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“I like your ponytail, but I have a ponytail, too” The Acquisition of the Logical Properties of
Because and *But*

In this paper, I research the acquisition of *because*, *but*, and *and*. I assume *and* is a simple conjunction against which I compare the properties of the other two. For example, *but* and *and* can be interchanged in a sentence S without affecting the truth value of S (1). Also, both *but* and *and* can coordinate heads, phrases, and clauses. However, unlike *and*, *but* requires a certain theory of mind to use felicitously because the speaker is providing an exception to what he believed would be expected (2); in this paper, this key logical property of *but* will be called (+contrast). *Because*, on the other hand, selects a subordinate clause and cannot be interchanged with *and* without affecting the truth value of S (3). Also, both understanding and producing *because* require understanding causality in the world; in this paper, the logical property of *because* will be called (+causal.)

Following Byrnes 1991, I hypothesize that adult-like knowledge of *and* is acquired before adult-like knowledge of *because*. I hypothesize that adult-like knowledge of *because* is acquired before adult-like knowledge of *but* (4) due to *but*'s extensive overlap with *and*'s environment and a slower development of theory of mind (Perner 1991) than of causal comprehension. I further hypothesize that children have not fully acquired the logical properties when they begin to produce these complex function words (5). I present evidence that preschoolers acquire comprehension and production of *because* and *but* gradually, starting by using them interchangeably with *and*.

In a pilot study, I tested three-year-old girl's ('A.') spontaneous production, elicited production, elicited imitation, and comprehension of *but*, *because* and *and*. I initially hypothesized that, as is normally the case, comprehension would precede production and elicited imitation tasks would evoke accurate use more frequently than elicited production or spontaneous production. To elicit the data, I designed a variety of tasks for the subject, including judging a puppet's productions, describing stuffed-animal scenarios, and repeating secret messages to a second linguist.

I found that *but* and *because* were often used and accepted without (+ contrast) and (+ causal) in the subject's spontaneous production, elicited imitation, and comprehension tasks, but never in elicited production. There was some suggestion that the elicited imitation and comprehension tasks were compromised. The pilot study was not conclusive as to whether comprehension precedes production; a previous study, Byrnes 1991, also suggested that production of *because* could precede comprehension. Clearly, however, the subject had learned *because* and *but* as conjunctions before acquiring their logical properties, which supports my original hypothesis. Interestingly, this broad use seems to violate the “no-negative-evidence” hypothesis that language acquisition devices have only grammatical instances of sentences from the target language.

1.) *P and Q*: S is true iff P and Q are both true

P *but* Q: S is true iff P and Q are both true

e.g. “Sam is weird, but nice.”

if the speaker does not assume that being weird normally precludes being nice, this sentence is a little odd, but certainly not false as long as Sam is both weird and nice. (Bach 1999)

2.) The speaker can be anticipating anything from conversation-specific expectations to the common expectations of society.

a. I told you I would go, but I can't. (specific)

b. I like you, but you don't like me. (common)

3.) P *and* Q: S is true iff P and Q are both true

P *because* Q: S is true iff P and Q are both true and Q caused P

a. “I broke my leg because I tripped”

- If the speaker broke his leg because something fell on it, this is false even if the speaker both tripped and broke his leg. (A sentence like “I tripped and broke my leg” might suggest that *and* is also causal; however, *and* merely occasionally allows a causal interpretation while *because* always requires it.)

4.) *and* → *because*

and → *but*

(Knowledge of *and* is required before one can acquire knowledge of *but* and *because*.

Though knowledge of *but* does not depend on knowledge of *because*, *but* takes longer to acquire.)

5.) 1. A: I like your ponytail, **but** I have a ponytail, too!

Intended: I like your ponytail **and** I have a ponytail, too!

2. Experimenter: When does [the clock] go bong bong bong?

A: **Because** after the tick-tocking.

Intended: After the ticktocking.

References

Bach, K. (1999) The Myth of Conventional Implicature. *Linguistics and Philosophy* 22/4: 327-366

Byrnes, J. (1991) “Acquisition and Development of *if* and *because*; Conceptual and Linguistic Aspects.” *Perspectives on Language and Thought: Interrelations in Development* 354-396. Cambridge: Cambridge University Press.

Perner, J. (1991) *Understanding the Representational Mind*. Cambridge: MIT Press