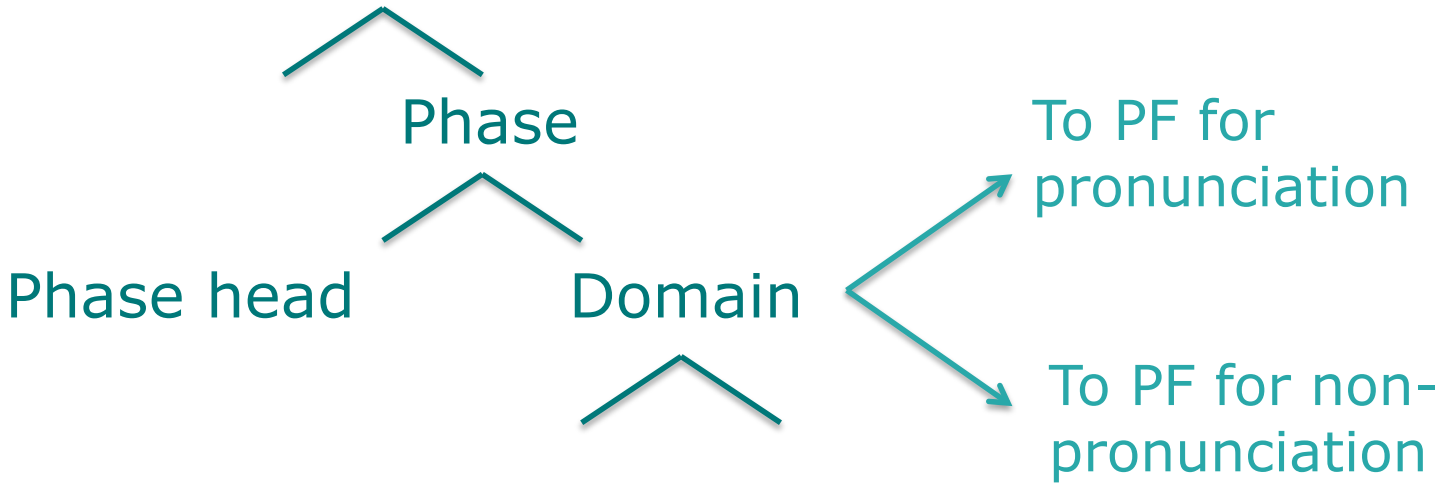
Ellipsis is licensed by phase heads.

Phase Theory:
A phase head sends off its domain (i.e. its complement) to PF for Spell-Out.

Syntactic licensing (21)

Ellipsis and phases

→ A phase head can send off its domain to PF for pronunciation **or for non-pronunciation.**



Syntactic licensing (22)

Head-complement relation in ellipsis

→ The ellipsis site is the phasal domain.

Sluicing: IP ellipsis

= ellipsis of the domain of the C phase head

NP ellipsis:

= ellipsis of the domain of the D phase head

Syntactic licensing (23)

VP ellipsis:

= ellipsis of the domain of the v phase head

! Discussion on whether VP ellipsis deletes the VP or the vP.

→ Consequences for Phase Theory:

Voice might be the clause-internal Phase head instead of v.

Syntactic licensing (24)

Class 4: counterargument against this approach

→ Ellipsis and non-ellipsis behave differently when it comes to extraction possibilities.

→ This is unexpected if ellipsis is just non-pronunciation at Spell-out.

Condition on ellipsis: Summing up

- Ellipsis is subject to two restrictions:
  - ❶ recoverability
  - ❷ syntactic licensing

- Recoverability can be syntactic or semantic.
  Syntactic: Fiengo & May (1994)
  Semantic: + proform → Hardt (1993)
  + syntactic structure → Merchant (2001)

- Syntactic licensing:
  Lobeck (1995): Strong agreement
  Merchant (2001): [E]-feature
  Gengel (2007)/Gallego (2009): Phases and ellipsis

“Silence is golden”

The syntax of ellipsis

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