Lack of ambition as explanation, when a clause is reduced David Pesetsky (MIT)

Topic:

- Two situations in which otherwise overt syntactic material goes unpronounced— seemingly with semantic consequences...
- ... where good explanations for the failure to pronounce and good explanations for the semantic consequences embroil us in paradox on standard approaches to explaining such things.

Proposal:

• Resolve the paradox by attributing the semantic consequences not to properties of the speaker's syntactic derivation, but to restrictions on the hearer's ability to reverse-engineer a speaker's derivation that contains unpronounced material.

The two situations:

• English AUX-drop questions and infinitival complements (from an Exfoliation perspective)

1. The AUX-drop paradox (Fitzpatrick 2006)

AUX-drop construction = yes/no question missing an auxiliary verb

(1) English AUX-drop

- a. Anybody want a coffee?
- b. Anyone seen John today?
- c. Anybody going to the game?d. Anybody accused of a crime today?
- (= Does anybody want a coffee?)
- (= Has anyone seen John today?)
- (= Is anybody going to the game?)
- (= Was anybody accused of a crime today?)

Analysis according to Fitzpatrick (2006): part 1

An AUX-drop clause is generated as a full CP in which an auxiliary verb moves from T to C.

• Evidence that it is at least as large as TP ...

(2)	a.	Anybody not like the movie?	(may contain negation)
	b.	Everyone probably coming tomorrow	(may contain high adverbs)
	c.	He here yet?	(subject is NOM; *Him here yet?)

• ... and at least as large as CP...

- (3) T-to- $C \rightarrow C$ must be adjacent to subject...
 - a. *Is finally everyone aware of the problem?
 - b. *Does coffee John drink (rather than tea)?
 - c. *Why are suddenly you going to the game?

... not true in non-T-to-C questions...

- d. I wonder if finally everyone is aware of the problem,
- e. I wonder whether coffee John drinks (rather than tea).
- f. How come suddenly you are going to the game?

...but true of AUX-drop (if it involves T-to-C, despite appearances)

- g. *Finally everyone aware of the problem?
- h. *Coffee John drink?
- i. *Really you going to the game?

• ... shown also by semantics supplied by elements of the C-system

(4) **NPI licensing**

- a. *in normal T-to-C yes/no question* Did anyone see that movie?
- b. *in* AUX-*drop yes/no question* Anyone see that movie?
- c. *not in declarative* *Anyone saw that movie.

(5) **Full CP alternatives**

a. *in normal T-to-C yes/no question* Did you give your talk or didn't you?

b. *in* AUX-*drop yes/no question* You give your talk or didn't you?

(6) Antecedent for Null Complement Anaphora of a *whether* question

- a. You giving your talk at BCGL, or don't you know yet Δ ?
- b. A: Anyone want coffee? B: I'll find out Δ .

Analysis according to Fitzpatrick (2006): part 2

• Source of AUX-drop:

Optional non-interpretation by the phonology of the root CP layer of a fully built syntactic structure.

• Why this makes sense:

Under the model of phase-by-phase interpretation proposed by Chomsky (2001), merger of a phrase head triggers phonological interpretation of the *phase head's complement*.

This requires a *special clean-up rule* to interpret root C and its specifiers.

Fitzpatrick: The clean-up rule is optional.

Alternatives that are just as good, for our purposes: Interpretation is free to stop short of the root for some other reason (cf. Rizzi *passim*. on truncation)

• Evidence that phonological interpretation skips only the root CP

- (7) No AUX-drop of an in situ auxiliary
 - a. *It given me a headache.

(cf. It has given me a headache.)

b. *I wonder whether Bill writing a letter. (cf. ... whether Bill is writing a letter.)

(8) No AUX-drop in counterfactual inversion

- a. Had you written a better speech, Sue would probably have won the election.
- b. *You written a better speech, Sue would probably have won the election.

(9) No AUX-drop in embedded question with T-to-C takes place

- a. Each actress wanted to know had she been chosen for the part. (cf. McCloskey 2006)
- b. *Each actress wanted to know she been chosen for the part.

What about semantic interpretation?

Analysis according to Fitzpatrick (2006): part 3

Semantic interpretation goes hand in hand with phonological interpretation (Chomsky's 2004 rule of TRANSFER)— so absence of phonological interpretation for the root CP layer entails absence of semantic interpretation.

Evidence: Emergence of the *factative effect* (Welmers 1973, Déchaine 1991) in AUX-drop construction — otherwise seen cross-linguistically in certain types of tenseless clauses.

(10) Factative effect

- \circ Predicate is non-eventive \rightarrow tense is understood as PRESENT
- \circ Predicate is eventive \rightarrow tense is understood as PAST (unless habitual/iterative)

(11) Factative effect: Haitian Kreyòl

- a. eventive → past
 Pyè vann bèf yo.
 Pyè sell cattle DET
 'Pyè sold the cattle.'
- b. non-eventive → present
 Sisi renmen chat mwen.
 Sisi like cat my
 'Sisi likes my cat.'

(12) Factative effect: English AUX-drop

- a. eventive→past
 You sell that car?
 'Did you sell that car?'
- b. non-eventive→present
 You like my house?
 'Do you like my house?'

The contradiction:

- On the one hand, the emergence of the factative effect shows that AUX-drop has a semantic consequence also seen in constructions lacking tense for other reasons
 → support for Chomsky's unified TRANSFER plus its optionality at the root.
- But on the other hand, the evidence for generating a full root CP in the first place in an AUXdrop construction included semantics of the unpronounced root CP layer!



(A contradiction acknowledged by Fitzpatrick, p. 422)

2. Resolving the AUX-drop contradiction

- Logic of a solution: two different senses of "semantically interpret".
 - (i) Failure of phonological interpretation does *not* entail failure of semantic interpretation internal to the speaker's syntactic derivation, i.e. mapping to LF (and thence to semantics). Chomsky's TRANSFER hypothesis is wrong.

Phonological interpretation of the root CP can be suppressed, just as Fitzpatrick suggests. Semantic interpretation, however, applies to the entire structure, including the root CP and cannot be suppressed.

(ii) However: suppression of phonological interpretation does have consequences for semantic interpretation of a speaker's utterance by a *hearer*, i.e. the process by which a hearer of an speaker's utterance *reverse engineers* the speaker's derivation that yielded that utterance.

When a speaker's syntactic derivation included items that are left unpronounced, what does the hearer posit as the identity of these items when reverse-engineering that derivation?

• **Proposal:** The reverse-engineering process must be semantically **unambitious** — positing as little semantics as possible that is not unambiguously reconstructable from the input provided by the speaker.

(13) Principle of Unambitious Reverse Engineering (PURE) When determining the identity of unpronounced material in the course of reverse-engineering a speaker's syntactic derivation, the language system of the hearer considers only the *minimally semantically contentful possibilities* compatible with the morphosyntactic environment.

Similar to the much-debated principle of Recoverability of Deletion (Chomsky 1964, 41; Katz and Postal 1964, 79ff) — now viewed as an extra-derivational property of the language system of the hearer attempting to parse input from a speaker and reverse-engineer the derivation that produced it.

• The phrase "*language system of the hearer*" — worded to emphasize that the discussion does not concern conscious decisions of the hearer, but rather the automatic behavior of the cognitive systems that parse linguistic input, determine its meaning, and communicate with other cognitive systems.

Also: a speaker engages in **self-monitoring**, acting as both speaker and hearer (cf. Gollum). So the term *hearer* as used here is an emphatically abstract concept.

For example...

• Fitzpatrick notes that AUX-drop is impossible when the auxiliary is "semantically contentful", giving modals as an example.

(14) No modal AUX-drop

- a. Anyone pick up John at the airport. *impossible with the meaning* 'Can anyone pick up John at the airport?'
- b. Anyone play the piano at the party tomorrow? *impossible with the meaning* 'Will anyone play the piano at the party tomorrow?'
- Where the hearer must posit an auxiliary verb in C, a semantically contentless supportive *do* counts as "minimally semantically contentful" and "compatible with the morphosyntactic environment". A modal such as *can* or *will* is not semantically minimal.

As a consequence, PURE guides the hearer to posit a suppressed form of *do* and prevents the positing of a suppressed modal.

• Promissory note: compatibility of yes/no question interpretation of the root CP with PURE

The factative effect

- When it is necessary to reverse-engineer a derivation in which a tensed but unpronounced auxiliary verb has raised to C, PURE requires the hearer to unambitiously posit a semantically minimal specification for the auxiliary and its tense features.
- Why should PAST qualify as a minimally contentful tense for an eventive predicate, while only PRESENT counts as minimally contentful for a non-eventive predicate?

PRESENT: bound to the utterance time, thus a ubiquitous component of the "morphosyntactic environment" of any utterance, licensing the hearer to posit PRESENT as the tense specification of a silenced T, in keeping with PURE.

PAST: adds anteriority to the meaning of PRESENT, and thus qualifies as less minimally semantically contentful. PURE therefore prevents the hearer's parser from positing PAST with a non-eventive predicate — all things being equal.

This derives the obligatorily PRESENT interpretation of an AUX-drop clause with a non-eventive predicate.

• Why then should an eventive predicate license the positing of PAST by the hearer as the tense of the speaker's derivation that is being reverse-engineered?

Eventive predicates are incompatible in English with simple PRESENT (unless coerced into a habitual or generic use). [Store this fact, important later.]

(15) Present tense incompatible with eventive predicates (unless coerced)

- a. *Mary sings in the shower now. / *Alice reads a book now. / *Bob sells that car now. [unless habitual]
- b. Sue owns a car now. / John like my cat now. / Bill knows German now. etc.
- Proposal:

It is precisely because of the incompatibility of the English PRESENT with an eventive predicate that PURE permits the hearer to posit an underlying PAST — in an AUX-drop construction where the unpronounced auxiliary in C is *do* and the main predicate is eventive.

PAST is the least semantically contentful option for T compatible with that morphosyntactic environment.

Summary:

- Following Fitzpatrick: AUX-drop arises from phonological non-interpretation of the root CP layer, possibly for exactly Fitzpatrick's reasons.
- **Deviating from Fitzpatrick:** Semantic interpretation is "top to toe", and may not be suppressed in the root CP layer.
- **PURE:** Restricts hearer's options when positing an identity for derivationally present but phonologically uninterpreted material

PRESENT is the most minimal assumption about tense unless it is incompatible with the predicate that it embeds — in which case PAST is a possible assumption.

3. An Exfoliation puzzle: a missing derivational opacity argument

Derivational theory of infinitivization (Pesetsky 2019)

The proposal:

- All embedded clauses are generated by the syntax as full and finite CPs. (Caveat: not discussing Restructuring pretend it does not exist for today.)
- Infinitival clauses result from a rule of Exfoliation: which strips away the outer layers of a finite CP, leaving behind an infinitival clause under very specific circumstances...

... namely, when a probe external to CP finds a goal internal to that CP that does not occupy its edge.

Exfoliation eliminates as many clausal layers as necessary to place that goal at the edge of what remains, so it can interact with that probe.

When the subject of an embedded clause occupies the specifier of *to*P (assumed to be below TP), and is contacted by a clause-external probe, the result is an infinitival clause:

(16) Exfoliation



Arguments for the proposal

Argument type #1: Paradigms of infinitival acceptability

(effects traditionally attributed to special case properties of infinitival subjects)

Argument type #2: Unification with complementizer-trace effects

(17) Complementizer-trace effects

- a. Who do you think (that) Sue met ?
- b. Who do you think (*that) ____ met Sue?

(18) **Exfoliation of only CP layer**



 \rightarrow *Argument type #3: Derivational opacity*

- NOM case outlives the deletion-by-Exfoliation of its finite T assigner
- (19) NOM object, which correlates with agreement in finite clause... (Icelandic)
 - a. Barninu batnaði veikin.
 the.child.DAT recovered.from.3sG the.disease.nom
 'The child recovered from the disease.'
 - b. Barninu bötnuðu veikirnar.
 the.child.DAT recovered.from.3PL the.diseases.NOM
 'The child recovered from the disease.'

... is retained in a non-finite Raising-to-Object (ECM) clause... (Icelandic)

c. Læknirinn_i telur barninu (í barnaskap sínum_i) batnaði veikin. the.doctor.NOM believes the.child.DAT (in foolishness his) recovered.from.INF the.disease.**NOM** 'The doctor_i believes the child (in his_i foolishness) to have recovered from the disease.'

(Defuses well-known arguments against associating NOM with finite T in the first place.)

(20) ...and shows the Anaphor Agreement Effect, despite the absence of visible Agreement

*Ég tel Maríu leiðast sig.
I believe Maria.DAT find.boring.INF REFL.NOM
Intended: 'I consider Maria to find herself boring.'

• Evidence that dovetails with Sheehan and Hartmann's talk yesterday.

The Exfoliation puzzle

• **The puzzle:** Why do we lack a derivational opacity argument for the *semantics* of finite clauses comparable to the argument summarized above from case and agreement-related phenomena?

Infinitival clauses are extremely restricted in their semantic possibilities (at least in English) — and certainly do not range freely over the possibilities available to finite clauses.

4. A reverse engineering resolution of the Exfoliation puzzle

our point of departure:

Wurmbrand (2014): English infinitival complements are deeply tenseless.

• **Proposal:** Reinterpret Wurmbrand's evidence reaching a different conclusion:

Speaker-side: In principle, Exfoliation may form an infinitive from a finite clause that contains *any* kind of tense or modal. In principle, *speaker's derivations* that yield infinitives do range freely over the tense and modal possibilities available to finite clauses...

Hearer-side: ... but PURE restricts the ability of the *hearer's language system* to posit all but the most minimal tenses and modals compatible with their environment as the pre-Exfoliation contents of T when attempting to reverse-engineer the speaker's derivation.

This is the source of our sense that infinitival clauses are inherently restricted in the tense and modal specifications that they can express. • Strategies of argumentation

Wurmbrand: The behavior of future and propositional infinitives cannot be exclusively identified with any single value that tense may bear in a corresponding finite clause. These complements do display behavior consistent with tenselesness

 \rightarrow they are deeply tenseless.

Alternative: The behavior of future and propositional infinitives may be identified with the *union* of behaviors expected from all the *semantically minimal* values for tense that a hearer can posit when *unambitiously* reverse-engineering the pre-Exfoliation portion of the speaker's derivation (as required by PURE).

 \rightarrow they are not deeply tenseless

So in a sense, we do have derivational opacity for tense semantics — since the tense interpretation of an infinitive does reflect the pre-Exfoliation tense properties of a T that is later deleted (a fact obscured by the severe restrictions imposed on the hearer by PURE).

• **Remaining puzzle:** This will leave us with one apparent discrepancy between the outcome of PURE for AUX-drop and its outcome for infinitivization — but this discrepancy follows from the difference between (1) non-pronunciation of syntactically present structure (AUX-drop, following Fitzpatrick), and (2) actual deletion of syntactic structure by Exfoliation.

5. Future infinitives

Background

- (21) Future infinitives (cf. embedded tense contrast with matrix PAST)
 - a. Yesterday, Mary wanted/needed John to leave tomorrow.
 - b. Yesterday, Mary decided/wanted/planed to leave tomorrow.

(W 408, adapted from ex.(6))

(22) Decomposition of English will and would a. will = woll + PRESENT b. would = woll + PAST

• Wurmbrand's questions:

Can we identify the tense of future infinitives with will? (No.) What about would? (No.)

Future infinitive ≠ will

(23) *Will* \rightarrow absolute future | Future infinitive \rightarrow relative future

- a. Sue decided a week ago [that she will go to the party (*yesterday)]
- b. Sue decided a week ago [to go to the party yesterday].
- Wurmbrand's conclusion about (23): Relative future is a reasonable interpretation for tenseless *woll* in the embedded clause of (23) but not an interpretation available to tensed *will*. An argment for tenselessness.

But note:

Substituting would for will in (23a) yields the relative future reading of the future infinitive.

(24) Sue decided a week ago [that she would go to the party (\sqrt{y} esterday)]

Sequence of Tense (SOT): Delete tense at LF if it is in the immediate scope of another tense with the same value and binds the situation time of the lower clause to that of the higher clause. (Ogihara 1996, followed by Wurmbrand).

(25) Will blocks SOT deletion of past | Future infinitive does not

a. [PAST John promised me yesterday [will that he will tell his mother tomorrow [PAST that they were having their last meal together, when...]]].
 *telling time = meal time

- b. $[_{PAST}$ John promised me yesterday $[_{FUT INF}$ to tell his mother tomorrow $[_{PAST}$ that they were having their last meal together]]]. $\sqrt{telling time} = meal time$
- Wurmbrand's conclusion about (25): Future infinitive is tenseless so PAST in the lowest clause of (25b) can be deleted by PAST in the highest clause, ignoring the middle clause.

But note:

Substituting *would* for *will* in (25a) permits SOT deletion of PAST in the lowest clause, followed by SOT deletion of PAST on *would* itself — the pattern of the future infinitive.

(26) [PAST John promised me yesterday [would that he would tell his mother tomorrow [PAST that they were having their last meal together]]].

 \checkmark *telling time = meal time*

So where future infinitive ≠ PRESENT *will*, it acts like PAST *would* (with PAST deleted by SOT).

Future infinitive ≠ *would*

- **Peculiarity of** *would*: possible only when in a PAST SOT environment, i.e. in the immediate scope of PAST (excluding its use in conditionals): **Mary would give a talk at BCGL*.
- (27) *Would* is excluded in non-PAST SOT environment | Future infinitive is not
 - a. *[*will* John will promise me tonight [*would* that he <u>would</u> tell his mother tomorrow ...]]
 - b. [will John will promise me tonight [FUT INFIN to tell his mother tomorrow ...]]
- Wurmbrand's conclusion about (27): Future infinitive is tenseless and therefore does not obey the requirements of *would*.

But note:

Substituting will for would in (27b) is fine, and captures the meaning the future infinitive.

(28) [*will* John will promise me tonight [*will* that he <u>will</u> tell his mother tomorrow ...

So where future infinitive ≠ PAST *would*, it acts like PRESENT *will*.

Reinterpreting these observations

• "[A]s suggested to me by David Pesetsky and a reviewer, the SOT properties of future infinitives [...] could also be derived if future infinitives were assumed to involve either PRES+*woll* or PAST+*woll*, and if the restriction that would involves obligatory SOT also applied to infinitival PAST+*woll*."

Speaker: Free to posit any content whatsoever for T of the embedded clause.

Hearer restricted by PURE:

- a. Hearer posits woll because it is selected by the higher verb. No other modal is possible
- b. Hearer may posit PRESENT as the tense of the future modal because it is semantically minimal (as we saw in discussing AUX-drop), yielding *will*.
- c. Hearer may posit PAST so long as it is semantically inert due to SOT as is always the case with *would*.

6. Propositional infinitives with *believe/claim*

• Wurmbrand's questions:

Can we identify the tense of propositional infinitives with PRESENT? (No.) With PAST? (No.)

Propositional infinitive \neq **PAST**

(29) Infinitival complement patterns like English PRESENT tense...

\checkmark non-eventive

- a. Bill knows German well.
- b. They believe Bill to know German well.
- c. They claim to know German well

*eventive (episodic)

- d. *Mary sings in the shower right now.
- e. *They believe Mary to sing in the shower right now.
- f. *They claim to sing in the shower right now.

(30) ... and not like PAST tense (where PAST makes a semantic contribution)

- a. Mary sang in the shower yesterday at 8:00.
- b. *They believe(d) Mary to sing in the shower yesterday at 8:00.
- c. *They claim(ed) to sing in the shower yesterday at 8:00.

So where propositional infinitive ≠ PAST, it acts like PRESENT.

Propositional infinitive *≠* **PRESENT**

- (31) Propositional infinitives that appear not to block SOT (*believe/claim* time overlaps pregnancy period) [claim examples omitted]
 a. [PAST A year ago, they believed [PROP INFIN Mary knows [PAST that she was pregnant]]].
 b. [PAST A year ago, they believed [PROP INFIN Mary to know [PAST that she was pregnant]]].
- Wurmbrand's conclusion about (31) : Propositional infinitive is tenseless, and fails to block SOT for that reason.

But note:

Substituting PAST *knew* for PRESENT *knows* in (**31b**) permits SOT deletion of PAST in the lowest clause, followed by SOT deletion of PAST in the middle clause — the pattern of the propositional infinitive.

(32) [PAST A year ago, they believed [PROP INFIN Mary knows [PAST that she was pregnant]]].

So where propositional infinitive ≠ PRESENT, it acts like PAST (where PAST is deleted by SOT).

[similar paradigm involving double-access omitted]

Reinterpreting these observations concerning propositional infinitivs

Speaker: Free to posit any content whatsoever for T of the embedded clause. (as before)

Hearer restricted by PURE:

- a. Hearer posits no modal because none is selected
- b. Hearer may posit PRESENT because it is semantically minimal (as we saw in discussing AUX-drop).
- c. Hearer may posit PAST so long as it is semantically inert due to SOT.

Some important notes relevant to the next section:

- Tenseless clauses are not "the enemy" in this proposal. They are exactly what SOT creates at LF.
- But note that SOT (*per* Wurmbrand and her sources) binds the tense of the lower clause to the tense of the higher, granting a temporal interpretation to the formally tenseless embedded clause.
- It is the hearer's task, faced with an infinitival output of Exfoliation, to reverse-engineer the speaker's derivation within the strictures of PURE so that the infinitival clause of the hearer's derivation does receive a temporal interpretation in the hearer's version LF.

Also:

• The observation that we may in principle posit an unheard *will* or *would* in a future infinitive and an unheard PAST or PRESENT in a propositional infinitive resolves the puzzle that arose for Exfoliation — thereby enhancing the appeal of that proposal. But it does not in and of itself argue for the Exfoliation proposal.

Any theory of infinitives comfortable with unheard content in T can adapt the proposals advanced above.

7. Why do propositional infinitives show only one side of the factative effect?

Putting together what we have learned from AUX-drop and infinitives...

• What the hearer may posit in T when speaker's T goes unpronounced

(33) Permissible reverse-engineered contents for T — and where we learned that
a. woll if selected by higher predicate
b. PRESENT
c. PAST if deleted by SOT
d. PAST if mandated by local predicate
(AUX-drop, prop. infinitives)
(AUX-drop with eventive verbs)

This looks extremely PURE-ish — semantically minimal in each instance.

But wait!

- (33d) is something we learned from the factative effect with AUX-drop and eventive predicates but it is not true of propositional infinitives!
- (34) a. You seen John yesterday?

(AUX-drop) (propositional infinitive)

- *We believed Mary to see John yesterday.
 *Mary claimed to see John yesterday.
- Why do eventive predicates in a propositional infinitive selected by *believe, claim*, etc. not receive PAST interpretation from the hearer?
- **Conjecture:** PURE prohibits positing PAST as the value of deleted T in a propositional infinitive because PAST can be *overt* and exponed by HAVE-*en*:

(35) **Propositional infinitives in which HAVE**- $en \rightarrow PAST$ (not perfect)

- a. They believe Mary to have written that message yesterday at 8:00.
- b. They claim to have sung in the shower yesterday at 8:00.
- c. They believe Bill to have known German when they were young.
- d. They claim to have known German well when they were young. [thanks to Susi Wurmbrand, p.c. for suggesting I consider this phenomenon.]

• Tentative proposal:

- (36) Speaker-side rules of the game
 - a. *T unless specified for PAST or PRESENT (surface filter, ignoring SOT)
 - b. HAVE-*en* is a realization of PAST (debated, but one of the proposals apparently still in the running; e.g. Klecha 2016)

From (36a) it follows that HAVE-*en* cannot be the highest expression of PAST in a clause that remains finite. T must be PAST or PRESENT, yielding pluperfect or perfect semantics.

But if T is deleted by Exfoliation, then it is possible that it might have never had a value for tense, without violating (a) — with HAVE-*en* now being able to express simple PAST.

(37) **Hearer-side speculation** (in the spirit of PURE, but not yet unified with it) Because PAST can be overtly expressed in an infinitival clause, hearer will assume that speaker would have expressed it overtly if PAST interpretation had been intended — and will therefore not posit PAST in the absence of HAVE-*en*.

• Why don't AUX-drop clauses follow the same logic?

HAVE-en in AUX-drop cannot express simple PAST...

(38) HAVE-*en* in AUX-drop \rightarrow present perfect (not PAST)

- a. *Mary written that message yesterday at 8:00? (attempt at PAST)
- b. Mary written that letter yet? (present perfect)

... and therefore does not invoke (37). In AUX-drop, there is no competition between expressible PAST and positing PAST where no exponent is overt.

• Why can't HAVE-en in AUX-drop express simple PAST? (vs. propositional infinitives)

Infinitive: If T violates (36a), but T is deleted by Exfoliation, the sensation of violation disappears. This permits HAVE-*en* to serve as a sole exponent of PAST.

AUX-drop: T is never deleted from syntactic structure. In fact *nothing* is deleted — the CP domain is merely left unpronounced, but syntactically present. Consequently, no end run around (36a) is possible, so HAVE-*en* cannot serve as a sole exponent of PAST.

• More general observation:

Exfoliation and AUX-drop are quite distinct processes: structure removal (term from Müller, *passim.*) vs. non-pronunciation — hence their differences.

But they impose a common burden on the HEARER who is faced with unpronounced instances of otherwise pronounced structure — hence their similarities.

8. A category of predicate not discussed yet

- Wurmbrand: Certain proposition-taking predicates seem to copy their tense value onto an infinitival complement
- (39) **Predicates imposing their reference time on infinitival complement**
 - a. Mary seemed to shout something yesterday at 8:00pm.
 - b. *Mary seems to shout something (yesterday at 8:00pm).
 - c. Mary seemed to like my house.
 - d. Mary seems to likee my house
- If this is a selectional property, it is probably PURE-compliant for hearer to assign a value of tense to the embedded clause that copies the matrix clause.

(40) **Permissible reverse-engineered contents for T**

- a. woll if selected by higher predicate
- b. present
- c. PAST if deleted by SOT
- d. PAST if mandated by local predicate
- e. copied from local predicate

(future infinitives) (AUX-drop, prop. infinitives) (future and prop. infinitives) (AUX-drop with eventive verbs) (seems etc.)

9. Some elephants in the room:

• Syncretism, Inherently null morphemes, Ellipsis

10. Final speculation

Does the reverse-engineer ever show more ambition?

• What if the reverse-engineer feels free to posit instances of internal Merge not evidenced in speaker's utterance?

Result: a place for covert movement

A "two cycle" theory (not "single output") where the two cycles now have a raison d'être.

• What if the reverse-engineer feels free to skip instances of internal Merge that are evidenced in speaker's utterance?

Result: reconstructed readings

in other words, perhaps the hearer may be ambitiously creative with EPP, even if that is the limits of the hearer's ambitions