Can Personality Be Changed?

The Role of Beliefs in Personality and Change

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ABSTRACT—*Using recent research, I argue that beliefs lie at the heart of personality and adaptive functioning and that they give us unique insight into how personality and functioning can be changed. I focus on two classes of be-liefs—beliefs about the malleability of self-attributes and expectations of social acceptance versus rejection—and show how modest interventions have brought about im-portant real-world changes. I conclude by suggesting that beliefs are central to the way in which people package their experiences and carry them forward, and that beliefs should play a more central role in the study of personality.*

KEYWORDS—*personality; personality theories; change; self-beliefs; interventions*

James Springer and James Lewis were identical twins separated shortly after birth and reared apart. Yet both married and divorced women names Linda, and then married women named Betty. They had similar interests. James #1 enjoyed carpentry and James #2 enjoyed mechanical drawing, and both showed similar levels of sociability, flexibility, and self-control on personality tests.

When Barbara Herbert and Daphne Goodship, also identical twins, were reunited at age 39, each arrived wearing a beige dress and a brown velvet jacket. Each had the eccentric habit of pushing up her nose and each giggled more than anyone else she knew.

These dramatic examples might lead people to believe that personality is encoded in our genes and impossible to change. If such specific things as the velvet jacket or such broad things as sociability are programmed in, it might imply that everything in between is too. However, more and more research is suggesting that this is not the case. Far from being simply encoded in the genes, much of personality is a flexible and dynamic thing (Mischel & Shoda, 1995) that changes over the life span and is shaped by experience (Roberts, Walton, & Viechtbauer, 2006). What is more, we are beginning to understand how to change it.

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Studies of twins often highlight (a) specific preferences and habits and (b) broad traits of personality and temperament (but see Roberts et al., 2006, for data on how much even these broad aspects of personality change over time). However, they often neglect the levels in between, and yet these are arguably the most important part of who we are.

What is this "in-between" part of personality? Several prominent theorists of personality propose that all (Mischel & Shoda, 1995) or much (McAdams, 1995) of the action takes place below the level of broad traits. Mischel and Shoda place such things as goals and construals at this level, and McAdams places such things as personal strivings and coping strategies there. In this paper, I focus on core beliefs or belief systems that, I will show, can organize and shape people's goals and strivings, as well as their construals of and reactions to the environment, to create consistent patterns of experience and actions. Indeed, Allport (1964) defined personality in terms of consistent patterns of experience and action that are evident across multiple situations or life contexts. As such, beliefs, with their power to mold experience and action, are central to this definition of person-ality. Moreover, showing that belief interventions do, in fact, change such consistent patterns of experience and action will be central to the case that personality can be changed.

People's beliefs include their mental representations of the nature and workings of the self, of their relationships, and of their world. From infancy, humans develop these beliefs and repre-sentations, and many prominent personality theorists of different persuasions acknowledge that they are a fundamental part of personality. For example, Mary Rothbart, the eminent temper-ament researcher, argues that personality contains much more than temperament and patterns of habitual behavior; impor-tantly, it also includes the way one perceives self, others, and events (Rothbart & Ahadi, 1994). Jack Block, often seen as a trait theorist, proposes that models of the self and the self's re-lationship to the world create the "organizing, motivating, and life-defining contexts within which the individual acts," and suggests that a central part of personality development is the encoding of internal models, schemas, and premise systems from socialization experiences (Block, 1993).

Focusing on people's beliefs, as opposed to their simple preferences and habits or broad personality traits, helps us answer in more precise ways questions like: What personality factors allow people to function well in their lives—that is, to grow and learn, sustain satisfying relationships, achieve well in school and careers, be caring toward others, or recover from setbacks? This is because beliefs can typically be defined very precisely, measured very simply, and altered through interventions to reveal their direct impact. In contrast, broad personality traits can be assessed, but they contain no implications for how you might change them. Beliefs are not necessarily easy to change, but they tell you where to begin.

To illustrate these points, I will use recent research that examines two very basic beliefs: people's beliefs about whether their attributes can be developed or not and people's beliefs about whether others will accept them or not. In describing this research, I will underscore the idea that beliefs and their impact are part of personality, that they underlie important aspects of adaptive functioning, and that they have unique implications for interventions.

SELF-THEORIES: BELIEFS ABOUT THE MALLEABILITY OF PERSONAL ATTRIBUTES

My research shows that acquired beliefs play a critical role in how well people function. These are people's self-theories. Some people have a *fixed* (or "entity") theory, believing that their qualities, such as their intelligence, are simply fixed traits. Others have a *malleable* (or incremental) theory, believing that their most basic qualities can be developed through their efforts and education. Research shows that people with a malleable theory are more open to learning, willing to confront challenges, able to stick to difficult tasks, and capable of bouncing back from failures (Dweck, 1999). These qualities lead to better performance in the face of challenges such as difficult school transitions (Blackwell, Trzesniewski, & Dweck, 2007), demanding business tasks (e.g., negotiations; Kray, 2007), and difficulties in relationships (e.g., dealing with conflict; Kammrath & Dweck, 2006). All of us would agree that these are a key part of how people function.

However, a malleable theory can be taught. When it is, people show increased motivation to learn and they perform better on challenging tasks. How is the malleable theory taught? In a study by Aronson, Fried, and Good (2002) with college students at a rigorous university, students in the experimental group were shown a film that highlighted how the brain is capable of making new connections throughout life and how it grows in response to intellectual challenge. They also wrote a letter to a struggling younger student emphasizing that the brain is malleable and that intelligence expands with hard work. At the end of that semester, the college students who had learned about malleable intelligence (compared to two control groups that did not) showed greater valuing of academics, enhanced enjoyment of their academic work, and higher grade-point averages.

Blackwell, Trzesniewski, and Dweck (2007) conducted a malleable-intelligence intervention with students making the difficult transition to junior high school (see also Good, Aronson, & Inzlicht, 2003). Both the experimental and control groups received an 8-session workshop built around study skills, but the malleable-intelligence group also learned that the brain is like a muscle that gets stronger with use and that the brain forms new connections every time learning occurs. The students in the control group, despite the excellent tutoring in study skills, showed little improvement in motivation and no improvement in grades. Those in the malleable-intelligence group, however, showed significant improvement in grades and significantly greater changes in their motivation (e.g., showing greater conscientiousness in their homework and studying, and putting more effort into their classroom learning).

More recently, we have been developing and testing a computer-based version of this workshop (called "Brainology"). After a pilot study in 20 New York City schools, virtually every student (anonymously) reported important changes in such things as their study habits and persistence in the face of obstacles. Many reported picturing their neurons forming new connections as they studied and learned.

People can also learn these self-theories from the kind of praise they receive (Mueller & Dweck, 1998). Ironically, when students are praised for their intelligence, they move toward a fixed theory. Far from raising their self-esteem, this praise makes them challenge-avoidant and vulnerable, such that when they hit obstacles their confidence, enjoyment, and performance decline. When students are praised for their effort or strategies (their *process*), they instead take on a more malleable theory—they are eager to learn and highly resilient in the face of difficulty.

Thus self-theories play an important (and causal role) in challenge seeking, self-regulation, and resilience, and changing self-theories appears to result in important real-world changes in how people function.

RELATIONSHIP BELIEFS: EXPECTATIONS OF ACCEPTANCE OR REJECTION

Fifty years ago, John Bowlby proposed that infants form internal working models of how relationships work and that these internal working models serve as prototypes for subsequent relationships. An important implication was that "insecure" models might not allow children to recognize consistent, available, and affectionate caretakers should they come on the scene.

Infant-attachment researchers have long been able to measure the quality of parent–infant relationships and have assumed that internal working models accompany them, but they had not measured working models in infants. In new research, Susan Johnson, Frances Chen, and I (Johnson, Dweck, & Chen, 2007) have provided the first evidence for internal working models of relationships in infants. We began by assessing 12- to

16-month-old infants' relationships with their mothers. That is, using the standard "strange situation" paradigm (in which the infant and mother are separated and reunited to see whether the infant uses the mother as a secure base in times of stress), infants were classified as securely or insecurely attached. Later, in an infant-habituation paradigm, these same infants were shown a film in which a large "mother" ball and a small "baby" ball were headed up a series of steps. Although the mother climbed easily, the baby was unable to follow her and began to cry. Infants were shown this film repeatedly until their interest waned. On the test trials, they were then shown two different endings, one in which the mother returns to the crying baby and another in which she continues up the steps on her own leaving the baby at the bottom.

Which ending "surprised" them and caused them to look longer? Infant-cognition researchers have long used recovery of looking time as evidence that infants see the new stimulus as a violation of their expectations. In this study, the securely attached infants looked longer when the mother kept going, but the insecurely attached infants made no such discrimination and, if anything, were slightly more "surprised" when the mother came back. Thus infants with secure and insecure attachment relationships had formed different expectations about whether a caretaker would be responsive to a child's needs.

These expectations of positive or negative responses from others have been shown to lie at the heart of adult relationships as well. Geraldine Downey and her colleagues, for example, have demonstrated that people who anxiously expect negative responses from others have more fragile relationships, perceive rejection in ordinary behavior, respond to conflict and rejection in ways that undermine their relationships, and become less engaged with and do less well in their academic institutions over time (e.g, Pietrzak, Downey, & Ayduk, 2005). Adult-relationship researchers have shown not only that these expectations consistently predict how well people function in relationships and interpersonal settings, but also that these beliefs are malleable (Baldwin & Dandeneau, 2005; Mikulincer & Shaver, 2007).

Expectations of rejection can be particularly harmful for minority students as they try to fit into historically White institutions. Thus, Walton and Cohen (2007) developed an experimental intervention aimed at African American students and designed to increase their expectations of acceptance. Participants, first-year college students, were taught that doubts about belonging in college are common at first but short-lived. They were presented with survey statistics, as well as personal testimonies from upperclassmen, and they wrote a speech (delivered to a video camera) explaining why people's perceptions of acceptance might change over time. Students in the control group engaged in similar activities but with respect to their political beliefs.

Changing Black students' expectations of acceptance had dramatic effects. First, compared to the control group, Black students in the experimental group took many more challenging courses (57% vs. 36%). Second, students in the experimental group were more resilient. On days of high adversity, they showed no change in their motivation, compared to those in the control group, who showed a substantial drop. Next, students in the experimental group were much more likely to reach out to professors (sending 3 times as many e-mails to them and going to office hours more often), and they studied significantly more hours per day. Finally, students in the experimental group showed an increase in grades in the semester following the intervention, whereas students in the control group showed a decrease.

SMALL INTERVENTION, LARGE IMPACT

The self-theories interventions and the expectation-of-acceptance intervention both yielded surprisingly large changes with seemingly modest input, and contrast with many large, costly interventions that yielded little or nothing. They follow in the footsteps of earlier attribution interventions, which changed people's explanations for events and by doing so changed their reactions to them. These interventions all speak to the effectiveness of targeting beliefs that lie at the heart of important motivational, self-regulatory, and interpersonal patterns.

What's more, in these interventions, the changes cut across many of the broad traits that are often thought to be relatively stable: openness to experience (e.g., challenge-seeking), conscientiousness (e.g., hours studied), sociability (e.g., reaching out to others), and negative affectivity (e.g., resilient vs. negative reactions to setbacks). Indeed, feeding up from the in-between level, this may be one of the mechanisms for change in these broader traits (Roberts et al., 2006).

IMPACT OF SOCIALIZATION AND EXPERIENCE

Beliefs also have unique implications for understanding the impact of experience on personality and functioning. As research has shown, experience plays a key role in shaping self-theories and expectations of positive responsiveness, as well as attributions. Indeed, many of our experiences may be packaged and carried forward in the form of these kinds of beliefs or mental representations.

Several striking examples have emerged from developmental research on attributions. The effect of domestic violence, abuse, or maternal depression on the development of subsequent depression in children is significantly influenced by the attributions children make for those events (e.g., Garber, Keiley, & Martin, 2002; Grych, Fincham, Jouriles, & McDonald, 2000). When those events are packaged with negative self-attributions or self-blame, children later show a greater vulnerability to depression. Children who are faced with similar negative life events but who understand or explain them in different ways are not as vulnerable.

CONCLUSION

We have looked at the in-between part of personality by examining acquired—and changeable—beliefs. We have seen that they underlie many patterns of adaptive functioning, and that they have unique implications for understanding personality development and personality change. The most important next step for personality researchers is to identify other core beliefs or belief systems that can vary across individuals (or cultures)—beliefs about the self, others, relationships, and the world—and that are responsible for important, consistent patterns of experience and action. Another key step is to continue to show how these beliefs feed into broader personality "traits" and contribute to their malleability.

Perhaps it was inevitable that James Springer and James Lewis would love carpentry and mechanical drawing or that Barbara Herbert and Daphne Goodship would giggle. It is possible that some consistent patterns, such as these, are less reliant on experience. However, it is not inevitable that people will function poorly in important areas of their lives. Beliefs matter, beliefs can be changed, and when they are, so too is personality.

Recommended Reading

Aronson, J., Fried, C., & Good, C. (2002). (See References). An excellent example of research showing how short, targeted interventions can yield striking changes in patterns of cognition, affect, and behavior.

Mikulincer, M., & Shaver, P.R. (2007). (See References). A comprehensive overview of theory, methods, and findings in the area of adult attachment, showing the widespread effects of relationship schemas.

Molden, D.C., & Dweck, C.S. (2006). Finding "meaning" in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist*, *61*, 192–203. A review of research on the ways in which implicit theories create patterns of goals, construals, emotions, and behavior across a variety of domains.

Pietrzak, J., Downey, G., & Ayduk, O. (2005). (See References). A fine review of theory and research on how learned expectations of rejection lead people to process and react to interpersonal cues in ways that undermine their interpersonal relationships.

Walton, G.M., & Cohen, G.L. (2007). (See References). A compelling research article showing how inducing expectations of interpersonal acceptance promotes marked changes in motivation and behavior.

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