Implicit Theories and Achievement Behavior

By: Dale H. Schunk

Schunk, D. H. (1995). Implicit theories and achievement behavior. *Psychological Inquiry, 6*, 311-314.

Article:

It is a pleasure to comment on Dweck, Chiu, and Hong's target article. Like so many of Dweck's earlier works, this article makes a substantive contribution to the psychological literature on the role of self-perceptions in behavior. The article summarizes much research on the operation of implicit theories. The theoretical framework is well presented, and the research evidence is impressive.

In this commentary, I discuss the theory and research on implicit theories and raise some issues of concern. I conclude with some suggested directions for future research. To focus my discussion, I concentrate on the role of implicit theories in achievement behavior.

The central thesis of the Dweck et al. article is that people's implicit theories can affect their perceptions and behaviors by creating a framework that promotes judgments and reactions consistent with it. The *theories* referred to are *entity theory* and *incremental theory* and are distinguished by the assumptions they make about persons' beliefs about the malleability of personal attributes (Dweck, 1986, 1991; Dweck & Leggett, 1988). People holding an entity view believe that such personal attributes as intelligence and morality are relatively fixed characteristics that change little (if at all) over time or due to experience. For example, people who subscribe to an entity theory of intelligence believe that it is roughly equivalent to capacity and does not change much over time. Those holding an incremental view believe that personal attributes are relatively fluid characteristics that can be changed. An incremental theorist might believe that intelligence is roughly synonymous with learning and can be developed as a result of one's efforts.

Implicit theories are characteristic beliefs of individuals. Although they may vary as a function of tasks and situations, they presumably operate like dispositions in the sense that people seem to have a preferred mode—entity or incremental.

This theoretical position is derived in part from studies of achievement patterns of children (Dweck, 1986, 1991; Dweck & Leggett, 1988). This research distinguished a helpless response (characterized by avoiding challenges and deteriorating performance in the face of difficulty) from a mastery-oriented pattern (involving seeking of challenging tasks and maintenance of effective strategies under difficulty or failure). Research shows that children classified into the two patterns typically do not differ in ability but do differ in choice of achievement goals. Students may focus on *learning goals* that involve increasing skills and competencies or on *performance goals* that entail a concern for appearing competent and obtaining favorable judgments from others. A series of studies showed that a focus on performance goals creates a tendency toward the helpless pattern, whereas pursuit of learning goals was more likely to produce a mastery-oriented pattern (Elliott & Dweck, 1988; Dweck & Leggett, 1988).

Subsequent work showed that different theories about one's capacities and capabilities could orient one to choose different goals for oneself. Thus, children holding an incremental view are more likely to choose learning than performance goals (Dweck & Leggett, 1988). This aspect of Dweck' s work is somewhat

reminiscent of achievement motivation research that identified differences in goals and motivational outcomes (e.g., persistence) among students as a function of level of achievement motivation (Atkinson, 1957).

Dweck et al. summarize an extensive body of research documenting the consequences of the implicit theories across domains. Implicit theories can affect judgments of intelligence and reactions to achievement difficulties and failures, judgments of others and reactions to social behaviors, motivational patterns in children, and encoding of social information and representation in memory. Implicit theories can affect judgments of one's own as well as others' actions.

With respect to the achievement domain, research on implicit theories bears strongly on individual differences in achievement patterns. Students have fundamentally different beliefs about their capabilities for learning and developing skills. This finding may help to explain why feedback linking outcomes to one or more attributions (perceived causes) has differential effects. For example, when students do poorly on a task, attribution theory predicts that attributing the performance to low effort can lead to better performance and higher perceptions of capabilities because effort is under personal control (Schunk, 1994). In contrast, attributing poor performance to low ability may have debilitating effects. We could predict, however, that effort feedback will be maximally effective with students who hold an incremental theory because an entity view might carry with it the belief that greater effort cannot produce better performance when ability is limited.

Implicit theories also have important practical implications. Teachers need to assess students' beliefs about their abilities and to structure feedback and tasks accordingly. Students holding an entity view need to understand (perhaps through feedback) that as a result of effort and use of good strategies, they have made progress in skill acquisition and have become more competent. For example, teachers might use portfolios containing samples of their work from times in a semester to provide tangible evidence of progress. By highlighting student progress, teachers will help to enhance student motivation, perceptions of capabilities, and skill acquisition (Schunk, 1994).

Much evidence from other investigators relates to and corroborates the work discussed by Dweck et al. Nicholls (1983, 1984) discussed the relation of conceptions of ability to the states of *task involvement* (concern with developing skills and judging ability based on one's progress in learning) and *ego involvement* (concern with looking smart and judging ability based on performance relative to that of others). Task and ego involvement are associated with an incremental theory and an entity theory, respectively (Dweck & Leggett, 1988; Nicholls, 1983). Meece, Blumenfeld, and Hoyle (1988) showed that children with task-mastery goals report more active cognitive engagement with material to be learned and that perceived competence relates positively to motivation and task-mastery goals. Schunk and Swartz (1993) found that providing children with a process goal of learning to use a strategy and feedback on their progress increases task orientation and decreases ego orientation and that self-efficacy (perceived capabilities) correlates positively with task orientation and negatively with ego orientation.

Wood and Bandura (1989) had adults engage in a managerial decision-making task and told them that decision-making ability was fixed (reflected their basic cognitive capabilities) or incremental (developed through practice). Incremental subjects maintained high self-efficacy, set challenging goals, applied rules efficiently, and performed better; entity subjects showed a decline in self-efficacy. Comparable results were obtained by Jourden, Bandura, and Banfield (1991) among college students performing a pursuit-rotor tracking task. Duda and Nicholls (1992) found that, for both sport and schoolwork, task orientation relates to high school students' beliefs that success depends on effort and collaboration with peers; ego orientation is associated with beliefs that success is due to high ability and attempting to perform better than others.

The array of evidence assembled by Dweck et al., combined with that of other investigators, provides strong support for the operation of implicit theories. At the same time, there are a few issues that need to be addressed. One concerns the nature of the theoretical beliefs. In much of the research by Dweck et al., implicit theories of intelligence have been assessed with three items: "You have a certain amount of intelligence and you really

can't do much to change it"; "Your intelligence is something about you that you can't change very much"; "You can learn new things, but you can't really change your basic intelligence." Respondents rate their judgments on a 6-point scale ranging from 1 *(strongly agree)* to 6 *(strongly disagree).* Scores on the three items are averaged to form an overall implicit theory score with higher scores indicating stronger incremental beliefs. Respondents who score 3 or below are classified as entity theorists; those who score 4 or above are incremental theorists.

The assumption is that the these two belief systems represent opposite ends of a continuum such that disagreement with the entity view (as expressed in the three items) implies agreement with the incremental view. Dweck et al. support this assumption by citing research in which respondents who disagreed with the entity statements gave incremental explanations of their answers.

This approach does not take into account the possibility that respondents could simultaneously entertain both sets of beliefs—a situation that may be especially common in achievement situations (e.g., school). Students might believe that there is an upper limit to ability that cannot be exceeded through effort, persistence, or use of effective task strategies (entity view) but that this limit is very high and the preceding factors can help to improve one's competence up to that level (incremental view). In support of this point, there is evidence that conceptions of ability can be affected by task conditions (Nicholls, 1983). Teachers give students lots of feedback indicating their progress in skill acquisition, which can help inculcate an incremental view of ability. At the same time, the social and group nature of much classroom learning emphasizes relative differences between students' abilities, which encourages entity beliefs. Further research is needed to determine whether these theories are antagonistic to one another.

A second issue is methodological and involves the use by Dweck and her colleagues of hypothetical situations. Dweck et al. summarize research in which students made attributions for hypothetical academic failures (poor grades) they could encounter and in which they were given scenarios depicting academic setbacks (e.g., low Graduate Record Examination scores) and asked how they would think and feel and what they might do. Dweck et al. summarize studies using actual achievement situations (e.g., Elliott & Dweck, 1988), but these typically involve students working individually outside of the context of the regular classroom.

Studies that use hypothetical scenarios or are conducted outside of regular classrooms downplay the role of contextual factors in achievement beliefs and behaviors, which are quite important (Schunk & Meece, 1992). It would seem that the role of the student vis a vis the environment could lead to the simultaneous valuing of entity and incremental theories, as noted previously.

More achievement research is needed in classrooms and other applied settings. Teachers often convey incremental information because they tell students they can improve with diligent effort, persistence, and careful attention to procedures, but social factors may convey entity information. It would be informative to assess students' perceptions at the outset of a school year and then follow students over time as they are exposed to classroom conditions that reinforce either an entity or an incremental perspective. Thus, teachers who give tasks in which greater effort pays off with higher grades may foster an incremental view; those who emphasize competition where ability equates with performance may cultivate an entity perspective.

A third issue concerns the maintenance over time of implicit theories and their generalization across settings. Research typically examines maintenance over brief periods and generalization across small variations in settings and content. Longer term studies are needed that assess how well theories generalize across domains. This research can help determine whether theories are more trait-like (people have preferred ways of believing for different tasks) or state-like (people alter their beliefs in response to changing conditions).

Finally, developmental research on the origination and refinement of implicit theories is called for. Research could address such questions as: Do children enter school with implicit theories? If so, what factors in the home affect theories? Could intervention programs with parents help to alter dysfunctional student beliefs? How might parents and teachers work together to foster productive beliefs for the school environment? In line with

this focus, research can address more fully the relations between school socialization practices, implicit theories, and personal beliefs. Dweck and Leggett (1988) found that perceptions of ability could moderate the effects of implicit theories on behavior. Research on how student perceptions of competence, attributions, and task value affect achievement outcomes will help to clarify the operation of implicit theories in achievement situations.

References

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychological Review, 64,* 359-372.

Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology, 84,* 290-299.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist, 41,* 1040-1048.

Dweck, C. S. (1991). Self-theories and goals: Their role in motivation, personality, and development. In R. A. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Vol. 38. Perspectives on motivation* (pp. 199-235). Lincoln: University of Nebraska Press.

Dweck, C. S., & Leggett, E. L. (1988). A social—cognitive approach to motivation and personality. *Psychological Review, 95,* 256273.

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology,* 54,5-12.

Jourden, F. J., Bandura, A., & Banfield, J. T. (1991). The impact of conceptions of ability on self-regulatory factors and motor skill acquisition. *Journal of Sport and Exercise Psychology, 8,* 213226.

Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology, 80,* 514-523.

Nicholls, J. G. (1983). Conceptions of ability and achievement motivation: A theory and its implications for education. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), *Learning and motivation in the classroom* (pp. 211-237). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review, 91,* 328-346.

Schunk, D. H. (1994). Self-regulation of self-efficacy and attributions in academic settings. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 75-99). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Schunk, D. H., & Meece, J. L. (Eds.). (1992). *Student perceptions in the classroom.* Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Schunk, D. H., & Swartz, C. W. (1993). Writing strategy instruction with gifted students: Effects of goals and feedback on self-efficacy and skills. *Roeper Review,* /5,225-230.

Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision-making. *Journal of Personality and Social Psychology, 56,* 407-415.