Week 9.5. Relative clauses

Last week, we covered *wh*-movement in questions like:

- What did Bill buy?
- What did Mary think Bill bought?
- And we looked at conditions on *wh*-movement, including Subjacency (you can’t move out of two bounding nodes in a single step) and the ECP (the trace of *wh*-movement must be licensed).

Relative clauses

Another place where we see *wh*-movement, besides in explicit questions (either in the main clause or embedded) is in relative clauses.

- The book which I read
- The woman who(m) I met
- These consist of a head noun (book, woman) and then what appears to be a *wh*-question that further specifies the referent of the head noun.

Relative clauses serve to modify the head noun.

- Kind of like adjectives, or PP modifiers.
- The unhappy students.
- The students from Vancouver.
- The students who solved the problem.

So where would you put them?

Quirks

- The “question” inside a relative clause has a couple of odd properties, not shared with regular main clause or embedded questions.
- The problem what I solved.
- The problem which I solved.
- The problem which I will solve.
- The problem I solved.
- The problem that I solved.
**Which/that/Ø**

- In addition to being able to say
  - The book which Mary read
- We can also say
  - The book that Mary read
  - The book Mary read
- And they all mean the same thing. So we expect that they would all have basically the same structure (they all have a question adjoined in the NP)—so where is the *wh*-word in the last two?

**Op**

- The secret to these last two kinds of relative clauses is *Op*, the silent *wh*-word.
- That is, *the book which Mary read* and *the book Mary read* are really exactly the same except that in one case you pronounce the *wh*-word, and in the other, you don’t.
- the book [CP which, Mary read ti]
- the book [CP Op, Mary read ti]

**Op**

- It is also possible to pronounce *that* with *Op*, giving us:
  - the book [CP Op that [TP Mary read ti]]
  - Why can’t we pronounce *that* with *which*?
  - *the book [CP which, that [TP Mary read ti]]

**Doubly-Filled COMP filter**

- The Doubly-Filled COMP filter is the traditional “explanation”.
- Doubly-Filled COMP filter:
  *[[CP *wh*-word if/that/for…]]*

  - You can’t pronounce both a *wh*-word and (a base-generated) C at the same time. Thus:
    - the book [CP Op, that [TP Mary read ti]]
    - the book [CP which, [TP Mary read ti]]
    - *the book [CP which, that [TP Mary read ti]]

**Op**

- Skeptical of *Op*? Is there really *wh*-movement of *Op*, a silent *wh*-phrase?
  - I read the book [CP which, [TP Mary said [CP that [TP Bill bought ti]]]].
  - *I read the book [CP which, [TP Mary wonders [CP who [TP bought ti]]]].
  - I read the book [CP Op (that) [TP Mary said [CP that [TP Bill bought ti]]]].
  - *I read the book [CP Op (that) [TP Mary wonders [CP who [TP bought ti]]]].

**Op**

- So if we have a silent *wh*-phrase, why can’t we ask questions with it?
  - Where, did Mary buy this book *ti*?
  - When, did Mary buy this book *ti*?
  - Why, did Mary buy this book *ti*?
  - How, did Mary buy this book *ti*?
  - *Op, did Mary buy this book *ti*?

- See why?
Op

- Recoverability condition: The content of a null category must be recoverable.
- the place [Op, (that) Mary bought that book t₁]  
- the day [Op, (that) Mary bought that book t₁]  
- the reason [Op, (that) Mary bought that book t₁]  
- the way [Op, (that) Mary bought that book t₁]  
- In each case, we can tell what the \(wh\)-phrase is by looking at the head noun.

Comment on C

- Notice that when you use Op, the C—despite being [+Q]—can be pronounced as that.
- This seems to mean that that is just a way you can pronounce C if it would otherwise be unpronounced and pronouncing it wouldn’t violate the DFC filter.