

Strauss, S., & Ziv, M. (2001). Children's request teaching when asking for names of objects. *Behavioral and Brain Science*, 24, 1118-1119.

Author of Target Article:

Paul Bloom, P. (2000). How children learn the meanings of words.

Correspondence to Sidney Strauss or Margalit Ziv, School of Education, Tel Aviv University, Tel Aviv 69978, Israel sidst@post.tau.ac.il or mziv@post.tau.ac.il

Abstract

We propose that in addition to children's requests for word names being a reflection of an understanding of the referential nature of words, they may also be requests for teaching. These possible requests for teaching among toddlers, along with other indications, suggest that teaching may be a natural cognition that may be related to the development of theory of mind.

Children's Request Teaching When Asking for Names of Objects

In analyzing the process of learning word meanings by children, Bloom assigns a central role to children's developing theory of mind. According to this account, very young children have the ability to use mentalistic cues and figure out adults' referential intentions. As Bloom recognizes, in the normal course of learning the meaning of words, young children not only infer others' intentions when others speak, gesture, etc., but they also actively request adults to name objects for them. In so doing, toddlers may be initiating teaching moments. We now explore this possibility.

It has been proposed (Strauss, Mevorach et al., in press) that teaching, like language, can be regarded as a natural cognition. The combination of several points may support this notion. (1) Teaching without theory of mind may be found among non-primates (Caro & Hauser; however, teaching with theory of mind may be species-specific to humans (Premack & Premack, 1996). (2) Teaching is universal among human beings. (3) The vast majority of humans spontaneously engage in teaching even though they have not been taught how to teach, but merely exposed to it. (4) Teaching is remarkably complex. It involves myriad and multifaceted mental processes and assumptions about others' minds and how learning takes place in their mind. (5) The visible part of teaching is the external behaviors teachers exhibit. The assumptions and complex mental processes made by teachers while teaching are invisible, and they cannot be inferred from the visible part of teaching. (6) Already during their preschool years, young children show attempts to teach (Ashley & Tomasello, 1998; Strauss, Ziv, & Stein, in press; Wood, Wood, Ainsworth, & O'Malley, 1995). In concert, these reasons suggest that teaching may be a natural cognition.

Frye & Ziv (in press) suggested that interpreting teaching in theory of mind terms highlights its two main components: the difference in states of knowledge of two parties as a prerequisite for teaching, and the intention to reduce the difference in knowledge by enhancing the knowledge, or understanding of the learner. Already at the age of 3 years, children could recognize that in order for teaching to occur there is a need for a knowledge gap between teacher and learner, or, in other words, that a knowledgeable person accompanied by an ignorant learner are the prerequisites for teaching. Several recent studies investigated preschoolers' teaching strategies and suggested that children's teaching was related to their theory of mind understanding (Wood et al., 1995; Astington & Pelletier, 1996). It wouldn't be surprising to hear a 3-year-old child say: "Dad, teach me (or show me) how to put this toy together".

There may be a possibility that a year earlier, toddlers at the age of 2 years begin to realize that they can produce object naming on the part of others and, thus, have some understanding of the prerequisites of teaching. They may, for example, have some sensitivity to their own lack of knowledge and to the adult's different knowledge status that enables satisfying their request. On this interpretation, the child may also have implicit knowledge that his/her request may result, on the adult's part, in an intentional reference to the specific object the child herself pointed, or referred to.

Another possibility is in line with what Bloom claimed about the implicit reasoning stages underlying children's inferences about thoughts of others. Here the implicit reasoning process involved in a request for intentional teaching of objects' names may be the following:

1. Objects have names, or words that refer to them (based on previous experience/ knowledge about words).
2. I don't know the word referring to this object.
3. Adults know the word referring to this object (2+3 – awareness of the knowledge gap).
4. If I point to this object the adult will pay attention to it, too (joint attention, social referencing).
5. If I ask, "What's that?" the adult will name it (initiating someone else's intentional teaching).

This analysis suggests that the origins of understanding teaching as a natural cognition, specifically beginning to appreciate the knowledge gap between the self and others, should be empirically investigated already in toddlers, and that requests for objects' names may provide a natural context for this exploration. Furthermore, exploring toddlers' emerging awareness of their own and others' knowledge may contribute to the understanding of the early developmental stages of what develops during the preschool years to children's theory of mind.

References

Ashley, J., & Tomasello, M. (1998). Cooperative problem-solving and teaching in preschoolers. Social Development, 7, 143-163.

Astington, J. W., & Pelletier, J. (1996). The language of mind: Its role in teaching and learning. In D. R. Olson and N. Torrance (Eds.), The handbook of education and human development (pp. 593-620). Oxford: Blackwell.

Caro, T. M., & Hauser, M. (1992). Is there teaching in nonhuman animals. The Quarterly Review of Biology, 67, 151-174.

Frye, D., & Ziv, M. (in press). Teaching and learning as intentional activities. In S. Strauss (Ed.), Theories of mind and teaching. Oxford: Oxford University Press.

Premack, D., & Premack, A. J. (1996). Why animals lack pedagogy and some cultures have more of it than others. In D. R. Olson and N. Torrance (Eds.), The handbook of human development and education (pp. 302-344). Oxford: Blackwell.

Strauss, S., Mevorach, M., Brand, E., Steiner, J., Zimet, G., Rauner, G., Wallenstein, N., & Hadas, R. (in press). Teachers' mental models of children's minds and learning. In S. Strauss (Ed.), Theories of mind and teaching. Oxford: Oxford University Press.

Strauss, S., Ziv, M., & Stein, A. (in press). Teaching among young children: Evidence for teaching as a natural cognition and children's emerging theory of mind. Cognitive Development (Special issue on Constructivism).

Wood, D., Wood, H., Ainsworth, S., & O'Malley, C. (1995). On becoming a tutor: Toward an ontogenetic model. Cognition and Instruction, 13, 565-581.