

# Selection and Movement: Issues in the Syntax of Clausal Complementation

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## 1. Interface questions about Nominal and Clausal Arguments

A central topic for the syntax-semantics interface is how arguments combine with their argument-takers

The picture we currently have about these relations, most thoroughly studied for nominal arguments, involves the following three ingredients

### 1. The selection of nominal arguments is semantic

- the semantic combination of nominal arguments (DPs like quantified nouns, etc.) with their selecting predicates is fully determined by the meaning of DPs, the selecting predicate, and their type-driven composition.

### 2. Nominal arguments are subject to non-semantic constraints on their surface position

- these include licensing requirements, like case.

But the positions in which arguments can surface (according to 2) are sometimes only *indirectly* related to the positions they are interpreted in (according to 1)

- (1) a. Which of his<sub>1</sub> friends didn't any boy<sub>1</sub> talk to?    a'. Some boy didn't talk to his<sub>1</sub> friends.  
b. \*Which of his<sub>1</sub> friends didn't talk to any boy<sub>1</sub>?    b'. \*His<sub>1</sub> friends didn't talk to any boy<sub>1</sub>.

### 3. Movement

- movement is designed to allow sentences to satisfy the demands of 1. and 2.
  - the copy theory of movement does so by generating copies in various positions, some where they may not even be interpreted (Chomsky 1993, Fox 1999)
- (2) a. Which of his<sub>1</sub> friends didn't any boy<sub>1</sub> talk to which of his<sub>1</sub> friends?  
b. \*Which of his<sub>1</sub> friends didn't which of his<sub>1</sub> friends talk to any boy<sub>1</sub>?

## The dissertation investigates how clausal arguments fit this picture

Two well-known differences between clausal (CP) and DP arguments.

### 1. It is unknown whether the selection of clausal arguments can be, like DPs, regulated by the semantics alone: s-selection vs. c-selection (Grimshaw 1979, Pesetsky 1982, 1991)

- predicates appear to select for the functional heads that introduce clauses, i.e. complementizers (Bresnan 1972)

- (3) a. Marilyn planned for dinner to be ready at seven.  
b. Marilyn believed (\*for) dinner to be ready at seven

- if selection of clausal arguments reduces to semantics (Pesetsky 1991) we need a theory of clause meanings that match them up with predicate meanings

#### (4) *The See Paradigm*

- |                                     |  |
|-------------------------------------|--|
| a. I saw the house collapse.        | <i>Direct perception ; bare infinitive</i>             |
| b. I saw the house to be collapsed. | <i>Indirect perception ; ECM complement</i>            |
| c. I saw that the house collapsed.  | <i>Factive Indirect perception ; finite complement</i> |

- I'll present a selection puzzle about verbs like *see* and their complements
- handling this puzzle, without recourse to stipulative syntactic selection, requires an enrichment of the meanings given to embedded clauses
- **Conclusion:** we have to recognize functional heads in complement clauses that carry the meanings we once thought were in the embedding predicate

### 2. The surface licensing condition for CPs is different than DPs

#### (5) *CPs don't sit comfortably in subject position*

- a. \*Is that the moon is made of cheese a real theory?  
b. Is the idea that the moon is made of cheese a real theory?

#### (6) *CPs aren't subject to the kinds of case requirements DPs are*

- a. Marilyn is afraid (\*of) that Gordon will try to repair the boat himself.  
b. Marilyn is afraid \*(of) that.

- Does movement allow clauses, as it does with DPs, to be interpreted in places other than where they appear?
- I will bring reconstruction data to bear on the question
- **Conclusion:** clauses must be interpreted in their surface position, a requirement not forced on DPs

## 2. CPs don't move

'Fronted' CPs: sentential subjects and sentential topics

- (7) a. That he would be so rude seemed to Mary rather upsetting.  
 b. That he would be so rude, I don't think Mary expected.
- A separate issue: some suggest that the sentential subject is really in the position that the sentential topic is (Koster 1978, but cf. Delahunty 1983, Davies and Dubinsky 2008)

### Applying Reconstruction Tests to CPs

- **a caveat:** care must be taken when evaluating questions of binding in opaque contexts, which many sentential subjects and topics are
- Chapters Two and Three address: perspectival variation (Kuno 2004), the role of *de se* interpretations and its interaction with Condition C; 'distance' effects (Reinhart 1983), and information structural and prosodic factors
- the sentences below control these factors

#### ✓ Fronted CPs allow bound variable interpretation

- (8) a. That he<sub>1</sub>'ll end up looking like his father doesn't seem to any young man<sub>1</sub> to be very likely.  
 b. That he<sub>1</sub>'ll end up looking like his father, (I don't think) any young<sub>1</sub> man expects.
- this isn't *yet* evidence that clauses participate in movement

### Flexibility of copies: Anti-Reconstruction

- movement doesn't always require interpretation of lower copies
  - nor that all portions of a phrase be present in all copies
  - certain referring expressions do not always induce a disjoint reference effect – they 'bleed' Condition C
- (9) a. Which students in Ms. Brown's<sub>1</sub> class did she<sub>1</sub> like best?  
 b. The undergrads in Ms. Brown's<sub>1</sub> class, she liked<sub>1</sub> more.
- (10) \*She<sub>1</sub> liked certain students in Ms. Brown's<sub>1</sub>'s class more.
- in cases where the semantics allows it, copy theory lets material be present in one copy but not another (Lebeaux 1988, Chomsky 1993, Fox 1999)
- (11) [The undergrads [<sub>PP</sub> in Ms. Brown<sub>1</sub>'s class]], she<sub>1</sub> liked [the undergrads]

✓ **Fronted CPs bleed Condition C**

- (12) That Texas would be a surprise was always possible, but...
- That Ms. Brown<sub>1</sub> would lose Ohio seemed to her<sub>1</sub> to be unlikely.
  - That Ms. Brown<sub>1</sub> would lose Ohio, she<sub>1</sub> never expected.

**The real test for syntactic reconstruction: creating a conflict** (Romero 1998, Fox 1999)

(13) *Fox's design*

- [<sub>XP</sub> ... pronoun<sub>1</sub> ... r-expression<sub>2</sub> ... ] ... pronoun<sub>2</sub> ... ✗ ... QP<sub>1</sub> ... ✗
- [<sub>XP</sub> ... pronoun<sub>1</sub> ... r-expression<sub>2</sub> ... ] ... QP<sub>1</sub> ... ✓ ... pronoun<sub>2</sub> ... ✗

- (14) a. \*The papers that he<sub>1</sub> gave to Ms. Brown<sub>2</sub>, she<sub>2</sub> hoped that every student<sub>2</sub> will revise.  
 b. The papers that he<sub>1</sub> gave to Ms. Brown<sub>2</sub>, every student<sub>1</sub> hoped that she<sub>2</sub> will read.  
 (Anagnostopolou and Fox 2007)

- (15) a. \*The papers that he<sub>1</sub> gave to Ms. Brown<sub>2</sub>, she<sub>2</sub> ✗ hoped that every student<sub>1</sub> will revise ✗.  
 b. The papers that he<sub>1</sub> gave to Ms. Brown<sub>2</sub>, every student<sub>1</sub> hoped ✓ that she<sub>2</sub> will read ✗.

✗ **Clauses do not show this effect**

(16) *Sentential 'Topics'*

- ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, I don't think she<sub>2</sub> would want any man<sub>1</sub> to believe.
- ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, I don't think any man<sub>1</sub> would want her<sub>2</sub> to believe.

(17) *Sentential subjects*

- ...But that he<sub>1</sub> might actually be too old for Mary<sub>2</sub> seemed to her<sub>2</sub> not to enter any man<sub>1</sub>'s mind.
- ...But that he<sub>1</sub> might actually be too old for Mary<sub>2</sub> seemed to her<sub>2</sub> not to enter Bobby<sub>1</sub>'s mind.

- CPs allow for binding *and* bleeding of Condition C
- since movement is *designed* to **force** these effects, CPs must not move.
  - clauses are interpreted where they appear
  - so clauses are based generated in their surface position (the analysis of Koster 1978, Alrenga 2005)
  - we must find another way to achieve co-variation for the pronoun

## 2.1. Another way to achieve co-variation

Some clues from a variation on the examples above

(18) ...but that he<sub>1</sub> might be too old to work for Mrs. Brown<sub>2</sub>, I don't think she<sub>2</sub> would want any man<sub>1</sub> to believe that of/about himself.

(19) ...but that he<sub>1</sub> might be too old to work for Mrs. Brown<sub>2</sub>, I don't think she<sub>2</sub> would want any man<sub>1</sub>'s wife to believe that of/about him.

- what co-varies is a (sometimes) hidden argument, which describes what the attitude is about: the *res* argument

(20) a. She believes *about the man* that he is too old.  
b. She believes that *about the man*.

### De Re Attitude Ascription

- De Re Belief - ascription of a Property P to a *res* y:
- Three-place belief: an attitude holder x, a *res* argument y, and a property P

(21)  $\llbracket \text{believe} \rrbracket = \lambda P. \lambda y_{\text{res}}. \lambda x. \lambda w. \text{believe}(P)(y)(x)(w)$

- informally: *x believes in w de re of y that P*<sup>1</sup>

### The fronted CP

- the fronted CP is a property P formed by abstracting over pronoun by a binder in C (Chierchia 1989, Percus and Sauerland 2003)

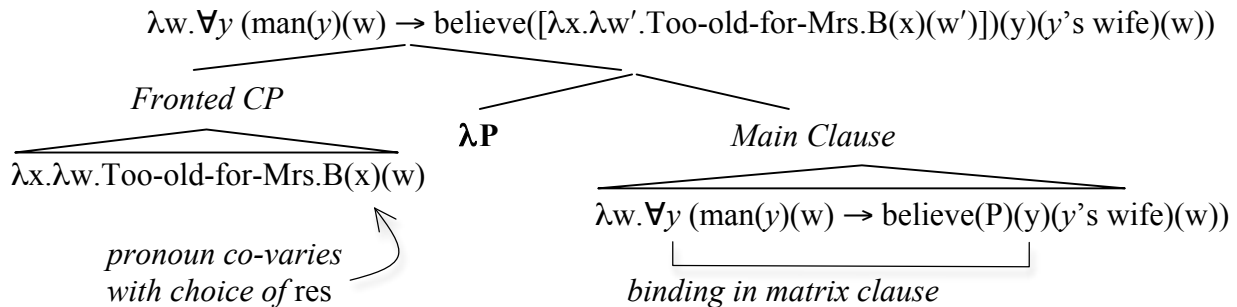
(22)  $\llbracket \text{that}_{\lambda x} \text{he}_x \text{ is too old for Mrs. Brown} \rrbracket = \lambda x. \lambda w. \text{Too-old-for-Mrs.B}(x)(w)$

- the *res* argument is bound in the matrix clause
- the fronted CP is composed with the embedding verb via a null operator that ranges over properties

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<sup>1</sup> The meaning of *de re belief* will be taken up in the second half of the talk.

(23) ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, every man<sub>1</sub>'s wife believed.



'Every man<sub>1</sub>'s wife believes *of him<sub>1</sub>* that P' (=the property of being too old for Mrs. Brown).

### What is the null operator?

- 'category mismatch' effects show that it is a DP

(24) DP requirement: A verb allows a CP argument to front only if a DP is licensed in the gap position. (Grimshaw 1981, Postal 1986, Webelhuth 1992, Postal 1994, Bresnan 1995)

(25) a. This assumption accounts for that claim.  
 b. \*This assumption accounts for that these nouns behave differently.  
 c. That these nouns behave differently is accounted for by this assumption.

(26) a. The panel deliberated over that possibility.  
 b. \*The panel deliberated over that John would represent them.  
 c. That John would represent them was deliberated over by the panel.  
 (Alrenga 2005:185-6)

- fronted CPs pattern like the DP case
- DP pronouns can be the property argument of *believe*
- they can be fronted and they can be null

(27) a. ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, I don't think she<sub>2</sub> would want any man<sub>1</sub>'s wife to believe **that**.  
 b. ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, **that**<sub>λP</sub> I don't think she<sub>2</sub> would want any man<sub>1</sub>'s wife to believe **P**.  
 c. ...but that he<sub>1</sub> might be too old for Mrs. Brown<sub>2</sub>, **Op**<sub>λP</sub> I don't think she<sub>2</sub> would want any man<sub>1</sub>'s wife to believe **P**.

## 2.2. Conclusion

- The signature of syntactic reconstruction is not found with fronted CPs
- CPs are interpreted in the positions in which they surface
  - using De re attitude ascription, we can understand “apparent” binding into fronted CPs
- Movement, then, does not negotiate between where a CP is ‘licensed’ and where it can be pronounced; other mechanisms only imitate this effect

### 3. Selection of Clausal Complements

#### An apparent case of idiosyncratic syntactic selection

- *Accusativus Cum Infinitivo* (AcI) complements (a.k.a. ECM or Raising to Object)
- in some cases there is apparent meaning difference between AcI and finite complements: “roughly synonymous” (Runner 2006)

- (28) a. John believes himself to be insane.  
b. John believes that he is insane.

#### There *is* a meaning difference between AcI and finite complements

- but we have to look beyond *believe*
- a good place to uncover complement meanings is the *see* paradigm

(29) *The See Paradigm*

- a. Martha saw Fred drive too fast. *Direct perception* ⇔ *bare infinitive*  
b. Martha saw that Fred was driving too fast. *Factive Indirect perception* ⇔ *finite*  
c. Martha saw Fred to be driving too fast. *Indirect perception* ⇔ *AcI complement*

Direct Perception: epistemically neutral perception report

Indirect Perception: epistemically non-neutral and factive

- (30) a. Martha saw Fred holding a straw up to his cheek, but she believed he was drinking a soda.  
b. Martha saw that Fred was holding a straw up to his cheek,  
#but she believed he wasn't.  
...#but he actually wasn't.

**AcI Constructions:** epistemically non-neutral; not factive

(Jespersen 1940, Higginbotham 1983, Safir 1993)

- (31) Martha saw Fred to be driving too fast, #but she believed he wasn't.  
...<sup>ok</sup>but he actually wasn't.

- (32) I see him to be an indolent, selfish, *bon vivant* (Jane Austin, *Mansfield Park*)

#### Side note

- *See* (and number of other AcI-taking verbs) report judgments or personal opinion rather than more garden-variety belief reports (Borkin 1984)
- the dissertation offers arguments that this is independent of the semantic contribution of AcI

**A puzzle hidden in plain sight**

There is nothing about *see* which forces its complement to be factive (given (31))

There is nothing about *that*-clauses which forces them to report facts (given (33))

(33) John believes/thinks/has determined/has the opinion that Fred is driving too fast.

**Why does the interpretation of *see* depend on its complement?****A class of *See*-type verbs**

(34) *Remember*

a. Martha remembered that John was bald, #but he wasn't.

b. Martha remembered John to be bald, but he wasn't.

(after Kiparsky and Kiparsky 1970)

(35) *Understand*

a. Martha understood that Fred was mocking her, #but he wasn't.

b. Martha understood Fred to be mocking her, but he wasn't.

(36) *Hear*

a. Martha heard (from her friends) that Bob was out of tune, #but he wasn't.

b. Martha heard Bob to be out of tune, but he wasn't.

(37) *Know*

a. She never knew that Fred was a liar. #So he must not have been.

b. She never knew Fred to be a liar. So he must not have been.

(38) *Consider*

a. ...Particularly when one considers that some images were crossed out.<sup>2</sup> [#but they weren't]

b. He considered the images to have been crossed out, but they weren't.

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<sup>2</sup> [www.lotsofessays.com/essay\\_search/considers\\_deep.htm](http://www.lotsofessays.com/essay_search/considers_deep.htm)

**The ultimate goal** to match up the right interpretation of the embedding verbs with the right types of complements, without syntactic selection

A full picture requires understanding at least the following:

1. the meaning of the verb roots
2. the semantic contribution of AcI complements
3. the semantic contributions of finite clauses (which are variable, factive and non-factive)

**The dissertation offers beginning steps for the meaning of AcI complements**

#### 4. The belief component of *see*-AcI is in the complement

**Starting assumption**

- the verb roots in the *see*-class do not take propositional complements
- the job of ascribing a belief is in the complement itself

**The belief reported is a *de re* belief**

- the belief reported with *See*-AcI is a belief about what was *perceived, heard, ...*

- (39) a. Bob hears Mary to be out of tune.  
 ≈ Bob believes of what he hears that it is Mary out of tune.
- b. Bob perceived there to be a large spider crawling up his leg.  
 ≈ Bob believes of what he perceives that it is a large spider crawling up his leg.

**Background: more details about *de re* belief**

*de re* believe: a property argument (P), res argument (*res*) and attitude holder (*att*)

- (40)  $[[\text{believe}]] = \lambda P.\lambda y_{\text{res}}.\lambda x_{\text{att}}.\lambda w.\exists R [R(y)(x)(w) \ \& \ \text{Acquaint}(R) \ \& \ \forall \langle x', w' \rangle (\langle x', w' \rangle \in \text{Dox}(x, w) \rightarrow P(\iota y'.R(y')(x')(w'))(w'))]$

**Two more Ingredients**

- (41) Doxastic Alternatives (Lewis 1979, Chierchia 1989)

$\text{DOX}(x, w) =$   
 $\{ \langle x', w' \rangle : \text{it is compatible with what } x \text{ believes in } w \text{ that he/she/it is } x' \text{ in } w' \}$

## (42) Acquaintance Relations

- these are relations that hold between the attitude holder and the res
- there are constraints on what counts as an acquaintance relation (Kaplan 1968, Lewis 1979); the condition *Acquaint(R)* above stands in for this
- the acquaintance relation picks out the unique individual whom that attitude holder (*de se* counterpart) bears R to in  $w'$
- that individual has the property P in  $w'$

**4.1. Proposal: the embedding verb is the Acquaintance Relation in AcI**

- Typically, the acquaintance relation is either contextually supplied or existentially bound (as above)
- In AcI constructions, the embedding verb can provide the acquaintance relation

## (43) Bob hears Mary to be out of tune.

Bob hears to some state  $s$  and believes *de re* of  $s$  that it is a state of Mary being out of tune.

**Implementation**

- there is a meaningful functional head in AcI complement,  $F_{\text{DOX}}$ , which has the meaning of *de re believe*
- the embedding verb provides (a) the acquaintance relation and (b) the attitude holder
- To accommodate this, there are two crucial differences between  $F_{\text{DOX}}$  and standard *de re belief*

$$(44) \quad \llbracket F_{\text{DOX}} \rrbracket^3 = \lambda P. \lambda R. \lambda s. \lambda w. \exists y_{\text{res}} [R(y)(s)(w) \ \& \ \text{Acquaint}(R) \ \& \ \forall \langle x', w' \rangle (\langle x', w' \rangle \in \text{Dox}(\iota x \text{ Holder}(x)(s)(w), w) \rightarrow P(\iota y'. R(y')(s)(w'))(w'))]$$

- in  $F_{\text{DOX}}$  the Acquaintance Relation R is opened up:
  - the embedding verb will compose as the R
- $F_{\text{DOX}}$  also has an eventuality argument:
  - the attitude holder is not an argument of  $F_{\text{DOX}}$
  - we access the attitude holder by finding the unique holder of the state described by the embedding verb

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<sup>3</sup> I do not address here how R is represented in the doxastic alternatives: how its event argument is resolved and whether the attitude holder's counterpart needs to be added as the external argument of R here as well.

**The embedding verb**

- external argument severed; added by Voice Holder for predicates that describe states

- (45) a.  $\llbracket \text{hear} \rrbracket = \lambda s'. \lambda s. \lambda w. \text{hear}(s')(s)(w)$   
 b.  $\llbracket \text{Holder} \rrbracket = \lambda x. \lambda s. \lambda w. \text{Holder}(x)(s)(w)$

**Putting the pieces together**

- (46)  $\llbracket \llbracket \text{VP Bob} \llbracket \llbracket \text{V Holder} \llbracket \llbracket \text{VP heard} \llbracket \text{FP}_{\text{Dox}} \text{ F}_{\text{Dox}} \llbracket \text{Mary be out of tune} \rrbracket \rrbracket \rrbracket \rrbracket \rrbracket \rrbracket$

- (47)  $\llbracket \llbracket \text{Mary be out of tune} \rrbracket \rrbracket = \lambda s. \lambda w. \text{Out-of-tune}(\text{Mary})(s)(w)$   
*I'll write P for this below*

- (48)  $\llbracket \llbracket \text{FP}_{\text{Dox}} \rrbracket \rrbracket = \lambda R. \lambda s. \lambda w. \exists y_{\text{res}} [\text{R}(y)(s)(w) \ \& \ \text{Acquaint}(R) \ \& \ \forall \langle x', w' \rangle (\langle x', w' \rangle \in \text{Dox}(\iota x \text{ Holder}(x)(s)(w), w) \rightarrow \text{P}(\iota y'. \text{R}(y')(s)(w'))(w'))]$

- (49)  $\llbracket \llbracket \llbracket \text{VP FP}_{\text{Dox}}(\text{hear}) \rrbracket \rrbracket \rrbracket = \lambda s. \lambda w. \exists y_{\text{res}} [\text{hear}(y)(s)(w) \ \& \ \text{Acquaint}(\text{hear}) \ \& \ \forall \langle x', w' \rangle (\langle x', w' \rangle \in \text{Dox}(\iota x \text{ Holder}(x)(s)(w), w) \rightarrow \text{P}(\iota y'. \text{hear}(y')(s)(w'))(w'))]$

- (50)  $\llbracket \llbracket \llbracket \text{VP Bob FP}_{\text{Dox}}(\text{hear}) \rrbracket \rrbracket \rrbracket =$

$$\lambda s. \lambda w. \exists y_{\text{res}} [\text{Holder}(\text{Bob})(s)(w) \ \& \ \text{hear}(y)(s)(w) \ \& \ \text{Acquaint}(\text{hear}) \ \& \ \forall \langle x', w' \rangle (\langle x', w' \rangle \in \text{Dox}(\iota x \text{ Holder}(x)(s)(w), w) \rightarrow \text{P}(\iota y'. \text{hear}(y')(s)(w'))(w'))]$$

'Bob bears the Acquaintance relation of hearing to some res  $y$  and believes of  $y$  that it is a state of Mary out of tune'

**The embedding verb is interpreted *inside* the complement!**

## 4.2. Some consequences of putting the meaning in F<sub>DOX</sub>

- F<sub>DOX</sub> as formulated requires the embedding describe a state (that has a unique holder)
  - **Borne out:** Non-stative verbs become stative with AcI complements (Pesetsky 1991)
- (51) a. John was considering his options.  
 b. #John was considering his options to be bad.  
 cf. John considered his options to be bad.
- (52) a. John was judging every act of Mary's.  
 b. #John was judging Mary's actions to be immoral.  
 cf. John judged Mary's actions to be immoral.
- (53) a. John was thinking that Mary was angry.  
 b. #John was thinking Mary to be angry.  
 cf. Mary wasn't as angry as John thought her to be.

### Manner of speech verbs (Postal 1974, Pesetsky 1991)

- (54) \*John shouted/whispered/screamed/pouted/giggled/muttered himself to be in danger.
- manner of speech verbs describe events; with a *for*-phrase, they describe repeated events
- (55) For ten minutes, John sneezed. *Repeated sneezes*
- (56) a. For several hours, John shouted to Mary that he was in danger. *Repeated shouts*  
 b. For several hours, John believed that Mary was in danger. *one state*
- an event of muttering cannot also be a state with a unique Holder

### Getting a handle on the Variability of AcI

“there is an unfortunate degree of fuzziness in people's judgments concerning [AcI]”  
 (Pesetsky 1991: 23)

“we do not find Postal's facts ... to be at all clear; that is we accept [AcI] with almost all the cited verbs” (Kayne 1984:121 ft 15)

- (57) a. \*?The doctors said John to be sick.  
 b. \*?The doctors wagered John to be sick.

### The “fuzziness” tells us something

- why would there be variation in the first place?
- what is the source of the variation?
- what is the nature of the variation?

Attested examples, esp. with *would say/would wager* collocation<sup>4</sup>

- (58) a. I have seen about 10 movies from Colin and I would say him to be a height of between 5ft9.75" (177cm) and 5ft10" (178cm)  
 b. After seeing a lot of his vids I would say him to be a lil over 9NBP by a little over 6.  
 c. Some would say her to be more than handsome, if not pretty.
- (59) I'd wager him to be on the wrong side of fifty and you're young enough to be his daughter.
- when *say* and *wager* report speech events → do not imply belief → no AcI
  - when *say* and *wager* report opinions → imply belief → AcI possible  
 (*would+say/would+wager* bring out the opinion-reporting use)
- (60) If I were you, I'd (just) say that he's about 5 feet ....even though we know he's not.
- (61) a. I'd say him to be about 5 foot. #...but I know he's not.  
 b. I'd wager him to be about 5 foot. #...but I know he's not.

### Summary of the semantics

*See*-type verbs do not embed propositional complements

The attitude ascription is in the complement, the functional head  $F_{\text{DOX}}$

### Future Tasks for the syntax-semantics mapping

What is the syntactic status of  $F_{\text{DOX}}$ ?

Why are finite clauses factive under *see*-type verbs but not *believe*-type verbs?

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<sup>4</sup> Sources for (58)-(59), respectively: <http://www.celebheights.com/s/Colin-Farrell-96.html>; <http://www.mattersofsize.com/forum/showthread.php?t=11872>; <http://forums.worldofwarcraft.com/thread.html?topicId=14990770355&sid=1>; *Preseli Bluestones*, Sion Pysod. <http://homepages.which.net/~j.fish/aderyn3.htm>

## 5. The syntax-semantics mapping

### 5.1. The syntactic status of $F_{\text{DOX}}$

- whatever the syntactic status of  $F_{\text{DOX}}$ , it must be incompatible with finiteness to capture our central puzzle

Two Options

- $F_{\text{DOX}}$  is a head that syntactically selects infinitives, i.e. a complementizer
  - $F_{\text{DOX}}$  is *to* itself – or, at least one of the heads that *to* spells out.
- I'll follow the latter because it fits best with the syntactic status of AcI complements as TPs, not CPs (for which there is ample evidence, Bresnan 1972, Chomsky 1981)

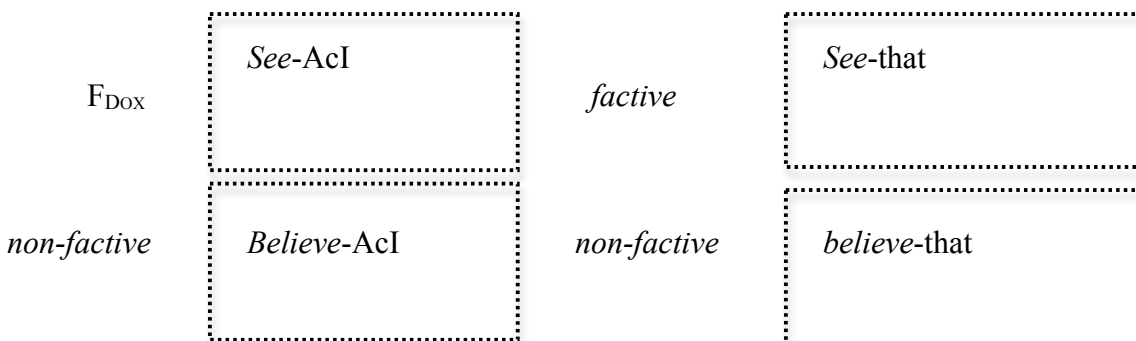
### 5.2. Conclusion and the next steps

The landscape of complement types:

- we let AcI determine via  $F_{\text{DOX}}$  the meaning of *see*-type verbs in that construction
- the meaning of *see* varies as a function of the complement type because **that meaning is in the complement**

The other cases

- does the verb *believe* itself work like *see*-type verbs with AcI complements?
- and how do we control the choice of finite clauses?



If the meaning is in the complement in some cases

- this suggests that in general the Hintikka (1962) style analysis – where the attitude verb selects a propositional complement – is not right for all cases of attitude ascription (as others are now suggesting: Kratzer 2006, Anand and Hacquard 2008)
- we might speculate **that the meaning is in the complement** in the other three cases too

***Believe-*AcI****

## Two Options

- standard denotation for *believe* (Hintikka 1962): the verb quantifies over doxastic alternatives
- let *believe* compose with  $F_{\text{DOX}}$

If we follow the latter option, then

- *believe* cannot saturate the acquaintance relation argument: it doesn't meet the requirements on acquaintance relations
- possibility: *believe* describes merely a state

(62)  $\llbracket \textit{believe} \rrbracket = \lambda s. \lambda w. \textit{believe}(s)(w)$

- if the Acquaintance Relation R cannot be saturated by the embedding verb, assume that the composition can be rescued by allowing R to be existentially bound (and contextual restrictions can be placed on R)
- *believe* then just provides the attitude holder

***The finite cases***

- is the meaning in the complement?
- factive complementizers, for instance, are well attested (Japanese (Kuno 1973b), Greek (Roussou 2004), Marathi (Wali 1988))
- languages such as Korean (Yoon 1990) appears to lexicalize, via meaningful complementizer-like heads, the difference between factives and non-factives

Korean            *-um*  $\Rightarrow$  factive complementizer  
                       *-ko*  $\Rightarrow$  non-factive 'complementizer' (one of several)

(63) John-un [CP Mary-ka cengcikhay-ss-**um**]-ul            alassta  
       John-nom    Mary-nom honest-past-Comp<sub>FACT</sub>-acc        knew  
       John knew that Mary was honest

(64) John-un [CP Mary-ka cengcikhay-ss-ta-**ko**]            malhay-ss-ta  
       John-nom    Mary-nom honest-past-decl-Comp        said  
       'John said that Mary was honest'  
       (Jeon 2008:2a,c)

## 6. Interface questions about Nominal and Clausal Arguments

We started with three components of the syntax-semantics of predicate-argument relations, as understood from nominal complements

1. **The selection of nominal arguments is semantic**
2. **Nominals arguments are subject to licensing conditions in order to be arguments**
3. **Movement allows arguments to be interpreted in places they do not surface**

We then asked some of these questions about clausal arguments

1. **The selection of clausal arguments is semantic.**
  - but it requires an enrichment of the meaning of embedded clauses, a job which we've only begun
3. **Movement is not a mechanism that allows clauses to be interpreted in places they do not surface**
  - clauses are interpreted where they appear
  - given our current picture of nominal arguments – which is *designed* to separate locations of interpretation and pronunciation – this is news.

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