Discussion

Syntax or semantics? Response to Lidz et al.

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Lidz, Waxman, and Freedman (2003) claim to have demonstrated that 18-month-old children know something about the syntax of noun phrases that they could not have learned from the linguistic input. Invoking the poverty of the stimulus argument, they conclude: “Our results provide clear support for the argument that the learner’s innate linguistic structure guides language acquisition.” (p.8)

What young children supposedly know is that in a sentence like

*I’ll play with this red ball and you can play with that one*

one refers not just to another ball of any type but to a red one. Someone who makes this linking thus knows that noun phrases have a nested structure [this [red [ball]]] rather than a flat structure [[this] [red] [ball]]. In searching through a corpus of child-directed speech, Lidz et al. found very few instances of utterances similar to the above example, that is, with a noun phrase containing an adjective as antecedent to the indefinite pronoun one. In most instances the antecedent was a determiner–noun sequence or pronoun with no adjective (e.g. *I’ll play with this ball and you play with that one*), which are not diagnostic. So children supposedly have no input that enables them to figure out, in the above example, that one refers back to “red ball” (N°) not just “ball” (N°).

To demonstrate that children nevertheless have such knowledge, Lidz et al. performed a preferential looking experiment with 18-month-old infants. In each of four trials, there was a familiarization phase followed by a test phase. In the familiarization phase:

an image of a single object (e.g. a yellow bottle) was presented three times...accompanied by a recorded voice that named the object with a phrase consisting of a determiner, adjective and noun (e.g. Look! A yellow bottle.)
Then in the test phase infants were presented with two pictures on opposite sides of a TV screen: one of a blue bottle and one of a yellow bottle, accompanied by a recorded voice saying: *Now look. Do you see another one?*

The finding was that in the test phase the infants looked longer at the yellow bottle, that is, the bottle that was the same color as the original object (whereas in a control condition, with neutral language at test, they looked more to the differently colored bottle). But note that the language here is very different from the original linguistic example above. It is different because the expression is now not just *one* but *another one*, an expression children experience many times in conjunction with certain nonlinguistic experiences (e.g. one grape and then another one). The current finding is that in a forced choice situation 18-month-olds think that *another one* goes best with another object almost identical to the one they have just seen (yellow bottle) rather than a differently colored one from the same category (blue bottle).¹ This is an interesting finding, and it is not immediately clear why it should be so. But it has nothing to do with children’s understanding of the nested structure of noun phrases or innate linguistic knowledge; it has only to do with their understanding of the kinds of nonlinguistic experiences conventionally associated with the expression *another one* (i.e. the semantics of this expression). To put the point in the form of a challenge: if one were to do exactly the same experiment with no noun phrase during the familiarization phase (just attention-getters like *Look at this!*), the findings would be exactly the same. Children are matching *another one* to the visual stimulus that is “the same” across familiarization and test, with no attention to the noun phrase during familiarization at all.

The control experiment (designed to exclude a different alternative hypothesis) does not undermine this explanation. In that study children were presented with the same familiarization phase and the same two alternatives pictures at test, but in this case the language accompanying the choice at test was not *another one*, as in the main experiment, but either: (1) *another yellow bottle* (in which case they looked more to the yellow bottle), or (2) *another bottle* (in which case they looked equally to the two bottles). This shows simply that children of this age (1) associate the word *yellow* with yellow things, and (2) do not associate the phrase *another bottle* with the same-colored object across familiarization and test (as they do with the phrase *another one*). But again the noun phrase in the familiarization phase is very likely irrelevant in this study—children are just matching the language at test with what they are seeing and/or have seen.

And so, what the current studies tell us is how 18-month-old children react to *another one*, and similar phrases containing the word *another* when presented with one object followed by a choice of two other objects: one almost identical and one differently colored but from the same category. The findings are interesting and invite further inquiry from the point of view of children’s word meanings, categorization tendencies, and the like, but they do not inform us at all about their understanding of the syntax of noun phrases.

¹ Note that I say “goes best with” rather than “means” (or similar words implying an interpretation) because in the preferential looking paradigm the child is not making an active choice of one object that excludes the other—such as pointing to one of the bottles—but merely looking 25% longer at one as compared with the other.