

Finding “Meaning” in Psychology

A Lay Theories Approach to Self-Regulation, Social Perception, and Social Development

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Much of psychology focuses on universal principles of thought and action. Although an extremely productive pursuit, this approach, by describing only the “average person,” risks describing no one in particular. This article discusses an alternate approach that complements interests in universal principles with analyses of the unique psychological meaning that individuals find in their experiences and interactions. Rooted in research on social cognition, this approach examines how people’s lay theories about the stability or malleability of human attributes alter the meaning they give to basic psychological processes such as self-regulation and social perception. Following a review of research on this lay theories perspective in the field of social psychology, the implications of analyzing psychological meaning for other fields such as developmental, cultural, and personality psychology are discussed.

Keywords: lay theories, meaning systems, social cognition

Psychology is often “one size fits all.” For example, all people within a culture are typically depicted as choosing goals, drawing inferences from their experiences, and regulating their self-esteem in similar ways. They are also frequently seen as developing in similar ways, with everyone proceeding along a common path, some just going farther, faster, or more skillfully.

The search for universal principles of human behavior and information processing is (and should be) one of the primary goals of psychological science (see, e.g., Higgins & Kruglanski, 1996) and has led to great advances in the field. Yet psychological science has (and should have) another primary goal as well: to understand how people give meaning to their experiences and to their relations with the world around them (see, e.g., Lakoff, 1994; McAdams, 2001.) However important universal principles are, they sometimes obscure how real people actually function. That is, by attempting to describe only the average, one runs the risk of describing nobody in particular. Thus, it is important to recognize that people can vary greatly in how they represent themselves and their social worlds. They may then process information and regulate themselves in fundamentally different ways—ways that can send them along different developmental paths.

The most promising approaches to psychology may therefore be those that closely marry the pursuit of univer-

sal principles with a careful consideration of personal meaning. Consider, for example, recent work in cultural psychology. An increasing number of findings are showing that many psychological phenomena common in Western cultures either do not hold or operate differently in other cultures (e.g., Heine et al., 2001; Markus & Kitayama, 1991; Nisbett, Peng, Choi, & Norenzayan, 2001). Yet rather than conclude that the principles typically thought to be behind these phenomena are flawed, researchers in cultural psychology have focused on unraveling how and why such principles are altered by the personal meaning that members of distinct cultures bring to their experiences (see Gardner, Gabriel, & Lee, 1999; Hong & Chiu, 2001; Hong, Morris, Chiu, & Benet-Martinez, 2000; Medin & Atran, 2004).

Here, we follow this line of thinking one step further: It is almost certain that many common psychological phenomena do not hold the same meaning for all individuals *within* a culture either. In this article, we use recent and ongoing research on people’s naive, or “lay,” theories about the social world to show how, even within a common cultural environment, different ways of representing the self and others interact with general principles of information processing, motivation, and self-regulation to produce important effects on achievement, self-esteem, interpersonal relations, and development. In so doing, we also show how key findings in many areas can be organized, reconceptualized, and extended.

Finding “Meaning” in Psychology

The idea that people structure and interact with the world differently on the basis of the meaning they assign to events in their social and physical environments has had a considerable history. Philosophers have long grappled with the metaphysical systems that they themselves (Pepper, 1942), scientists (Whitehead, 1938), and lay people (Langer,

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1972) construct to make sense of the world and to guide their actions. There were also several important early attempts within psychology to capture the idea that people structure their environments using cognitive or affective systems of meaning. For example, Kelly's (1955) theory of *personal constructs* proposed that everyone possesses a unique set of conceptual representations that they use to scan the environment for meaningful information. Also, Osgood's (1962) work on *semantic differentials* attempted to define the basic evaluative meaning that serves as the foundation on which people's attitudes and preferences are built. More recently, the idea that children form *internal working models* that give meaning to their relationships with caregivers, which stems from the theorizing of Bowlby (1969/1982), has taken hold and guided important research in social development (e.g., Main, Kaplan, & Cassidy, 1985).

Although considerations of personally constructed meaning have deep theoretical roots in psychology, one area in which such consideration has made widespread, important, and lasting empirical contributions to the field is the study of what has come to be known as *social cognition*. Social-cognitive approaches began with a focus on the general cognitive structures and processes underlying social judgment and social behavior (e.g., Hamilton & Gifford, 1976; Smith & Miller, 1979; Srull & Wyer, 1979), but from the beginning, an important subset of researchers within this tradition recognized the need to combine an interest in these general processes with the meaning that arises from individual representations of social stimuli (e.g., Bandura, 1986; Dweck, 1975; Markus, 1977; Mischel, 1973). Indeed, one of the earliest sourcebooks of the social cognition literature concludes with the caution that "the failure to incorporate [such] 'personal' factors into

social cognition could severely hamper the development of a comprehensive and realistic account of the processing of social information" (Higgins, Kuiper, & Olson, 1981, p. 396). Perhaps for these reasons, even as this area of focus has grown and changed, considerations of personal meaning have remained a priority in many extended research programs and have continued to inform the larger psychological principles that describe a wide variety of social phenomena (e.g., Andersen & Chen, 2002; Bless &Forgas, 2000; Cervone, 2004; Higgins, 1997; Mischel & Shoda, 1995; Molden, Lee, & Higgins, in press; Nisbett et al., 2001).

Although research on individual differences has long thrived across all domains of psychology (Ainsworth, 1979; Binet, 1905; Murray, 1938), it is important to note that social cognition research has gone beyond merely asking which individuals possess more or less of certain inclinations and with what consequences. That is, social-cognitive perspectives do not focus solely on topics such as how dispositional variation in people's primary needs or motives (e.g., McClelland, 1985), in their basic emotional perceptions or sensitivities (e.g., Gray, 1991), or in their general cognitive styles (e.g., Witkin & Goodenough, 1977) alter their performance or behavior. Rather, such perspectives are primarily concerned with how these types of motives, sensitivities, or styles, which may vary either chronically between individuals or from moment to moment within a single individual, affect the ways in which people give meaning to their experiences (Bless &Forgas, 2000). Moreover, they are also concerned with how this meaning might, in turn, direct and organize people's affect, cognition, and behavior (see Mischel & Shoda, 1995).

A Lay Theories Approach to Meaning

Given the promise of social-cognitive perspectives for clarifying the role of personal meaning in thought and behavior, they have heavily informed the approach we have taken to this issue (see Dweck & Leggett, 1988). We have concentrated on how the meaning that emerges from people's fundamental assumptions (i.e., *lay theories*) about the nature of the self and the social world can alter the general cognitive structures and processes through which they perceive this world (see also Morris, Ames & Knowles, 2001; Wegener & Petty, 1998). The specific assumptions that have been our primary focus concern whether fundamental person attributes (such as intelligence or personality) are considered to be static traits that are relatively fixed or, instead, more dynamic qualities that can be cultivated (see Dweck, 1999). The former assumption is termed an *entity theory*, since here the belief is that human attributes are fixed entities that are not subject to personal development. The latter assumption is termed an *incremental theory*, since here the belief is that human attributes can develop and change incrementally through a person's efforts.

In the following sections, we review several programs of research that have investigated the impact of the social meaning created by individuals' lay theories on a wide variety of phenomena. We begin by discussing the effects of holding an entity theory or an incremental theory about

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one's own traits or abilities on immediate self-regulatory responses to setbacks, including (a) responding to failure, (b) coping with dysphoria, (c) overcoming negative stereotypes, and (d) managing personal conflict in intimate relationships. We then describe how such theories can also affect prolonged self-regulation of achievement and self-esteem for students making the challenging transition to middle school or college. Following this, we examine how people's entity or incremental theories about *others'* personality affect the meaning they find in social behaviors and, in particular, how they influence the processing of social information and use of stereotypes. Finally, we discuss the broader implications of our lay theories approach for other areas of psychological research including socialization, development, culture, and personality, and we conclude by advocating greater attention to the organized systems of meaning that people construct to make sense of the world.

During this review, several features of the particular lay theories discussed here should be kept in mind. Specifically, across many different studies with diverse populations, research has repeatedly shown that (a) most individuals generally endorse either an entity theory or an incremental theory, and each theory occurs with equal frequency; (b) people can hold different theories in different domains of the self (e.g., intelligence vs. personality); (c) no one theory is consistently linked to people's ability level, education, or cognitive complexity; and (d) although the theories can be held strongly and stably, they can also be experimentally induced (see Dweck, 1999). Thus, overall, assessing people's more chronic entity and incremental theories has proven to be an effective means of capturing the broad meaning they typically give to their social experiences. Yet, at the same time, temporarily inducing one

theory or the other has shed light on the dynamic nature of theory activation and revealed the causal role such theories play in creating this meaning.

Effects of Lay Theories on Self-Regulation

In life, everyone inevitably faces a variety of failures and setbacks both large and small. The self-regulation people are able to immediately exercise in response to these setbacks, particularly when cherished abilities and identities are directly threatened, can often determine whether they are able to recover and resume pursuit of their larger goals (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus & Folkman, 1984). What failures and setbacks *mean* to the person experiencing them and what specific threats they are seen as posing to this person's self-concept should have an important influence on self-regulation in such circumstances. Is failure interpreted in a way that is undermining and debilitating or one that is challenging and energizing? Does it signify a need for passive or defensive behavior, or does it inspire active attempts to learn and problem-solve? Several separate lines of research have recently investigated how the distinct meaning that entity and incremental theorists find in failure can help shed light on these types of questions.

In general, believing that their abilities and attributes are fixed and stable versus dynamic and malleable should have a profound effect on the way in which people interpret failure. If attributes are seen as fixed, then success or failure provides diagnostic information about how much of these fixed attributes one possesses (and will ever possess). Therefore, for entity theorists, failure often signifies that abilities are permanently lacking in some way. Following failure, any self-regulation in which these individuals are engaged is thus likely to focus primarily on suppressing the importance of this failure or on coping as best they can with the negative emotional impact. In contrast, if attributes are seen as malleable, then success or failure provides diagnostic information about the level to which these attributes have thus far developed. Therefore, for incremental theorists, failure may signify that their abilities require improvement through further attention and effort. Following failure, any self-regulation in which these individuals are engaged is thus more likely to focus on determining how to bring about this improvement (Dweck, 1999).

Protecting Versus Improving Self-Regard

One area in which these differences in self-regulation between entity and incremental theorists can clearly be seen is in the way in which they attempt to maintain or defend their positive self-regard (i.e., their *self-esteem*). Although there are many different perspectives on why people place such great value on self-esteem—for example, because it serves as a “thermometer” of social success (Leary, Tambor, Terdal, & Downs, 1995) or as a means of keeping anxiety at bay (Greenberg et al., 1992)—a consensus exists that people will often go to great lengths to protect their self-esteem from harm. Individuals have been shown to use

a wide variety of strategies for recovering from blows to their self-esteem, at times even stooping to associating only with those they consider less worthy than themselves or attempting to actively sabotage those who have outperformed them (Tesser, 2000). However, less is known about when and why people may choose some self-esteem regulation strategies over others and whether this might be tied to the basic meaning people give to the self-threats they encounter.

Work by Nussbaum and Dweck (2005) recently examined these questions and revealed two dramatically different responses by entity and incremental theorists to a personal failure that threatened their self-esteem. In a manner consistent with the general perspective described above, those temporarily led to adopt an entity theory of their traits and abilities primarily sought to cope with their negative feelings and repair their sense of self by choosing to examine the work of other students who had performed very poorly. In contrast, those led to adopt an incremental theory primarily opted to repair their sense of self by attempting to directly remedy their personal deficit and choosing to study the strategies of students who had performed far better than they had.

Resisting Stereotype Threat

In addition to personal failure, another source of threat to the self comes from negative social stereotypes. The groundbreaking work of Steele and Aronson (1995; Steele, 1997) has dramatically demonstrated that minority group members typically underperform in situations where a stereotype of low ability is evoked. In explaining this phenomenon, most researchers have focused generally on the anxiety, distraction, or maladaptive strategies engendered by the threat of low ability that is brought about by the salient stereotype. However, because the primary threat in these circumstances again comes from the perception that one's ability is under evaluation, differences in how entity and incremental theorists perceive this threatened ability could again alter their responses to stereotype threat.

In several experiments, Joshua Aronson and his colleagues (e.g., Aronson, 2000) have indeed shown that effects of stereotype threat are accentuated for entity theorists (for whom any perceived deficiencies in ability are fixed and stable) and are alleviated for incremental theorists (for whom any perceived deficiencies in ability can be remedied over time). Aronson, Fried, and Good (2002) also performed an intervention in which African American college students were taught to adopt an incremental theory of their abilities. Despite the fact that the intervention did not decrease students' perception of stereotype threat in their environment, it did alter their response to it. Again, in a manner consistent with a self-regulatory response focused on improvement, these students showed greater valuing of academic work, greater engagement with their academic work, and higher grade point averages than those in the control groups.

Thus, it appears that the overall meaning that an incremental theory gives to their performance allows students to remain effortfully engaged in spite of their expe-

riences of stereotype threat. Indeed, several other interventions or experimental manipulations that have successfully alleviated the detrimental effects of stereotype threat also appear to orient students away from an entity theory, with its emphasis on judgment, and toward an incremental theory, with its emphasis on learning (Cohen, Steele, & Ross, 1999; Steele, 1997). This is a particularly dramatic illustration of how considering the personal meaning people give to social experiences can produce both important theoretical and practical advances.

Responding to Social Challenges

Self-regulation is often required to form and maintain close relationships with others, particularly when threats of conflict or rejection are perceived to be likely (e.g., Downey & Feldman, 1996). Much work on relationships has attended to how the meaning people assign to their partner's behavior can have implications for such self-regulation. It has been found, for example, that explaining a partner's negative behavior in terms of his or her negative traits or chronic negative intentions leads to escalation of conflict and hostility and often predicts the deterioration of the relationship (Bradbury & Fincham, 1992).

Yet what might lead people to form these negative expectations or explanations in the first place? Several programs of research on lay theories and relationships have examined these questions. First, Beer (2002) has demonstrated that, just as people's lay theories of ability can influence their self-regulation in response to academic or intellectual challenges, so too can their lay theories of their own shyness affect their responses to social challenges. Across several studies, shy incremental theorists preferred to engage in more difficult social interactions that they thought might increase their social skills and displayed more approach-oriented behaviors toward interaction partners. Shy entity theorists, in contrast, preferred to engage in easy social interactions where their social skills would not be threatened and displayed more avoidance-oriented behaviors toward their actual interaction partners. That is, once again, entity theorists focused on escaping a negative social interaction and minimizing what they saw as a threat to their stable (and underdeveloped) social abilities, whereas incremental theorists focused on overcoming a negative social interaction and improving their currently limited social skills.

In another program of research that has examined ongoing intimate relationships, Knee and colleagues (see Knee, Patrick, & Lonsbary, 2003) have found that those who view their relationship as a fixed entity (i.e., one, that is or is not "destined to be") (a) orient toward "diagnosing" the relationship, (b) believe that problems reflect the underlying quality of the relationship, and (c) show avoidant or hostile responses to conflict (see also Finkel & Burnette, 2006). In contrast, those with a more incremental view (i.e., that their relationship can, and should, grow over time) (a) orient toward developing the relationship, (b) believe that problems are challenges that spark relationship growth, and (c) show positive, improvement-oriented strategies in the face of disagreements. As in other contexts, then, the

meaning that people's lay theories impart to both casual and intimate relationships alters the functioning of basic interpersonal processes.

Falling Prey to, and Coping With, Dysphoria

Dysphoria poses a particular challenge for self-regulation because it often disrupts motivation and removes the pleasure from activities that were previously prized in one's life. Research on depression that has considered the meaning behind people's experiences of dysphoria has provided important insight into how they are, or are not, able to face these self-regulatory challenges. For example, *hopelessness* models of depression (Abramson, Metalsky, & Alloy, 1989) have outlined how people's interpretations of the controllability, importance, and self-relevance of negative life events are related to the difficulty they face in coping with major depression (see also Beck, Rush, Shaw, & Emery, 1979). Furthermore, more general research on coping has similarly emphasized the role of the emotional meaning of people's experiences in determining how successfully they maintain their focus on important goals (Lazarus & Folkman, 1984; Lewis, 1999; Park & Folkman, 1997).

Recent studies by Baer, Grant, and Dweck (2005) extend these perspectives and illustrate the way in which examining people's lay theories can illuminate both vulnerability to dysphoria and the impact of dysphoria on coping. Across three studies (which included a daily diary study that measured entity- and incremental-relevant goals and a laboratory experiment in which an entity or incremental theory was experimentally induced), Baer et al. showed, first, that operating within an entity theory, relative to an incremental theory, increased college students' vulnerability to dysphoria in their daily lives. In a manner consistent with the research described earlier, this increased vulnerability was mediated by a greater tendency to engage in self-critical rumination about one's traits and abilities following negative events (cf. Nolen-Hoeksema, 1991).

Beyond this increased vulnerability to dysphoria, Baer et al. (2005) also showed that the presence of dysphoria had very different effects on coping for entity theorists and incremental theorists. As is typically the case, dysphoria indeed had a dampening effect on coping for college students operating with an entity theory. The more dysphoria they reported on a depression inventory, the more they failed to keep up with their daily chores and academic work. In contrast, although dysphoria is, by definition, unpleasant, it often had an *energizing* effect for those operating with an incremental theory. The more dysphoria they reported, the more active problem solving they exhibited in their daily activities. Perhaps even more striking, after a setback on an experimental task, the more dysphoria they reported, the *better* they performed on the next trial. Thus, in the context of one lay theory, depressed affect appeared to signal defeat, whereas in the context of another it appeared to serve as a call for renewed action. These findings—that people's lay theories can predict what impact negative events will have on their affect and what

impact that affect will have on their lives—further highlight the importance of understanding how the way in which people give meaning to their experiences influences self-regulation and adaptive functioning.

Mastering the Transition From Elementary School to Middle School

In addition to influencing how and when they engage in short-term self-regulation following a negative experience or event, as has been the case in the studies described thus far, people's lay theories also affect how they manage more chronic and extended challenges. One demonstration of this can be found in the extensive research on how entity and incremental theories guide students' achievement motivation and scholastic performance (see Dweck, 1999). The study of achievement has long placed a great importance on determining what meaning people see in the tasks they choose to undertake and outcomes that befall them. Beginning with attribution theory (Weiner & Kukla, 1970), and expanding with the study of achievement goals (Dweck & Elliott, 1983; Nicholls, 1984), researchers have repeatedly shown that people's specific interpretations of their achievement prospects and outcomes can dramatically affect their persistence and performance. Yet further consideration of people's basic achievement-relevant theories can help make sense of how different goals and interpretations arise to begin with and continue to affect achievement over an extended period of time (Molden & Dweck, 2000).

This is clearly illustrated in a study by Blackwell, Trzesniewski, and Dweck (2005) in which nearly 400 students were followed across the seventh-grade transition to junior high school. Students' entity versus incremental theories of intelligence were assessed at the beginning of seventh grade, and their achievement goals, beliefs about the role of effort in achievement, attributions for performance, achievement strategies, and mathematics grades were monitored as they moved through junior high school. The transition from elementary-school mathematics to middle-school mathematics is a particularly challenging one (Eccles et al., 1993) and therefore provides an opportunity to examine how people's lay theories influence their self-regulation throughout this difficult period.

Looking first at the general achievement goals and beliefs that grew out of children's theories, Blackwell et al. (2005) found that these theories had a substantial and significant influence on how children handled the challenge of middle-school mathematics. Compared with students holding an entity theory, who viewed their intelligence as fixed and stable, those holding an incremental theory, who viewed their intelligence as something that could be cultivated, (a) predominantly adopted *learning goals* aimed at developing and extending their ability, (b) viewed effort as a *positive* thing that activates ability rather than as a *negative* thing that indicates a lack of ability, (c) less frequently explained their failures in terms of *low ability*, and (d) reported *mastery-oriented* responses of increased effort and persistence rather than *helpless* strategies of effort withdrawal (see also Dweck & Leggett, 1988).

In addition to these effects, although entity and incremental theorists showed no differences in mathematics performance when they entered seventh grade, they showed significant differences in their mathematics grades at the end of eighth grade. In fact, the grades earned by incremental theorists steadily increased over the seventh and eighth grades such that the disparity between incremental and entity theorists grew over time. (It is interesting to note that whereas students' theories significantly predicted this change in grades over time, their entering mathematics achievement did not.) Finally, path analyses showed that an incremental theory fostered increasing rather than decreasing mathematics grades over time by directly encouraging learning goals and positive effort beliefs, both of which then fostered the more positive, mastery-oriented strategies that led, in turn, to the higher grades.

Thus, in summary, the immediate meaning that students' lay theories gave to the challenges presented by middle-school mathematics determined how they regulated their long-term goals and strategies in pursuing these challenges (see also Butler, 2000). Furthermore, this self-regulation ultimately determined whether they reinvigorated rather than abandoned their efforts when difficulties were encountered.

Maintaining Self-Worth Through the College Years

Earlier, we discussed research on how people's lay theories affect their choice of strategies for repairing their self-esteem from an immediate threat. One further question that can be asked, however, is what long-term implications these strategies have for people's regulation of their self-esteem when facing repeated struggles. Do certain types of strategies, although potentially effective in the short term, create long-term vulnerabilities?

To investigate these questions, Robins and Pals (2002) examined changes in self-esteem in several hundred students as they went through their college years at a highly competitive school. Early in college, students' lay theories of intelligence and levels of self-esteem were assessed. Broad indicators of their typical self-esteem regulation strategies (i.e., their tendency to adopt learning and performance goals and their attributional, affective, and behavioral responses to setbacks) were measured as well.

The results of Robins and Pals (2002), like those of Blackwell et al. (2005), first demonstrated that theories of intelligence had significant links to (a) the adoption of both learning and performance goals, with incremental theorists choosing more learning goals and fewer performance goals, and (b) the choice of mastery-oriented versus helpless responses to setbacks, with incremental theorists explaining failure more in terms of a lack of effort than a lack of ability, showing less negative affective reactions, and demonstrating increased persistence rather than withdrawal in the face of difficulty. Furthermore, students' lay theories also predicted changes in self-esteem, with entity theorists showing a clear downward trajectory, compared with incremental theorists, over their college years. It is interesting

that this widening gap in self-esteem was independent of differences in average level of self-esteem and was not a function of differences in grades. Again, in a manner consistent with the findings of Blackwell et al., the path analyses revealed that students' lay theories achieved their effect by (a) fostering differences in goal pursuit, which then affected mastery-oriented versus helpless reactions, which went on to affect self-esteem, and (b) by directly fostering differences in mastery-oriented versus helpless reactions, which went on to affect self-esteem.

It is important to note that in both the Blackwell et al. (2005) and the Robins and Pals (2002) studies, mastery-oriented versus helpless self-regulation strategies played key roles, constituting the final pathway in predicting achievement and self-esteem. Yet these strategies arose directly out of the meaning that students' entity or incremental theories of intelligence gave to the challenges and struggles they faced. Indeed, in the Robins and Pals study, lay theories accounted for much of the variance in mastery-oriented versus helpless coping responses, either directly or indirectly through their additional effects on goals. This further illustrates the importance of systematically considering how the personal meaning people assign to their experiences may provide insight concerning psychological questions such as why people choose the goals they do, how they go about pursuing those goals, and whether or not they will succeed.

Effects of Lay Theories on Social Perception

The research on self-regulation that we have reviewed thus far has been concerned with people's self-related beliefs, goals, and inferences, that is, with their beliefs about their own attributes and their interpretations of their own behavior. There is also, however, a vast literature on social perception (Gilbert, 1998) that is concerned with how people interpret and respond to the behavior of others and what inferences they draw from others' actions and outcomes. Might considering the meaning people's lay theories bring to their judgments of others' behaviors increase our understanding of these processes as well?

The broad influence of lay theories on people's perceptions of others has, in fact, long been a central concern in the study of social judgment (e.g., Heider, 1958; Kelley, 1973; Ross & Nisbett, 1991). However, research within this tradition has also long assumed that all people share a common set of beliefs about the general causes of behavior. Furthermore, the formal information-processing models of social judgment that have emerged from such research also typically presume that all perceivers are generally trying to assign meaning to others' actions in much the same way (Gilbert, 1998; Krull, 1993; Trope, 1986). Yet just as individuals have different theories about themselves, they may have different theories about other people as well. Below we review several programs of research that have investigated the nature and consequences of such theories.

The core assumptions at the heart of the theories that we focus on here are analogous to the entity and incremen-

tal theories of ability discussed above but involve beliefs about the fixedness or malleability of *others'* personal attributes. The philosopher Alfred North Whitehead (1938) argued that viewing the world as consisting of objects with fixed properties leads one to be primarily concerned with measuring those enduring properties; however, viewing the world as being characterized by fluid, dynamic processes leads one to be primarily concerned with understanding those ongoing processes. In line with this argument, research has shown that holding an entity theory of personality (i.e., believing that people's personalities are fixed) produces a *trait focus* in which assessing people's stable personality traits is the primary aim. In contrast, holding an incremental theory of personality (i.e., believing that people's personalities are malleable) produces a *process focus* in which assessing people's dynamic social situations (and the ongoing, context-sensitive mental states they create) is the primary aim (see Levy, Plaks, & Dweck, 1999). How, then, might these lay theories affect the process of person perception and social inference?

Engaging in "Lay Dispositionism"

In general, people tend to show a number of clear biases in their judgments of social behavior. Perhaps the most well-known of these is what Ross and Nisbett (1991) have termed *lay dispositionism*, in which people overemphasize the role of individuals' personality traits, and underemphasize the role of varying social environments, when interpreting and explaining others' actions (see also Gilbert, 1998). Although this bias has been found to be quite robust, it should perhaps be more pronounced in perceivers for whom an actor's traits hold special meaning and should be less pronounced, or even reversed, in perceivers for whom situations hold special meaning.

Much cross-cultural research is consistent with this proposition (for reviews, see Markus & Kitayama, 1991; Nisbett et al., 2001). People with East Asian cultural backgrounds, which emphasize interdependence and sensitivity to varying social contexts in order to preserve social harmony, tend to display markedly less lay dispositionism than people with more Western European cultural backgrounds, which emphasize independence and a concern with individual attributes and accomplishments. Given these findings, individuals *within* a single culture who place greater importance on social situations (i.e., incremental theorists) should show less lay dispositionism than those who place greater importance on personality traits (i.e., entity theorists).

Studies by Chiu, Hong, and Dweck (1997) confirmed this prediction and found that those holding an incremental theory were indeed substantially less likely to display lay dispositionism. Whereas entity theorists predicted that a person who was more friendly, aggressive, or athletic than another person in one situation would again be more friendly, aggressive, or athletic than the other person "in a very different situation," incremental theorists predicted that the same person would be the *less* friendly, aggressive, or athletic one when the circumstances changed. Thus, although all perceivers displayed biased judgments, entity

theorists showed the classic tendency to overattribute behavior to a person's traits, whereas incremental theorists showed the opposite tendency, that is, to overattribute behavior to a specific situation (cf. Krull, 1993). Most important, these types of effects were found regardless of the entity or incremental theorists' culture of origin. A separate study, which included a sample of students from the United States and Hong Kong, revealed that in both cultures, entity theorists made stronger trait judgments based on individuals' behavior in a single situation than did incremental theorists.

Processing "Meaningful" Social Information

Beyond altering their explanations of and predictions for social behavior, might people's lay theories also alter their basic processing of social information? This question was addressed in a series of studies by Molden, Plaks, and Dweck (in press). According to standard models of social perception, impressions of behavior are assembled across several stages (e.g., Gilbert, 1998; Krull, 1993; cf. Trope, 1986). After a basic categorization of what types of actions are being performed, perceivers are thought to, first, generate an initial characterization of why these actions are occurring and, second, search for any information that would require the correction of this initial characterization. Furthermore, whereas the early categorization and characterization stages are conceptualized as being relatively automatic and requiring little effort or attention, the later correction stage is seen as being relatively deliberate and occurring only if perceivers can dedicate sufficient cognitive resources to the task.

In contrast to these standard models, Molden et al. (in press) obtained evidence that even when people's cognitive resources are very limited, they can continue to correct their inferences if the adjustment is a particularly meaningful one. Specifically, when their cognitive resources were depleted (using a dual-task paradigm), entity theorists corrected their initial impressions of an action to account for trait information (but not situational information), whereas incremental theorists corrected their initial impressions to account for situational information (but not trait information). Thus, when perceivers' lay theories gave certain information special meaning, they incorporated it into their judgments even when their effort and attention were limited (see also Knowles, Morris, Chiu, & Hong, 2001). These findings extend conventional models of social perception and suggest that basic social information processing can depend, in important ways, on people's lay theories.

Endorsing and Applying Social Stereotypes

In addition to the general models of social information processing discussed in the previous sections, much work has also been done on how perceivers specifically interpret and explain the behavior of targets who can be described by social stereotypes. Once again, the primary goal of most researchers has been to develop a broad account of how people respond to and use this stereotypical information during the impression formation process (Macrae & Bodenhausen, 2000). Yet because holding an entity theory

or an incremental theory affects basic social perception processes, as described above, might these theories affect the application of stereotypes as well?

At their core, stereotypes are a constellation of traits and abilities that are ascribed to anyone who is a member of a particular social group (e.g., librarians are typically viewed as being quiet, reserved, and conservative). Because entity theorists find special meaning in traits during the course of general social perception, they might also be expected to show a greater focus on stereotypes when considering social groups. This expectation was supported in a series of studies by Levy, Stroessner, and Dweck (1998). Although entity and incremental theorists demonstrated equal knowledge of what traits were associated with various racial, ethnic, and religious stereotypes (cf. Devine, 1989), entity theorists believed these traits to be more accurate descriptions of the groups than did incremental theorists. Additional studies by Levy et al. (1998) also revealed that entity theorists were quicker to develop a set of stereotypic traits when forming first impressions of novel groups. After reading sets of positive or negative behaviors supposedly performed by members of a student group from another campus, entity theorists (a) were more likely to apply general trait labels in their open-ended descriptions of group members, (b) made more extreme trait ratings for both positive and negative groups, and (c) reported stronger positive or negative evaluations of the group as a whole than did incremental theorists.

Attending to Stereotype-Consistent and Stereotype-Inconsistent Information

Do people's lay theories influence both their endorsement of social stereotypes and their processing of stereotypic information during impression formation? Previous work on such processing has at times found that people pay more attention to behavioral information that confirms their stereotypes but at other times has found that people pay more attention to behavioral information that disconfirms their stereotypes (because unexpected information is often particularly salient, see Stangor & McMillan, 1992). Studies by Plaks, Stroessner, Dweck, and Sherman (2001) were intended to shed additional light on this issue by investigating how people's lay theories might influence when and why each of these patterns of information processing occurs.

Across several studies, entity theorists were found to turn their attention away from information that went against their stereotypes (and, typically, toward information that confirmed them). Furthermore, in one study, the more the information violated their stereotype-based expectation, the less attention they allocated to it. This stereotype-inconsistent information (e.g., a skinhead acting kindly, a priest acting unkindly, or a disadvantaged, low-achieving boy performing well on a test) challenged their belief that the basic traits these types of individuals are thought to possess provide a reliable means for understanding their behaviors. In contrast, for incremental theorists, counterstereotypical information was attended to more than other information (i.e., information that was consistent with

the stereotype or neutral with respect to it). Indeed, as Plaks et al. (2001) pointed out, when people's psychological processes hold special meaning, inconsistent information, rather than being a threat to one's views, may be welcomed as a way of forming a more nuanced view of someone's beliefs, desires, or habits (see also McConnell, 2001; Plaks, Grant, & Dweck, 2005).

In summary, research on people's lay theories of personality has shown that, beyond any culturally shared assumptions about social behavior or universal principles for the processing of social information, the distinct meaning created by differing beliefs about personality can have profound effects on social perception and social information processing.

The Implications of a Lay Theories Approach for Other Areas of Psychology

Thus far we have reviewed the specific contributions of a lay theories approach to understanding basic processes of self-regulation and social perception. But are there broader implications for other areas of psychology? In the remainder of this article, we briefly consider several possibilities in the areas of socialization, development, culture, and personality.

Implications for Research on Socialization: Studying the Origins of Lay Theories

The search for the influence of parents on children is hampered by the fact that parents do so many things—how can researchers possibly know which ones are relevant to a child's development? Those researchers who have attempted to isolate this influence most often look either at how very broad styles of rearing (e.g., *authoritative* vs. *permissive* practices) affect a wide range of children's behavior (Baumrind, 1968) or at how more specific and concrete parenting practices (e.g., the degree to which mothers' responses are attuned to their children's emotions and actions) directly affect specific self-regulatory competencies (Kochanska, Murray, & Harlan, 2000). Both approaches have been extremely fruitful, but neither has illuminated how the messages that parents convey both directly and indirectly to their children may give rise to general beliefs about the self and the workings of the social world. Given the pervasive influences of these beliefs that we have described above, this is an important aspect of socialization that should be explored further. Current knowledge about adults' lay theories and their impact might suggest areas in which researchers could look for socialization practices that transmit lay theories to children.

For example, a series of studies by Mueller and Dweck (1998) showed that giving children trait-focused (intelligence) praise versus process-focused (effort) praise had an immediate and dramatic impact, priming different self-theories, goals, and attributions and leading to strikingly different responses to setbacks. It is thus likely that rearing practices that emphasize traits versus process will play a role in the lay theories children develop. In prelim-

inary research (Dweck & Lennon, 2001), this idea has received clear support. In this research, adolescents who were participating in a transition-to-junior-high study were asked to report on their parents' rearing practices. They rated whether their parents used authoritative or nonauthoritative practices (a dimension of child rearing found to predict achievement motivation; see Steinberg, Lamborn, Dornbusch, & Darling, 1992). They also rated whether their parents typically sent trait messages (e.g., about their intelligence) or process messages (e.g., about studying strategies or learning) in the course of interacting with them over their schoolwork. Although future work must establish the direction of effect, the more students reported that their parents sent trait rather than process messages, the more they held an entity theory of intelligence, made ability rather than effort attributions for failure, held negative effort beliefs, and showed lower grades across the junior high transition (with prior grades controlled). Moreover, although trait messages were related to nonauthoritative rearing, and process messages to authoritative rearing, in simultaneous regression analyses it was the trait and process messages that predicted the children's theories, attributions, and performance.

Thus, in the same way that early parental attunement promotes young children's emotion regulation, it is possible that process-focused parenting is an important way in which this attunement is carried on for older children. Furthermore, it is also possible that this later form of attunement, by fostering an incremental theory, additionally helps children to self-regulate in a mastery-oriented manner in the face of challenges.

Implications for Social Development

A lay theories approach to self-regulation and social perception has major implications for conceptualizations of social development. If individuals assign qualitatively different meanings to their own or others' behavior within any given domain, doing so may place them on qualitatively different developmental paths in that domain (see, e.g., Fischer, Knight, & Van Parrys, 1993; Levitt, Selman, & Richmond, 1991; Thompson, 2000). An individual going through an important developmental transition with an entity, trait-oriented, theory (asking "Am I smart or dumb?" "Am I a winner or a loser?") will have vastly different experiences from one going through the same transition with an incremental, process-oriented theory (asking "What do I want to learn?" "What parts of myself do I want to develop?" "What do I want to become?"). Indeed, adolescence may be an entirely different world for the entity-oriented youths who are anxiously trying to prove themselves and the incremental-oriented youths who are excitedly exploring new realms of knowledge and experience and are more resilient when things go awry.

Thus, in many areas, there may not be a single developmental trajectory on which individuals are more or less advanced. Instead, in trying to understand what distinguishes successful from problematic transitions, developmental researchers might think more about how the perceptions and impressions stemming from individuals' lay

theories are leading them down different paths and perhaps to entirely different destinations. Indeed, near the end of his life, Piaget acknowledged that the worldviews children construct can be as important to their functioning as the logical reasoning he studied for much of his career (Piaget & Garcia, 1989).

Implications for Cultural Psychology

It is interesting to note that many of the within-culture differences created by people's lay theories that we report in this article are as striking as the between-culture differences often reported in the cultural psychology literature (see Nisbett et al., 2001). Moreover, the individual differences stemming from holding an entity theory or an incremental theory have been found to operate similarly and just as strongly within other cultures beyond the United States (e.g., in China; see Chiu & Hong, 1999), although the overall prevalence of each theory may differ by culture (see Heine et al., 2001). Therefore, in the same way that culture-specific ways of creating social meaning contribute to between-culture differences in self-regulation and social perception, lay theories can be an important source of within-culture differences (cf. Gardner et al., 1999). The prospect of using a lay theories approach to bring these different within- and between-culture research traditions into one conceptual framework is exciting and something that should be a priority for future research (see Hong & Chiu, 2001).

Lay Theories as "Units" of Personality

In the same way that a lay theories approach can potentially accommodate both between- and within-culture differences, so too might it integrate the study of between- and within-individual variation within a single framework. As has been demonstrated in much of the work described above, people can differ in terms of the lay theories they typically favor (leading to systematic individual differences in the patterns of behavior they display), but the same person can also vary in terms of the lay theories that are activated in different situations (leading to predictable variation in that individual's behavior). If an important part of personality psychology is not simply what behavioral traits people display but also how people function and cope in important areas of their lives, then a lay theories approach may have a key role to play in the study of personality. Indeed, when we want to know "who someone really is," we are often asking questions about their underlying beliefs and goals, and when we want to know how this person functions, we are often asking about how they handle setbacks, how they regulate their self-esteem, and how they view, react to, and interact with other people. This perspective is consistent with Mischel and Shoda's (1995) theory of personality, in which the activation and organization of people's "cognitive-affective processing units" are the basic units of analysis. What a lay theories approach adds is the idea that such units can be organized around people's core beliefs about themselves and the social world, generating a network of allied beliefs, goals, and emotions that,

in turn, create important stable patterns of behavior (see also Cervone, 2004).

Conclusions: Lay Theories and "Systems" of Meaning

In this article, we have described how people's lay theories help them find meaning in their own and others' social actions across a wide variety of circumstances. Moreover, we have discussed how the meaning these individuals construct can dramatically alter basic psychological processes such as self-regulation and social perception. However, one important thing to note in these findings is that such effects were often not the simple products of people's entity or incremental beliefs alone. Instead, in many cases, people's lay theories appeared to serve as core assumptions that created a larger system of allied beliefs and goals. For example, in the Blackwell et al. (2005) and the Robins and Pals (2002) studies, people's entity and incremental theories influenced their academic performance and self-esteem primarily through a network of goals, beliefs, and strategies that arose from these basic theories. Similarly, the effects of entity and incremental theories on social perception and stereotyping appear to operate through the additional goals and assumptions that define a trait versus a process focus.

Overall, then, people's lay theories may alter their psychological processes through these larger *meaning systems* that come to be organized around the theories. One compelling piece of evidence consistent with this view comes from a recent review of the literature on the development of ability beliefs (Dweck, 2002). If lay theories do primarily affect behavior through the formation of meaning systems, one would not expect to see the full influence of an entity or incremental theory on motivation and performance until all of the additional pieces were in place. This was precisely what the review of the literature indicated. Many beliefs about ability are developing over the grade-school years, but they do not relate well to each other and they do not reliably predict motivation and behavior until about 10–12 years of age. For example, before that time, children may reliably articulate theories of intelligence, choose achievement goals, and make attributions for ability-related outcomes—all elements of an entity- or incremental-oriented meaning system—but these elements are not reliably related to each other or to behavior (cf. Butler, 1999). It is only when these elements become organized and coherent (when children are 10–12 years of age) that they begin to predict important motivational and achievement outcomes in the face of challenge.

It is likely, however, that the meaning systems that potentially surround an entity theory or an incremental theory are just two examples of a larger phenomenon. It would be fascinating to investigate the evolution of other possible meaning systems, for example, those relating to gender beliefs (e.g., Martin, Ruble, & Szkrybalo, 2002), relationship beliefs (e.g., Thompson, 2000), or beliefs about the world (such as "just world" beliefs; Lerner, 1980) as they are formed into organized systems, attract allied goals, and begin to exert systematic influence. In short, we

encourage researchers to search for and articulate meaning systems that might guide cognition, affect, and behavior in the areas they study.

Finally, returning to the issue of universals, we wish to conclude by noting that a meaning systems approach to psychology is in no way incompatible with the essential search for broad psychological principles and processes. The overarching motivations that drive the construction of meaning systems (e.g., the need for prediction and control; see Plaks et al., 2005) may well be universal needs, and the mechanisms through which meaning systems operate may reflect universal cognitive and affective processes. Rather, our aim is to caution against universalizing at the wrong level and in a manner that obscures important differences in how people construct, interpret, and respond to their worlds. Indeed, further empirical work on lay theories and meaning systems could answer recent calls to integrate social-cognitive approaches with social-constructivist approaches to self and social phenomena (Jost & Kruglanski, 2002; Semin & Gergen, 1990) and ensure that, as a field, we are able to keep sight of the person behind the process.

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