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Lay Theories and Intergroup Attitudes: The Role of Theories Concerning
Internality-Externality and Stability-Instability

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Abstract

The focus of this thesis investigates how social explanations (intrinsic vs. extrinsic) and implicit theories, (entity vs. incremental) shape intergroup attitudes. More specifically, we were interested in how they each predict compunction in response to “rational discrimination” and attitudes toward diversity. To measure this, we presented 120 Caucasian Lehigh Undergraduate students with a 2 phase correlational study in which African Americans were used as the group discriminated against. During the first phase, participants completed a measure of their social explanations in which they rated the extent to which they agreed with extrinsically and intrinsically based statements. They also completed a measure of their implicit theories in which they rated the extent to which they agreed with entity theory based questions. During the second phase, participants read a vignette regarding young African American males hanging out on a street corner late at night. Participants were asked if they would engage in some avoidant behavior. If they chose to engage in avoidant behavior, they were then asked to rate their emotional reactions to this imagined scenario. Next, they completed a measure of the extent to which they supported diversity. Our results found that social explanations and implicit theories are different dimensions of people’s intergroup attitudes. More specifically, it was found that women showed higher compunction than males. In addition, those supporting extrinsic explanations showed high levels of compunction and those supporting entity theory showed low levels of compunction. Also, those that endorse extrinsic explanations reported support for diversity, however, those who endorsed intrinsic explanations did not support diversity. This thesis shows that how one interprets and explains social disparity, as well as the stability of a group’s features affect one’s attitudes toward discrimination and future exposure to the group.

Lay Theories and Intergroup Attitudes: The Role of Theories Concerning Internality-Externality and Stability-Instability

As equity and diversity become increasingly accepted goals in today's society, the issue of lingering bias against disadvantaged groups takes center stage. Indeed, the implementation of equity and diversity initiatives depends on social tolerance and harmony, which are incompatible with prejudiced attitudes. Thus, to make tolerance and acceptance possible, social psychologists seek to understand the root of both positive and negative intergroup attitudes. The thesis of the present article is that lay theories concerning the intrinsic versus extrinsic causes of group differences (Gill, 2004) and lay theories concerning the stability versus instability of group differences (Levy et al., 2001) play a crucial role in shaping intergroup attitudes. Before discussing the particulars of our approach, we will review some of the diversity of perspectives from the literature on changing intergroup attitudes.

Promoting Positive Intergroup Attitudes

The formation and reduction of intergroup bias is a central focus of social psychological research. A great deal of past research has assumed that the foundation of intergroup bias is ignorance. Indeed, the extensively researched "contact hypothesis," formulated by Robin William (1947), followed by Gordon Allport (1954), stems from this assumption. The contact hypothesis proposes that face to face contact under optimal conditions with an outgroup will improve attitudes toward that outgroup. The optimal conditions proposed by Allport include equal status between the groups, shared goals, no competition, and an authority figure sanctioning the contact (Pettigrew & Tropp, 2000). Pettigrew and Tropp (2000) conducted a meta-analysis regarding the effect of intergroup contact on prejudice and found that, indeed, face to face contact, even under non-optimal conditions, generally lowers prejudice. Furthermore, it

was found that ingroup members tended to generalize this reduced prejudice to members of the outgroup that were not directly involved in the contact experience. Finally, when the intergroup contact involved friendship, the reduction in prejudice was much larger than in less intimate contact encounters (Pettigrew & Tropp 2000).

Gaertner et al. (2000) reviewed specific psychological processes through which contact can decrease prejudice. In particular, Gaertner et al. suggested that the contact be structured to promote the adoption of superordinate goals, decategorization, recategorization, or mutual differentiation, each of which can lead to improved intergroup attitudes. They used the classic Robbers Cave study to illustrate how contact can lower prejudice via all of these routes. In the Robbers Cave Study, 12-year-old male campers were divided into 2 groups and put into competitive tasks. It was found that intergroup bias and conflict arose as soon as the groups knew the other existed, even before the onset of the competitive task. This has been interpreted as suggesting that all it takes for intergroup bias to occur is the awareness of the existence of an outgroup. How can this bias be reduced?

The implementation of superordinate goals, which require cooperation between the groups to be accomplished, boded well for intergroup bias reduction. Superordinate goals subsequently led to increases in decategorization, recategorization, and mutual differentiation. *Decategorization* involves reducing the groups' distinction by having members of the ingroup interact with members of the outgroup on a more personal level. Consequently, members begin to look at each other as individual people, rather than as distinct groups. *Recategorization* emphasizes getting the members of different groups to recognize that they are simultaneously members of the same group (e.g. we are all human). In this scenario, ingroup and outgroup members will feel connected based on the newly recognized, shared group membership. Finally,

mutual differentiation involves members of both groups working together toward a common goal while maintaining an acute awareness of the fact that they are from different groups. When this happens, it is theorized; members of each group form positive views of each other's group members, and hence form generalizable positive intergroup attitudes.

According to Gaertner et al.'s (2000) analysis, support for the effectiveness of each of these processes can be found in the Robbers Cave scenario. Furthermore, each process can make some of the other processes more likely to occur. For example, Gaertner et al. showed that if recategorization is used, this can facilitate the initiation of decategorization and vice versa. Also, decategorization can foster a good environment for mutual differentiation. In sum, these processes contribute to the reduction of intergroup bias and conflict whether used interactively or independently (Gaertner et al. 2000).

In addition to reviewing the processes described by Gaertner et al. (2000), Hewstone (1998) examined how the explicit presentation of stereotype disconfirming information can affect stereotypes. This is another dominant research focus in the realm of promoting positive intergroup attitudes. Work in this area begins with the influential theoretical work of Rothbart and John (1985), which suggested that stereotype-disconfirming attributes will change stereotypes most effectively when they are associated with members of the stereotyped group who otherwise fit the category prototype. For example, if an African American possessed the trait "unathletic", he would most effectively change the stereotype of African American athleticism if he otherwise possessed stereotypical traits (e.g. musical, poor).

Furthermore, Hewstone (1996) examined research suggesting that intergroup bias can be reduced by diminishing the distinctions of the group's categories by using alternate categorizations (Hewstone 1996). One such method includes grouping the original

categorizations into other types of social categorizations. This begins when the groups are cross cut into other, subordinate or superordinate groups, such as “me as an individual, me as a group member, or me as a human being.” If these alternate groups are emphasized and the original groups’ distinctions are deemphasized, the significance of the initial categorization should be reduced. (Hewstone 1996). This method should change the both ingroup and outgroup perceptions of each other.

A final approach we will review comes from Devine et al. (1996). This approach focuses on contradictions often inherent between people’s egalitarian value systems and their prejudices. Such contradictions occur because prejudice is like a bad habit that does not quickly disappear even when one’s value system suggests that prejudice is wrong. Indeed, Devine et al. (1996) suggested that although great advancements have been made in the reduction of overt prejudice, covert prejudice is still evident in society largely because prejudice is like a deeply engrained bad habit that can linger despite our intention to be unbiased. Because of this, prejudice reduction might require making people aware of how their lingering prejudices contradict their values, thus motivating them to change. Accordingly, Devine and her colleagues explore peoples’ reactions to the recognition that they have violated either personal or societal norms that define prejudice as wrong. In one study based on this framework, high and low prejudice participants reported their personal standards for how outgroup members should be treated. Then, they reported how they actually would treat them in certain circumstances. Critically, low and high prejudice participants’ personal feelings about deviations between their personal standards and actual behavior were measured. It was found that low prejudice participants felt more self-directed negative feelings (e.g. self-critical, angry at myself) than did high prejudice participants upon recognizing that their actual behavior violated their personal

standards. Theoretically, low prejudice people will use these negative feelings to fuel the reduction of their own prejudice (Devine et al 1996). From these studies, it is suggested that reducing prejudice is a process that starts with being made personally aware of the wrongs of prejudice, internalizing non-prejudiced personal standards, and replacing one's lingering, automatic prejudice reactions with these alternative beliefs.

To expand on their research further, Devine et al. (1996) explored participants' motivation to reduce prejudice, specifically whether this motivation was internal (e.g., to please myself) or external (e.g., to please others). As it turns out, low prejudice participants scored higher than high prejudice participants' on the internal motivation scale (IMS), which means that being nonprejudiced is important to their self concept (Devine 1996). Supporting the validity of the IMS, Devine et al. reported that high IMS participants gave less prejudicial reactions regardless of whether they were made publicly or privately.

In contrast to these positive effects of internal motivation, Devine et al. (1996) suggested that external motivation to have non-prejudiced reactions can, in fact, create a backlash. It was found that angry backlashes were highest with externally motivated participants (Devine et al. 1996). Thus, a dangerous side effect of social pressure to conform to anti-prejudice norms is dangerous angry backlash against those norms. Such backlash includes hostility and resentment, displayed physically and/or verbally toward the outgroup's successes. Thus, implementing anti-prejudice norms is not enough to reduce prejudice (Devine et al. 1996). Anti-prejudice norms must be internalized by people to produce positive effects.

Stereotypes as Social Explanations

A more recent idea, growing out of work by Jost et al. (2000) and Hoffman and Hurst (1990), starts with the assumption that negative intergroup attitudes are rooted in a tendency for

people to explain or rationalize social inequalities by invoking intrinsic deficiencies of low status groups. For example, from this perspective, negative views of African Americans stem from the fact that they are over-represented in decaying inner cities, and people tend to explain or rationalize this in terms of group traits (e.g., African Americans must not try hard enough to succeed).

This notion of the genesis and function of negative intergroup attitudes is integral to the system-justification perspective of Jost et al. (2000). Those authors raise the idea that people have a natural motivation to view the social system in which they participate as fair and just. To accomplish such a view, one must generate explanations for the low status of certain groups that *blame the group* rather than the system. For example, if a dominant group member notices that members of a minority group are economically not well-off, she will conclude that this stems from some deficiency intrinsic to the minority group. Indeed, she is unlikely to spontaneously blame the social system for this state of affairs, perhaps because doing so casts doubt on her own deservingness of her social position. This research supports our premise that stereotypes are a way of explaining or rationalizing the disparities in society. [Notably, a tendency to justify the system is paradoxical for members of non-dominant groups, who nonetheless often do so. According to Jost et al., such individuals face a “legitimacy crisis” in which justifying the system tends to undermine one’s need to value the self.]

Hoffman and Hurst (1990) provided relatively direct evidence supporting the notion of stereotypes as explanations/rationalizations for group disparities. They suggested that many gender stereotypes are formed by people’s tendency to explain and rationalize gender inequality in society. For example, because women are more commonly seen in the role of child raiser, a stereotype is created to rationalize this in terms of the idea that women are inherently more

nurturing than men. Hoffman and Hurst (1990; Experiment 1) provided evidence for this process by presenting subjects with two fictional groups, one being “city workers” and the other “child raisers.” Subjects were then asked to draw conclusions about personality traits of the groups, despite having been given personality trait information suggesting the groups had similar personalities. As it turned out, the subjects formed stereotyped views of the groups in which child raisers were attributed traits relevant to that role (e.g., kind, empathetic) and city workers were attributed traits relevant to that role (e.g., assertive, independent). Interestingly, and consistent with the present argument, this tendency to create stereotypes was enhanced when participants were asked to *explain* the role differences. In a second experiment, Hoffman and Hurst used “business persons” and “academics”—categories less clearly linked to gender stereotypes—and found similar results: Stereotypes were created to explain or rationalize why certain groups occupied certain niches in society.

Implications for Promoting Positive Intergroup Attitudes

What are the implications of this notion that negative intergroup attitudes are rooted in people’s tendency to explain or rationalize intergroup disparities in terms of intrinsic features of groups? If we return to work on attribution theory (see Gilbert and Malone, 1994, for a review), we see that attribution theory conceptualizes human explanation of social behavior in terms of the concepts of *intrinsic causality* (i.e., “something about the person” produced the behavior) and *extrinsic causality* (i.e., “something about the situation/circumstances” produced the behavior). These types of explanations are viewed as being, to a degree, antithetical to one another: To the extent that one has compelling evidence that one type of cause is relevant, the other cause will be perceived as not relevant. Based on this attributional framework, one can state our argument above in terms of the idea that negative intergroup attitudes are rooted in attributions for group

outcomes that invoke intrinsic causality (indeed, one can see that they are yet another manifestation of the Fundamental Attribution Error or Correspondence Bias!). As such, changing these attitudes might be accomplished by making perceivers more aware of situational factors (e.g., historical, societal) that shape group outcomes, which will result in a less group-blaming orientation.

Some existing evidence bears on these ideas. Lopez et al. (1998) presented two studies suggesting that courses in Intergroup Relations tended to increase “structural thinking” (similar to our concept of extrinsic causality) about group differences. That is, students who took such courses were more likely to see structural factors as responsible for intergroup disparities, and were less likely to endorse group-blaming explanations. Lopez et al. (1998) suggested that structural thinking would lead to more positive intergroup attitudes, although they measured only people’s attributions for intergroup disparities and not any supplementary attitude measures.

Vescio et al. (2003) were concerned with the role of perspective taking in promoting positive intergroup attitudes. Those authors showed participants a segment of an interview where an African American discussed the adversity he faced being part of a stigmatized group. Moreover, some participants were instructed to take the perspective of the African American student or to “remain objective.” The results indicated that taking the perspective of the African American student—as compared to remaining “objective”—was associated with improved intergroup attitudes, and that this improvement was fully mediated by the fact that perspective taking participants endorsed more situational attributions for the difficulties faced by the African American student. Vescio et al. (1998) concluded that perceivers taking situational factors into account can reduce prejudice and promote positive intergroup attitudes.

Implicit Theories and Intergroup Attitudes

Our notion that, lurking beneath the features people associate with a group, lies a theory regarding the intrinsic or extrinsic causal forces that give rise to those features is reminiscent of work on *implicit theories* of human traits (e.g., Levy et al., 2001): Both views highlight the role of lay theories in creating meaning in our social judgments. In their review of the role of implicit theories in intergroup perception, Levy et al. (2001) suggested that implicit theories consist of two predominant kinds. One theory is an *entity theory*, which maintains that a person's traits are fixed and stable over time ("you cannot really change the kind of person you are"). A contrasting theory is the *incremental theory*, which maintains that traits are malleable ("with some effort you can change important parts of who you are").

Levy et al. (2001) reviewed several studies that examined the role of these implicit theories in fostering susceptibility to stereotyping, perceptions of group homogeneity, the ultimate attribution error, intergroup bias, and discriminatory behavior. It was found that entity theorists produced more negative and salient stereotypes than incremental theorists. For example, Chow (1996), asked Hong Kong students to write their views on Mainland Chinese (outgroup) from the perspective of people from Hong Kong. The Hong Kong students, regardless of whether they were incremental or entity, produced the same number of stereotypes. Entity theorists, however, produced more negative stereotypes than incremental theorists. In another similar study, Hong and Yeung (1997) also found entity theorists to be more prejudiced. For example, Hong and Yeung (1997) asked participants from Hong Kong to assign a list of moral/immoral behaviors to either people from Hong Kong or Mainland China. It was found that entity theorists felt confident in assigning immoral behaviors to the Mainland Chinese and moral behaviors to their own group.

Distinguishing Social Explanations and Implicit Theories

Both social explanations and implicit theories suggest that one's perceptions of social actions and outcomes vary based on one's underlying theories about the nature of those phenomena. The two theories differ in that social explanations focus on the *causality* (whether it be external or internal) behind behavior, whereas implicit theories focus on the apparent *stability* of the traits.

The Present Study

In the present study, we are measuring both *social explanations*—the extent to which intrinsic versus extrinsic attributions are endorsed—and *implicit theories*—whether they are entity versus incremental—and then test the extent to which each of these is predictive of some facet of intergroup attitudes.

Method

Overview

During a two phase correlational study, participants completed measures of their social explanations (internal vs. external) and implicit theories (incremental vs. entity). Weeks later, participants completed a measure of their intergroup attitudes, one that measures their emotional reactions to rational discrimination, and another that measures their attitudes about assimilation and multiculturalism.

Participants

Sixty-two female and fifty-eight, white undergraduates at Lehigh University participated for credit in their Introductory Psychology or Social Psychology courses.

Procedure

Phase 1. In the first phase, at the beginning of the semester, participants were asked to complete both the Social Explanations Questionnaire (Gill, 2004) and Implicit Theories about

African Americans Questionnaire (adapted from Levy et. al 20XX). The Social Explanations Questionnaire (see Appendix A) consists of 16 statements that point to potential explanations for the social and economic disparities that exist between African Americans and White Americans. Participants were asked to rate, on a 6 point scale, the extent to which degree they *Strongly Disagree* (1) or *Strongly Agree* (6) with each explanation. Nine of the items refer to *intrinsic explanations*, in which disparities are viewed as stemming from inherent character deficiencies of African Americans (e.g., *African Americans are generally less well-off than are White Americans because they do not try as hard as White Americans*). Seven of the items referred to extrinsic explanations, in which disparities are viewed as stemming from factors external to African Americans such as economic and social forces (e.g., *The history of slavery, segregation, and discrimination suffered by African Americans has surely contributed to any current economic and social problems they are facing*). Each participant received an *intrinsic explanation* score and an *extrinsic explanation* score, both of which were computed by averaging the relevant items. As can be seen in Table 1, these scales possessed high reliability and showed substantial variability.

After the participants completed the Social Explanations Questionnaire, they also completed the measure of Implicit Theories about African Americans (Appendix B). This questionnaire consists of 3 statements that measure the nature of the participants' implicit theories, that is, the extent to which they hold an incremental versus entity theory. The participants were asked to read each statement and rate it on a 6 point scale with endpoints being *Strongly Agree* (1) and *Strongly Disagree* (6). Each of the 3 statements was worded such that agreement indicated an entity theory: *The thinking style and behavior style of African Americans reflects something very basic about them and cannot be changed much; African Americans can*

do some things differently, but the important parts of who they are cannot really be changed; African Americans are a particular type of group, and there is not much they can really do to change that. We reversed scored all the items so that high scores indicated an entity theorist perspective. As can be seen in Table 1, this measure also possessed high reliability and showed substantial variability.

A few weeks after the first phase, participants were asked to participate in the second phase of the study. Participants were not made aware of the relation between the two phases.

Phase 2. During the second phase, the original participants from the first phase returned a few weeks later to complete dependent measures regarding intergroup attitudes. The participants completed a measure examining their emotional reactions to so-called “rational discrimination” (D’Souza, 1994), which is discrimination that is ostensibly based on such things as real danger of criminal activity, and they completed a survey that measured their attitudes toward diversity and multiculturalism.

For the measure of emotional reactions to rational discrimination, participants read a vignette that we expected would get them to admit that they might engage in prejudicial behavior consisting of avoiding young, Black males in an urban setting (see Appendix C). Our expectation was confirmed by the fact that, indeed, 89.2% of participants indicated that they would respond prejudicially. Crucially, the measure also solicits—only from those who say they might respond prejudicially—the respondent’s emotional reaction to the imagined instance of prejudicial avoidance. Specifically, respondents rate the extent to which they feel justified and unbothered by their behavior as opposed to feeling ashamed and distressed on a 6-point-scale with endpoints labeled *Feel this NOT AT ALL* (1) and *Feel this VERY STRONGLY* (6). After reverse coding such that a high score indicates feeling unjustified and distressed—which we will label

compunction, to be consistent with prior, related work—the 10 items were averaged to form a single index of emotional reactions to rational discrimination. As can be seen in Table 1, this measure showed high reliability and substantial variability.

For the Attitude Toward Diversity measure (see Appendix D) measure, participants completed a 10 statement survey. More specifically, five of the statements highlight the potential value of diversity (e.g., *Our nation will be more harmonious when we learn to understand and appreciate the cultural differences among the groups in our society*) and the other five highlight the potential costs of diversity (e.g., *A commitment to diversity fosters more division among racial and ethnic groups than intergroup understanding*). The participants indicated the extent to which they agreed with each statement on an 8-point-scale with endpoints labeled *Strongly Disagree* (1) and *Strongly Agree* (8). After appropriate reverse scoring such that a high score indicated a pro-diversity attitude, the ten items were averaged. As can be seen in Table 1, this measure showed high reliability and substantial variability.

Results

Prior to testing our main hypotheses, we computed zero-order correlations among all our variables. These can be seen in Table 2.

Social Explanations, Implicit Theories, and Emotional Reactions to Rational Discrimination

One of the primary research questions involves the relationship between Social Explanations, Implicit Theories, and emotional responses to rational discrimination. We examined these relations among the 107 participants who had answered that they might engage in prejudicial behavior toward the urban Black teenagers in our vignette (because no emotional reactions were reported by participants who said they would not avoid the Black teenagers).

Specifically, we computed a multiple regression in which emotional reactions to rational discrimination were predicted from sex, intrinsic explanations, extrinsic explanations, implicit theories, and all the interactions among these variables. Interaction terms were computed by first centering variables on their means and then multiplying them together (Cohen & Cohen, 1983). As can be seen in Table 3, this analysis revealed several significant or marginal main effects and interactions. To begin, there was a marginal effect of sex such that females ($M = 3.20$) showed greater compunction in response to rational discrimination than did males ($M = 2.81$). In addition, both extrinsic explanations and implicit theories had significant effects. The nature of these was that participants who strongly endorsed extrinsic explanations showed greater compunction in response to their imagined discrimination than did those who did not, and participants who endorsed an entity theory regarding African Americans showed less compunction in response to their imagined discrimination than did those who were more incremental in their thinking.

In contrast to the significant main effects of extrinsic explanations and implicit theories, all interactions described below were only marginal. First, qualifying the main effect of extrinsic explanations, there was an interaction between sex and extrinsic explanations. The nature of this was that extrinsic explanations were strongly associated with compunction among males, $r(46) = .52$, $p = .000$, but were not related to compunction among females, $r(57) = .15$, $p = .26$. In addition, qualifying the main effect of implicit theories, there was a sex by implicit theories interaction. The nature of this was that the extent to which one endorsed an entity theory for African Americans was associated with low levels of compunction among females, $r(54) = -.34$, $p = .01$, but was not related to compunction among males, $r(46) = -.09$, $p = .54$. Also qualifying the main effect of implicit theories, there was an intrinsic explanations by implicit theories interaction. To examine the nature of this interaction, we performed a median split on implicit

theory scores. This resulted in two groups: One consisting of people tending toward incremental theories, and the other consisting of people tending toward entity theories. Subsequently, we found that the nature of the interaction was that, among incremental theorists, intrinsic explanations were associated with low levels of compunction, $r(48) = -.32$, $p = .02$, whereas among entity theorists intrinsic explanations were not related to compunction, $r(52) = -.06$, $p = .68$. Finally, we found that this interaction was qualified by a three-way interaction among sex, intrinsic explanations, and implicit theories. Using the categories of incremental versus entity theorists we created for the previous interaction, we examined the nature of this interaction by looking at the correlation between intrinsic explanations and compunction separately for female entity theorists, female incremental theorists, male entity theorists, and male incremental theorists. These correlations suggested a tendency for intrinsic explanations to be associated with low levels of compunction among male incremental theorists, $r(19) = -.35$, $p = .13$, whereas intrinsic explanations were not associated with compunction in any of the other groups $|r| < .07$, $ps > .73$.

Social Explanations, Implicit Theories, and Attitudes Toward Diversity

Another primary research question involves the relationship between social explanations, implicit theories, and attitudes toward diversity. We examined these relations among the 120 participants who had complete data for all relevant measures. Specifically, we computed a multiple regression in which attitudes toward diversity were predicted from sex, intrinsic explanations, extrinsic explanations, implicit theories, and all the interactions among these variables. Interaction terms were computed by first centering variables on their means and then multiplying them together (Cohen & Cohen, 1983). As can be seen in Table 4, this analysis revealed two significant main effects and no significant or marginal interactions. To begin, there

was a significant main effect of intrinsic explanations such that those who endorsed intrinsic explanations held negative attitudes toward highlighting and celebrating diversity. In addition, there was a significant effect of extrinsic explanations such that those who endorsed extrinsic explanations held positive attitudes toward highlighting and celebrating diversity.

Discussion

We were interested in the role that implicit theories and social explanations play in shaping intergroup attitudes. More specifically, we were interested in the extent to which endorsing entity (vs. incremental) theories, intrinsic explanations, and extrinsic theories was associated both with compunction in response to imagined prejudice and with attitudes toward diversity. We conducted a study in which 120 Caucasian undergraduates at Lehigh University completed measures of their implicit theories and social explanations. At a later date, the participants completed measures of the extent to which they experience compunction in response to imagining themselves discriminating and of their attitude toward diversity. What did we find?

Compunction in Response to “Rational Discrimination”

When examining compunction in response to imagined discrimination, we found a marginal effect of sex such that females showed somewhat greater compunction in response to imagined discrimination than did males. This might be due to a stronger sense of empathy, perhaps stemming from a greater familiarity with being discriminated against themselves. Future research that directly measured empathy and experiences of discrimination would be able to examine this possibility better than can the present study.

We also found a significant effect of extrinsic explanations, such that those who strongly endorsed extrinsic explanations showed greater compunction in response to their imagined discrimination than did those who did not. Those who endorse extrinsic explanations more

strongly feel that the negative attributes of a group are due to more environmental factors such as government and socialization. Thus, those who endorse extrinsic explanations would hold the group not responsible and not blame them for their current situation in society. In that sense, they would feel worse about having to discriminate a group for reasons that were outside of the group's control. This main effect of extrinsic explanations was qualified by a weak interaction with sex. Given that this interaction was not predicted, and given that it was weak, it makes sense not to read too much meaning into it. The nature of the interaction was that extrinsic theories were strongly associated with compunction among male participants, but virtually unrelated to compunction among female participants. This might be due to the fact that females feel justified in discriminating because they feel more physically vulnerable and threatened than do males (indeed, of the 13 participants who said they would not avoid the African American teenagers, 77% were males, despite the fact that only 48% of our sample was male). Because of this relative feeling of vulnerability, females might feel quite justified about discriminating regardless of their beliefs about the discriminated against group per se. In contrast, because males do not feel particularly physically vulnerable, they reason about whether the discrimination is just or not and their social explanations seem to affect this reasoning. Although this explanation seems plausible, it is also somewhat undermined by the fact that, on average, females showed more compunction about discriminating than did males. So, perhaps another explanation of this sex difference is that females feel compunction for a variety of reasons that have nothing to do with social explanations—e.g., a high level of dispositional empathy—and thus their social explanations are not very predictive of their prejudice-related compunction. Another way of saying this is that females are already “at ceiling” in terms of their compunction, and thus there is no additional compunction that can be added based on their extrinsic social explanations. Consistent with this

idea, females had both higher compunction scores and less variability in their compunction scores than did males (and this pattern held for their extrinsic explanations, too).

We also found a significant effect of implicit theories. In particular, participants who endorsed an entity theory regarding African Americans showed less compunction than did those who endorsed an incremental theory. Those who endorsed an entity theory might have showed less compunction because they believe that African Americans will not change who they are, and therefore the group's negative attributes are stable. Thus, entity theorists hold a less hopeful outlook on African American's future and would show high levels of compunction because they feel there is little point in feeling bad about discriminating against a group that will "always be bad." To the contrary, those who endorsed incremental thinking would show higher levels of compunction because they believe African American's attributes are unstable and have the ability to change. Thus, incremental theorists have a more hopeful and positive outlook on African Americans and would show more remorse for discrimination because they believe that in another place and time African Americans may not have to be avoided in this imagined scenario. This main effect of implicit theories was qualified by a weak interaction with sex. Given that this interaction was not predicted, and given that it was weak, it makes sense not to read too much meaning into it. The nature of the interaction was that female entity theorists showed less compunction than did female incremental theorists, but male entity and incremental theorists did not differ. This interaction is particularly difficult to explain. So, we will note that when we examine the data using three factor regressions (compunction as a function of sex, intrinsic explanations, implicit theories; compunction as a function of sex, extrinsic explanations, implicit theories) this sex by implicit theory interaction does not approach significance ($ps = .17$ and $.45$)

in either analysis. Therefore, it might simply be an artifact of testing a regression model with too many interaction terms, which increases Type I error rates (Cohen & Cohen, 1983).

Finally, we found an interaction between implicit theories and intrinsic theories. The nature of this was that, among incremental theorists, intrinsic explanations were associated with low levels of compunction, whereas among entity theorists intrinsic explanations were not related to compunction. Furthermore, this was qualified by a three-way interaction between implicit theories, intrinsic theories, and sex. As with the interaction between implicit theories and sex, this is both difficult to explain, and, furthermore, does not replicate when we test our hypotheses using two three factor regressions. Thus, we will not attempt to find meaning in it.

Social Explanations, Implicit Theories, and Attitudes Toward Diversity

We also found a significant effect of intrinsic explanations, such that those who strongly endorsed intrinsic explanations showed negative attitudes toward highlighting and celebrating diversity. This might be due to their more blameful view of the group's negative features. Since those who endorse intrinsic explanations view African Americans' traits as something that is innate and distinctively unique to the group, a strong divide is created between the groups. For these reasons, they would not be in support of interacting with a group who they view as distinctly different and blame for their negative features.

To the contrary, we found a significant effect of extrinsic explanations, such that those who strongly endorsed extrinsic explanations showed favorable attitudes toward diversity. This might be due to their less blameful attributions of the group. Since they do not hold African Americans particularly responsible for certain negative traits, they may be in favor of diversity. Those who endorse extrinsic explanations would be more strongly in favor of diversity in hopes that providing a diversified environment might help bridge the gap between groups.

On the whole, it was also found a correlation was found between implicit theories and intrinsic explanations. In a correlation, they both were predictors of compunction in response to imagined discrimination and attitudes toward diversity. It appears that they both tap into similar elements of people's belief systems. In a regression, implicit theories were predictive of compunction and intrinsic explanations did not explain any variance beyond what was explained by implicit theories. Conversely, intrinsic explanations were predictive of attitudes toward diversity and implicit theories did not explain any variance beyond what was explained by intrinsic explanations.

Although our study yielded significant results, there are some areas of improvement for further research. Perhaps the results would have been more significant had the sample size been much larger and more diverse. More specifically, it would be interesting to see if the results would change if the subject pool included participants who had and had not been lived in a multicultural or impoverished environment. Since a fairly large number of Lehigh Undergraduates come from ethnically homogenous environments, it may have steered the study in a certain direction. Had the study been larger and included more diversity in regard to participants' multicultural experiences, perhaps the results would have been more significant.

Conclusions

Overall, this thesis suggests that social explanations and implicit theories are two distinct lay theories that are predictors of distinct intergroup attitudes. Both social explanations and implicit theories are associated with different levels of prejudice. How one interprets and explains social disparity affects one's attitudes toward discrimination and future exposure to the group. In addition, how one perceives the stability and instability of a group's features affect one's attitudes toward discrimination and future exposure to the group. This thesis shows the

importance of understanding the foundational thought processes of negative and positive discrimination because of its contributions to a more peaceful society.

Table 1

Descriptive Statistics for All Measures

	M	SD	Reliability	Range
Intrinsic explanations	2.06	.85	.90	1 — 5.17
Extrinsic explanations	4.09	1.02	.83	1.17 — 6
Implicit Theories	2.71	1.12	.73	1 — 6
Emotions in response to rational discrimination.	3.02	.94	.84	1 — 5.3
Diversity	5.10	.97	.71	2.11 — 7
Positive attitude toward African-American culture	4.71	.84	.82	1.57 — 6

Table 2

Zero-order Correlations Among Variables

	1	2	3	4	5	6	7
1 Sex		-.204*	-.206*	.051	.396*	-.134	-.242**
2 Emotional Reactions			.268**	-.219*	-.218*	.385**	.211*
3 Diversity				-.309**	-.457**	.488**	.525**
4 ITAA					.412**	-.045	-.274**
5 Intrinsic						-.315**	-.598**
6 Extrinsic							.556**
7 PAAC							

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3

Regression of Emotional Reactions to Rational Discrimination on Sex, Intrinsic Explanations, Extrinsic Explanations, Implicit Theories, and all their interactions

Variable	β	t	p
Sex	-.21	-1.82	.07
Extrinsic Explanations	.30	2.41	.02
Implicit Theories	-.33	-2.55	.01
Sex by Extrinsic Explanations	.18	1.52	.13
Sex by Implicit Theories	.21	1.65	.10
Implicit Theories by Intrinsic Theories	-.24	-1.71	.09
Sex by Implicit Theories by Intrinsic Theories	.24	1.67	.10

Note. All main effects and interactions not reported here were non-significant, $ts < 1$, $ps > .39$.

Dependent variable is Emotional Reactions to Rational Discrimination and high scores indicate negative self-directed emotions and concern with being unfair.

Table 4

Regression of Diversity Attitudes on Intrinsic and Extrinsic Explanations

Variable	β	t	p
Intrinsic Explanations	-.26	-2.28	.025
Extrinsic Explanations	.30	2.91	.005

Note. All main effects and interactions not reported here were non-significant, $ts < 1$, $ps > .18$.

Dependent variable is attitudes toward diversity and high scores indicate support for diversity unfair.

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