

Behaviorism, nativism and interactionism

(8)“Traditional behaviorists believed that *language learning* is the result of imitation, practice, feedback on success, and habit formation.”

Examine the texts given below to see to in what ways learners use imitation, the practice, and the feedback on success. As for habit formation, it is not clear how the actual data could ever directly reflect it.

a.) Imitation in the texts.

Peter (24 months) (p. 10)

(Peter is playing with a dump truck while two adults, Patsy and Lois, look on.)

Peter: Get more.

Lois: You're gonna put more wheels in the dump truck?

Peter: Dump truck. Wheels. Dump truck.

(later)

Patsy: What happened to it?

Peter: (looking under the chair for it). Lose it. Dump truck! Dump truck! Fall! Fall!

Lois: Yes, the dump truck fell down.

Peter: Dump truck fall down. Dump truck.

Peter (25 months) (pp. 10-11)

(Peter, Patsy, and Lois are playing with pencil and paper.)

Peter: (indicating he wants Patsy to draw) Lois. Lois too. Patsy. Lois too.

! Patsy: You want me to make a car? OK.

(Patsy draws a tiny car like Lois's.)

Peter: Lois have some paper?

(later)

Patsy: Let's see if I can draw what you draw. Draw something!

Peter: Draw something!

(Unpublished data from P. M. Lightbown)

“It is easy to see that Peter imitates a great deal. However, it should be stressed that not all children imitate to the extent that Peter does. Some 30—40 percent of Peter's speech consists of imitations, while for some children, the rate of imitation may less than 10 percent.”

In any case, the imitation is certainly not simple-minded, parrot-like behavior. It is selective, focussed on certain things, ignoring others, and it stops once the child seems to think it has 'mastered' whatever it is focusing on for the moment. (11) “Detailed analyses showed that Peter imitated new words and sentence structures until they became solidly grounded in his language system, and then he stopped imitating those and went on to imitate other new words and structures.” In part what is chosen for imitation seems to be something that the child has begun to understand and thus began to incorporate in its own language system. In any case, the imitations are often seriously flawed in terms of the adult system.

Finally, it is clear that imitation is, at best, only part of the process. Much more of the process involves making generalizations that extend the linguistic system, quite unlike a parrot.

b.) Practice in the texts.

Cindy (24 months, 16 days; p. 11)

(Cindy is looking at a picture of a carrot in a book and trying to get Patsy's attention.)

Cindy: Kawo? kawo? kawo? kawo?

Patsy: What are the rabbits eating?

Cindy: They eating...kando?

Patsy: No, that's a carrot.

Cindy: Carrot. (point to each carrot on the page). The other...carrot. The other carrot. The other carrot.

(A few minutes later, Cindy brings Patsy a stuffed toy rabbit.)

Cindy: He (xxx) eat carrots. The other one eat carrots. They both eat carrots.

(One week later, Cindy opens the book to the same page.)

Cindy: Here's the carrots. (pointing) Is that a carrot?

Patsy: Yes.

Cindy (25 months, 1 day) (pp. 11-12)

Cindy: (playing with several dolls, one of which she calls a 'tiger') Doll go to sleep.

Patsy: Does the doll want to go to sleep?

Cindy: (not answering Patsy, but talking to dolls in 'motherly' tones)

Okay, I take you. Come on, Doll...(xxx). Go to sleep with the tiger (xxx) go to sleep. Doll wants to go to sleep.

Patsy: Does the tiger want to go to sleep?

Cindy: Tiger wants to go to sleep. The doll wants to go to sleep. He go to sleep.

(Unpublished data from P. M. Lightbown)

Practice, in so far as it exists, is full of non-native utterances and certainly does not extend over the whole range of types of utterances that are possible. And, for some children, there is almost no obvious practice. Note that the data so far shows some support for imitation and practice as mechanisms of learning. Note, however, that most children do not use these techniques as much and some hardly use them at all, but they also learn language.

Kathryn (24 months)

Lois: Did you see the toys I brought?

Kathryn: I bring toys? Choo choo? Lois brought the choo choo train?

Lois: Yes, Lois brought the choo choo train.

Kathryn (reaching for bag) I want play with choo choo train. I want play with choo choo train. (taking out slide). Want play. What's this?

Lois: Oh you know what that is.

Kathryn: Put down on floor. This. I do this.

(Kathryn puts slide on the floor).

Kathryn: (taking out two train cars). Do this. I want do this. (trying to put train together) I do this. I do this.

Lois: OK. You can do it. You can do it. Look I'll show you how.

(Lois puts it together.)

Kathryn: (searching in box) I get more. Get a more. No more choo choo train. Get truck. (taking out truck) Kathryn truck. Where? Where a more choo choo train?

Lois: Inside. It's in the box.

Kathryn: A choo choo train? (taking out part of train). This is a choo choo train.

(Bloom and Lahey 1978)

c.) Feedback in the texts.

And, the feedback, such as it is, from the caretakers is far too random and impoverished to account for the learning; thus, the feedback on success, insofar as it exists and plays a role, must be generated, not by the caretakers, but by the child's own utterances.

Further, children with considerable frequency, totally ignore feedback.
(McNeill (1966:69); no age given)

Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, say, "Nobody likes me."
Child: Nobody don't like me.
Mother: No, now listen carefully; say, "*Nobody likes me.*"
Child: Oh! Nobody don't likes me.

Preliminary conclusion: Most presentations of behaviorism are too simplistic to account for the actual behavior observed. At the very least, the account needs to be enriched.

Other children:

(Data from P.M. Lightbown and J. Rand)

1. Kyo (6,10): I'm hungry.
Dad: We'll have some poppy seed bread in a little while.
Kyo: No, I want it now.
Dad: We have to wait 'till it's defrosted.
Kyo: But I like it *frossed*.
2. Randall had a little bump on his hand and his mother said that they'd have to take him to the doctor.

Randall (3,0):Why? So he can *doc* my little bump?
3. Michel (2,10):Mummy, I'm *hiccing up* and I can't stop.
4. Mother: Get undressed (after many repetitions)
David (3.11):I'm getting undressed.
I'm getting *on dressed*.
I'm getting *on dressed*.
I'm getting *off dressed*.

5. At Lucy's twelfth birthday party, toasts were proposed with grape juice in stemmed glasses:

Father: I'd like to propose a toast.

After a long period without toasts, David raised his glass:

David (5,1): I'd like to propose a piece of bread.

Only after all the laughter sent David slinking from the table did the group realize that he wasn't joking.

6. Mother: I love you to pieces.

David (4,1): I love you three pieces.

7. Randall (2,9): Are dogs can wiggle their ears?

8. Randall (3,5): You took all the towels away because I can't dry my hands.

Innatism: It's all in your mind.

Chomsky speaks about "the logical problem of language acquisition", that is, the ability of children to learn a language despite what he terms inadequate data: the data that children are exposed to is full of false starts, incomplete sentences, slips of the tongue, and so on. The position is that (a) the child is biologically endowed to learn language (=LAD, Language Acquisition Device), (b) the environment only contributes in the sense that caretakers speak to the child, and (c) adult correction plays virtually no role in language learning.

One question is over whether there is a special capacity for language learning or whether language learning can be handled by the basic cognitive capacities of humans.

A problem for all approaches, including innatists since children learn different languages, not the same language, is how do they learn what they learn? This is sometimes referred to as the learnability problem.

Interactionist positions.

Interaction with the environment is crucial. Some interactionists say that it is sufficient; others say that some parts of human language learning are innate, while others are learned. Within this group, there is some debate about whether or not there is a specific language learning capacity.