

## Non-adult questions in child language: Manipulating bias and Questions Under Discussion

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**Overview:** Questions with doubled auxiliaries (QDA) are rare but present in spontaneous and elicited child language. We claim that they are not errors (Crain & Nakayama 1987, Guasti et al. 1995 i.a.) but an option in child grammar used to ask biased questions. We show how Romero & Han's (2004; R&H) account for bias in negative polar questions can be adapted to account for QDAs.

**Data:** Many authors have noted the presence of QDAs like (1–2) in child English as late as 5;0:

(1) Can he go? 4;8, Menyuk (1969)

(2) Is the cat food can go there? 2;11, Theakston et al. (2001)

QDAs are easily elicited in children younger than 4;0 and can be found in adult English as in (3–4):

(3) What's the view [here...] Do we correct, do we don't correct? Adult British English, 2016

(4) Is you is or is you ain't my baby? US English, 1944

Doubling of verbal elements is not uncommon in other languages for affirmation (E. Portuguese, Martins 2007), focus (Gungbe, Aboh 2006) and other reasons. They are not speech errors due to (a) the age of the speakers, (b) their fluency, (c) QDA features compared with similar speech errors and (d) the semantico-pragmatic use to which QDAs are put. QDAs ask biased questions targeting a Question Under Discussion (QUD; Roberts 1996/2012) that is subordinate to the main QUD.

**Case study:** We collected all 3,068 questions produced by one child, Becky, between 2;0,27 and 2;11,15 (Theakston et al. 2001). With a dialogue window of five lines, we coded all questions for structure and use in context, using the full transcript if the short dialogue was unclear. Becky produced 6 QDAs like (2) and 8 questions with doubling and a contracted auxiliary as in (5):

(5) What's is this? 2;1, Theakston et al 2001

Both structures are extremely infrequent, making up less than 1% of Becky's questions, but they are used differently. Utterances like (5) are produced between 2;1–2;5, with one last example at 2;9, but QDAs appear from 2;6 until the final recording at 2;11. Utterances like (5) are used exclusively as information seeking questions and 5/8 are used in out-of-the-blue, discourse-initial contexts. 8/9 of these examples contain a contracted form of *is* cliticised to *what so* we consider utterances like (5) to be speech errors. Becky's QDAs, in contrast, are never used as information-seeking questions; they query or check previously mentioned or assumed information (4/6) or contrast propositions (2/6). An example of a full dialogue containing one of these questions is in (6):

(6) *Context: Becky (CHI) and her mother (MOT) are playing at food shopping. MOT has said she might not want the items as CHI has been nibbling at them. MOT gives CHI money and says:*

a. MOT: I'll take that home when I go home? [...]

b. CHI: Why do you don't want it?

c. MOT: I do want it.

In the context leading up to (6), Becky believes that her mother wants the item being “bought”, but then interprets her mother's utterance in (6a) as a rejection of the item. She uses the QDA in (6b) to check the truth of the negated proposition she once believed *–you want this*, and to query the reasons for it. This is a biased question following R&H as it expresses a belief by Becky that a positive proposition contained within the question is true. She never uses QDAs in discourse-initial position. Note that she uses many other structures for these checking or contrastive purposes, including non-target structures with uninverted or no auxiliaries and target-like inversion of a single auxiliary. This suggests that auxiliary doubling is a structure generated by Becky's grammar that is just one option for expressing this kind of biased question.

A semi-formal schema for the QDA “Why do you don’t want it?” follows:

Main QUD	Do you want it?
Initial belief	You want it.
Pragmatic inference	(I have gained evidence that) You do not want it.
Sub-QUD	Why don’t you want it?

By formulating her question as “Why do you don’t want it?”, Becky not only directly asks the sub-QUD but also checks her new bias towards a negative answer to the main QUD. Likewise, a child of 4;0 who does not want to go outside asks his friend “do you don’t want to go outside?” to check his bias towards the proposition  $\neg$ *you want to go outside*. Such sequences of entailed reasoning are far more complex, we argue, than has ever been attributed to a child under three, and its output is delivered to a level of consciousness via speech. However, it is a plausible analysis because of the consistency in the way(s) Becky uses QDAs and independent evidence that she is aware of discourse management: she is a prolific user of tag questions (81/3068 = 2.6%).

**Why double?** Doubling of full auxiliaries in questions like Becky’s begins before the child has all the relevant knowledge of phrasal and clausal recursion (cf. De Villiers & Pyers 2002, i.a.), and hence cannot make use of adult strategies like cleft questions to check and contrast. QDAs develop as a monoclausal strategy based on the child’s awareness of the information carried by auxiliaries: not only tense, but also discourse polarity, as evidenced in *verum* focus and insertion of dummy *do* for questions and emphasis. Klein (1998, 2006) and Duffield (2007, 2013) have provided similar evidence for an Assertion [ASR] feature separate from Tense [TNS] that are bundled together in adult English. We claim that children can separate these two features, leading to two separate and featurally distinct instantiations of the auxiliary on different heads. This analysis accounts for QDAs in which two different AUXs are used, such as (2), schematised below as (7):

(7) [<sub>CP</sub> [<sub>C[-ASR]</sub> is] [<sub>TP</sub> [<sub>DP</sub> the cat food] [<sub>T</sub> [<sub>T[+TNS]</sub> can] [<sub>VP</sub> go there]]]]

This proposed feature-splitting in child language allows for an analysis of QDAs as biased questions using a modified version of R&H’s account, in which the adult speaker postulates a *VERUM* operator. The child achieves a very similar semantics to this by using two auxiliaries, one carrying [-ASR] to form a question and one carrying [TNS] to provide the certainty meaning contributed by *VERUM*. As in R&H, where the Q operator scopes over *VERUM*, the ASR feature scopes over TNS, which forms the proposition to be checked. This proposition is *not* asserted, because no assertion feature remains in TP; it is thus interpreted, like the propositions in adult biased questions, as a proposition that the speaker has an epistemic bias towards. The child overtly expresses this proposition in a QDA by leaving tense low, meaning that QDAs are also necessarily interpreted as confirming a contrastive option or checking because, unlike in adult-like questions with preposed negation but like adult cleft questions, a complete proposition remains in TP.

Why should the child express *VERUM* in questions via an overt auxiliary when this is not in the child’s experience? There is a wealth of evidence, as alluded to above, from adults that auxiliaries can express *VERUM*, so we argue that the child may overextend the expression of *VERUM* by overt auxiliaries to use them in contexts like QDAs. We develop the idea that an explanation for R&H’s claim that negative preposing signals *VERUM* in negative polar questions: a conceptual link between the two grows out of the way in which the child’s acquisition path articulates an interaction between (a) high positions for polarity and illocutionary force and (b) the expression of full tensed propositions in the TP.

**Conclusion:** The acquisition path as syntax develops can pinpoint both operations and interfaces in UG in a unique manner. Questions with auxiliary doubling involve a syntactic split between Tense and Assertion, semantic recognition of a QUD, and pragmatic projection of a sub-QUD built on a pragmatic inference.