

# How is contraction not possible here?

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## 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.).

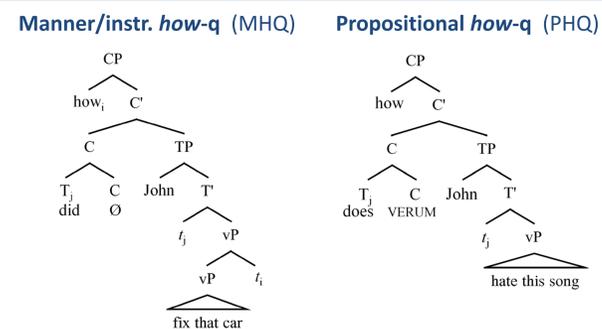
- 4) How did John not fix that chair?
  - a. # With a hammer. / # Very carefully. (MHQ)
  - b. I know! It looked like such a simple job! (PHQ)

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!')

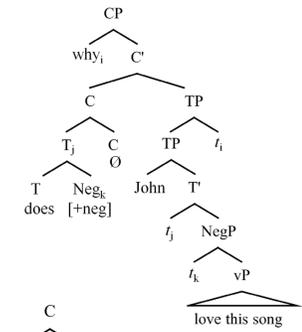
Suppose VERUM is the source of this 'extreme surprise.'

- 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

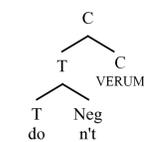
- 7) **Negative *why*-question** (see ex. 5')  
[<sub>CP</sub> **Why**<sub>i</sub> [<sub>C</sub> [<sub>T</sub> **does**<sub>j</sub> [<sub>NEG</sub> *n't*<sub>k</sub>]]] **John** *t*<sub>j</sub> *t*<sub>k</sub> **love this song** *t*<sub>i</sub>]

- 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)  
[<sub>CP</sub> [<sub>C</sub> [<sub>T</sub> **Do**<sub>j</sub> [<sub>NEG</sub> *n't*<sub>k</sub>]]] VERUM] **you** *t*<sub>j</sub> *t*<sub>k</sub> **love this song**]

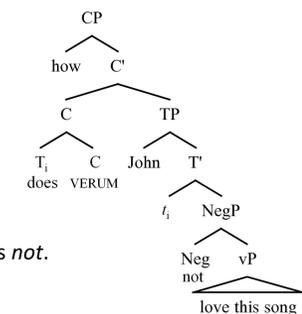
- Steps 1-2 proceed as in (7).
- Negative *yn*-question has VERUM in C
- Neg incorporation into C allows NEG > VERUM:  
'It is for-sure that we should add to CG that *you love this song*;  
it's not for-sure that we should add to CG that *you love this song*.'
- Q > NEG > VERUM creates **bias** (speaker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



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

[<sub>CP</sub> **How** [<sub>C</sub> [<sub>T</sub> **does**<sub>j</sub>] VERUM] **John** *t*<sub>j</sub> **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** [<sub>CP</sub> **how** [<sub>C</sub> VERUM] **John** [<sub>T</sub> **does** [<sub>NEG</sub> *n't*<sub>k</sub>]] *t*<sub>k</sub> **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)

# [<sub>CP</sub> **How**<sub>i</sub> [<sub>C</sub> [<sub>T</sub> **did**<sub>j</sub>] [<sub>NEG</sub> *n't*<sub>k</sub>]]] **John** *t*<sub>j</sub> *t*<sub>k</sub> [<sub>VP</sub> **fix that chair** *t*<sub>i</sub>]

- 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?*