
Who I Am, Who We Are, and Why: Links Between Emotions and Causal Attributions for Self- and Group Discrepancies

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Discrepancies between people's ought selves and their actual selves and their ideal selves and actual selves predict the emotions that individuals experience. The authors predicted that internal versus external causal attributions for self-discrepancies should moderate the relationship between self-discrepancies and emotions, resulting in more refined predictions for both agitation- and dejection-related emotions and for two additional types of emotion, namely, anger-related and discontent-related emotions. Results of two studies generally supported the predictions that agitation-related emotions and dejection-related emotions were positively associated with actual-ought discrepancies and actual-ideal discrepancies, respectively, only when causal attributions for the discrepancies were internally based. Anger-related emotions and emotions of discontent were positively associated with actual-ought and actual-ideal discrepancies, respectively, primarily when causal attributions were externally based. Study 2, which addressed group discrepancies and group-based emotions, generally replicated the findings when group identification was high, yielding a more complex model of the link between discrepancies and emotions.

Keywords: *self-discrepancy; attributions; group-based emotions; group identification*

People possess cognitive representations of the self as well as standards against which they evaluate the self. For example, an individual may believe that she is shy, but that she would ideally like to be more outgoing. Emotional reactions, such as anxiety or dejection, often result from such comparisons. These are the fundamental postulates of self-discrepancy theory (SDT), originally advanced by Higgins (1987, 1989), which has become one of the most prominent conceptual models linking self-representation and emotion.

More specifically, according to SDT, two basic representations serve as self-evaluative guides against which an individual can compare his or her actual self. A person's ought self is defined as their representation of the kind of person they believe they have the duty or obligation to be. Measures of the ought self typically ask participants to list traits or characteristics that they believe they should or ought to possess or feel obligated to possess. A person's ideal self is defined as their representation of the kind of person they would really like to be. Measures of the ideal self typically ask participants to list traits or characteristics that they would ideally like to have. Naturally, people desire to minimize both types of discrepancies, between their actual and ought selves and between their actual and ideal selves.

Higgins (1987) theorized that when representations of an actual-ought (A-O) discrepancy are activated, they signal to the individual the potential presence of undesirable outcomes. The presence of negative outcomes is predicted to lead to agitation-related emotions (e.g., anxiety, fear, nervousness). In contrast, when representations of an actual-ideal (A-I) discrepancy are activated, they signify the absence of desirable outcomes. This absence of positive outcomes is predicted to produce

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dejection-related emotions (e.g., sadness, inadequacy, hopelessness).

In support of the emotion-specific predictions made by SDT, several studies have demonstrated that the extent of A-O self-discrepancy is uniquely associated with agitation-related emotions, whereas an A-I self-discrepancy is uniquely associated with dejection-related emotions (Higgins, Bond, Klein, & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Strauman & Higgins, 1988). For instance, Strauman (1992) demonstrated associations between A-O discrepancy and anxiety as well as A-I discrepancy and dejection that persisted over a 4-month period. These effects were consistent with earlier research conducted by Strauman (1989) and Strauman and Higgins (1987).

However, findings concerning the relation between self-discrepancies and emotion are somewhat inconsistent (Tangney, Niedenthal, Covert, & Barlow, 1998). Some studies have found that the A-O discrepancy predicts agitation-related emotions only among a subset of individuals (i.e., those who perceive their actual selves to be far from their "feared selves," Carver, Lawrence, & Scheier, 1999; Heppen & Ogilvie, 2003). Other studies find only partial support for the SDT predictions. Bruch, Rivet, and Laurenti (2000) examined SDT emotion-specific predictions in light of Clark and Watson's (1991) tripartite theory of anxiety and depression. The experimenters reported findings consistent with the hypothesized A-I discrepancy link to tripartite components of depressive affect, but A-O discrepancy was unrelated to components of anxious affect. In yet another study, Szymanski and Cash (1995) failed to find unique associations between A-O discrepancy and agitation-related emotions or between A-I discrepancy and dejection-related emotions when examining body image ideals in women. Thus, emotion-specific predictions made by SDT have not always been supported by the data.

Such inconsistencies motivate research attention to the "second-generation question:" When are self-discrepancies associated with emotions? (Higgins, 1999). Addressing this question, Higgins (1999) argued that self-discrepancies are likely to show significant associations with specific emotions under the following five general conditions: (a) when the magnitude of self-discrepancies is great, (b) when the magnitude of self-discrepancies matches that of the extremity of the emotional symptoms examined, (c) when self-evaluative knowledge structures are activated (e.g., Strauman & Higgins, 1987), (d) when self-evaluative knowledge is applicable and perceived as relevant to the current judgment, and (e) when the individual believes that falling short of the ought self or ideal self has important consequences, such as the reactions of others. The current studies provide a different type of answer to the second-

generation question by taking into account a dimension that may further differentiate emotional experience, specifically, causal attributions for self-discrepancies.

Numerous appraisal theories of emotion share the basic postulate that appraisals of the causal locus of an event (internally or externally caused) are important determinants of emotional responses to the event (Roseman, 1984, 1991; Schacter & Singer, 1962; C. A. Smith & Ellsworth, 1985; C. A. Smith, Haynes, Lazarus, & Pope, 1993; Weiner, 1982, 1986a, 1986b). However, the role of attributions has generally been ignored within SDT. The reason is that SDT has focused on emotions as a function of regulatory processes working or not working (i.e., as a function of the presence or absence of activated self-discrepancies). Thus, past research has overlooked the potential effects of internal versus external causal attributions regarding self-discrepancies. This is the primary focus of the current studies: How do emotional consequences of self-discrepancies depend on the attributions that the individual makes for those discrepancies? We know of only two studies that have examined the relationship between causal attributions and self-discrepancies (both conducted by Kinderman & Bentall, 2000). However, these studies focused on attributions for specific negative achievement-related events rather than causal attributions for self-discrepancies, and they failed to measure the range of emotions that we believe our model may address.

Our specific hypotheses flow from cognitive appraisal models of emotion that incorporate attributional analyses (Roseman, 1984; Roseman & Evdokas, 2004; C. A. Smith & Ellsworth, 1985; Weiner, 1982) as well as from SDT itself. Despite inconsistencies in the literature such as those noted earlier, it seems clear that A-O discrepancies are generally associated with agitation-related emotions whereas A-I discrepancies are associated with dejection-related emotions. However, we hypothesize that beliefs about the causes of self-discrepancies will moderate the relation between discrepancies and emotions. Appraisal models of emotion and their ancestors, such as Weiner's (1986b) attributional approach, generally agree on the postulate that the perceiver's attributions regarding an emotion-inducing event strongly determine the nature of emotional responses. For example, one might experience pride based on a positive outcome that is attributed to one's own efforts or abilities but gratitude if the same outcome is attributed to the beneficence of another person. Or, one might experience disappointment if a negative outcome is attributed to one's own lack of ability or effort but anger if it is attributed to another person's intentional acts (Averill, 1983).

Higgins (1987) briefly considered the possibility of attributions for discrepancies as a moderator in his interpretation of Weiner, Russell, and Lerman (1979), writ-

ing, "When people attribute their failures to a lack of sufficient effort on their part (i.e., not trying as hard as they know they should have), which perhaps reflects an actual/own:ought/own discrepancy, they feel guilty" (p. 325). This statement suggests that self-discrepancies generally have been assumed to be caused by internal aspects of the individual or at least that the individual is somehow responsible for them.

In contrast, we contend that just as people often make external causal attributions for undesirable outcomes (Miller & Ross, 1975), they may also form external causal attributions for why they are not who they ought to be or who they would ideally like to be. External attributions might result from realistic perceptions of situations in some cases or could result from motivated self-protection mechanisms. What should be the effects of such attributions on emotions? To derive specific hypotheses, we turned to the logic of appraisal theories (Roseman, 1984, 1991; Schacter & Singer, 1962; C. A. Smith & Ellsworth, 1985; C. A. Smith et al., 1993; Weiner, 1982, 1986a, 1986b) and to research demonstrating relationships between specific emotions and discrepancies (Higgins, 1987, 1989; Higgins et al., 1985; Strauman & Higgins, 1988). Consistent with SDT, we reasoned that (1) agitation-related emotions would be positively associated with A-O self-discrepancy when causal attributions for the discrepancy are internal but not (or less so) when attributions are external and (2) dejection-related emotions would be positively associated with A-I self-discrepancy when causal attributions for the discrepancy are internal but not when attributions are external.

Our novel hypotheses concern the following two additional categories of emotion: (3) Anger-related emotions would be positively associated with A-O self-discrepancy when causal attributions for the discrepancy are external, and (4) emotions of discontent (disappointment, dissatisfaction) would be positively associated with A-I self-discrepancy when causal attributions for the discrepancy are external. The hypothesis regarding anger stems from Higgins's (1987) SDT postulate that A-O discrepancies psychologically represent the presence of negative outcomes combined with appraisal models that predict anger in response to negative outcomes that are perceived to be caused by other people or other external sources. Thus, when attributing a failure to meet one's standards or obligations to external causes, anger would be predicted to result. The hypothesis regarding emotions of discontent is derived from SDT's assumption that A-I discrepancies are interpreted as the absence of positive outcomes together with appraisal models (Roseman, Spindel, & Jose, 1990; van Dijk & Zeelenberg, 2002a, 2002b) that suggest disappointment and discontent to result from the lack of positive events that are caused by external situations. This hypothesis is also con-

sistent with counterfactual thinking research that has found associations between disappointment and discontent and the lack of positive events that are perceived to be due to situations outside the individual (Mandel, 2003; Zeelenberg et al., 1998). Thus, when attributing a failure to meet one's ideals to external causes, discontent would be predicted to result.

The first study set out to test these four hypotheses at the level of individuals' experienced emotions. Although our hypotheses are based on the internal/external attribution dimension, in exploratory analyses we will also consider potential effects of two other important dimensions on which causes may differ, namely, stable/unstable and controllable/uncontrollable (Abramson, Metalsky, & Alloy, 1989; Weiner, 1980). Stability (the degree to which causes are perceived as permanent or unchanging) might be argued to intensify a discrepancy-related emotion if the attribution were perceived as a stable cause, implying that the discrepancy might be long lasting. Controllability (the degree to which causes are perceived as under one's own or other people's voluntary control) also is known to affect specific emotions, but we no particular theoretical reason to predict how this attribution dimension might interact with self-discrepancies, so these analyses remain exploratory.

STUDY 1: CAUSAL ATTRIBUTIONS FOR SELF-DISCREPANCIES AND EMOTIONS

Method

PARTICIPANTS AND PROCEDURE

In Study 1, 192 students in an introductory psychology course participated in the experiment in return for partial course credit. Data collection was conducted in two parts. On arrival at the laboratory for the first part of the experiment, participants were greeted by a laboratory assistant who gave them a brief oral introduction to the experiment and escorted each participant to a cubicle equipped with a personal computer. All experimental instructions, conditions, stimuli, and data collection were provided via experimental software (MediaLab; Jarvis, 2004). The instructions of the experiment were self-paced, and participants advanced by clicking a "Continue" icon at the bottom of the screen.

Self-discrepancies. Self-discrepancies were measured with a method similar to that employed by Carver et al. (1999).¹ Participants were first presented with the following definition of the ought self:

Your ought self is the kind of person you believe you have the duty or obligation to be. It's defined by the traits you think you should or ought to possess, or feel obligated to possess. It's not necessary that you actually have these traits now, only that you believe you ought to have them.

After reading this statement, participants were asked to type traits or descriptor words that describe their ought self (one word on each of the next seven screens). In a similar manner, participants typed seven descriptors of their ideal self after being presented with the following definition of the ideal self:

Your ideal self is the kind of person you'd really like to be.
It's defined by the traits you would ideally like to have.
It's not necessary that you actually have these traits now,
only that you believe you want to have them.

The 14 descriptors that participants had listed were then presented back to them one at a time. Participants were asked to indicate how similar they actually and presently are to each descriptor using a 7-point Likert scale ranging from 1 (*I'm just like this trait*) to 7 (*I'm the opposite of this trait*). A-O and A-I discrepancy scores were computed by summing the seven respective idiosyncratic items.

Causal attributions for self-discrepancies. Participants were then presented with the following brief statement regarding causal attributions for the A-O self-discrepancy (instructions for the A-I self-discrepancy in brackets):

A person's actual self may not be exactly like their ought [ideal] self. There are many possible reasons for why there may be a difference between one's actual self and one's ought [ideal] self. It may be due to characteristics of the person, such as education, ability, and effort, or it may be due to other things, such as good or bad luck, being helped or held back by other people, or the circumstances of life. Thus, there are many potential explanations for why there may be a difference between your actual self and your ought [ideal] self. Assuming that there is some difference that exists between who you actually are and who you think you ought to be [who you ideally would like to be], what is the reason for that difference?

Participants indicated how important they believed each of eight external factors (e.g., bad luck, unfair situations, people working against me) and eight internal factors (e.g., my own choices, my own lack of motivation, my attitude) to be for the difference between their actual self and their ought as well as for the difference between their actual self and their ideal self using a 5-point Likert scale ranging from 1 (*not at all important*) to 5 (*extremely important*). Causal attributions for each discrepancy were computed by subtracting the external sum from the internal sum such that positive scores represented relatively more internal causal attributions for the discrepancies.

Emotions. The second data collection involved the measure of emotions, which occurred 2 weeks after the first part of the experiment. Participants received an e-

mail from the laboratory assistant. Contained within the e-mail was one of four different versions of an emotions questionnaire (varying only in order of items). Participants responded to the questionnaire in a reply e-mail. Based on the Affects Balance Scale (Derogatis, 1975) and the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), the emotions questionnaire included 39 emotions designed to measure four general sets of emotions. The emotions included (a) agitation-related emotions: anxiety (e.g., nervous, tense) and guilt (e.g., ashamed, guilty); (b) anger-related emotions: angry at others (e.g., angry at others, resentful) and hostile (e.g., hostile, aggressive); (c) dejection-related emotions: depression (e.g., sad, miserable) and inadequacy (e.g., inadequate, worthless); and (d) emotions of discontent: disappointment (e.g., jealous, disappointed) and discontent (reverse scored, e.g., pleased, satisfied). Happiness items (e.g., happy, joyous) were also included to balance the negativity of the questionnaire. Participants were simply asked to indicate to what extent they had felt each of the feelings and emotions over the past 2 weeks on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Internal consistency coefficients of the subscales (including the happiness scale) ranged from .75 to .86 ($M = .80$).

Results

Each of the four general emotions scores was computed by summing the z scores of their respective items. Each of the four types of emotions was then individually regressed onto self-discrepancies and the causal attributions for those discrepancies in separate hierarchical regression analyses following the standard procedures outlined by Cohen and Cohen (1983). In each regression, the first step was used to statistically control for the discrepancy not typically associated with the emotion. In the second step, both the typically associated discrepancy and the causal attribution for that discrepancy were entered. In the final step, the interaction between the two predictors entered in the second step was entered. Procedures for analyzing and interpreting the interaction terms, recommended by Aiken and West (1991), were employed. Self-discrepancy and attribution scores were centered. High and low self-discrepancies and internal and external causal attributions were represented by one standard deviation above and below the mean, respectively. Regression results are displayed in Table 1.

Surprisingly, and contrary to several previous studies, A-O self-discrepancy failed to predict agitation-related emotions with the A-I self-discrepancy statistically controlled. A main effect of attribution for the A-O self-discrepancy emerged, indicating that agitation was associated with external causal attributions. However, the

TABLE 1: Hierarchical Regression Summary of Personal Emotions Regressed Onto Self-Discrepancies and Causal Attributions for Self-Discrepancies (Study 1)

<i>Criterion/Step/Predictor</i>	R^2	ΔR^2	B	SEB	β
Agitation-related emotions					
Step 1	.07***	.07***			
A-I SD			.06	.02	.27***
Step 2	.09***	.02			
A-O SD			.01	.02	.01
Attribution for A-O SD			-.04	.02	-.14*
Step 3	.13***	.04**			
A-O SD \times Attribution for A-O SD			.01	.00	.20**
Anger-related emotions					
Step 1	.01	.01			
A-I SD			.06	.04	.12
Step 2	.02	.01			
A-O SD			-.03	.04	-.05
Attribution for A-O SD			-.04	.04	-.07
Step 3	.06*	.04**			
A-O SD \times Attribution for A-O SD			-.02	.01	-.21**
Dejection-related emotions					
Step 1	.02 ^a	.02 ^a			
A-O SD			.04	.03	.13 ^a
Step 2	.09**	.07			
A-I SD			.07	.02	.21**
Attribution for A-I SD			-.05	.02	-.16*
Step 3	.10**	.01 ^a			
A-I SD \times Attribution for A-I SD			.01	.00	.12 ^a
Emotions of discontent					
Step 1	.01	.01			
A-O SD			.01	.03	.04
Step 2	.02	.01			
A-I SD			.05	.03	.15 ^a
Attribution for A-I SD			-.01	.03	-.03
Step 3	.02	.00			
A-I SD \times Attribution for A-I SD			-.01	.00	-.05

NOTE: A-O SD = actual-ought self-discrepancy; A-I SD = actual-ideal self-discrepancy.

a. $p \leq .08$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

predicted interaction between A-O self-discrepancy and attribution for the A-O self-discrepancy did appear (see the top panel of Figure 1). As predicted, agitation-related emotions increased with increases in A-O self-discrepancy only when causal attributions were internal, $\beta = .20$, $t(187) = 2.94$, $p < .01$. The direction of this relationship was statistically reversed for participants who believed the cause of the discrepancy to be external from the self, $\beta = -.21$, $t(187) = 2.95$, $p < .01$. Thus, people with a relatively large A-O self-discrepancy may feel less agitated when the discrepancy can be explained by reasons external from the self.

Examination of anger-related emotions revealed no main effects, but the predicted interaction between A-O self-discrepancy and A-O causal attribution was significant. As expected, the direction of the relationship between anger-related emotions and A-O self-discrepancy

for participants who perceived relatively internal causal attributions for the discrepancy was opposite to that of participants who perceived relatively external causal attributions (see the bottom panel of Figure 1). Although the slope for external causal attributions was in the expected direction, its magnitude failed to reach statistical significance. Consistent with expectation however, anger-related emotions decreased with increases in A-O self-discrepancy only when causal attributions were internal, $\beta = -.24$, $t(187) = -2.29$, $p < .05$. Thus, the direction of the interaction was exactly as predicted.

Main effects of A-I self-discrepancy and attribution for the A-I discrepancy emerged for dejection-related emotions. These effects were qualified by the marginally significant expected interaction between these same two variables (see the top panel of Figure 2). Consistent with expectations, dejection-related emotions increased as A-I

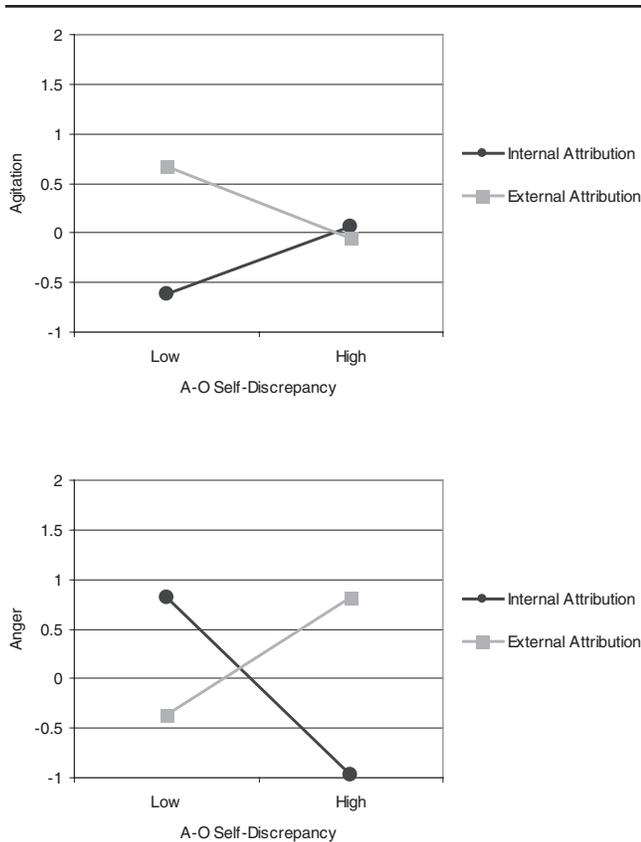


Figure 1 Predicted personal agitation and anger-related means by actual-ought self-discrepancy and attribution for the actual-ought self-discrepancy (Study 1).

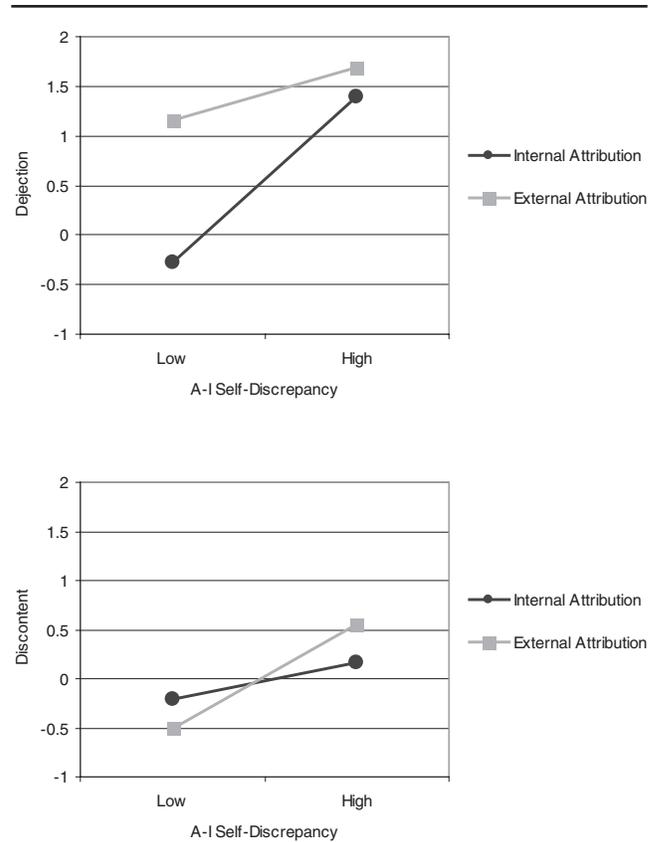


Figure 2 Predicted personal dejection-related emotions and emotions of discontent means by actual-ideal self-discrepancy and attribution for the actual-ideal self-discrepancy (Study 1).

self-discrepancy increased only when causal attributions for the discrepancy were internal, $\beta = .35$, $t(187) = 2.65$, $p < .01$. This relationship was weaker for participants who believed the cause of this discrepancy to be external to the self (no significant partial slope was found when causal attributions were external).

When examining emotions of discontent, no significant main effects were found. Although the predicted interaction term for emotions of discontent failed to reach significance, the means plotted in the bottom panel of Figure 2 reveal that the tendencies were in the directions predicted. Thus, we chose to examine simple effects as we did for the other three emotions. A marginal simple effect was revealed when causal attributions for the A-I self-discrepancy were relatively external such that emotions of discontent increased as predicted with increases in A-I self-discrepancy, $\beta = .31$, $t(187) = 1.74$, $p = .083$. When causal attributions for the A-I self-discrepancy were internal, no significant relationship between A-I self-discrepancy and emotions of discontent was revealed.

Although our hypotheses concerned the internal/external attribution dimension, we wanted to explore

whether the stability and controllability dimensions might also reliably moderate the effects of self-discrepancies on emotions. To form scales measuring these dimensions, we recoded the 16 specific attribution items in terms of stable/unstable and controllable/uncontrollable. (In a few cases, the placement of a causal attribution on a dimension was unclear, so those attributions were omitted in calculating the scales.) Analyses were performed (parallel to the main analyses reported earlier) using these dimensions instead of the internal/external scale. Of eight significance tests for moderation in these analyses, only one (12.5%) proved significant at the .05 level, close to chance expectation.² Thus, there is little evidence for any moderating role of the stability or controllability dimensions. We also conducted a slightly different type of analysis to explore the possibility that some specific items of the attributions included in the questionnaire (e.g., my own lack of ability) might have particular moderating effects (above and beyond the effects due to the internal/external nature of the attribution). Thus, we performed additional analyses parallel to the main ones using the participant's ratings of specific causal attributions instead of the internal/external scale. Of such 64

significance tests, 5 (7.8%) reached the .05 level, close to chance expectation.³ We conclude that (as we predicted) the internal or external nature of the attribution rather than (a) its stability or controllability or (b) its specific nature (ability, effort, chance, etc.) is generally what matters in terms of moderating the effects of self-discrepancies on emotions.

Discussion

In general, results of Study 1 were consistent with our expectations. When causal attributions for the A-O self-discrepancy and the A-I self-discrepancy were internal, agitation-related emotions and dejection-related emotions increased with increases in the corresponding self-discrepancy (our Hypotheses 1 and 2). In addition, higher levels of anger-related emotions were associated with the A-O self-discrepancy when causal attributions for that discrepancy were external, consistent with our Hypothesis 3. Support for our fourth hypothesis was more limited: Although the statistical interaction was not significant, we did find as predicted that when causal attributions for the A-I self-discrepancy were external, emotions of discontent increased with increases in A-I self-discrepancy.

Anger at others has been examined within the context of self-discrepancies in previous research that did not address causal attributions for discrepancies. A study conducted by Strauman and Higgins (1988) showed anger at others to be positively correlated with the discrepancy between one's own perceived actual self and one's perception of other people's ought standards for one's self. We believe that the type of anger examined in the Strauman and Higgins study and that examined in the current studies may be entirely different. The former appears to represent anger and frustration over the pressures represented by others' beliefs about what one should be. The latter may represent anger arising from believing something external to the self is somehow preventing one from being what one ought to be.

STUDY 2: CAUSAL ATTRIBUTIONS FOR GROUP DISCREPANCIES AND GROUP-BASED EMOTIONS

The tests of our initial hypotheses regarding emotions at the individual level were generally supported. In Study 2, we were interested in extending the hypotheses to group-based emotional experiences to determine whether they depend in similar ways on group discrepancies and causal attributions for those discrepancies.

Most theorists agree that the self is composed of an individual self as well as a social or collective self. Particular situations may cause one's group membership to become salient, and the self is then regarded as an interchange-

able exemplar of the group rather than a unique individual. When one's group functions as part of the self, group-based situations may be appraised as self-relevant and trigger emotions. These are the core ideas of E. R. Smith's (1993, 1999) intergroup emotion theory, which borrows directly from theories that distinguish between personal and social identities, such as the social identity approach (Tajfel & Turner, 1986) and self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Not only have studies shown the salience of group membership to influence specific types of intergroup emotions, but group-based emotions have also demonstrated a causal role in leading to unique action tendencies (Mackie, Devos, & Smith, 2000; E. R. Smith, Seger, & Mackie, 2005).

Of great relevance to this issue is a study conducted by Bizman, Yinon, and Krotman (2001). They extended SDT to group-based emotions by asking Israeli participants to consider their ought and ideal national groups in comparison to their actual national group and relating these group discrepancies to group-based emotions. Results paralleled those of individual-level self-discrepancy studies. A-O group discrepancy was uniquely linked to group-based agitation-related emotions, whereas A-I group discrepancy was uniquely associated with group-based dejection-related emotions. However, no studies have examined causal attributions as a moderator of the relationship between group discrepancies and group-based emotions. We hypothesized that the same patterns that we hypothesized and found (at the individual level) in Study 1 would also be found at the group level in Study 2.

The degree of social identification with the ingroup is also an important predictor in intergroup emotion theory (Mackie et al., 2000; E. R. Smith, 1999). When situations or events are appraised in terms of the social identity, an individual may experience emotions on "behalf of the group." Thus, the more one identifies with the group, the more potent the appraisal and corresponding group-based emotions. Therefore, we hypothesized that the relationships between group discrepancies and group-based emotions would be moderated by level of group identification in addition to causal attributions for the discrepancies. Specifically, we hypothesized that the two-way interactions between discrepancies and causal attributions would be augmented for those participants who were relatively high in group identification in comparison to those participants who were relatively low in group identification. We chose "Americans" as the group to focus on in this study, comparable to the Israeli national group studied by Bizman et al. (2001).

Method

PARTICIPANTS AND PROCEDURE

In Study 2, 107 students in an introductory psychology course participated in return for partial course credit. A total of 24 participants identified themselves as non-American, and their data were not used in the current study. All of the remaining 83 participants identified themselves as American citizens.

The procedures of the current study followed the same procedures used in Study 1 with three exceptions. First, rather than assessing self-discrepancies, we measured group discrepancies by asking participants to think of Americans as a social group. Rather than listing self-attributes, they were asked to list attributes of the type of group they would ideally like to see Americans be as well as attributes that describe what they think Americans ought to be. Second, emotions were assessed in relation to being an American. The same emotions questionnaire that was used in Study 1 was employed in Study 2; however, we employed a slightly modified version of the question wording used by Bizman et al. (2001). Participants were asked, "As an American, when you think about Americans as a group, to what extent have you experienced each of the following emotions?" Internal consistency coefficients for the emotion subscales (including the happiness scale) ranged from .71 to .90 ($M = .81$). The third and final difference in procedures was the addition of a group identification questionnaire. We employed a modified version of the group identification measure constructed by Doosje, Ellemers, and Spears (1995). This measure consisted of four statements in which participants were asked to rate their level of endorsement on a 7-point Likert scale ranging from 1 (*do not agree at all*) to 7 (*agree completely*). Items included, "I see myself as an American," "I am pleased to be an American," "I feel strong ties with other Americans," and "I identify with other Americans" (Cronbach's alpha = .86).

Results

Each of the four general group-based emotions scales was computed by summing the z scores of their respective items. Each of these emotions was then individually regressed onto group discrepancies, causal attributions for those discrepancies, and group identification. The first step in each regression was used to statistically control for the discrepancy not typically associated with the emotion. In the second step, the typically associated discrepancy, the causal attribution for that discrepancy, and group identification were entered. In the third step, all two-way interaction terms between predictors entered in the second step were entered. In the final step, the three-way interaction was entered. High and low group discrepancies, internal and external causal attributions,

and high and low group identification were represented by one standard deviation above and below the mean, respectively. Regression results are displayed in Table 2.

When examining group-based agitation-related emotions, American identity was the only main effect to emerge. The main effect was qualified by the predicted three-way interaction between A-O group discrepancy, causal attributions for the discrepancy, and group identification (see the top panel of Figure 3). However, examining simple slopes revealed a relationship that was opposite of our predictions. Only when group identification was high and causal attributions were external did agitation increase with increases in A-O group discrepancy, $\beta = .58$, $t(74) = 2.48$, $p < .05$. No other simple slopes reached statistical significance.

American identity was the only main effect to emerge for group-based anger-related emotions. This effect was qualified by the predicted three-way interaction between A-O group discrepancy, causal attributions for the discrepancy, and group identification (see the bottom panel of Figure 3). Simple slope analysis revealed, as predicted, when group identification was high, group-based anger increased as A-O discrepancy increased only when causal attributions were external, $\beta = .49$, $t(74) = 2.14$, $p < .05$. Examining the other cells, when group identification was low and causal attributions were internal, group-based anger increased with increases in A-O group discrepancy, $\beta = .50$, $t(74) = 2.18$, $p < .05$. When group identification was low and causal attributions were external, group-based anger decreased as A-O group discrepancy increased, $\beta = -.85$, $t(74) = -3.68$, $p < .001$.

No main effects emerged for group-based dejection-related emotions. However, the predicted three-way interaction between A-I group discrepancy, causal attributions for the discrepancy, and group identification reached statistical significance (see the top panel of Figure 4). Simple slope analysis revealed only one simple effect. Exactly as predicted, when group identification was high, group-based dejection increased as A-I group discrepancy increased only when causal attributions were internal, $\beta = .48$, $t(74) = 2.82$, $p < .01$.

Regression results were examined for group-based emotions of discontent. A main effect for A-O group discrepancy emerged. This effect was qualified by the predicted three-way interaction between A-I group discrepancy, causal attributions for the discrepancy, and group identification (see the bottom panel of Figure 4). Simple slope analysis revealed two statistically significant slopes, both when group identification was high. Consistent with predictions, group discontent increased as A-I discrepancy increased only when causal attributions were external, $\beta = .84$, $t(74) = 2.92$, $p < .01$. When group identification was high, emotions of discontent decreased with

TABLE 2: Hierarchical Regression Summary of Group-Based Emotions Regressed Onto Self-Discrepancies and Causal Attributions for Self-Discrepancies (Study 2)

<i>Criterion/Step/Predictor</i>	R^2	ΔR^2	B	SEB	β
Agitation-related emotions					
Step 1	.00	.00			
A-I SD			-.01	.01	-.02
Step 2	.17**	.17**			
A-O SD			.02	.01	.27
Attribution for A-O SD			-.01	.01	-.01
American identity			-.21	.07	-.36**
Step 3	.17*	.00			
A-O SD \times Attribution for A-O SD			.00	.00	.01
A-O SD \times American Identity			.00	.01	.04
Attribution for A-O SD \times American Identity			-.01	.01	-.04
Step 4	.22*	.05*			
A-O SD \times Attribution for A-O SD \times American Identity			-.02	.00	-.29*
Anger-related emotions					
Step 1	.00	.00			
A-I SD			.01	.04	.03
Step 2	.08	.08 ^a			
A-O SD			-.01	.06	-.04
Attribution for A-O SD			.02	.05	.05
American identity			-.78	.31	-.30*
Step 3	.13	.05			
A-O SD \times Attribution for A-O SD			.01	.01	.20 ^a
A-O SD \times American Identity			.01	.04	.05
Attribution for A-O SD \times American Identity			-.05	.05	.13
Step 4	.18*	.05*			
A-O SD \times Attribution for A-O SD \times American Identity			-.01	.01	-.30*
Dejection-related emotions					
Step 1	.00	.00			
A-O SD			-.01	.01	-.02
Step 2	.01	.01			
A-I SD			.02	.02	.15
Attribution for A-I SD			.00	.02	.01
American identity			-.05	.10	-.06
Step 3	.02	.01			
A-I SD \times Attribution for A-I SD			.00	.00	.01
A-I SD \times American Identity			.00	.01	.06
Attribution for A-I SD \times American Identity			-.01	.02	-.10
Step 4	.07	.05*			
A-I SD \times Attribution for A-I SD \times American Identity			.01	.00	.28*
Emotions of discontent					
Step 1	.05*	.05*			
A-O SD			.05	.02	.23*
Step 2	.12*	.07			
A-I SD			-.01	.04	-.03
Attribution for A-I SD			-.05	.03	-.19 ^a
American identity			-.29	.19	-.17
Step 3	.14	.02			
A-I SD \times Attribution for A-I SD			-.01	.00	-.13
A-I SD \times American Identity			.01	.02	.04
Attribution for A-I SD \times American Identity			.02	.03	.07
Step 4	.21*	.07*			
A-I SD \times Attribution for A-I SD \times American Identity			-.01	.00	-.34*

NOTE: A-O SD = actual-ought self-discrepancy; A-I SD = actual-ideal self-discrepancy.

a. $p \leq .09$.* $p < .05$. ** $p < .01$. *** $p < .001$.

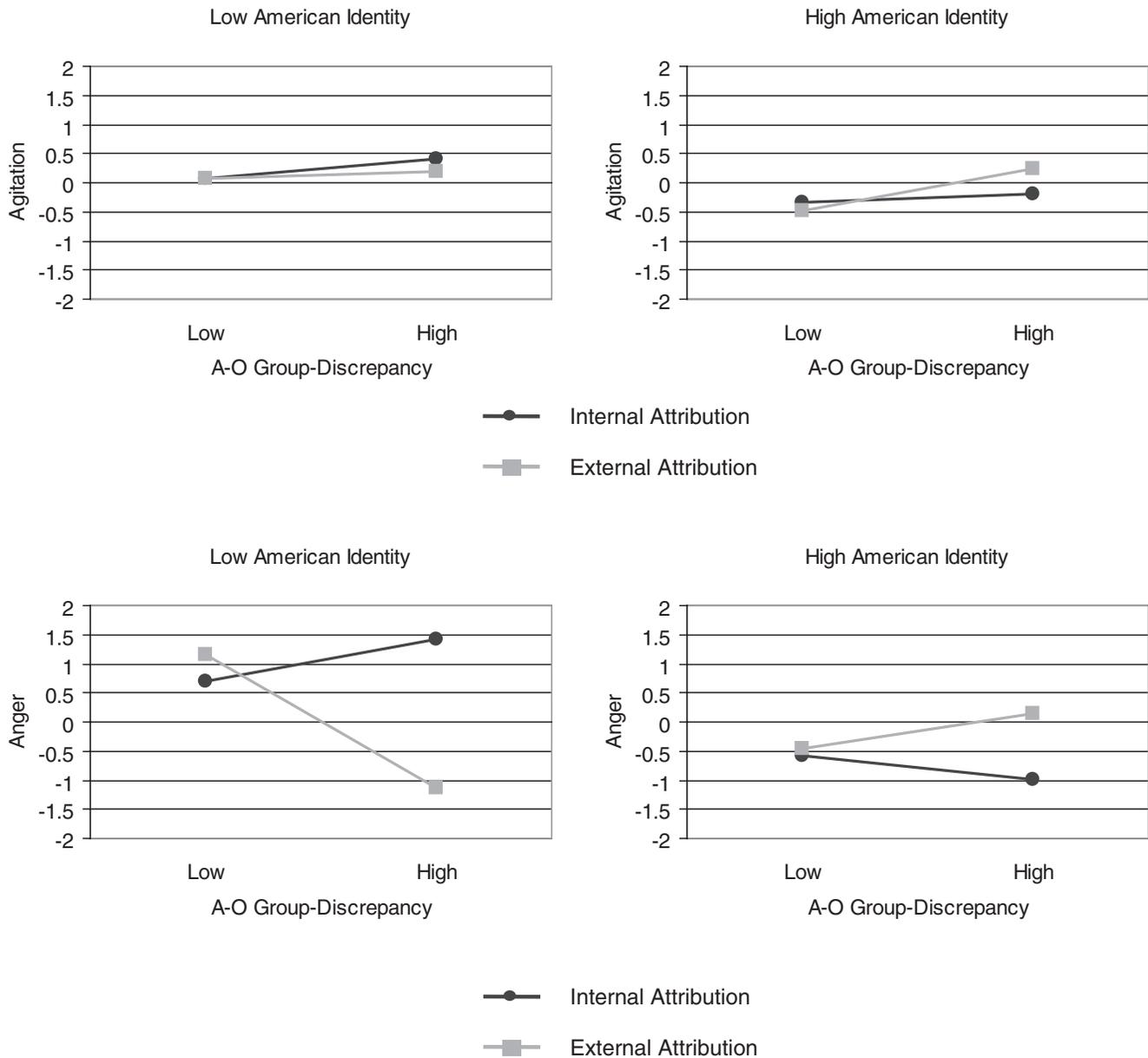


Figure 3 Predicted group-based agitation and anger-related means by actual-ought group discrepancy, attribution for the actual-ought group discrepancy, and American identity (Study 2).

increases in A-I group discrepancy only when attributions were internal, $\beta = -.83, t(74) = -2.87, p < .01$.

Similar to our exploratory analyses in Study 1 regarding other attribution dimensions as moderators of the relationship between self-discrepancies and emotions, we examined stability and controllability as potential moderators of the relationship between group discrepancies and group-based emotions in eight additional tests. None of these tests reached statistical significance. Also as in Study 1, we examined the individual attributions as moderators of the discrepancy-emotion relation-

ships in 64 additional interaction tests and found significant results in 8 cases or 12.5%, close to chance expectation.⁴ However, just as in Study 1, no one particular attribution for group discrepancies is a particularly strong determinant of the results, but rather, the moderation is due to the more general property of attributions as being internal or external.

Discussion

Support for our predictions at the level of group-based emotions was found for group-based anger-

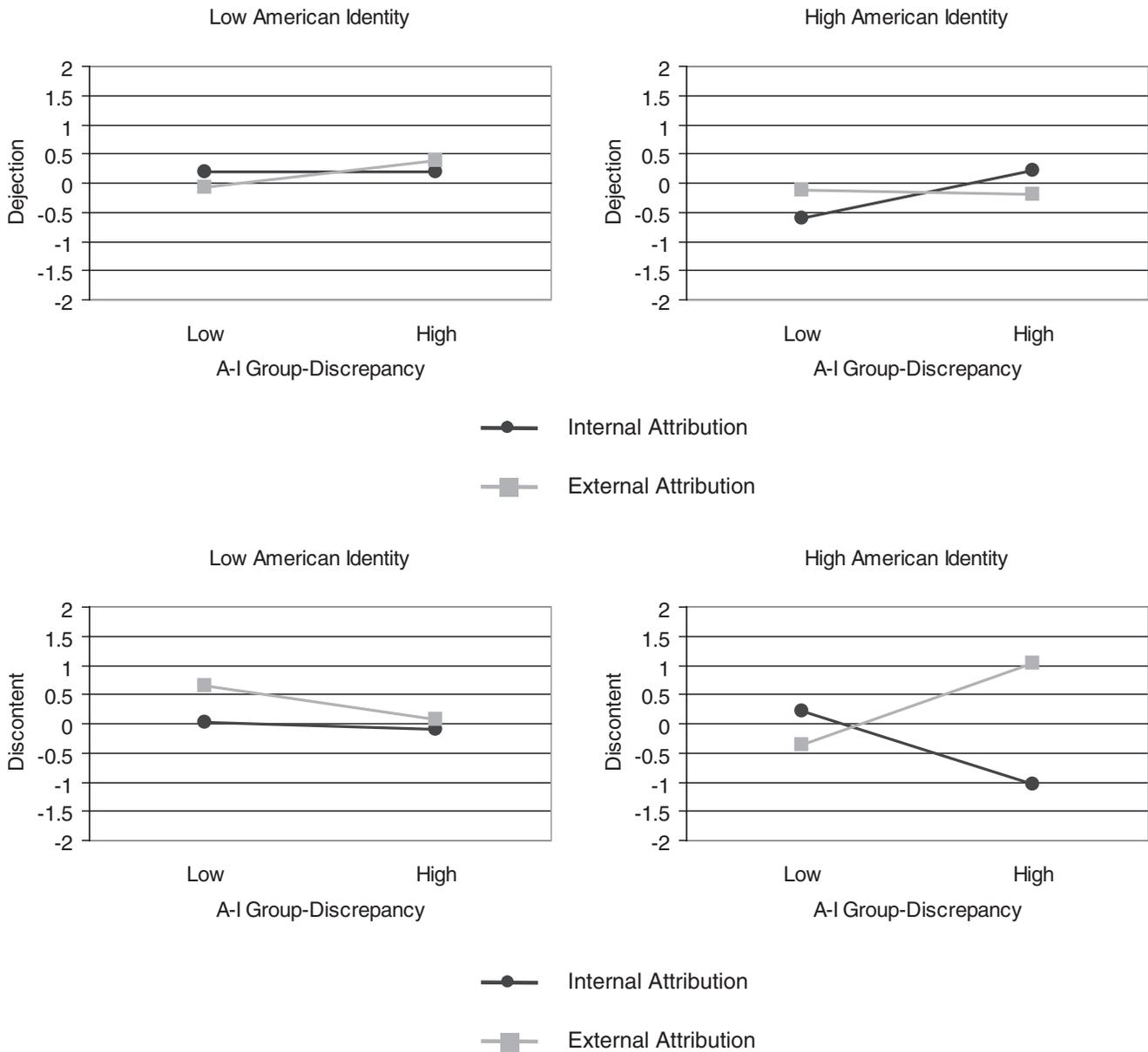


Figure 4 Predicted group-based dejection-related emotions and emotions of discontent means by actual-ideal (A-I) group discrepancy, attribution for the actual-ideal group discrepancy, and American identity (Study 2).

related emotions and group-based emotions of discontent. When group identification was high, both of these emotions increased only when causal attributions were external. Also consistent with our expectations was the fact that group-based dejection-related emotions increased only when group identification was high and causal attributions for the A-O group discrepancy were internal.

In contrast to these three cases, no support for the hypothesis was found with agitation-related emotions. In that case, the predicted three-way interaction (A-O Dis-

crepancy \times Attribution \times Group Identification) was opposite in direction to our prediction. We can only speculate as to the reason for this. We believe that it reflects the operation of a reverse causal path, with negative group-based emotions leading to a decrease in identification with that group. Thus, people who have high levels of group A-O discrepancy and make internal attributions—that is, people who see America as not being what they think it should be for internal reasons—and feel agitated as a result may be motivated to decrease their level of group identification. Such a process would

remove some people with high levels of agitation from the high identifier/high A-O discrepancy/internal attribution cell, lowering the mean in that cell and producing the reversal of our prediction. Of course, the current study, because of its correlational design, cannot confirm or rule out this possibility (for related discussion, see E. R. Smith et al., 2005). The fact that this unexpected data pattern occurred with group discrepancies (Study 2) but not with individual self-discrepancies (Study 1) supports the speculation because the process we describe here (withdrawing from identification with a group) has no real parallel at the level of the individual self (see E. R. Smith et al., 2005).

For all four types of emotions, the effects of discrepancies by attributions were further moderated by self-reported identification with the group. Thus, consistent with intergroup emotion theory, the results of Study 2 supported the importance of considering the degree to which an individual identifies with the group in question when attempting to understand and explain group-based emotions.

Interestingly, the more participants identified with being American, the less they reported feeling agitated, angry, dejected, or discontented as an American. In addition, the more participants identified with being American, the smaller their group discrepancies. This pattern, where those who highly identify with a group are less likely to experience negative group-related emotions and less likely to see the group as falling short of their ideals or standards, is consistent with the findings of Doosje, Branscombe, Spears, and Manstead (1998). These researchers found that people who strongly identified with their national group tended to reinterpret negative aspects of its history to perceive them in a more positive light. A second possibility is that the causal flow is reversed: Negative group emotions or perceived group discrepancies may lead people to reduce their identification with the group, as E. R. Smith and Mackie (in press) discussed. Obviously these two possibilities are not incompatible, and both may well be expected to occur.

GENERAL DISCUSSION

The results from both studies offer general support for our hypotheses. Emotions, whether they are individual or group based, appear to be differentiated not only by the nature of self-discrepancies but also by the reasons people perceive for the existence of those discrepancies. In terms of our specific hypotheses,

1. We expected agitation-related emotions to be highest when attributions for A-O discrepancies were internal (and in Study 2, when identification was high). This prediction was confirmed in Study 1, but results fell in the opposite pattern in Study 2. Overall, support for this hypothesis was mixed.

2. We expected dejection-related emotions to be highest when attributions for A-I discrepancies were internal (and in Study 2, when identification was high). This prediction was confirmed in both studies, offering strong support at both the levels of individual and group emotions.
3. We expected anger-related emotions to be highest when attributions for A-O discrepancies were external (and in Study 2, when identification was high). This prediction was also confirmed in both studies, offering strong support at both the levels of individual and group emotions.
4. Finally, we expected discontent-related emotions to be highest when attributions for A-I discrepancies were external (and in Study 2, when identification was high). This prediction was significantly confirmed in Study 2, and the means were in the same direction (although only marginally significant) in Study 1. The results provide qualified support at both levels of emotions.

The general support for the hypotheses is particularly impressive in light of the fact that some research has suggested that particular discrepancies must be activated to produce effects on specific emotion measures (Higgins, 1999; Strauman, 1992; Strauman & Higgins, 1987). Our approach was extremely conservative in that our participants responded to the emotion measures 2 weeks after reporting their discrepancies and attributions and did so in a different environment (in an e-mail questionnaire rather than by returning to a laboratory room). Thus, our research procedures did not specifically activate participants' self-discrepancies in any direct way at the time they answered questions about their emotions.

The conceptualization of the relationship between discrepancies and emotions endorsed here is much different than that theorized in previous self-discrepancy research (Bizman et al., 2001; Higgins, 1987). Earlier conceptualizations held that agitation-related emotions necessarily result from the activation of A-O discrepancies whereas dejection-related emotions result from the activation of A-I discrepancies. The results of Studies 1 and 2 suggest that the relation between discrepancies and emotions may be more complex and conditional, involving attribution processes. We suggest that if people focus on their self-discrepancies, they are likely to search for reasons to explain them. In fact, previous research has shown that the search for answers to "why" questions is likely to occur when people experience negative outcomes (Wong & Weiner, 1981). The results of our studies suggest that the specific attributions that people come up with interact with the nature of the discrepancies themselves (A-O or A-I) in generating distinct types of emotional reactions.

The current studies also suggest that self- and group discrepancies have utility in predicting and understanding a wider range of emotional responses than previously demonstrated. Specifically, self- and group discrepan-

cies appear to interact with attributions to predict two additional sets of emotions that have rarely been studied with respect to self-discrepancies. Both studies examined anger-related emotions (e.g., angry at others, resentful, hostile, aggressive) and emotions of discontent (e.g., jealous, disappointed, pleased [reversed], satisfied [reversed]) in addition to the emotions typically studied in self-discrepancy research (agitation-related and dejection-related emotions). Thus, in addition to attempting to answer the second-generation question (When is there an effect?; Higgins, 1999; Tangney et al., 1998), we examined different types of emotions that may result from self-discrepancies and group discrepancies in interaction with attributions. The conceptual impetus for our studies was the recognition that self-discrepancies are undesirable and that external causal attributions for undesirable outcomes may lead to different types of emotions than do internal causal attributions (Weiner, 1986a). If people feel responsible for their self-discrepancies, we predicted (in line with SDT) that they ought to experience agitation or dejection, depending on the type of discrepancy. However, when people perceive external forces as responsible for the discrepancies, their negative emotions may be directed outward and toward the perceived cause of those outcomes—in the form of anger and discontent. The data provided by the two studies examined here support our contentions.

These studies directly asked participants to report reasons for their individual or group-level A-O and A-I discrepancies. Subsequent studies could examine whether the formation of internal and external causal attributions for discrepancies occurs spontaneously. Considering that discrepancies are undesirable, as well as studies that demonstrate a tendency for people to ask why questions especially when outcomes are undesirable (Wong & Weiner, 1981), it seems likely that people should make attributions for discrepancies even when not specifically prompted to do so. However, this issue awaits empirical attention.

Parallel with our main analyses that supported most of our predictions regarding internal/external causal attributions, we also conducted exploratory analyses of the potential affects of other attribution dimensions (stability and controllability). Although these dimensions are known to have effects on emotions in other contexts (Abramson et al., 1989; Weiner, 1980), we found no evidence that they moderate the effects of self-discrepancies on emotions, the subject of our investigation in these studies. Neither did we find that particular concrete attributions (e.g., my own lack of ability) moderated the effects. Although further research on the topic would be valuable, it appears at present that the internal/external dimension is (as predicted) the main factor distinguishing between agitation and anger as responses to A-O dis-

crepancies and between dejection and discontent as responses to A-I discrepancies.

Future research in this area of study may also examine more specific types of discrepancies, such as discrepancies with respect to different domains of life (e.g., family life, work, and community). It is possible that one's actual family self differs less from their ought family self than does their actual work self from their ought work self. With respect to the Study 2 results, regarding the importance of group identification, it seems possible that the degree to which an individual identifies with the domain in question may also moderate the relationship between discrepancies and emotion. It may matter little to most people if they are not the water-skiing champion that they believed they ought to be or would ideally like to be, but it would seem to matter much to most people if they were not the parent that they believed they ought to be or would ideally like to be. The salience of a self-discrepancy affects one's self-regulatory processes and emotions (Higgins, 1999), and the salience of group membership appears to affect group-based emotions (E. R. Smith, 1993, 1999). Perhaps the salience of particular domains that are central to the self-concept, or the group concept, may also affect emotions and group-based emotions in a more subtle manner by triggering thoughts—including attributions—about self-discrepancies.

CONCLUSION

Both studies provided general support for the initial predictions. The data revealed that the relationships between discrepancies and emotions are more complex than previously hypothesized and that they can be better understood when considering the effects of internal or external causal attributions for the discrepancies. Furthermore, the studies show that the general patterns of these effects are largely consistent for discrepancies and emotions at the individual and group levels, at least for individuals with high levels of group identification. This pattern supports the general contentions of intergroup emotion theory (E. R. Smith, 1993). Our analysis has taken an initial step toward an attributional analysis of self- and group discrepancies by demonstrating that causal attributions for discrepancies may be internal or external. Such a distinction is useful in predicting emotions traditionally studied in self-discrepancy research (agitation and dejection) as well as anger-related emotions and emotions of discontent. Consideration of causal attributions for discrepancies provides for a more complex model of the relationship between discrepancies and emotions. The utility of this complexity may be better judged in subsequent studies that examine the potential implications of discrepancies and attributions for overt social behavior as well as for emotions.

NOTES

1. This method is quite different from that used by Higgins, Bond, Klein, and Strauman (1986). We chose the Carver, Lawrence, and Scheier (1999) measurement approach because of (a) its greater ease of administration and scoring and (b) the fact that it does not require subjective judgments to be made by a scorer. Tangney, Niedenthal, Covert, and Barlow's (1998) study employed both Higgins's qualitative scoring method and a quantitative adjective rating method (comparable to the Carver et al., 1999, approach), and their results showed that the two methods yielded essentially identical relationships to other study variables.

2. Dejection-related emotions scores increased with the extremity of the actual-ideal (A-I) discrepancy when the causal attributions for the discrepancy were relatively stable, $\beta = .20$, $t(187) = 2.94$, $p < .01$. As we will describe later, this effect was not replicated in Study 2, and thus it should probably be given minimal importance.

3. Of the five tests that reached significance, only the external attribution, "uncooperative people," emerged as a significant moderator more than once. Both agitation-related emotions and anger-related emotions increased with the extremity of the actual-ought (A-O) discrepancy when participants attributed the discrepancy to uncooperative people but decreased when they did not.

4. These findings were due almost entirely to three specific attributions—"uncooperative people," "the system," and "our own shortcomings"—which emerged as moderators of group-based agitation-related emotions and emotions of discontent. Group-based agitation-related emotions scores increased with the extremity of the A-O discrepancy when participants attributed the discrepancy to the internal attribution (our own shortcomings) but decreased when they did not. On the other hand, agitation decreased with the extremity of the A-O discrepancy when participants attributed the discrepancy to the external attributions (uncooperative people and the system) but decreased when they did not. Group-based emotions of discontent increased with the extremity of the A-I discrepancy when participants attributed the discrepancy to the external attributions (uncooperative people and the system) but decreased when they did not. On the other hand, these emotions decreased with the extremity of the A-I discrepancy when participants attributed the discrepancy to the internal attribution (our own shortcomings) but increased when they did not. In general, the small number of significant effects in these analyses of specific attributions is consistent with our overall predictions involving the internal/external nature of the attributions.

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