

# Head movement and allomorphy in children's negative questions

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## the phenomenon.....

Many English-speaking preschoolers produce doubled auxiliaries in negative questions (**2AuxQs**):

- 1) a. **Why does Superman doesn't wear Underoos on his bottom?** (3;03) (MacWhinney 2000)
- b. **Why did you didn't know?** (3;08) (Kuczaj 1977)

2AuxQs seem to involve a **failure to raise n't to C**, so that *n't* gets stranded and then rescued by a copy of the auxiliary. **But why does Neg-to-C fail?**

- 2) a. Adult q: **Why didn't** [<sub>TP</sub> you t know?]
- b. 2AuxQ: **Why did** [<sub>TP</sub> you **didn't** know?]

## previous accounts.....

Guasti et al. 1995: Neg-to-C is prohibited by the hypothesized grammar. These kids have adopted a UG option requiring the Neg-Criterion to be satisfied within TP.

Hiramatsu 2003: But kids who produce 2AuxQs reject them—and **accept Neg-to-C**—in a judgment task. Why would kids accept e.g. (3b) if their grammar prohibited Neg-to-C?

- 3) (Big Bird didn't brush the dog. Ask the puppet why.)
  - a. **Why did Big Bird didn't brush the dog?** (2AuxQ)
  - b. **Why didn't Big Bird brush the dog?** (accepted)

Another possibility: *n't* is mistakenly merged as a specifier or adjunct, making it ineligible for head-movement (Xu & Snyder 2011, Hiramatsu 2003).

But there's no evidence for this idea: these children have **adultlike negative declaratives** (Guasti et al. 1995).

- 4) a. You don't like pizza. b. \*You [<sub>VP</sub> not [<sub>VP</sub> like pizza]]

2AuxQs involve **two independent errors**:

- i) a **planning** error (raising T to C without Neg to T first)
- ii) an **allomorphy** error (overgeneralization of *n't* vs. *not*)

## deriving Neg-to-C

In the adult question (5), I assume that:

- Neg raises to T; then T raises to C, yielding subject-AUX inversion
- Dummy verb *do* is inserted when bound T fails to combine with *v*
- *n't* and *not* are **allomorphs** of Neg:

- 6) [+NEG] ↔ **n't** / X ⊕ \_\_\_ ('iff Neg is affixed to X')  
**not** (elsewhere)

## deriving a 2AuxQ

Speakers sometimes begin uttering sentences before they're fully planned (Kroch 1981, Phillips & Lewis 2013, etc.). **Neg to C requires iterative head-movement**—Neg to T, then T to C—a degree of planning which may well stymie a child who has only recently acquired T-to-C.

- The child begins uttering *Why did...*, raising T-to-C, **without planning far enough ahead to realize that Neg needs to be raised to T first**. Neg then gets 'stranded' within TP.

This derivation could be 'rescued' by inserting the allomorph *not* at Neg (7). But as is well known, children this age are still acquiring allomorphy rules for [PAST], [PL], etc. (e.g. *I threw the ball*).

- With Neg, some children **mistakenly treat n't** (the more frequent form in discourse) **as the default** and *not* as the 'special case,' to be inserted iff Neg has stress or focus (e.g. *I do not like him*).
- A child with (9) will insert their default *n't* in (7b)—a context where it has no host. As a last resort, the child either pronounces the lower copy of [<sub>T</sub> did] or inserts another instance of *do* to support *n't*—yielding a 2AuxQ.

- 10) [<sub>CP</sub> why<sub>1</sub> [<sub>C</sub> [<sub>T</sub> did]<sub>2</sub>] [<sub>TP</sub> you [<sub>T</sub> did]<sub>2</sub> [<sub>NegP</sub> [<sub>NEG</sub> n't] [<sub>VP</sub> know]]] t<sub>1</sub>]]

## predictions: two independent errors

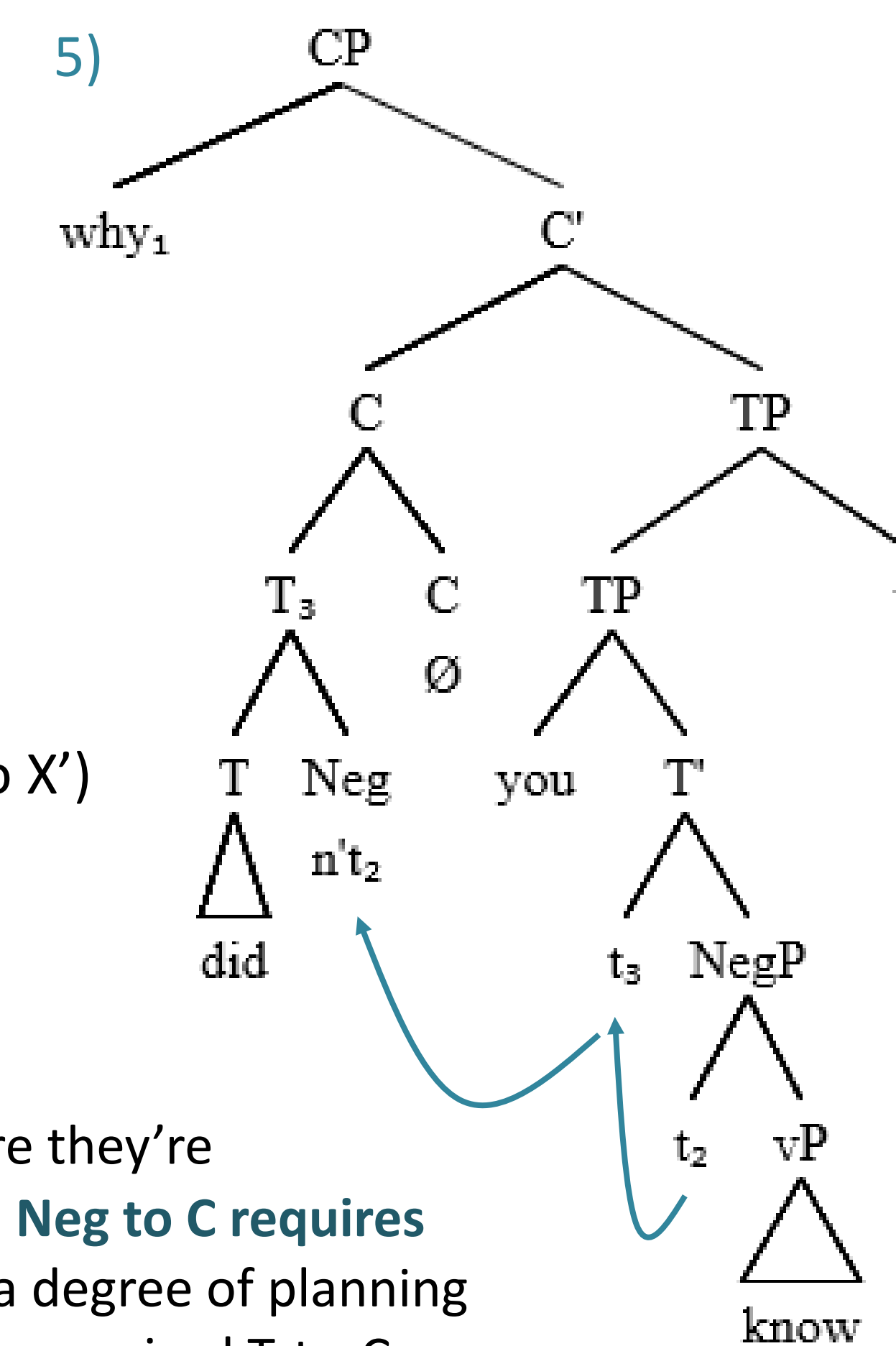
Of course, it's possible for kids to fail at Neg-to-C (i) but then have the adult allomorphy (ii), yielding (8).

This explains why some children produce frequent questions with uncontracted *not* (e.g. (8)) which are grammatical but rare for adults (Guasti et al. 1995).

Conversely, it's possible to commit the allomorphy error (ii) without the planning error (i).

This explains why we find 2AuxQs in contexts where Neg-to-C isn't even the target—*viz.* **inner-negation yn-questions**:

- 11) **Did you don't like the spooky parts?** (Kuczaj 1977) ('I didn't like the spooky parts; how about you?')
- Adult q: Did you **not** like the spooky parts either?  
%Didn't you like ... either? (Sailor 2013)



### The planning problem (i):

- 7) a. [<sub>CP</sub> why [<sub>C</sub> [<sub>T</sub> did]<sub>i</sub>] [<sub>TP</sub> ...
- b. ... [<sub>TP</sub> you t<sub>i</sub> [<sub>NegP</sub> !Neg ...

### The allomorphy problem (ii):

- 8) Why did you **not** know?
- 9) [+NEG] ↔ **not** / \_\_\_ [+FOC]  
**n't** (elsewhere)

## advantages.....

- My account explains why 2AuxQ-producing children seem to prefer Neg-to-C in judgment tasks (3). They have the adult syntax; they just have trouble executing Neg-to-C on the fly (a performance error).
  - We maintain the idea that **Neg-to-C failure** is a major culprit in 2AuxQs. This idea is further supported by new facts: 2AuxQs are unattested in **tag questions**, **positive-bias yn-q's**, and **why -n't proposals**—all contexts where *n't* is interpreted *external* to TP.
- 12) a. A tricycle has a back, doesn't it? ...\*does it doesn't?
  - b. Ow, doesn't that hurt? \*Ow, does that doesn't hurt?
  - c. Why don't we play a game, ok? \*Why do we don't play a game?
  - 13) a. A tricycle has a back, doesn't it? A: Yes, it {does/\*doesn't}.
  - b. Doesn't that hurt? A: Yes, you're right, it {does/\*doesn't}.
  - c. Why don't we play a game, ok? (≠ 'We don't play a game')
  - cf. Why don't cats like chocolate? (⇒ 'Cats don't like chocolate')

If *n't* in (12) heads a functional projection **above TP** (Holmberg 2016), the absence of 2AuxQs is explained: 'high *n't*' gets picked up in the course of T-to-C raising without the forward-planning necessary in (5).

- 14) [<sub>CP</sub> [<sub>C</sub> [<sub>X</sub> [<sub>T</sub> does]<sub>i</sub>] [<sub>XP</sub> [<sub>X</sub> [<sub>T</sub> does]<sub>j</sub>] [<sub>TP</sub> that [<sub>T</sub> does]<sub>j</sub> [<sub>VP</sub> hurt]]]]]

## TAKE-HOME

In this treatment, 2AuxQs arise from the confluence of well-established properties of English morphosyntax (status of NegP, alternation of *n't*~*not*) and challenges in acquisition (planning and allomorphy).

The planning and allomorphy errors responsible for 2AuxQs are correctly predicted to occur independently.

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