This chapter was originally published in the book *Advances in Experimental Social Psychology*, Vol. 45, published by Elsevier, and the attached copy is provided by Elsevier for the author's benefit and for the benefit of the author's institution, for non-commercial research and educational use including without limitation use in instruction at your institution, sending it to specific colleagues who know you, and providing a copy to your institution’s administrator.

All other uses, reproduction and distribution, including without limitation commercial reprints, selling or licensing copies or access, or posting on open internet sites, your personal or institution’s website or repository, are prohibited. For exceptions, permission may be sought for such use through Elsevier's permissions site at: [http://www.elsevier.com/locate/permissionusematerial](http://www.elsevier.com/locate/permissionusematerial)


ISBN: 978-0-12-394286-9
© Copyright 2012 Elsevier Inc.
Academic Press
CHAPTER THREE

IMPLICIT THEORIES SHAPE INTERGROUP RELATIONS

Priyanka B. Carr, Aneeta Rattan, and Carol S. Dweck

Contents

1. Implicit Theories of Malleability 128
   1.1. What are implicit theories? 128
   1.2. What are the general effects of implicit theories? 130
2. Implicit Theories and Intergroup Relations 139
   2.1. Interpreting others 139
   2.2. The self’s motivations and behaviors in intergroup contexts 148
3. Broader Lessons and Implications for Intergroup Relations 157
   3.1. Stereotyping is not a given 157
   3.2. Stereotypes can be robbed of their power 158
   3.3. To motivate progress in intergroup conflicts, people’s belief systems must be addressed 159
   3.4. Biased behavior can emerge in the absence of bias 159
4. Conclusion 160
References 160

Abstract

It is often assumed that improving intergroup relations is simply a matter of directly addressing prejudice. In this chapter, we show that this is not the case. Instead, we illuminate through our research how implicit theories give rise to prejudice and how they disrupt intergroup relations even in people who are low in prejudice. In particular, we demonstrate that those who believe that people have fixed attributes (an entity theory) are more likely to form, invest in, and act on stereotypes, and are more likely to show problematic intergroup relations above and beyond their level of prejudice compared to those who believe that people are capable of change (an incremental theory). These compromised intergroup relations are shown for both majority-group and minority-group members. This chapter sheds new light on the processes that drive intergroup relations and suggests a novel path to improving intergroup relations—changing implicit theories.
Much research has focused on the impact of stereotypes and prejudice on intergroup relations (e.g., Dovidio, Kawakami, & Gaertner, 2002; McConnell & Leibold, 2001; Richeson & Shelton, 2003). However, we now know that there are fundamentally different ways of construing people, groups, and even prejudice and that these differences shape intergroup relations. In this chapter, we examine people’s implicit theories—their beliefs about the malleability versus fixedness of people, groups, and prejudice—to sharpen our understanding of intergroup relations. This analysis illuminates when stereotypes and prejudice are most likely to emerge and when they are likely to have the most negative consequences. But it also shows that stereotypes and prejudice are far from the whole story in intergroup relations.

In this chapter, then, we provide an overview of implicit theories about the malleability versus fixedness of human qualities and demonstrate their importance for intergroup relations. Along the way, we show how fixed theories of people and groups set up stereotypes and prejudice and magnify their influence, how fixed theories can dampen people’s willingness to confront bias when it occurs, and how fixed theories of prejudice itself (the belief that one’s prejudice cannot be changed) can create the signature characteristics of prejudiced behavior even in people who are low in attitudinal prejudice. Importantly, we also show how implicit theories can be changed to produce changes in intergroup relations. In this way, the work not only sheds light on the processes underlying intergroup relations but also holds new promise for understanding how those relations can be improved.

1. Implicit Theories of Malleability

1.1. What are implicit theories?

Implicit theories are people’s beliefs about the nature of human attributes. People differ substantially and meaningfully in the beliefs they hold about human characteristics. While most people may agree on the basic principles that are the foundation of the physical world (e.g., gravity), there is much more variation in people’s understanding of the basic principles of the social world—of the workings and characteristics of people and groups. Research on implicit theories focuses specifically on beliefs about people’s potential for change, growth, and development (Dweck, 1999). “Entity” theorists believe that human characteristics are relatively fixed, whereas “incremental” theorists believe that human characteristics can be changed and developed. It is important to note that an incremental theory does not imply that everyone starts out with the same talent or potential or that everyone has unlimited potential. Nor do implicit theories reflect a belief about the mere
stability of characteristics—their tendency to vary or not vary spontaneously over time. Instead, at their core, implicit theories are beliefs about people’s ability to control or change attributes when motivation, opportunity, and instruction are present. For example, both those who hold an entity theory and those who hold an incremental one may believe that some people start out with more talent than others and that aptitude can deteriorate with age, but they will differ in their beliefs about people’s potential to create change and improve upon their ability.

Individuals may hold an entity or incremental theory about people in general (Chiu, Hong, & Dweck, 1997), about groups of people (Rydell, Hugenberg, Ray, & Mackie, 2007), about specific attributes such as intelligence (Dweck & Leggett, 1988), and about specific domains such as math (Good, Rattan, & Dweck, in press), arriving at different answers to questions such as, “Can the kind of person someone is be changed?,” “Can groups change their character?,” “Can intelligence be improved?,” and “Can math ability be developed?.” These theories are assessed with items that ask whether the object in question can or cannot be changed; for instance, “Everyone, no matter who they are, can significantly change their basic characteristics” versus “The kind of person someone is, is something very basic about them and it can’t be changed very much.” While implicit theories about different attributes and domains are correlated, the correlation is low to moderate and people may differ in their beliefs about malleability or fixedness by domain. For example, one may believe that personality is quite malleable and able to be developed but that intellectual abilities are not very amenable to being molded by effort (Dweck, Chiu, & Hong, 1995a; Dweck, Chiu, & Hong, 1995b). Further, implicit theories about a domain are not typically correlated with ability in that domain. Both people high and low in current intellectual ability may believe that intelligence is unchangeable by effort (see Dweck, 1999).

The implicit theories people endorse can be relatively stable within individuals and can consistently affect motivation and behavior over time (e.g., Robins & Pals, 2002). However, importantly, while these theories can be stable, they are also dynamic. They can be triggered by strong situational cues (e.g., Mueller & Dweck, 1998) and can be changed through instruction and exposure to different schools of thought (e.g., Chiu, Hong, et al., 1997; Hong, Chiu, Dweck, Lin, & Wan, 1999; Kray & Haselhuhn, 2007). Researchers have changed people’s theories temporarily by having them read scientific articles arguing that attributes can or cannot be changed (e.g., Chiu, Hong, et al., 1997) or in more long-term ways through workshops that teach individuals about the potential for growth (e.g., Good, Aronson, & Inzlicht, 2003). Indeed, changing theories can have a long-lasting influence on motivation and behavior (Aronson, Fried, & Good, 2002; Blackwell, Trzesniewski, & Dweck, 2007; Good et al., 2003). In sum, though people’s theories can be stable,
potent situations and instruction can change them and the downstream consequences they trigger.\(^1\)

It is important to note that implicit theories are conceptually related to other important variables, such as essentialist beliefs (e.g., Bastian & Haslam, 2006) and beliefs about genetic determinism (e.g., Keller, 2005). All these beliefs capture thinking about whether people have somewhat immutable natures, and the research on all these related beliefs tends to produce parallel and consistent findings (Levy, Chiu, & Hong, 2006).

1.2. What are the general effects of implicit theories?

In this section, to lay the groundwork, we show how implicit theories shape perceptions, judgments, motivations, and behavior outside the domain of intergroup relations. In later sections, we show how these very same processes play a critical role in intergroup relations, that is, in the formation and maintenance of stereotypes, in reactions to intergroup conflict, and in behaviors in intergroup situations.

Entity and incremental theories are important to our understanding of human behavior because people’s theories impact so many aspects of their psychology. Indeed, an implicit theory creates a “meaning system” (Molden & Dweck, 2006), an interpretive lens that serves to organize and make sense of the world. As will be seen, the “entity” meaning system, organized around a belief in fixed traits, biases people to simply label and categorize others according to their fixed characteristics. In contrast, the “incremental” meaning system, organized around a belief in malleable qualities, orients people toward understanding others and fostering their learning and growth (Chiu, Hong, et al., 1997; Erdley & Dweck, 1993). These implicit theory-based meaning systems also affect people as they focus on themselves, determining the extent to which they are driven to validate their own fixed qualities or to challenge themselves and grow (Blackwell et al., 2007; Dweck & Leggett, 1988; Robins & Pals, 2002).

Here, we first explore research that illuminates how implicit theories shape perceptions and reasoning about others, especially the propensity to infer traits and to label individuals. We then examine research on how implicit theories shape people’s own motivations and behaviors, especially their motivations and behaviors aimed at validating their qualities. These effects will be especially important later for our understanding of intergroup relations—for our understanding of how people perceive and react to individuals from other groups and in our understanding of people’s own motivations and behaviors in intergroup situations.

\(^1\) In this chapter, we use the term entity theorists and incremental theorists to refer to those who hold entity and incremental theories—both to those whose theories have been measured and to those whose theories have been induced or manipulated.
1.2.1. Interpreting others
If one believes people’s traits are fixed, then diagnosing people’s traits from their behavior, rather than understanding the situational forces that shape people’s behavior, takes center stage. Let us see how this works. (The reader may already begin to see how such a focus on traits can affect how readily people stereotype outgroups and how they react to difficult intergroup situations.)

1.2.1.1. Attaching unchangeable labels
Research finds that people holding an entity theory of personality are more likely than those holding an incremental or one-time behavioral information. In one study, Chiu, Hong, and colleagues (1997) presented participants with lists of behaviors that were mildly positive (e.g., making one’s bed), very positive (e.g., risking one’s life for another), mildly negative (e.g., interrupting a speaker), or very negative (e.g., stealing a car). Participants were asked to imagine witnessing these behaviors and were given no other information about the people enacting these behaviors. They then rated how indicative these behaviors—these single instances devoid of any other contextual information—were of a person’s moral goodness. Entity personality theorists found such behaviors, even the mild ones such as making one’s bed, to be more indicative of a person’s moral character than incremental theorists did. Importantly, entity and incremental theorists did not differ in their judgments about the valence or extremity of these behaviors: It was not the case that entity theorists saw these behaviors as more extreme. The difference was in their willingness to draw trait inferences from the same behavior. Establishing a causal role, researchers also manipulated implicit theories about personality and found that those given an entity theory compared to an incremental one were more willing to draw trait inferences about goodness and badness from a single, decontextualized instance of behavior.

Entity personality theorists, compared to incremental ones, not only are more ready to judge traits based on a small sample of behavior but also in line with their theory they are also more likely to believe in their global and enduring nature. Erdley and Dweck (1993) presented children with information about a new boy in school (John). The children learned that John felt anxious in this new setting and engaged in several dishonest behaviors (such as lying to impress other students or trying to copy from another student’s test). John was portrayed as nervous and struggling with these decisions, and none of his depicted actions were malicious. Both entity and incremental personality theorists agreed with the statement that John is dishonest, a statement clearly supported by the information given. However, entity but not incremental theorists generalized this information more broadly and inferred global traits from his behavior. Entity theorists rated John as more “mean,” “nasty,” and “bad” than incremental theorists did, giving less weight to John’s
situation, motivations, and psychological fears. In addition, when asked to imagine seeing John again in a few weeks (i.e., after he had a chance to get used to his new situation) and to think about what he would be like then, incremental theorists thought, on average, that he would be somewhat different, while entity theorists thought, on average, that he would be somewhat the same. The two groups also differed substantially in whether they thought John would be a troublemaker several years later, with incremental theorists tending to say no and entity theorists tending to say yes. Entity theorists, true to their theory, believed less in his capacity to change.

In a related vein, Chiu, Hong, and colleagues (1997) found that while entity theorists believe in the rigid, cross-situational nature of traits, incremental theorists view them as more fluid and responsive to situations: Entity theorists predicted that a person who exhibited more of a trait (e.g., friendliness) than another person in one situation would again exhibit more of it than the other person even in a very different situation.

Consistent with this line of research, Molden, Plaks, and Dweck (2006) found that entity theorists are drawn to trait information but do not adjust for situational information. When people are cognitively burdened, they prioritize and give attention to information that is meaningful to them. Under cognitive burden, entity theorists adjusted their initial judgments of a person behaving anxiously to account for trait information but not for information about the situation’s demands on the person. That is, even given information about a powerful situation a person was in (she was in an anxiety-provoking situation and asked to publicly discuss her most embarrassing moments), entity theorists did not update their judgments about that person’s anxious nature. Further, research shows that the quick trait inferences entity theorists draw can impact weighty decisions. In one line of research, entity personality theorists were more likely than incremental ones to use information such as the clothing of a defendant on a day of the murder (a leather jacket vs. a suit) to infer the defendant’s moral character and his guilt (Gervey, Chiu, Hong, & Dweck, 1999).

In sum, research shows that an entity personality theory compared to an incremental one leads individuals to focus on deciphering traits and draws their attention away from situations and motivations that may exert influence on people’s actions. For entity theorists, traits are believed to be easily detectable and appear to carry important predictive value. Though incremental theorists may also use trait information, they are more cautious about labeling people with traits and treat traits as more tentative and updatable descriptors of people (Erdley & Dweck, 1993).

1.2.1.2. Engagement and compromise with others during difficult social interactions

Given their differences in trait inferences, will entity and incremental theorists react differently to individuals with whom they have negative or difficult interactions?
One line of research investigated people’s responses when faced with disagreement or conflict with another person. Kammrath and Dweck (2006) asked participants to report an instance of difficult conflict with a partner in a close relationship and indicate how they responded to this conflict. Entity and incremental personality theorists did not differ in the severity of the conflict they reported but differed substantially in the strategies they adopted in response to the conflict. During conflicts, incremental theorists (those who believed that others could change) engaged actively with their partner, voicing their concerns and trying to work out a solution (e.g., endorsing statements like “I openly discussed the situation with my partner.”). Entity theorists (those who believed that people were not capable of change), however, disengaged from their partner, choosing to hide their feelings and choosing not to work toward a solution (e.g., endorsing strategies like “I learned to live with it.”). In another study, these researchers asked participants to keep a daily diary of the conflicts they experienced in their relationships. They found again that, especially with more serious conflicts, incremental theorists voiced their opinions, actively and constructively engaged with their partner, and tried to find a solution. Entity theorists withdrew and avoided, bottling up their anger and thinking about ending the relationship with their partner. For entity theorists—trying to change their partner and influence their relationship with the partner was less of an option—it was a “take it or leave it” situation.

These findings are similar to those that emerge in research examining the effects not of implicit theories of personality but of implicit theories of relationships—beliefs that relationships are fixed and destined (believing, e.g., that a relationship was “meant to be”) or open to growth and change (believing, e.g., that challenges help grow and deepen relationships; see Knee, Patrick, & Lonsbary, 2003). Knee, Patrick, Vietor, and Neighbors (2004) found that while those who endorsed fixed beliefs about relationships became more dissatisfied with their relationship when they had disagreements, those who endorsed growth beliefs did not. Similarly, when those who held fixed beliefs discussed problems with their partner, they became much less committed to their relationship. This was not the case for those who endorsed growth beliefs. Again, it seems that believing in an inability to change and grow makes disagreement and conflict particularly negative and fosters the desire to avoid and leave, rather than engage and solve.

Other research too finds that entity theories can interfere with positive conflict resolution strategies, such as compromise and negotiation. Chiu, Dweck, Tong, and Fu (1997) asked college students to imagine a scenario in which a professor’s changing of the rules late in the semester led to their receiving a lower grade than they had initially thought they would. Students were asked to indicate what they would do in this conflict situation. Those who endorsed an incremental rather than an entity theory about people sought to engage with the professor—the wrongdoer—and try to negotiate
with him to restore a fair outcome. In contrast, those who endorsed an entity theory, not believing in the wrongdoer’s ability to change, were more likely to focus on revenge or punishment.

In sum, entity theorists, who believe in the fixedness of people and relationships and are prone to inferring stable and global traits from even a few instances of behavior, are more likely to shut down, pull back, or retaliate when interactions with others become difficult. In these difficult situations, incremental theorists are more likely to see engagement with, education of, and negotiations with others as a preferable option. Though withdrawing from difficult social situations can be a viable strategy and even the preferred one in dangerous relationships, an entity theory, by making it the default strategy, may rob individuals of potentially positive relationships. In addition, an entity theory, by making negotiation and compromise less likely, may thwart progress toward more positive relationships.

1.2.2. The self’s motivations and behaviors
Thus far, we have focused on the implications of people’s implicit theories (particularly their theories about the personalities of others) for how they judge and react to others. However, as mentioned, people’s implicit theories also affect them as they turn inward—affecting their reasoning about the self, their goals for the self, and their self-related choices. In this section, we examine research exploring these issues. We focus particularly on people’s theories about their intelligence, since this is the area in which these issues have been most extensively explored. As will be seen, implicit theories have powerful effects in situations in which people’s ability can be evaluated or in which they have the opportunity to learn and grow their abilities. However, keep in mind that intergroup relations are also an arena in which people can be evaluated and in which they can learn and grow.

As we seek to understand the effects of implicit theories, it is important to consider what people aim for in situations in which achievement is important and evaluation is possible. In these situations, people can aim to demonstrate their ability and prove how competent they are (a performance goal) or aim to develop their ability and master something new (a learning goal). Depending on the situation, almost everyone pursues both performance and learning goals, and both goals play a role in achievement. However, people differ in which goal is their predominant focus.

Entity and incremental theories, in part, drive that focus. One would expect that, for those who believe that a characteristic—like intelligence—is largely unchangeable, the possibility of discovering or demonstrating that they do not possess the valuable trait should be highly aversive. Thus, validating that they possess this trait by performing well or avoiding a poor performance should take center stage. In contrast, those with a more incremental belief about traits like intelligence—believing intelligence can be developed—should be less worried at any given moment about having or
proving a trait. For them, evaluation and current performance should be less critical, and learning should take center stage.

Research supports this expectation. For entity theorists, motivation tends to be organized more around affirming their fixed traits through performance goals. For incremental theorists, motivation tends to be organized more around refining their malleable qualities through learning goals (Blackwell et al., 2007; Dweck & Legget, 1988; Robins & Pals, 2002; see also Beer, 2002; Kray & Haselhuhn, 2007). Illustratively, one line of research examining brain-wave data (event-related potentials or ERPs) finds that while entity theorists become alert and engaged when presented with performance-relevant information but not learning-relevant information that can help them improve, incremental theorists consistently engage with learning-relevant information (Mangels, Butterfield, Lamb, Good, & Dweck, 2006).

How does the different motivational focus on validating the self versus growing the self play out?

1.2.2.1. Avoiding challenges One way it plays out is in how willing people are to engage with challenging situations—situations that carry the potential of poor performance and a diagnosis of their abilities. Research finds that entity theorists become more anxious in anticipation of these evaluative situations (Cury, Da Fonseca, Zahn, & Elliot, 2008; Rhodewalt, 1994). For example, they report engaging in more self-handicapping (Rhodewalt, 1994). Self-handicapping occurs when people put up barriers to their success, such as partying before an important test. These ultimately self-defeating strategies are designed to ensure that the challenging situation, whatever the outcome, does not allow for a negative diagnosis of the person’s ability. Poor performance can be attributed to external factors (such as lack of sleep), allaying an entity theorist’s fears that they will prove themselves to be lacking in ability.

Given their concerns about validating their ability, entity theorists should avoid challenging situations that put their ability in question, while incremental theorists should more readily embrace these situations that also allow an opportunity for growth. In one line of research, Dweck and Leggett (1988) examined whether implicit theories of intelligence predicted different behavioral choices of challenging tasks. Adolescents were given a choice between tasks that were unchallenging for them and/or sure to validate their ability (“fairly easy, so I’ll do well” or “problems that are hard enough to show I’m smart”) or tasks that presented the opportunity to learn but carried the potential for poor performance (problems that are hard, new, and different so that I could learn). While 61% of incremental theorists chose the challenging task that risked poor performance but supported learning, only 18% of entity theorists did so. Thus, those with an entity theory, worried about projecting and validating their intelligence, shied
away from a challenging task that offered them an opportunity for growth. In parallel with these findings, research by Beer (2002), which examined entity and incremental theories not about intelligence but about shyness, found that shy people who endorsed an incremental theory about shyness, compared to those who endorsed an entity theory, chose to enter more challenging social situations even while controlling for their level of shyness.

1.2.2.2. Not wishing to learn If people do not believe in growth, then their interest in learning should wane—even for learning tasks that are not particularly threatening or challenging. We saw in the study conducted by Mangels and colleagues (2006) described above that entity theorists pay less attention than incremental theorists to information they can learn from. Hong and colleagues (1999) also found that entity theorists were less likely than incremental theorists to take advantage of learning opportunities. The researchers manipulated people’s theories of intelligence and then gave them an intelligence test. After the test, some participants were told that their performance had been unsatisfactory and were offered a choice between an unrelated task or a task that could help them improve their performance on the next round of problems. Of those in the incremental theory condition, 73% chose the remedial task that would allow them to improve. However, only 13% of those in the entity theory condition chose this task.

In fact, Nussbaum and Dweck (2008) found that entity theorists, after a poor performance, preferred dwelling on other people’s failure rather than enhancing their own learning. These researchers manipulated entity and incremental theories of intelligence and examined people’s responses after failure. After experiencing failure on a test, people in the incremental theory condition chose to learn and improve by reviewing the tests of others who had performed better than them. However, people in the entity theory condition actually chose to review the tests of individuals who had performed worse than them. Viewing these tests of poorly performing individuals did not give people the opportunity to learn how to do better. Instead, it provided an opportunity to repair self-esteem by feeling superior to others.

This research clearly indicates that an entity theory devalues opportunities to learn and instead fosters a primary focus on performance and affirming one’s ability.

1.2.2.3. Reactions in challenging situations As we have seen, entity theorists are more motivated to avoid challenging situations that put their ability in question. What happens when challenging situations cannot be avoided?

In the research on incremental and entity theories about shyness discussed above (Beer, 2002), researchers examined shy individuals’ behaviors
in social interactions with new people—a challenging situation for them. Entity and incremental theorists behaved very differently in these interactions. Entity theorists exhibited more avoidant and anxious behavior—pulling back and avoiding eye contact with their interaction partners—while incremental theorists were more open and engaging. In fact, entity theorists were judged by perceivers to be more shy and aloof because of these behaviors.

A study by Mueller and Dweck (1998) also examined responses to challenging situations. Students were given a set of moderately difficult items from an IQ test (Raven’s Progressive Matrices; Raven, Styles, & Raven, 1998), were told that they had performed well on this test, and were praised for their performance. Some were given praise for being intelligent (intelligence praise), some for working hard (effort praise), and some were given no additional praise (control). These different types of praise oriented students toward different theories of intelligence. Intelligence praise—which cast intelligence as a trait—created more of an entity belief about intelligence. Effort praise—which put the emphasis on hard work—created more of an incremental belief about intelligence. The students then experienced a challenge as they struggled with a second, very difficult set of problems from the same IQ test. After this challenge, they received a third set of problems that was matched in difficulty to the first set. How did the students perform on this third set? One might expect that, because of the practice and exposure the students had, they would perform better on this set compared to the first one. Those in the control group met this expectation: they slightly improved their performance. Those given the effort praise (oriented toward an incremental theory) improved their performance significantly. But, those given intelligence praise (oriented toward an entity theory) performed significantly worse on the third set than the first one and significantly worse than the other two groups on this third set. In addition, after a challenge, those given intelligence praise compared to effort praise reported less enjoyment of the task and less desire to continue with it. Thus, those put in an entity mindset seemed highly disrupted by the challenging situation.

This research demonstrates that situations in which ability could be evaluated are more negative experiences for entity than incremental theorists—marked by more anxiety and more disengagement. These reactions make sense given heightened worry about validating ability and increased concern about being seen as lacking in ability. Indeed, neuroscience research shows that entity theorists about intelligence find negative feedback about their intellectual performance on a difficult test more emotionally significant than incremental theorists (Mangels et al., 2006). In addition, entity theorists become more defensive after encountering poor performance on difficult tests, lying about their performance (Mueller & Dweck, 1998). And their self-esteem takes a bigger hit after poor performance. Niiya,
Crocker, and Bartmess (2004) found that among those who cared very much about academics and whose self-esteem was tied to academics, entity intelligence theorists, but not incremental ones, suffered anxiety and low self-esteem after poor performance.

In short, entity theorists, focused on validating their abilities, appear to be more anxious in challenging situations—situations that put their abilities in question—than incremental theorists. Ironically, this anxiety can result in poorer performance, leading entity theorists to look less intelligent, even though they are no less able. For instance, in one line of research, Cury, Elliot, Da Fonseca, and Moller (2006) taught adolescents either an entity or an incremental theory of intelligence and then measured their performance on an IQ test. Those taught an entity theory performed significantly worse on this IQ test than those taught an incremental theory. Importantly, the two groups of participants did not differ in preexisting intellectual ability—their performance was equal on an IQ test administered before their implicit theories about intelligence were influenced (see also Cury et al., 2008; Mueller & Dweck, 1998).

1.2.3. Summary
The literature reviewed above reveals that entity and incremental theories create meaning systems for people (Molden & Dweck, 2006), and these meaning systems change the nature of person perception. Those who believe in the fixedness of people focus more on deciphering stable traits, believe more in the predictive validity of these traits, are less likely to update their trait inferences based on situational information, and are more likely to withdraw from or avoid people with whom they have difficult interactions. Those who believe in people’s capacity to change and grow do not label as readily, do not believe in the validity of labels as strongly, and are more likely to persist through difficult interactions and proactively work toward a solution.

In following sections, we explore whether these effects extend to perceptions of social groups. We examine whether those who hold an entity rather than incremental theory are also more prone to stereotyping—a process in which trait labels are applied to groups of people (often on the basis of limited information), in which situational and motivational influences are deemphasized, and in which trait inferences are not readily updated (Allport, 1954). We also examine how implicit theories influence people’s strategies—their propensities for engagement and compromise—in intergroup situations marked by conflict, difficulty, and tension.

The literature reviewed above also highlights the fact that meaning systems created by implicit theories change the nature of people’s motivations related to the self. Those who believe in the fixedness of attributes like intelligence are more driven to validate their ability and are more anxious about situations that may put their aptitude in question. In contrast, those
with more of an incremental theory tend to embrace challenges that could help them stretch their ability.

In the next sections, we explore how these very patterns play out in the domain of intergroup relations—in people’s drive to validate their lack of prejudice and in their anxiety in intergroup interactions.

2. **Implicit Theories and Intergroup Relations**

More and more research is revealing the important role that implicit theories play in people’s behaviors in intergroup settings—the behavior that emerges when “individuals belonging to one group interact, collectively or individually, with another group or its members in terms of their group identification” (Sherif, 1966; p. 12). As ethnic and racial diversity increases in societies like the United States, intergroup interactions become increasingly important and virtually inevitable (Feagin & O’Brien, 2004). Nevertheless, intergroup interactions and interracial interactions in particular are frequently avoided and, when they do occur, are often marked by stereotyping, prejudice, anxiety, and unfriendliness (Mendes, Blascovich, Lickel, & Hunter, 2002; Norton, Sommers, Apfelbaum, Pura, & Ariely, 2006; Richeson & Trawalter, 2005; Shelton, 2003; Trawalter & Richeson, 2008; Vorauer, Main, & O’Connell, 1998; for reviews, see Shelton & Richeson, 2006; Trawalter, Richeson, & Shelton, 2009).

Implicit theories can help us understand why this is so. Though much past research has focused on negative intergroup attitudes and cognitive associations as the major drivers of intergroup relations (e.g., Allport, 1954; Dovidio et al., 2002; Greenwald, McGhee, & Schwartz, 1998; McConnell & Leibold, 2001; Richeson & Shelton, 2003), implicit theories also wield great influence in the intergroup context. Below, we examine how implicit theories affect the formation of stereotypes, the maintenance of stereotypes, the expression of bias, and the responses of individuals targeted by prejudice or embroiled in intergroup conflict. We also examine how implicit theories affect openness to intergroup encounters, anxiety in these encounters, and willingness to work toward improvement of intergroup relations. This analysis enriches our understanding of the forces shaping intergroup relations and opens doors to new ways of improving these relations.

2.1. **Interpreting others**

The effects of implicit theories extend beyond the interpretation of individuals to the interpretation of social groups and those encountered in intergroup interactions. Here, we ask: When are stereotypes most likely to arise and how do those targeted by them react? We also explore how
implicit theories about people and groups shape behaviors and attitudes toward outgroup members encountered in intergroup conflict.

2.1.1. Attaching unchangeable labels to groups
We have seen that entity theorists are more likely to draw trait inferences about individuals (even based on sparse information), more likely to overgeneralize traits as reflections of global character, and less likely to account for situational determinants of behavior (Chiu, Hong, et al., 1997; Erdley & Dweck, 1993; Molden et al., 2006). In short, they are more prone to concluding that what people do reflects who they truly are and will be. How does this propensity affect the inferences people make about groups, that is, the process of stereotyping?

2.1.1.1. Stereotype endorsement and formation
Levy, Stroessner, and Dweck (1998) investigated the effects of implicit theories about the malleability of people on the endorsement of stereotypes and the emergence of stereotypes. Levy and colleagues (1998) had participants list societal stereotypes (positive, negative, and other) about various ethnic, racial, and religious groups—African Americans, Asians, Whites, Latinos, and Jews. They found that those who held an entity theory and those who held an incremental theory about people were equally knowledgeable about the content of societal stereotypes. But they differed in the degree to which they believed the stereotypes were true (stereotypes such as African Americans are less intelligent and Asians are hardworking): Entity theorists gave more credence to stereotypes. In addition, compared to incremental theorists, entity theorists were more likely to believe that stereotypes were reflections of the group’s innate character and less likely to believe they arose from changeable environmental or societal factors.

Levy and colleagues (1998) also investigated how stereotypes come into being. People were told about a novel group—a student group at another university about which they had no preconceptions. Everyone received information about behaviors performed by 18 members of that group. Half learned about a student group in which a majority (two-thirds) of those members had engaged in negative behaviors (e.g., pushed to the front of a line at a movie theater) and a smaller group (one-third) had engaged in neutral behaviors (e.g., played a video game at the arcade). The other half learned about a group in which two-thirds had engaged in positive behaviors (e.g., offered to share an umbrella with a stranger) and one-third had engaged in neutral ones. Participants then provided an open-ended description and several ratings of the group they had learned about. Those endorsing an entity theory rather than an incremental theory listed more traits and were more extreme in their use of traits (using words such as “extremely”) when they described the group (both the predominantly positive and negative ones). On their ratings of the group on dimensions like
bad–good, immoral–moral, and evil–virtuous, entity theorists made more positive ratings of the positive group and more negative ratings of the negative group. They were also faster than incremental theorists in their trait judgments and were more likely to believe they had sufficient information (one behavior per group member) to form a fair impression of the group. These findings highlight that entity theorists more readily ascribed global traits to groups and perceived the members of the group as more homogeneous on these traits. Though everyone learned that one-third of the members had behaved differently from the other two-thirds, entity theorists were more likely to believe that the group members were similar to each other. Such perceptions of homogeneity within a group are important in the process of stereotyping—the process of applying labels to an entire group of people (Park & Judd, 1990).

The studies described so far measured implicit theories of personality to examine their impact on seeing a group as an “entity” made of similar people and defined by stereotypes that reflect their innate character. However, because of their correlational nature, these studies cannot answer whether implicit theories cause differences in the formation and endorsement of stereotypes. To address this important question, Levy and colleagues (1998) manipulated individuals’ beliefs about the malleability of personality. People were given one of two compelling “scientific” articles on the nature of personality that claimed it was either fixed or malleable. In the “entity” condition, people read an article entitled “Personality, like plaster, is pretty stable over time” that argued personality was relatively unchangeable. In the “incremental” condition, participants read an article entitled “Personality is changeable and can be developed.” Both articles presented the same evidence and data—case studies, longitudinal data, and intervention programs—but differed in the key findings and conclusions reached. These articles successfully changed people’s beliefs about the malleability of personality. After reading these articles, participants rated the degree to which they believed in stereotypes about racial groups (e.g., African Americans are unintelligent) and occupational groups (e.g., lawyers are greedy). Establishing that a fixed belief about human nature causes increased stereotyping, those who were (temporarily) taught an entity view of human characteristics more strongly endorsed stereotypes about groups (both racial and occupational) than those who were taught an incremental view of human nature.

Even children work this way. Levy and Dweck (1999) measured sixth graders’ beliefs about the malleability of people’s characteristics and presented them with information about the behaviors of students in schools they had not heard of. Just like adults, children with a more entity view of personality more readily formed stereotypes about the schools based on small samples of behavior (nine children, six of whom performed good or bad actions), making more extreme trait ratings of each school and seeing
students within these schools as more similar on important traits. The research also explored the consequences of this stereotyping. Children were asked to make judgments of a student who was absent the day the researchers observed the behaviors of students in his school. Let us take the example of the student who went to a “negative” school—a school in which a majority of students (six of nine) had exhibited negative behaviors. Entity theorists, compared to incremental theorists, rated the novel student—about whom they knew nothing—as more mean and bad. In addition, entity theorists were more likely than incremental theorists to want to avoid any contact with students from the “negative” school. Research by Karafantis and Levy (2004) also underscores the impact of implicit theories on biased behaviors toward other groups. Children who believed in an entity theory about personality rather than an incremental one held more negative attitudes toward a disadvantaged outgroup (homeless and UNICEF-funded children), saw them as more distant and dissimilar from themselves, were less interested in having social contact with them, and were less interested in volunteering to help them.

This research indicates that for entity theorists, there is something very “real” about group membership and the labels ascribed to groups. For them, groups have decipherable traits that are shared by its members and that provide a good way to understand individuals from that group. In other research, Eberhardt, Dasgupta, and Banaszynski (2003) pointedly demonstrated the power labels hold for entity theorists, affecting even their visual perception. Participants were presented with an image of a biracial individual (created by morphing an African American face and a White face) and were told that what they were seeing was an image of either an African American or a White individual. When they were later asked to identify or draw the face that they had seen, those who believed in an entity theory of people chose/drew an image that was strikingly closer to the label, while those who believed in an incremental theory chose/drew an image that was far less stereotypical of the racial label they had been given.

Last, though we have focused on implicit theories about individuals, recent research has identified a different kind of implicit theory that also affects stereotyping—one about the malleability of groups (Rydell et al., 2007). Theories about the malleability of groups are measured by agreement with items such as “Groups can change even their most basic qualities.” Though theories about people and groups are positively related to each other, implicit theories about groups produce effects above and beyond those of implicit theories about people. Rydell and colleagues (2007) found that those who believed or were taught that groups are relatively fixed (that their characteristics are static rather than malleable) saw groups as more “entitative”—as more tied together by the shared goals and investment of their members. As a result, they endorsed group stereotypes to a greater degree.
In sum, those with an entity view of people and groups more readily apply labels—stereotypes—to groups and literally see the world according to these stereotypes. And, this increased stereotyping has behavioral consequences, such as lowered interest in engaging with or helping people from groups stereotyped as negative.

2.1.1.2. Stereotype maintenance  People are motivated to protect their meaning system. They may allow their theory to be replaced by another, but they do not want to be left theory-less, that is, without a way to organize and predict their world. When information violates the predictions people derive from their implicit theories, they experience anxiety and seek to regain control (Plaks, Grant, & Dweck, 2005). As described above, one of the core predictions arising from an entity theory is that stereotypes are valid and are useful predictors of behavior. Those with entity theories, thus, expect people from a group to behave in line with stereotypes about their group (to be stereotype-consistent) while those who endorse incremental views do not imbue stereotypes with such predictive power and do not expect such stereotype consistency (Levy & Dweck, 1999; Levy et al., 1998). Motivated to affirm their theories, entity theorists should therefore seek and be attentive to information that confirms the stereotype rather than stereotype-inconsistent information. Incremental theorists should show no such preference for stereotype consistency and might perhaps prefer stereotype-inconsistent information.

Research by Plaks, Stroessner, Dweck, and Sherman (2001) examined this hypothesis by testing how entity and incremental person theorists attended to stereotype-consistent and stereotype-inconsistent information. They found that entity theorists tuned out information that challenged their stereotypes (e.g., a disadvantaged boy excelling on a test) and preferentially attended to and remembered information that confirmed their stereotypes (and therefore their beliefs in the validity and stability of traits). In fact, they found that the more stereotype-inconsistent the information was the more entity theorists turned their attention away from it. Incremental theorists, in contrast, tended to pay more attention to stereotype-inconsistent information than stereotype-consistent information. This suggests that entity theorists are not just more likely to form stereotypes, but, by tuning out information that challenges their stereotype and selectively attending to information that confirms it, also more likely to maintain them. Incremental theorists are more open to stereotype-disconfirming evidence that may render the stereotype obsolete and inconsequential.

2.1.1.3. Summary  Driven by their different meanings systems, entity and incremental theorists follow very different paths in their judgments about groups, with entity theorists being more likely to form stereotypes and to process incoming information in a way that maintains them. Importantly,
the research does not support the conclusion that entity theorists are driven to see others and other groups as negative. In fact, they are also more likely than incremental theorists to form and endorse positive stereotypes (Levy et al., 1998).

It is also important to note that beliefs in fixedness do not always lead to greater prejudice. Haslam and Levy (2006) found that believing gay individuals’ sexual preference was inborn and unchangeable resulted in less prejudice against gay individuals. In this case, believing that sexual preference is a choice that can be “unchosen” seems to fuel prejudice. It would be fascinating for future research to examine the conditions under which people are blamed more when they are seen as in control of their attributes as opposed to when they are seen as having attributes that are unchangeable.

In sum, entity theorists are in general more likely to form, endorse, maintain, and therefore act on stereotypes, which often are negative, which rob people of individuality even when they are positive, and which often hold negative consequences for those targeted by stereotypes. Should we be disheartened that entity theorists (approximately 40% of the population; Dweck, 1999) exhibit such propensities toward stereotyping, a major hurdle to positive intergroup relations? We believe that these findings instead offer hope for improving intergroup relations. They suggest that much stereotyping may follow not from animus but from people’s beliefs about the malleability of individuals. By changing people’s implicit theories—by teaching them that people, groups, and their attributes are potentially malleable—we may create an environment in which stereotypes are less likely flourish. And research indicates that such change in theories is possible. Though individuals are resistant to information that violates their theories (Plaks et al., 2005), they are open to replacing their theories (e.g., Levy et al., 1998; Rydell et al., 2007). Future research may focus on more intensive interventions (such as those used to change theories of intelligence; e.g., Blackwell et al., 2007; Good et al., 2003) to create more lasting change in stereotyping, prejudice, and intergroup relations.

2.1.2. Engagement and compromise with others during intergroup conflict

The research on implicit theories and interpersonal conflict, reviewed above, shows that those who hold a more entity theory and believe others will not change do not tend to address conflict in a direct, constructive way. Instead, they often withdraw from conflict in their close relationships rather than voicing their concerns (Kammrath & Dweck, 2006), and they often choose not to engage or negotiate with wrongdoers (Chiu, Dweck, et al., 1997). In this section, we explore the consequences of implicit theories for dealing with conflict in intergroup contexts as we examine people’s willingness to confront perpetrators of prejudice and their willingness to negotiate and compromise with outgroup members.
2.1.2.1. Engagement with perpetrators of prejudice  Conflict in intergroup contexts—particularly conflict related to prejudice—may raise the stakes relative to other interpersonal conflicts. There is an uneven playing field in situations in which prejudice occurs, and members of groups targeted by prejudice may face the risk of material, social, and even physical repercussions for engaging with the conflict and confronting prejudice. However, speaking out against prejudice also has many positive consequences, such as educating the perpetrators of prejudice, communicating anti-prejudice norms, and creating changes in bias (Blanchard, Crandall, Brigham, & Vaughn, 1994; Czopp, Monteith, & Mark, 2006). Indeed, there are prominent historical examples that simultaneously represent triumphs of action and cautionary tales of the dangers of speaking out against prejudice. Martin Luther King, Jr. is one such example.

Even today, members of stereotyped groups regularly experience prejudice. For example, studies of the everyday experiences of African American and female undergraduates indicate that they experience explicit expressions of prejudice approximately once every 2 weeks (Swim, Hyers, Cohen, & Ferguson, 2001; Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003). Many members of stereotyped groups anticipate they would speak up against bias, but when actually faced with it most do not (Swim & Hyers, 1999; Woodzicka & LaFrance, 2001, 2005).

Potential costs (see Shelton & Stewart, 2004; Stangor, Swim, Van Allen, & Sechrist, 2002) aside, how are we to understand such reluctance to confront prejudice? Research by Rattan and Dweck (2010) has found that implicit theories are a key determinant of willingness to confront expressions of bias. In one study, the researchers brought African American and Latino undergraduates into the lab for a study on impression formation. Students’ implicit theories of personality were assessed and, after some filler questionnaires, they engaged in an online conversation about the undergraduate application and admission process with another student (a White male named Matt). After a series of innocuous statements about the application process, Matt uttered a biased statement: “I was really worried that I had to be even more overqualified because of the whole diversity admissions thing... so many schools reserve admissions for students who don’t really qualify the same way so I was pretty freaked out.”

It was then the student’s turn to respond. Those who held a more incremental theory were significantly more likely to directly confront the biased statement. While those who held a more entity theory simply focused on other topics and avoided bringing up the bias, the incremental theorists explicitly identified the biased comment and disagreed with it. This was true even though entity and incremental theorists did not differ in their evaluation of the statement. Thus, in the context of intergroup conflict—when faced with an expression of prejudice against their group—minority-group members were more likely to speak out if they believed that people could change.
Although the statement in the above example was rated as biased by the participants, it may not represent the most blatant form of prejudice. Therefore, in two additional studies, Rattan and Dweck (2010) explored people’s responses to more extreme bias. In these studies, participants imagined being in a business setting, where a coworker said, “I’m really surprised at the types of people who are working here . . . with all of this ‘diversity’ hiring—women, minorities, foreigners, etc., I wonder how long this company will stay on top?” In one study, participants—minority-group members and females, all of whom were targeted by the biased statement (and rated it as highly offensive)—were more likely to report that they would confront the biased statement if they held an incremental rather than entity theory. In addition, entity theorists were more likely than incremental theorists to endorse avoidance strategies, such as leaving the situation and pretending it did not happen. Another study used scientific articles to manipulate people’s implicit theories and found that inducing an incremental theory, rather than an entity theory, caused targets of prejudice to become more willing to confront prejudice and less likely to avoid the situation.

Across these studies, an entity theory was associated with silence while an incremental theory predicted greater speaking up. But Rattan and Dweck (2010) also wondered who would be more willing to engage in the future with the person who uttered the biased statement—the incremental theorists, who tended to confront more, or the entity theorists, who “kept the peace”? Perhaps the belief that people can change, which led to the confronting of prejudice, might also leave targets willing to give the perpetrator of bias another chance. In the two scenario studies described above, people who held a more incremental theory reported greater willingness to engage in future social and professional interactions with the person who expressed bias. Entity theorists, seeing little hope for that person to change, were more likely to avoid that person in the future. The study that manipulated implicit theories allowed for a causal conclusion to be drawn: Believing in fixedness fosters silence and avoidance, while believing others can change leads to both a higher likelihood of confronting and a greater openness to continued interactions with someone who expressed bias.

Even when entity theorists are given evidence that someone has changed, they are reluctant to believe it. In a scenario study, Rattan and Dweck (2011) led people to imagine they had confronted biased behavior and then provided them with evidence that the person they had confronted acted very differently on a future occasion. Entity theorists were significantly less likely than incremental theorists to believe that this altered behavior represented true change. In other words, an entity theory made people less likely to believe that confronting prejudice can create change even when they see evidence that it has.
2.1.2.2. Compromise in Intergroup Conflict  Sometimes, as in geopolitical conflicts, large groups of people collide over seemingly intractable issues. In the Israeli–Palestinian crisis, these issues involve national borders, the right to Jerusalem, or the right of return for Palestinian refugees. Most traditional approaches to conflict resolution involve bringing the warring parties together or teaching each group positive or empathy-promoting things about the other group. However, these approaches may create reactance and lead groups to close themselves off to these messages. Can implicit theories foster more positive attitudes and greater willingness to compromise without risking reactance? Halperin, Russell, Trzesniewski, Gorss, and Dweck (2011) examined the role of implicit theories about groups—beliefs about groups' abilities to change—in the Israeli–Palestinian conflict. They found that when those who were involved in the conflict—Israeli Jews, Palestinians in Israel, or Palestinians in the West Bank—believed or were taught a malleable rather than fixed view of groups, they had more positive attitudes toward the outgroup and were more willing to make important compromises that could create peace (e.g., compromise over the status of Jerusalem). West-Bank Palestinians, many of whom were members of Hamas and Fatah, also indicated greater willingness to meet with Israelis and hear their views.

In teaching a malleable theory, no mention was made of the groups involved in the Israeli–Palestinian conflict. Instead, the focus was on teaching that violent groups (in general) could change, with examples of groups that once would have been considered violent but now appear to be peaceful. This new construal of groups and their nature then changed people’s attitudes toward outgroups they were in conflict with.

Learning that others’ negative behaviors do not emanate from their fixed traits can remove roadblocks to peace and conflict resolution. Future research should examine ways in which an incremental belief can be maintained even in the face of continued negative behavior.

2.1.2.3. Summary  Intergroup bias and conflict unfortunately persist. In the case of prejudice, majority-group members rarely confront expressed bias (Kawakami, Dunn, Karmali, & Dovidio, 2009) and often look to minority-group members to determine if bias has even occurred (Crosby, Monin, & Richardson, 2008). These findings suggest that, unfair though it may be, in reality it may fall upon targets of prejudice to be the ones who label bias and confront it when appropriate. On the positive side, addressing bias when it occurs both can communicate important anti-prejudice norms (Blanchard et al., 1994) and can be effective in reducing stereotyping among majority-group members (Czopp et al., 2006). However, holding an entity theory may prevent the targets of prejudice from engaging in social action that could change bias and from even believing that social change efforts can be effective.
In addition, in the context of geopolitical conflict, research finds that an entity theory about groups may fuel tension. It may drive negative attitudes toward outgroups and prevent players in a conflict from coming together to negotiate. Taken together, the research reviewed shows that fostering beliefs about the malleability of people and groups can promote more positive outcomes in intergroup conflict.

2.2. The self’s motivations and behaviors in intergroup contexts

We showed earlier how entity and incremental theories change individuals’ motivational focus. An entity theory puts the focus on validating one’s personal qualities. An incremental theory instead makes learning and growing more primary, taking the pressure off confirming one’s qualities in any one instance (Blackwell et al., 2007; Mangels et al., 2006; Robins & Pals, 2002). How do these different motivations for the self affect critical choices and behaviors in intergroup relations?

2.2.1. Avoiding intergroup encounters

One way they do so is by shaping people’s choices about engaging in challenging intergroup situations. In many parts of the United States, the lack of prejudice is a highly valued attribute, especially for majority-group members. Indeed, research finds that being or being labeled racist is a very negative experience for many White Americans (Crandall, Eshleman, & O’Brien, 2002). Thus, many White individuals value not having, or not being seen as having, prejudice.

What are the challenging situations in this context? In the domain of intelligence, challenging situations are situations in which intelligence may be evaluated or questioned. Similarly, for majority-group members in the intergroup domain, situations in which prejudice may surface or be evaluated—such as interracial interactions or a class on the history of discrimination—might be considered challenging situations. (Of course, if individuals do not value a lack of prejudice and believe that society does not value a lack of prejudice, then evaluation of prejudice would likely not be challenging.)

Based on this analysis, recent research (Carr, Dweck, & Pauker, 2011) has examined a new kind of implicit theory—majority-group members’ implicit theories about the malleability of prejudice. People’s beliefs about the malleability versus fixedness of prejudice are assessed by items such as “People can learn how to act like they’re not prejudiced, but they can’t really change their prejudice deep down.” In one study, White participants’ implicit theories of prejudice were assessed in one session. In a second session 2–4 weeks later (presented as unrelated to the first), the researchers examined participants’ interest in interactions with members of other racial
groups (by assessing agreement with items such as “I like meeting and getting to know people from ethnic groups other than my own.”). People also rated their interest in various activities—some that brought with them the possibility of provoking prejudiced thoughts (such as tutoring disadvantaged minority middle-schoolers or reading about the civil rights movement) and some that did not involve this possibility (such as reading about biology). The researchers reasoned that those with an entity theory of prejudice would avoid these “challenging” situations in which prejudiced thoughts or behaviors may arise. Those with an incremental theory might more willingly engage in intergroup interactions and opportunities to learn about other groups. The results supported the predictions. The more people believed prejudice was unchangeable, the less they wanted to have contact with members of other racial groups or engage in activities like learning about those groups’ history. Even during a seemingly benign activity such as learning about the history of another racial group, a prejudiced thought may pop into one’s mind. Underscoring that those with an entity theory of prejudice are not just less interested in all activities, people’s theories of prejudice were unrelated to their interest in activities in which prejudice could not surface.

One possibility is that those with more fixed theories of prejudice are just more prejudiced—hold more negative attitudes about other racial groups—and therefore are less interested in interracial interactions. However, Carr and colleagues (2011) also measured participants’ racial attitudes and found that those with more of an entity theory were not any more prejudiced and that the effects described above held when controlling for participants’ prejudice. In addition, they found that implicit theories of prejudice, though positively related to implicit theories about people, affected participants’ choices in intergroup situations independent of any effects of implicit theories about people. Thus, an entity theory of prejudice and its attendant concerns about validating a lack of prejudice appears to be a powerful predictor of intergroup behaviors. It results in White participants exhibiting behaviors that could be deemed prejudiced—for instance avoiding people of other races—even when they are not high in prejudice.

To provide causal evidence, the researchers ran another study in which they manipulated White participants’ understanding of the malleability of prejudice (Carr et al., 2011). People thought they were participating in two separate studies. In the first, they were presented with several scientific articles and asked to rate their interest in them. One of these articles contained the manipulation. It was a compelling article, modeled on articles designed to change people’s theories about personality (e.g., Chiu, Hong, et al., 1997; Rattan & Dweck, 2010), that either claimed prejudice was relatively fixed (titled “Prejudice, like plaster, is pretty stable over time”) or claimed that it was malleable and changeable (titled “Prejudice is changeable and can be reduced”). Both these articles presented the same kinds of data—
anecdotes and longitudinal studies—but differed in the conclusions derived from the data about the malleability of prejudice. Participants then moved on to what they thought was a different study in which they completed over a dozen questionnaires. Most of these questionnaires were completely unrelated to prejudice or intergroup situations. However, one contained the key dependent variable—participants’ interest in engaging in interracial interactions. The results of this study revealed that the articles successfully changed people’s theories about prejudice and established the causal role of theories of prejudice: Those taught an entity theory of prejudice were less interested in interactions with members of other racial groups than those taught an incremental theory of prejudice. In addition, this effect of an entity theory of prejudice was significantly mediated by participants’ concerns about uncovering or appearing prejudiced in intergroup encounters (measured by items such as “I am concerned that I might find myself thinking or feeling in a racially prejudiced way around people of other races”). In sum, an entity theory of prejudice created more concerns about having prejudice or being seen as having prejudice and resulted in damped interest in interracial interactions.

2.2.1.1. Summary  Past research has shown that intergroup contact and openness to learning about others is a fruitful way to reduce prejudice and improve intergroup relations (Page-Gould, Mendoza-Denton, & Tropp, 2008; Pettigrew & Tropp, 2006; Tropp & Pettigrew, 2005). However, such contact and learning is often avoided, especially by majority-group members (Shelton & Richeson, 2006; Trawalter et al., 2009). While persistent prejudice and racial animus may certainly be a reason why, our research indicates that people’s beliefs, not about members of other racial groups but about prejudice itself, may also be an important determinant of the frequency of intergroup contact. The research we have just described suggests that a powerful way to increase willingness to engage in interracial interactions is to lead majority-group members to change their conceptions of prejudice—to see it as changeable. Such a belief in the malleability of prejudice may reduce worry about being a “racist” and open people up to these interactions, which though they might be challenging also offer unparalleled opportunity for growth.

2.2.2. Not wishing to learn about prejudice
The evidence clearly indicates that majority-group members with an entity theory of prejudice, compared to those with an incremental theory of prejudice, avoid challenging situations in the domain of intergroup relations. However, we have seen that an entity theory about intelligence also leads to another thing—low interest in learning. Do implicit theories of prejudice also affect interest in opportunities to learn—to reduce one’s prejudice?
In another study (Carr et al., 2011), White participants were given feedback that they had been found to have some “anti-Black racial prejudice.” They were then asked to rate their interest in various activities they could participate in during the remainder of the study. Two of these activities presented opportunities to improve their prejudice. They offered tutorials to reduce prejudice and more detailed information about the source and nature of their prejudice. Importantly, these activities were private and relatively unthreatening—all that people had to do was get information about prejudice and prejudice reduction from a computer. Nonetheless, those who endorsed more of an entity theory of prejudice were much less interested in undertaking efforts to learn about or try to reduce their prejudice than were those who endorsed an incremental theory.

In this way, implicit theories of prejudice may shape the course of intergroup relations, which are still marked by prejudice and have much room for improvement.

2.2.3. Reactions in intergroup encounters

Challenging situations cannot always be avoided. This is especially true in the intergroup context, as diversity continues to increase in the United States (Feagin & O’Brien, 2004). In this section, we show how implicit theories shape actual behavior in challenging intergroup contexts. We look not only at majority-group members’ behaviors but also at the concerns and responses of minority-group members—the targets of prejudice.

2.2.3.1. Majority-group members in intergroup encounters: The case of interracial interactions

In one study, Carr and colleagues (2011) measured people’s theories of prejudice and later monitored their behavior in interracial interactions. White participants came into the lab and met another individual, purportedly another participant in the same session, but actually a confederate. Participants were randomly assigned to meet a confederate who was either the same race as them (White) or a different race (African American). The two confederates were matched on attractiveness and trained to act in an equally friendly manner. After meeting, the participant and confederate went into separate rooms to fill out some questionnaires. A short while later, participants were told that the rest of the study involved having a conversation with the person they had met earlier (the confederate). Participants were taken to the “conversation room” and asked to pull up two chairs stacked against the wall and arrange them facing each other for their conversation, while the experimenter finished some other tasks. The distance of the two chairs has been used in past research as an index of anxiety about interracial interactions (Goff, Steele, & Davies, 2008). Participants also filled out a questionnaire, which
among other questions asked participants how long they would want to spend in their upcoming interaction if they had unlimited free time that day.

Strikingly, those with a more entity theory of prejudice positioned their chair almost 10 in. farther away from an African American interaction partner than those with an incremental theory. They also wanted a much shorter interaction with the African American partner. When it came to interacting with another White person, entity and incremental theorists both had about 20 min to spare. When it came to interacting with an African American individual, incremental theorists had on average 30 min to spare. Entity theorists had only 5 min. And the effects of implicit theories of prejudice on behaviors in interracial interactions emerged above and beyond participants’ racial prejudice against African Americans, which was measured with an Implicit Association Test (Nosek, Banaji, & Greenwald, 2002) and which was not related to participants’ implicit theories of prejudice. Thus, those who believed more in an entity theory of prejudice sat farther away from and sought to minimize interactions with different-race partners, even though they were actually no more prejudiced!

In the study we just reviewed, people did not actually engage in the interaction. The study ended after they had arranged the chairs and completed the questionnaire. However, in another study, Carr and colleagues (2011) manipulated White individuals’ implicit theories about prejudice (using the scientific articles described earlier) and then had them interact with a White or an African American individual. People believed they were participating in two separate studies. The first one contained the manipulation of implicit theories about prejudice. The second one involved a 10 min interaction with a White or an African American experimenter. This interaction was videotaped, and coders (who were blind to implicit theory condition and the race of the experimenter participants were interacting with) rated participants’ behavior on several dimensions of behavioral anxiety (such as decreased eye contact, increased speech dysfluency, nervous laughter, and body rigidity) and made overall ratings of the participants’ anxiety and friendliness in the interaction. In addition, participants’ physiological reactivity (heart rate) was measured during the interaction to provide a physiological index of their anxiety.

How did theories about prejudice affect White individuals’ anxiety during the course of an interracial interaction? Those who had been taught an entity theory of prejudice rather than an incremental theory behaved far more anxiously in the interracial interaction. They exhibited greater anxiety on every behavioral marker (for instance making less eye contact with their interaction partner), were judged by coders to be more anxious than their incremental counterparts, and showed more physiological anxiety, exhibiting a higher heart rate in the interaction. Importantly, they were judged to be significantly less friendly. This was not the case in their interaction with a White individual. Thus, those who were led to believe prejudice
was fixed—apparently experiencing heightened concerns about having prejudice—behaved more anxiously and appeared less friendly in an interracial interaction than a same-race one. Being taught that prejudice was malleable eliminated this “biased” behavior. Again, it appears an entity theory of prejudice can lead individuals to act in seemingly prejudiced ways, even when they are no more prejudiced than others.

The evidence clearly indicates that majority-group members with an entity theory of prejudice, compared to those with a malleable theory of prejudice, are more anxious and threatened in interracial interactions (but not same-race ones). This evidence is consistent with research showing that emphasizing learning goals in general (not just about prejudice) can reduce White individuals’ anxiety in interracial interactions. Goff and colleagues (2008) found that when White participants were asked to focus on learning (a focus that arises when one holds an incremental theory), they did not anxiously sit farther from a Black compared to White interaction partner. However, when learning goals were not emphasized, participants were more focused on performance and sat farther from the Black compared to White interaction partner. Further supporting the findings that an entity theory of prejudice is associated with increased anxiety in interracial interactions, research finds that heightening concerns about performance (a dominant concern of those with an entity theory) exacerbates majority-group members’ anxiety in interactions with minority-group members (Richeson & Trawalter, 2005) and that increased external motivation to control prejudice (motivation to not be seen as prejudiced by others because of normative pressure; Plant & Devine, 1998) heightens the threat experienced by majority-group members in interracial interactions (Butz & Plant, 2009).

2.2.3.2. Minority-group members in intergroup encounters: The case of stereotype threat

Minority-group members also have concerns in intergroup situations—concerns about being the targets of stereotypes and prejudice. Preliminary research suggests that minority-group members’ beliefs about the fixedness of others’ prejudice against them can affect their interest and anxiety in intergroup interactions (Carr & Dweck, 2011). This research is still in its early stages. However, research on stereotype threat speaks directly to implications of implicit theories for minority-group members’ motivations, concerns, and behaviors in intergroup situations.

2 Note that external motivation to control prejudice, however, is not the same as concerns about having or uncovering prejudice (the mediator used in work on implicit theories of prejudice). While the former taps the source of people’s felt pressure to hide prejudice (e.g., “I try to hide any negative thoughts about Black people in order to avoid negative reactions from others”; Plant & Devine, 1998), the latter taps concerns about the implications of having prejudice—about even having negative thoughts that might indicate “fixed” prejudice.
Stereotype threat—the threat of confirming a negative stereotype about one’s group—is experienced by those targeted by negative stereotypes (Steele & Aronson, 1995). This threat emerges in situations in which the ability impugned by the negative stereotype can be tested, and by heightening anxiety and concerns about stereotypes, it hampers performance. For instance, research finds that African Americans, threatened by the negative stereotype held by others that their group is unintelligent, underperform relative to White individuals when a test is presented as diagnostic of their intellectual ability. However, when the same test is presented as not diagnostic of intelligence—making the stereotype irrelevant in this situation—African American participants perform as well as their White counterparts (Steele & Aronson, 1995). Though stereotype-threat situations are not traditionally thought of as instances of intergroup interactions, they can readily be conceptualized as such. Stereotype threat is not about those targeted by stereotypes believing the stereotype to be true; it is about those targeted by stereotypes worrying about how they are perceived by others (Quinn, 2009; Steele, 1997; Walton & Carr, 2011). An African American individual taking a stereotype-threatening intelligence test is often doing so in the presence (real or symbolic) of a majority-group evaluator. As such, a stereotype-threat situation provides an important avenue for gaining insight into how implicit theories may affect those targeted by stereotypes in these intergroup encounters.

How, more specifically, does stereotype threat create its pernicious effects? Under the burden of a stereotype about their group’s innate intellectual status, people are understandably not focused on maximizing learning and absorbing information but instead are focused on disproving, through their performance, the negative stereotypes that question their ability (see Cadinu, Maass, Rosabianca, & Kiesner 2005; Krendl, Richeson, Kelley, & Heatherton, 2008; Schmader & Johns, 2003; Schmader, Johns, & Forbes, 2008). One can imagine then that stereotype threat would be all the more threatening if one believes that the negatively stereotyped ability is fixed or is seen as fixed by the evaluator. In contrast, an incremental frame on ability may make stereotypes less meaningful and any test of them less threatening.

Research supports this expectation. Aronson (2000) gave an entity, incremental, or neutral framing to a test, telling African American students that a verbal standardized test tapped a fixed ability or an acquirable ability, or no mention of the nature of the ability was made. He found that stereotype threat was indeed intensified by holding an entity theory and alleviated by holding an incremental one about a diagnostic test. Relatedly, Dar-Nimrod and Heine (2006) suggested to females that gender differences in math ability were genetically determined (more of an entity theory) or environmentally determined (more of an incremental theory). Believing that math ability was genetically determined heightened stereotype threat, leading women to underperform on a math test. Thus, believing ability is
fixed or innate exacerbates the effects of stereotype threat, while believing it is fluid and situationally determined weakens it (see also Sawyer & Hollis-Sawyer, 2005; Thoman, White, Yamawaki, & Koishi, 2008).

Further, several intervention studies show that teaching incremental theories can buffer against the negative effects of stereotype threat in real-world academic settings. In one such study, Good and colleagues (2003) sought to change theories of intelligence to lessen the effects of stereotype threat in girls studying math. Junior high school students were assigned to receive either training that intelligence was malleable or no such training (receiving antidrug training instead) over their seventh grade year. The researchers then examined performance on a standardized math test at the end of the year. In the control group, replicating stereotype-threat effects, boys outperformed girls. In the group that received training that intelligence was changeable, this gender gap was substantially reduced. Although the boys in this group also tended to improve their performance relative to those in the control group, the positive effect was more robust for the stereotype-threatened participants—the girls.

Similarly, Aronson et al. (2002) found that an intervention that changed implicit theories about intelligence also reduced the effects of stereotype threat on African American college students’ grades. In this study, White and African American college students were assigned to one of the three conditions. In the incremental condition, they learned that intelligence was malleable and wrote letters to pen pals teaching them that intelligence, “like a muscle,” could be developed and strengthened. In a control condition, participants did not learn about the malleability of intelligence and instead wrote letters explaining that there were different kinds of intelligence (with no mention of malleability). The third condition was a no-treatment control. The researchers examined students’ GPA 9 weeks later. In both the control conditions, the stereotype-threat effect emerged. African American students underperformed relative to the White students. However, among those taught that intelligence was malleable, the stereotype-threat-created performance gap disappeared. African American and White students did not significantly differ in their GPAs. Though the White students in the incremental condition also tended to improve their performance, this effect was only marginally significant. For the African American students—burdened by stereotype threat—the performance improvement was robust and significant. In short, an incremental belief about intelligence significantly increased stereotyped students’ GPA and helped reduce an achievement gap created by stereotype threat.

Stereotype threat does not only exert negative effects on performance; it can also affect the degree to which members of stereotyped groups are willing to pursue different fields of study. Good, Rattan, and Dweck (in press) surveyed female and male math students at a competitive private university at three times during a calculus course they were taking. The
women in that calculus course are the very females that society hopes will enter and remain in the math pipeline. The researchers found that, even among these already high-achieving and highly invested students, the theory of math intelligence they believed was prevalent in their math environment made a great difference. When females perceived that they were in a math environment dominated by an entity theory and they encountered high degrees of gender stereotyping (i.e., when they perceived an environment that indicated “ability is fixed and your group doesn’t have it”), their sense of belonging in math eroded. In comparison, when females perceived an incremental theory in their math environment, even when they encountered a high degree of gender stereotyping, their sense of belonging in math remained strong. This sense of belonging, in turn, predicted females’ intentions to pursue math in the future and their final grades in the course. In other words, perceiving an incremental (rather than entity) theory of math ability in the environment buffered females from the negative effects of gender stereotyping, allowing them to maintain a positive sense of belonging, a desire to pursue the field, and high grades.

Is an entity theory ever good? Yes—for those on the positive end of the stereotype. Mendoza-Denton, Kahn, and Chan (2008) found that for individuals who are positively stereotyped (men taking a math test), learning that ability was determined by innate factors (an entity view) rather than effort (an incremental view) fueled improved performance on a math test. In short, if individuals think, “It’s fixed and we have it,” performance can be enhanced. However, if those same individuals suddenly find that they are not in the well-endowed group, they are vulnerable. Indeed, even White men suffer stereotype threat and performance decrements on a math test when told they are being compared to Asians, a group stereotyped as being superior in math (Aronson et al., 1999). Thus, it appears that an entity theory can boost performance only as long as one’s supremacy is not questioned.

Taken together, the research clearly indicates the role of implicit theories in stereotype threat. An entity view on negatively stereotyped abilities makes performing under stereotype threat all the more threatening. In fact, one can conceptualize majority-group members’ anxiety about being prejudiced in intergroup interactions as a form of stereotype threat—worry about confirming the stereotype that White individuals are racist (see Frantz, Cuddy, Burnett, Ray, & Hart, 2004; Goff et al., 2008). However, minority-group members and historically disadvantaged groups are more pervasively negatively stereotyped (Steele, Spencer, & Aronson, 2002), thus making the effects of implicit theories about ability particularly important for understanding their experiences. The findings suggest that an emphasis on the malleability of abilities may reduce the achievement gaps created by stereotype threat and thus weaken one of the most negative consequences of stereotypes and prejudice.
2.2.3.3. Summary We have shown that implicit theories have important consequences for both sides of an intergroup interaction. For majority-group members, an entity theory about prejudice can make people behave in seemingly more prejudiced ways—becoming anxious and looking unfriendly in interracial interactions—even when they are not more prejudiced. For minority-group members, an entity theory of intellectual ability can make them seem less able—creating poor performance—even though they are no less able. In both cases, people’s fears of fulfilling a stereotype or confirming an undesirable trait may sabotage their behavior and make their worst fears more likely to come true. These lines of research highlight the importance of broadening our focus beyond stereotypes and prejudice to peoples’ implicit theories in order to improve intergroup relations and curb the negative effects of stereotypes.

3. Broader Lessons and Implications for Intergroup Relations

Despite the rise in norms of egalitarianism and despite a decline in overt prejudice, intergroup relations have sadly remained threatening and uncomfortable (e.g., Mendes et al., 2002; Richeson & Trawalter, 2005; Shelton, 2003; Shelton & Richeson, 2006; Trawalter & Richeson, 2008; Trawalter et al., 2009; Vorauer et al., 1998). The findings reviewed here bring a fresh theoretical perspective to the study of intergroup relations, enriching our understanding of these relations. Much previous research has focused on majority-group members’ qualities and cognitive associations—their racism or their implicit racial associations—to uncover the bases for persistently troubled intergroup relations. While these dimensions are certainly important, they leave out a vital part of the story.

The research we have described in this chapter brings to light a different factor—people’s theories about human qualities and attributes. These implicit theories, on the surface, may often seem as though they have little to do with stereotyping and prejudice, and yet this research underscores the significance of implicit theories for the perpetration of stereotyping, prejudice, and bias and for the experience of those targeted by bias. Below, we review key insights from this research that shift our thinking about intergroup relations.

3.1. Stereotyping is not a given

For a long while, stereotyping has been characterized as a relatively inevitable consequence of the need for cognitive simplicity, of intergroup competition, and of the societal prevalence of negative representations of certain
groups (e.g., Devine, 1989; Guimond, 2000; LeVine & Campbell, 1972; Pettigrew, 1958; Wigboldus, Sherman, Franzese, & van Knippenberg, 2004). But the research reviewed in this chapter shows that stereotyping is not necessarily a given. Meaning systems characterized by the belief that people are fixed create fertile ground for stereotypes to emerge and flourish and imbue stereotypes with power and validity. However, meaning systems characterized by a belief in malleability and dynamism are much less conducive to stereotyping. In fact, for those with malleability beliefs, stereotyping holds little cognitive appeal and information that violates stereotypes becomes more attractive (Plaks et al., 2001). These findings force us to reconsider the nature of stereotyping. Stereotyping is not simply a reflection of a human need for cognitive simplicity, of a drive to denigrate, or of societal representations, but a consequence of people’s beliefs about the value of traits and labels and their motivation to protect these beliefs.

This theoretical insight has important practical consequences. It suggests that interventions that create long-lasting beliefs in the malleability of people—interventions modeled on those to create beliefs about the malleability of intelligence—may be highly effective in curtailing the development and maintenance of stereotypes. It also suggests that existing interventions, such as counter-stereotypic training (e.g., Kawakami, Dovidio, & van Kamp, 2007), may not have the desired impact for many people. An intervention that exposes participants to counter-stereotypic exemplars may not change stereotyping among entity theorists, who do not readily attend to or remember counter-stereotypic information (Plaks et al., 2001). It is important not only to target the content of stereotypes but also to simultaneously target the meaning systems that sustain them. An intervention that fosters a malleable belief while also presenting counter-stereotypic information may be especially powerful in reducing stereotyping.

3.2. Stereotypes can be robbed of their power

The research in this chapter also indicates that stereotypes do not inflict their negative effects equally across all individuals targeted by them. Past work on stereotype threat has taught us that this threat’s negative consequences are particularly strong among those who are identified with the stereotyped group and with the stereotyped ability (Aronson et al., 1999; Schmader, 2002; Spencer, Steele, & Quinn, 1999). Intuitively, if a woman does not identify with her gender or with math, a stereotype doubting women’s abilities in math has less personal relevance or consequence for her. However, disidentification with one’s group or a domain is a disheartening, isolating, and often self-defeating way to protect oneself from stereotypes. Research on implicit theories and stereotype threat shows another, potentially more productive way of blunting the effects of stereotypes among those targeted by them. It shows that the lens people hold on the world can
rob stereotypes of their power to inflict harm. When stereotyped abilities are seen as fixed, stereotypes become powerful and threatening. However, when they are seen as not fixed or innate, stereotypes become less threatening and an instance in which the stereotyped ability is tested becomes less anxiety provoking.

While an ideal world would not have groups of people impugned by negative stereotypes, that world does not currently exist. As we continue to work to eradicate stereotypes and prejudice, we can empower those targeted by them by fostering environments that support a malleable view of abilities. We have already described several interventions that have created beliefs in the malleability of intelligence and reduced achievement gaps created by stereotype threat (Aronson et al., 2002; Good et al., 2003). We see great potential to scale such interventions up, to disseminate them more broadly, and to incorporate them in standard school curricula and in human resource programs within organizations.

By showing us when stereotypes have the most negative consequences, research on implicit theories shows us that stereotypes need not be so powerful.

3.3. To motivate progress in intergroup conflicts, people’s belief systems must be addressed

Reducing prejudice and creating progress in intergroup conflict require action, but who is willing to take this action? Reasonably, one might answer that people targeted by prejudice will take action if the situation allows them to—if the social, physical, and financial costs of such action are not too high (e.g., Shelton & Stewart, 2004; Stangor et al., 2002). Yet, as we have seen, people’s implicit theories—their belief that people are fixed—can set up roadblocks to taking action to confront prejudice or to be willing to compromise in a peace process.

Creating a belief in the malleability of individuals in people targeted by stereotypes encourages them to stand up to bias and to educate the perpetrators of bias. Creating a belief in the malleability of groups encourages positive attitudes toward the other side in a conflict and promotes willingness to compromise. These consequences, in turn, could lay the groundwork for more positive intergroup relations.

3.4. Biased behavior can emerge in the absence of bias

Prejudiced behavior has understandably been seen largely as a reflection of underlying bias or animus. One could reasonably assume that a White individual who is unfriendlier to an African American individual than a White one holds racial prejudice or negative racial associations. In that conceptualization, behaviors reflect attitudes and associations. However,
The research reviewed in this chapter creates a more nuanced understanding of behavior that seems prejudiced. It indicates that, in a society in which prejudice is frowned upon, behavior that appears prejudiced may arise not just from prejudice but from people’s beliefs that prejudiced is fixed. Strikingly, the research indicates that even if prejudice and negative group associations were eradicated, biased behavior and its pernicious consequences may still persist. African American employees may still be robbed of opportunities because their White employers believe in the fixedness of prejudice and are uncomfortable in interactions with them. Latino students may still suffer a lack of belonging and poor performance (Walton & Cohen, 2007) because their teachers’ belief in an entity theory of prejudice leads to apparently unfriendly behavior and an unwillingness to discuss their groups’ history.

Many interventions that target prejudice rely on creating positive intergroup contact. (e.g., Page-Gould et al., 2008; Pettigrew & Tropp, 2006; Tropp & Pettigrew, 2005). However, we also know that intergroup contact is often avoided and when it occurs is often negative (Shelton & Richeson, 2006; Trawalter et al., 2009). An incremental theory of prejudice can open majority-group members up to engaging in intergroup contact and make this contact more comfortable and successful. By doing so, it has the potential to greatly enhance the positive impact of intergroup contact.

4. Conclusion

Research on implicit theories is enriching our theoretical understanding of the nature of stereotyping, bias, and intergroup relations. The practical implications are clear and hopeful. Fostering a belief in the malleability of people and their attributes has the potential to reduce stereotyping, diminish the power of stereotypes, increase intergroup contact, and create a better climate for intergroup relations. Of course, as we academics are fond of saying, more research is needed, and it is our hope that this chapter will stimulate that research.

REFERENCES


Rattan, A., & Dweck, C. S. (2011). *Believe the change you wish to see in the world: The role of implicit theories in targets’ responses to explicit bias* (Doctoral Dissertation). Stanford University, Stanford, CA.


