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Brief Report

Children's explicit assessments of reliability influence their willingness to learn novel labels

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ABSTRACT

This study examined how explicitly evaluating another person's performance influences 3.5-year-old children's willingness to learn from that person. Children interacted with a speaker who presented a series of familiar objects and labeled them either accurately or inaccurately. After establishing reliability, the speaker taught nonsense labels for two additional familiar objects. Half of the children were asked to explicitly judge whether the speaker was reliable before the novel labels were presented; half were asked to do so at the end of the experiment. Children who were given an opportunity to verbally assess the speaker's accuracy prior to label learning were more likely than those evaluating afterward to avoid learning from the previously inaccurate labeler. These findings show that explicitly evaluating their knowledge can reduce children's willingness to learn words from an unreliable source, expanding on prior research showing influences of explicit evaluations on children's problem solving.

Introduction

As children develop their understanding of the world, they learn and interpret substantial amounts of information from the people in their environment. In many instances, children need not be consciously aware of the information for it to affect their understanding and behavior. In some instances,

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however, explicit statements of one's knowledge may promote learning (e.g., Brown, Kane, & Echols, 1986; Siegler, 1995). Such descriptions could be particularly valuable for younger children, who may be more susceptible to inaccuracy and in turn deception, in part because they fail to make conscious judgments regarding others' knowledge. The purpose of the current study was to investigate the influence of children's own explicit judgments of the reliability of a speaker on their willingness to learn novel information from that individual.

The value of making knowledge explicit has been demonstrated in studies involving self-explanation, where learners provide descriptions of problem-solving strategies, abstractions, or learned information. For example, school-aged children show increased problem-solving success if they describe the problem solutions (Siegler, 1995) and show increased understanding of biological systems after explaining passages from a biology textbook (Chi, De Leeuw, Chiu, & Lavancher, 1994). Although both self-explanation and direct instruction can promote learning, self-explanation is particularly effective in promoting transfer of knowledge (Rittle-Johnson, 2006). Most self-explanation research has focused on older school-aged children and adults, but effects of explicit descriptions also have been observed in preschool and kindergarten children. For example, giving explicit statements of the goal, obstacle, and solution increases children's success at generalizing a problem solution to a new task (Brown et al., 1986). In Brown et al.'s (1986) study, 3- to 5-year-olds who were prompted to describe the structure of a problem scenario were more successful in transferring a solution to similar problems and were equivalent in performance to children who spontaneously discovered the problem structure. Relatedly, describing how an adult had solved a math problem promotes 5-year-olds' subsequent accuracy on addition problems (Calin-Jageman & Ratner, 2005).

Explanations might prove valuable in learning and problem solving because they help learners to recruit their prior knowledge to identify informative patterns in the input (Williams & Lombrozo, 2013). Thus, it seems plausible that explicit statements of their knowledge could improve young children's performance in other types of tasks, including those related to language and social cognition. Indeed, there is evidence that children's explanatory statements can promote their social cognitive skills; in one study, 3-year-olds prompted to describe, across multiple sessions, what happened in false belief scenarios subsequently were more successful at false belief tasks than children who were not asked to provide descriptions or were prompted less systematically (Amsterlaw & Wellman, 2006).

The influence of explicit descriptions on activating prior knowledge (Williams & Lombrozo, 2013) may make them particularly valuable for evaluating the credibility of information sources. Much of what children learn is obtained, either directly or indirectly, from other people. Consequently, the ability to evaluate the reliability of that information is essential for successful learning. By the age of 2 years, children show some ability to evaluate the probable reliability of an informant, being more willing to learn new words from a previously accurate labeler than from a previously inaccurate labeler (Koenig & Woodward, 2010; Krogh-Jespersen & Echols, 2012). This ability improves with age, with 4-year-olds being more systematic in using past accuracy than 3-year-olds (Clément, Koenig, & Harris, 2004; Corriveau, Meints, & Harris, 2009; Koenig & Harris, 2005). For example, 3-year-olds are less successful than 4-year-olds in making judgments when informants are only partially accurate (Pasquini, Corriveau, Koenig, & Harris, 2007), and they are more likely than 4-year-olds to retain their trust in a previously reliable informant who becomes unreliable (Scofield & Behrend, 2008). Here we asked whether encouraging younger children to provide explicit descriptions of the labeling behavior of an informant increases their use of reliability in subsequent label learning.

There are, in fact, suggestions in the literature that explicit judgments might influence children's use of reliability in learning from others. In a study by Koenig, Clément, and Harris (2004), 3- and 4-year-olds were asked to indicate whether each of two speakers, one accurate and one inaccurate, had provided right or wrong information at two time-points: immediately following a familiarization period but prior to novel label test trials and, again, following the novel label test trials. Children of both age groups could identify the labeling abilities of the accurate and inaccurate speakers at above-chance levels, and in both age groups those children who correctly reported information about each speaker's prior accuracy selectively learned novel labels from the accurate speaker. Similarly, Corriveau et al. (2009) showed that both 3- and 4-year-olds reliably differentiated among accurate,

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