

How is contraction not possible here?

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LSA 2015 Portland

Another kind of *how*-question

Typically, *how*-questions query MANNER or INSTRUMENT. But some English *how*-questions have a very different interpretation – they express extreme surprise that the proposition under *how* holds at all.

- 1) a. How is Sarah still asleep?
- b. How do you hate this song?
- c. How has it already snowed six times?
- d. How is Bill no longer the chair of Linguistics?

Manner/instrument <i>how</i> -question (MHQ)	Propositional <i>how</i> -question (PHQ)
How did John fix that chair? A1: Very carefully. (<i>manner</i>) A2: With a hammer. (<i>instr.</i>)	How did John fix that chair? A: I know! I didn't think he could fix anything!

PHQ *how* freely combines with statives and other predicates that are incompatible with manner/instrument modifiers (Smith 1991, Katz 2000).

- 2) a. How did Sarah fall asleep? (✓PHQ, ✓MHQ)
 - b. How is Sarah still asleep? (✓PHQ, *MHQ)
- cf. Sarah { ✓fell / *is } asleep by counting sheep.

PHQ *how* cannot be de-accented.

- 3) a. { **Hó**w / Hòw } did she fall asleep? (MHQ)
- b. { **Hó**w / *Hòw } is she still asleep? (PHQ)

PHQs are fully compatible with negation, unlike MHQs, which are subjected to weak-island effects (Abrusán 2008, Kuno/Takami 1997, Ross 1984, etc.).

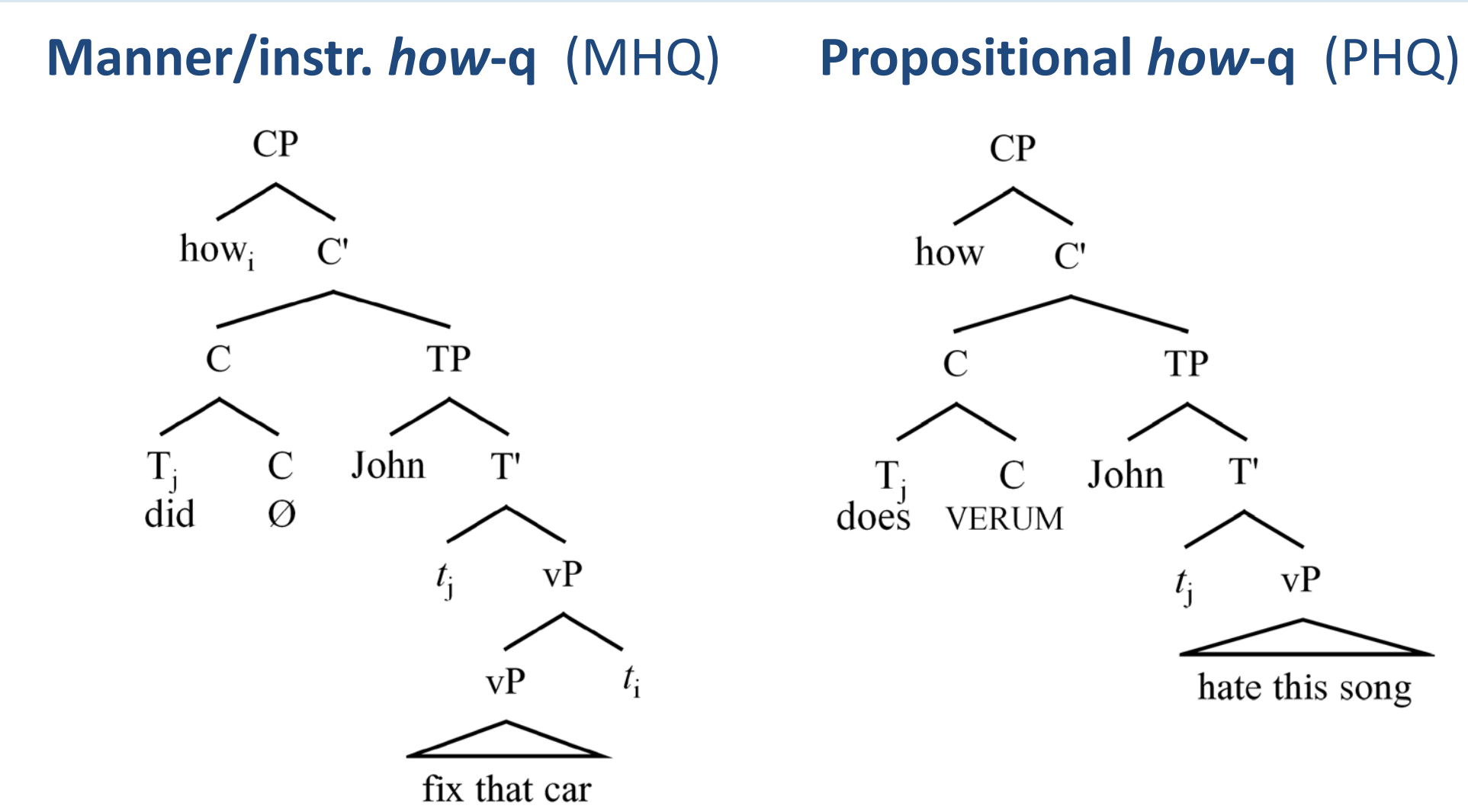
- 4) How did John not fix that chair?
 - a. # With a hammer. / # Very carefully. (MHQ)
 - b. I know! It looked like such a simple job! (PHQ)

But PHQs resist Neg-contraction to *n't*, showing a clear contrast with e.g. *why*-questions, where Neg-contraction is fine.

- 5) a. How { is Chili's not / ?*isn't Chili's } open yet?
 - b. How { do you not / ?*don't you } love this song?
 - c. How { has it not / ?*hasn't it } snowed yet?
- 5') a. Why isn't Chili's open yet?
 - b. Why don't you love this song?
 - c. Why hasn't it snowed yet?

PROPOSAL: PHQs, unlike MHQs, have...

- *how* initially merged in Spec,CP
- a covert VERUM operator in C



What does a PHQ mean?

- i. PHQ acknowledges the truth of the **complete proposition p** (maximal TP, with no gaps) under *how*
 - 6) How did everybody behave?
 - a. John behaved very well, Mary behaved okay, Sam was awful. (MHQ)
 - b. I know! I thought at least one kid would have problems. (PHQ)
- ii. At the same time, PHQ expresses **extreme surprise** at the truth of *p* ('I thought *p* was nearly impossible!')

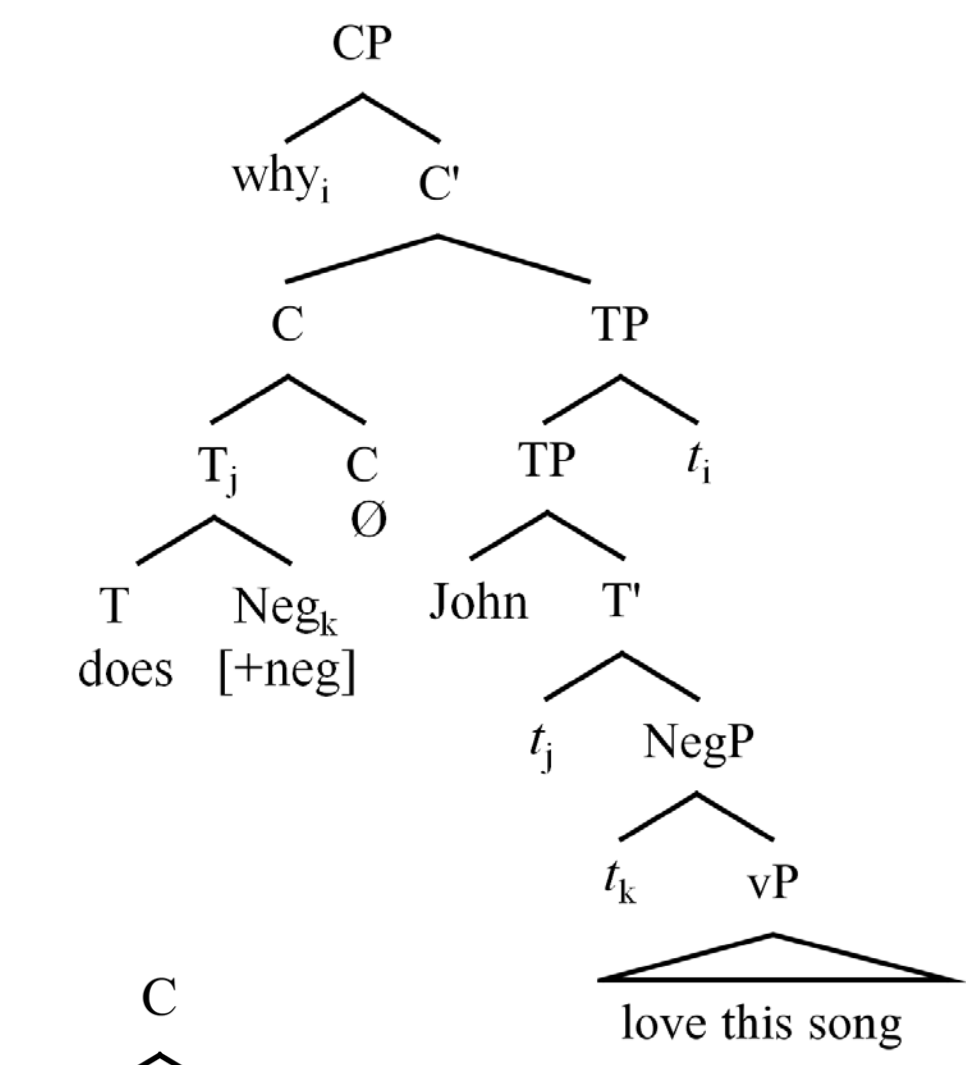
Suppose VERUM is the source of this 'extreme surprise.'

- Romero/Han 2004: VERUM is an epistemic operator in C, sometimes contributed by *really* (*She really is asleep*).
[[VERUM]] = λ*p*. It is for-sure that *p* should be added to the Common Ground (CG)
- In a PHQ, VERUM could serve to rule out the possibility that there's some mistake about the truth of *p*. Including VERUM creates an implicature that *p* is particularly unlikely or hard to believe.
how > VERUM > *p* = 'What causes it to be for-sure that *p* should be added to CG?'

Negation, contraction and VERUM

- 7) **Negative *why*-question** (see ex. 5')
[_{CP} **Why**_i [_C [_T **does**_j [_{NEG} *n't*_k]]] **John** *t*_j *t*_k **love this song** *t*_i]

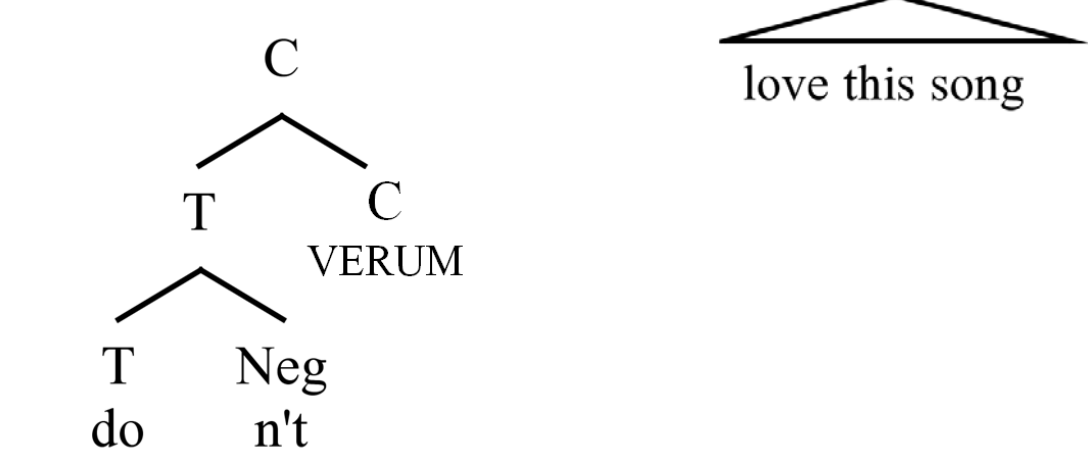
- Step 1: Neg raises to T and then to C.
- Step 2: Neg is spelled out as *n't* iff it is a sub-word.
- No VERUM in C, so everything is fine.



- 8) **Negative *yes/no*-question** (Romero/Han 2004)

[_{CP} [_C [_T **Do**_j [_{NEG} *n't*_k]]] VERUM] **you** *t*_j *t*_k **love this song**]

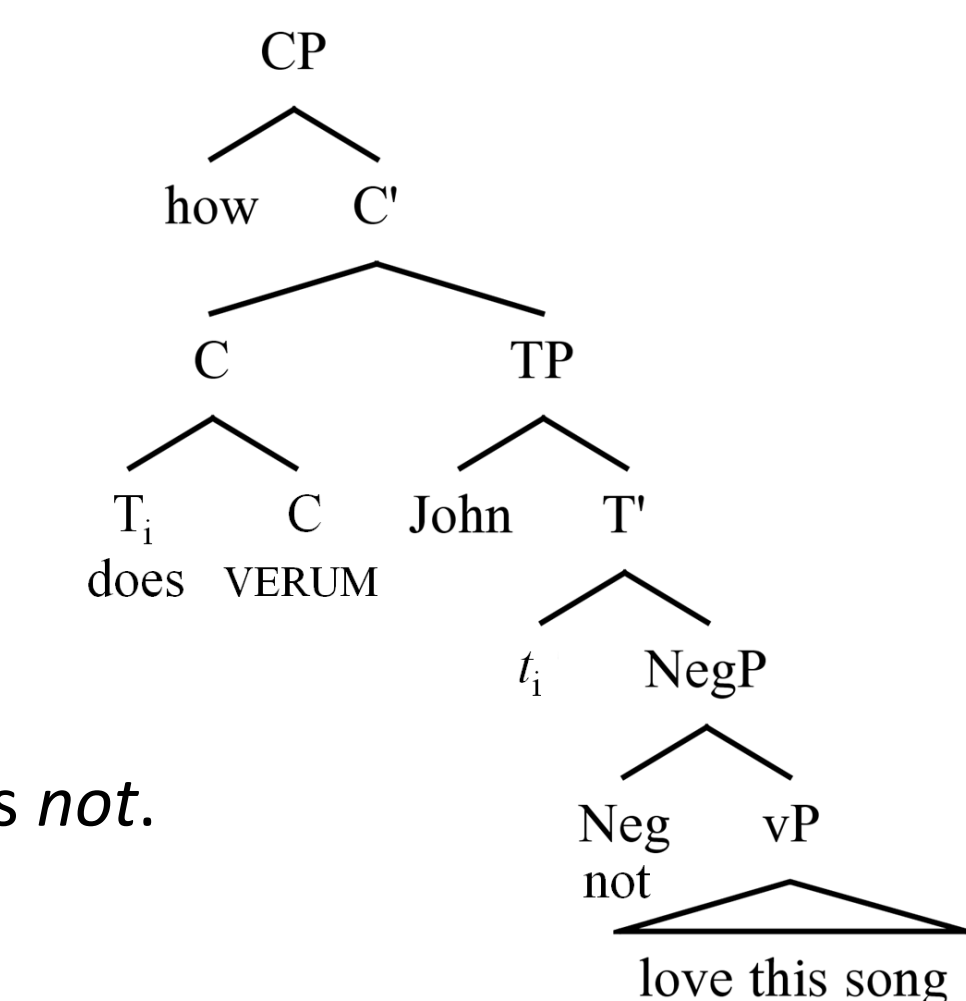
- Steps 1-2 proceed as in (7).
- Negative *yn*-question has VERUM in C
- Neg incorporation into C allows NEG > VERUM:
'It is for-sure that we should add to CG that *you love this song*;
it's not for-sure that we should add to CG that *you love this song*.'
- Q > NEG > VERUM creates **bias** (speaker already believes *you love this song*)



- 9) **Negative PHQ** (see ex. 5)

[_{CP} **How** [_C [_T **does**_j] VERUM] **John** *t*_j **not love this song**]

- Unlike in (8), NEG > VERUM is not intended:
= VERUM > NEG > *p*: *John loves this song*
'How is it for-sure that *~p* should be added to CG?'
≠ NEG > VERUM > *p*: *John loves this song*
'How is it **not** for-sure that *p* should be added to CG?'
- To avoid NEG > VERUM, Neg is left *in situ* and spelled out as *not*.
- Note that *n't* attaches by **syntactic head movement**, not PF rebracketing or 'cliticization'. Semantic effects like (8)-(9) are therefore unsurprising.



- 10) **Embedded negative PHQ**

I want to know [_{CP} **how** [_C VERUM] **John** [_T **does** [_{NEG} *n't*_k]]] *t*_k **love this song**]

- Notice that *n't* is fine here – because no Neg to C, so no danger of NEG > VERUM.
- Step 1: Neg raises to T and stops there.
- Step 2: Neg is spelled out as *n't* (as in (7)).
- It's Neg-to-C raising that causes problems in (5)/(9), not contraction *per se*.

- 11) **Negative MHQ** (see ex. 4)

[_{CP} **How**_i [_C [_T **did**_j] [_{NEG} *n't*_k]]] **John** *t*_j *t*_k [_{VP} **fix that chair** *t*_i]

- Trace of *how* under Neg correlates with weak-island effects:
'What's a manner/instrument that John *didn't* use to fix the chair?'
- When island effects are removed by context (Kroch 1989), **Neg-contraction is fine**, as expected (no VERUM here!)
John tried everything! The real question is, how *didn't* he fix the chair?