They will bake a cake.

Bake has two theta roles, the agent (baker, they) and the theme (baked, a cake).

These need to be assigned in the VP.

They will bake a cake.

T has future/modal will in it.

It’s a statement, so C is [-Q].

Subject can get accusative Case from bake.

Bake is transitive.

Bake governs the DP a cake.

Subject needs to move to satisfy the EPP.

Subject moves to SpecTP.

EPP is satisfied.

Subject can get nominative Case from (finite) T.

SS: Ok.
Y/N Q?

- What if it had been
  Will they bake a cake?

- Everything would have been the same, except that (since it is a question), C would have been [+Q] (since the beginning, in DS too)

- And, there would be another thing still to fix: [+Q] C needs a T.

Wt-questions

- Wt-questions are questions, but with an extra [+WH] feature in C.

- 2 things to solve:
  - [+Q] C needs T

Wh-questions

- Wh-questions are information-seeking questions (vs. yes/no questions), involving a wh-word.
  - Who, what, when, where, why, how, which

- What will they bake?

- Observe that what is basically the object of bake. And look how far away it is from bake, the thing that assigns it a []\-role.

- What has John baked?
A-movement vs. A*-movement

- Wh-movement of a DP into SpecCP is sometimes called (a kind of) A*-movement.
- Although it is movement of a DP, this isn’t the same kind of movement as the other DP-movement (“A-movement”) we’ve seen.

A-movement: Movement to SpecTP (subjects, passive objects, unaccusatives, subject raising).
A*-movement: Movement to SpecCP and other things we’ll talk about later.
- “A” is for “Argument”—good enough for me.

A-movement vs. A*-movement

- Case: Whom is the accusative case version of who, although it’s not in common use colloquially.
- Whom did you meet?
- So: Who/whom/what, etc. are DPs, they’re just special DPs, [+wh] DPs.
- And DPs need (and, in the case of who/whom, show) case.

- Objects generally get case from V. So, we move object words away from their Case location.

A- vs. A’-movement

- A-movement ends in a Case location.
- A’-movement starts in a Case location.
- So, consider:

A- vs. A’-movement

- What was broken?
- Passive—what can’t get Case in its DS position (sister of V).
- What needs to get Case, standard procedure in passives is DP-movement (A-movement) to SpecTP.
- Then, what needs to get to SpecCP.

Aside: tense and aspect

- In order to bring our view of participles more in line with our view of tense, let’s complicate our view of auxiliary+participle constructions a bit.

- Tense: Time with respect to a reference time (in simple sentences, generally the utterance time).
  - Past: John left. (before now)
  - Present: John knows French. (now)
  - Future: John will eat caviar. (after now)

Aside: tense and aspect

- Aspect: The relation between the time Tense points to and the event.
  - Perfective: John had written the letter (before now, already done—have+en)
  - Progressive: John was writing the letter (before now, ongoing—be+ing)
  - Passive: The letter was written (before now, passive—be+en).

- So, let’s treat Aspect like Tense—an affix that heads its own projection.

Aside: tense and aspect

- Where is AspP?
  - John has been running.

- We can think of this as:
  - John [past] have -en be -ing run
  - Where have moves to T, pronounced with T as has, be is pronounced with -en as been, and -ing is pronounced with run.
  - So, there’s an AspP above each VP…
Tense and aspect

- They are writing the letter.

A little evidence?

- Consider this:
  - John will leave and Mary will leave too.
  - Hypothesis: Ellipsis of the second VP is possible where it is identical to the first.
  - John left and Mary will leave too.
  - John left and Mary did leave too.
  - Why is this possible? *Left* and *leave* are not the same.

J left and M will — too.

J will have left and M will too.

What was broken?

- So, back to the problem: We were wondering about *in*-movement in *What was broken?*

  - *What* gets the theme [+role, but *broken* is passive, so there is no external [+role and no case assigned to the object.
  - *What* needs case, and *TP* needs a specifier, so it moves up to SpecTP (A-movement).
  - *CP* needs a [+wh] specifier, so it moves on to SpecCP.

What was broken?
What was broken?

Subject wh-questions
- Object wh-questions are pretty clear—we see T move to C and the wh-word move to SpecCP:
  - What did John buy?
  - What will Mary eat?
- But subject wh-questions don’t show inversion:
  - Who left?
  - Who will eat the sandwich?
- Compare:
  - John left.
  - John will eat the sandwich.
  - So does T not move to C? Does who not move to SpecCP?

Who left?

Subject wh-questions
- A simpler analysis is just to suppose that everything works the same way in all wh-questions.
  - [+Q] C needs T to move up to it.
  - [+WH] C needs a wh-element in its specifier.
- Turns out that this predicts the subject wh-question pattern just as well…

Who left?

Subject wh-questions
- So, the difference between subject and object wh-questions is that nothing gets in the way between T and the verb in a subject wh-question:
  - Who, T, … t_i, … t_i, leave?
  - Who, T, John, t_i, meet t_i,?

Embedded questions
- Just like with statement CPs, question CPs can be embedded (under certain verbs).
  - I wonder who left.
  - I know who left.
  - I know what John will buy.
  - I wonder if John will leave.
- Notice, though: It’s not:
  - I know what will John buy.
- For some reason: No TÆ C movement in embedded clauses (English-specific)… only in matrix clauses do you get TÆ C for [+Q] C.
Long-distance movement

- You can ask a question about something in an embedded clause too…
- I said [that John ate a sandwich].
- What did I say [that John ate t]? Mary wondered [what I said [that John ate t]].
- Note that what gets its /role from at.
- Note that the main clause C is the question [+Q, +WH]—the embedded clause C here is a [-Q] CP.
- Wh-movement the escapes its clause like this is sometimes called “long-distance wh-movement”.

Islands

- There are certain things that seem to “trap” wh-elements, though.
- What did John claim [that Mary bought t]? John believes [the claim [that Mary bought cheese]].
- “What does John believe [the claim [that Mary bought t]]? The claim that… is a DP. What starts inside.”

CNP Islands

- In general, it is not possible to extract a wh-phrase out of a DP, though you can extract out of an embedded clause that isn’t inside a DP.
- These are called Complex NP islands.

You know what I blame this on the breakdown of?

- I blame this on [the breakdown of society].
- Questioning society requires extraction of a wh-phrase from inside a DP (the breakdown of society).

Islands

- Another thing that seems to “trap” a wh-phrase is another wh-question. (Called wh-islands)
- Who bought a cheeseburger at Burger King? John wondered [who bought a cheeseburger at Burger King].
- “What, did John wonder [who bought t at BK]? ”Who did John wonder [what t bought t at BK]?”

Bounding nodes

- What makes islands different? What makes them “opaque” like this?
- The idea is essentially that (despite appearances) wh-movement has to be over relatively short distances.
- Islands block wh-movement because they force wh-movement to have to go “too far.”
Wh-islands

- Recall that a wh-question is an island.
  - "What did John wonder [who bought at BK]?"
- But nevertheless, long-distance wh-movement is possible.
  - What did John say [that Mary bought it, at BK]?
  - What did John say [that Mary heard [that Sue said [that Bill bought it, at BK]]]?
- How can we resolve the idea that wh-movement must be relatively short with the observation that wh-movement can escape any number of clauses?

Successive-cyclic movement

- Then, the wh-phrase moves from the intermediate SpecCP to the main clause SpecCP.

Wh-islands

- Suppose that when a wh-word moves, it has to move to the closest SpecCP. It can't skip a SpecCP.

Wh-islands

- The wh-phrase moves first to the intermediate SpecCP.

Too far—
- Wh-movement can't go past the middle CP without "stopping off"
**Wh-islands**

- Subjacency. 
  A 'movement cannot cross more than one bounding node.
- TP is a bounding node in English.

**CNP-islands**

- We can treat complex NP islands in pretty much the same way—what makes them ungrammatical is trying to move past more than one bounding node.
- "What did Mary believe the claim that John bought?"
- Note: the textbook seems to regress to pre-DP trees in this section. Trust my trees here, not the book’s trees.

**CNP?**

- DP is also a bounding node.

**Successive cyclic?**

- What all did you get for Christmas?
- What did you get all for Christmas?
- All the students have left.
- The students have all left.
- I don’t remember [CP what I said all].
- What all did he say (that) he wanted?
- What did he say (that) he wanted all?
- What did he say all (that) he wanted?