Short Report

Subtle Linguistic Cues Affect Children's Motivation

Andrei Cimpian, Holly-Marie C. Arce, Ellen M. Markman, and Carol S. Dweck

Stanford University

Are preschoolers' reactions to setbacks influenced by whether their successes are rewarded with generic or nongeneric praise? Previous research has focused on the role of category-referring generics (e.g., "Dogs are friendly") in shaping children's knowledge about natural kinds (see Gelman, 2004). Generic sentences can, however, refer to individuals as well as categories. For example, "John is friendly" is generic because it reports a general regularity—albeit about a single person—rather than a particular fact or episode (Carlson & Pelletier, 1995). In contrast, the nongeneric "John was friendly at the party" refers to a specific past event. Generic sentences about an individual imply that the particular behavior commented on (e.g., John smiling warmly) stems from a stable trait (e.g., friendliness) or skill (see Gelman & Heyman, 1999). Are children sensitive to this subtle connotation with respect to their own behavior? If so, then generic praise may lead children to think in trait terms, such that later mistakes could signal a negative trait or low ability and therefore undermine motivation (Dweck, 1999, 2006).

Preliminary support for this claim comes from a study by Kamins and Dweck (1999). Praising the whole person (e.g., "You are a good boy/girl") after success on a task fostered helpless responses to subsequent mistakes more than praising the process through which success was achieved (e.g., "You found a good way to do it"). We suggest that children's behavior was in part driven by the fact that the person praise was generic, connoting a stable trait of the child, while the process praise was nongeneric, focusing on one specific episode. Would manipulating only the genericness of the praise result in similar patterns of coping? For example, would children's motivation be affected differently by "You are a good drawer" (generic) than by "You did a good job drawing" (nongeneric)? Note that these sentences are much more similar than the person-process pairs used by Kamins and Dweck—so similar, in fact, that adults may not be aware of their contrasting implications and are thus likely to use them interchangeably in interactions with children. Demon-strating that children praised in these two ways react differently to a challenge would be evidence for the importance of the generic/nongeneric distinction in shaping young children's conceptions of their abilities.

METHOD

Twenty-four 4-year-old children ($M = 4$ years 6 months; range = 4 years 1 month to 5 years 1 month; 12 boys) acted out several scenarios[1] (see Kamins & Dweck, 1999, Experiment 2). Children chose a puppet they could use to act out their part in the scenarios; the experimenter handled a second puppet, representing a teacher. In each scenario, the teacher puppet asked the child puppet to draw a different object. Small pipe cleaners were used as pretend crayons; no actual drawing or pictures were involved. The child puppet successfully completed the requested drawing in the first four scenarios, and the teacher puppet praised each success generically for half the children ("You are a good drawer") and nongenerically for the other half ("You did a good job drawing"). The four success scenarios were followed by two in which the child puppet made a mistake (omitting ears on a cat and wheels on a bus) that the teacher puppet commented on, identically in the two conditions. These mistake scenarios allowed us to test children's reactions to criticism. For debriefing, the mistake scenarios were completed successfully.

A baseline set of *self-evaluation* questions was given after the third success scenario, which involved drawing an apple. The four questions were as follows:

- Question a: "Do you like the apple that you drew, or do you not like it?" (answered on a 6-point scale from 1, *really not like it*, to 6, *really like it*)
- Question b: "Did what happened in the apple story make you feel happy or sad?" (answered on a 6-point scale from 1, *really sad*, to 6, *really happy*)

Address correspondence to Andrei Cimpian, Department of Psychology, Stanford University, Jordan Hall, Bldg. 420, 450 Serra Mall, Stanford, CA 94305, e-mail: acimpian@psych.stanford.edu.

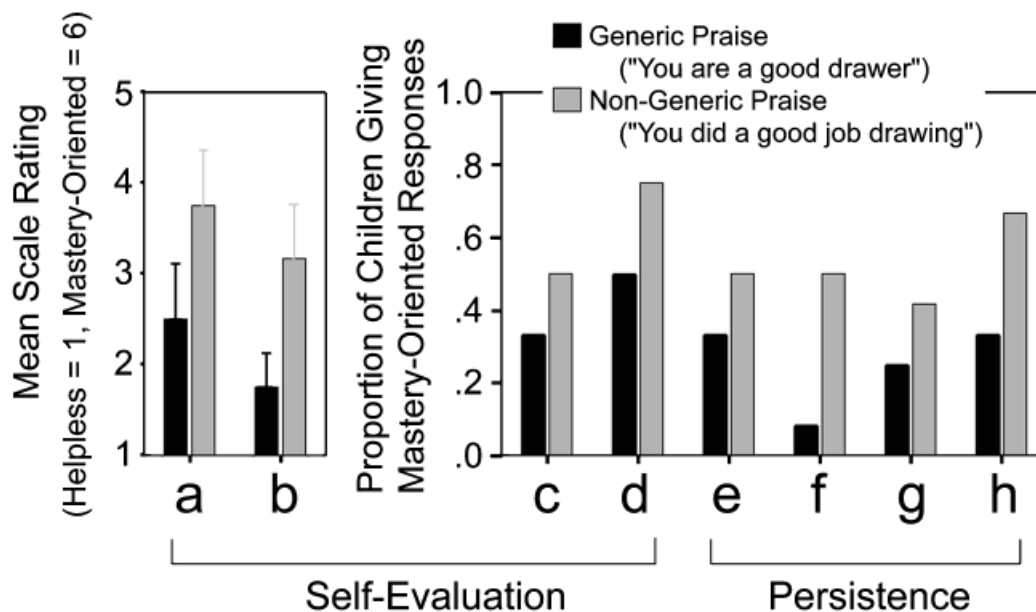[1]For the full script, see http://psychology.stanford.edu/~acimpian/full_script.pdf.

Fig. 1. Children's responses to the eight postmistake questions in the generic- and nongeneric-praise conditions. Error bars represent +1 *SEM*.

- Question c: "Did everything that happened in the apple story make you feel like you were good at drawing or not good at drawing?" (forced choice)
- Question d: "Did everything that happened in the apple story make you feel like you were a good boy/girl or not a good boy/girl?" (forced choice)

A second set of questions was administered after the two mistake scenarios. In addition to versions of Questions a through d, tailored to the content of the last mistake scenario, this second set included the following four *persistence-related* questions:

- Question e (would the child prefer to work again on an unsuccessful or successful previous drawing?): "On another day, when you had a chance to draw one of these again, would you want to draw the bus [unsuccessful], want to draw the tree [successful], or want to draw the cat [unsuccessful]?" (forced choice)
- Question f: "If you had a chance to do something tomorrow, would you draw or would you do something else?" (forced choice)
- Questions g and h (what would the child do after the teacher's criticism on each of the two mistake scenarios?): "Think about the story where you drew a cat and forgot the ears. What would you do now?" and "Think about the story where you drew a bus and forgot the wheels. What would you do now?" (open-ended)

For Questions g and h, answers that provided a solution to the mistakes (e.g., "Fix it") were coded as mastery oriented, whereas all others (e.g., "I would walk away") were coded as helpless; intercoder reliability was 100%.

RESULTS AND DISCUSSION

To compare the two conditions, we derived a composite measure of helpless/mastery-oriented behavior by standardizing children's responses within each question and averaging across questions. At baseline, before children experienced any mistakes, there was no significant difference between the generic- and nongeneric-praise conditions. This result suggests that the two types of praise were equally rewarding. However, on the postmistake measures, children who received generic praise exhibited significantly more helpless behavior than children who received nongeneric praise, $t(22) = 2.86$, $p_{rep} = .953$, $d = 1.17$. This pattern was true both for children's self-evaluation (Questions a–d), $t(22) = 1.94$, $p_{rep} = .858$, $d = 0.79$, and for their persistence (Questions e–h), $t(22) = 2.28$, $p_{rep} = .903$, $d = 0.93$. Moreover, the pattern for all eight questions went in the predicted direction (see Fig. 1), $p = .008$ by a sign test, although only for two of them—(b) and (f)—did the difference between conditions reach significance independently.

Generic praise implies there is a stable ability that underlies performance; subsequent mistakes reflect on this ability and can therefore be demoralizing. When criticized, children who had been told they were "good drawers" were more likely than those who had been told they "did a good job drawing" to denigrate their skill, feel sad, avoid the unsuccessful drawings and even drawing in general, and fail to generate strategies to repair their mistake. When asked what he would do after the teacher's criticism, one child said, "Cry. I would do it for both of them. Yeah, for the wheels and the ears." Children who were told they had done a good job had less extreme emotional reactions and better strategies for correcting their mistakes. In sum, subtle differences

in the genericness of language can influence children's conception of their abilities and their achievement motivation.

REFERENCES

Carlson, G.N., & Pelletier, F.J. (1995). *The generic book*. Chicago: Chicago University Press.

Dweck, C.S. (1999). *Self-theories: Their role in motivation, personality, and development*. Philadelphia: Psychology Press.

Dweck, C.S. (2006). *Mindset: The new psychology of success*. New York: Random House.

Gelman, S.A. (2004). Learning words for kinds: Generic noun phrases in acquisition. In D.G. Hall & S.R. Waxman (Eds.), *Weaving a lexicon* (pp. 445–484). Cambridge, MA: MIT Press.

Gelman, S.A., & Heyman, G.D. (1999). Carrot-eaters and creature-believers: The effects of lexicalization on children's inferences about social categories. *Psychological Science*, *10*, 489–493.

Kamins, M.L., & Dweck, C.S. (1999). Person versus process praise and criticism: Implications for contingent self-worth and coping. *Developmental Psychology*, *35*, 835–847.