
How to test children's understanding of sentential negation

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The age at which children have an adult-like understanding of negation as a truth-functional operator is still a matter of debate. Some studies found mastery of negated sentences in 3-year-olds (Reuter et al. 2018), while others reported difficulties for children aged 4 and older (Nordmeyer & Frank 2014). But previous test sentences mostly involved contrastive negation or negated just the object; therefore, it is still open what makes a context pragmatically felicitous for sentential negation. We address this question by investigating the understanding of sentential negation in monolingual German-speaking children between the ages of 3 and 6, the age range during which the comprehension of the truth-functional meaning of negation is assumed to develop, as well as adult controls. Within a two-alternative forced-choice task, we ask children to choose the correct of two pictures after listening to short stories about everyday life situations in a family (e.g., *Dad is cooking lunch and asks mum for help. Mum is asked to grate the cheese, but maybe she'd rather peel the pear.*). The request, along with the alternative activity, serves to introduce the Question under Discussion (QUD, WHETHER P), which is intended to license an affirmative as well as a negated sentence. Each story ends with an affirmative or negated sentence revealing the character's choice, e.g., "Sie reibt den Käse nicht/schon" (*She [doesn't grate/ is already grating] the cheese.*). We argue that in our design both negated and affirmative target sentences are equally felicitous: the negated sentence provides an answer to the QUD that is equally informative as the affirmative counterpart (see Xiang et al. 2020). To illustrate, the negated sentence "Sie reibt den Käse nicht." (*She doesn't grate the cheese.*) should be as felicitous and as informative as the affirmative counterpart "Sie schält die Birne schon." (*She is already peeling the pear.*), because the negated sentence unambiguously determines the current state of affairs. Note that by presenting different verbs and object nouns, we avoid a contrastive reading of negation (narrow focus) and ensure that negation scopes over the whole VP.

References: • Nordmeyer, A. E. & M. C. Frank (2014). The role of context in young children's comprehension of negation. *Journal of Memory and Language* 77, 25–39 • Reuter, T., Feiman, R., & J. Snedeker (2018). Getting to No: Pragmatic and Semantic Factors in Two- and Three-Year-Olds' Understanding of Negation. *Child Development* 89(4), e364–e381. • Xiang, M., Kramer, A., & A. E. Nordmeyer (2020). An informativity-based account of negation complexity. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 46(10), 1857–1867.