The Role of Affect in Determining the Attributional Weight of Immoral Behaviors

David Trafimow
Irina K. Bromgard
Krystina A. Finlay
Timothy Ketelaar
New Mexico State University

Theories about why immoral behaviors carry a large amount of attributional weight tend to emphasize traditional cognitive variables. In contrast, the authors propose that the degree of negative affect that these behaviors induce in observers is largely responsible for their attributional weight. Studies 1 and 2 demonstrate an association between the amount of negative affect induced by immoral behaviors and their attributional weight. Studies 3 and 4 provide causal evidence for this idea by either "adding in" or "taking away" the negative affect associated with immoral behaviors to influence their attributional weight. Finally, Study 5 demonstrates that negative affect can be induced through a variety of negative emotions (disgust, sadness, and fear), with similar results. It is argued that it is difficult to account for these data solely on the basis of traditional cognitive variables, and so a theory that includes an emphasis on affect as a causal variable is desirable.

Keywords: *attribution; affect; emotions; perfect duties; imperfect duties*

Although a famous singer in the 1940s suggested that we should "accentuate the positive and eliminate the negative," a voluminous literature on the so-called negativity effect suggests that people do exactly the opposite when they make attributions from behaviors (Birnbaum, 1972; Klein, 1991; Lupfer, Weeks, & Dupuis, 2000; Peeters, 1971; Reeder & Brewer, 1979; Richey, McClelland, & Shimkunas, 1967; Rothbart & Park, 1986; Skowronski & Carlston, 1987, 1989; Trafimow & Schneider, 1994; Trafimow & Trafimow, 1999; Vonk, 1993; Vonk & van Knippenberg, 1994; Wojciszke, Bazinska, & Jaworski, 1998; Wojciszke, Brycz, & Borkenau, 1993). Not surprisingly, a variety of theories have been proposed to explain negativity effects. One such explanation invokes the notion that socially desirable behaviors are normative, and consequently, it is only the performance of a nonnormative, socially undesirable behavior that actually implies anything about what the person is really like (Jones & Davis, 1965; Jones & McGillis, 1976; Kanouse & Hanson, 1972). Alternatively, the idea of contrast suggests that the expectation of positive behaviors provides a perceptual anchor against which negative behaviors are contrasted (Helson, 1964; Sherif & Sherif, 1967). Finally, the novelty approach suggests that negative behaviors are perceived as more novel than positive ones and therefore receive more attention, a deeper level of processing, and thus more attributional weight.

As Reeder and Brewer (1979) suggested, however, matters are not that simple. It is not all negative behaviors that have strong attributional weight. Rather, this effect seems to be limited to the domain of morality (Reeder & Coovert, 1986; Reeder, Pryor, & Wojciszke, 1992; Trafimow & Schneider, 1994; Trafimow & Trafimow, 1999; Wojciszke et al., 1993, 1998). Furthermore, in the domain of ability, the general rule is that positivity effects are obtained; a successful performance carries more attributional weight than an unsuccessful one (Reeder, 1993, 1997; Reeder, Hesson-McInnis, Krohse, & Scialabba, 2001; Skowronski & Carlston, 1987; Trafimow & Schneider, 1994; Wojciszke et al., 1993). According to Skowronski and Carlston (1987, 1989), positivity effects in the ability domain present a problem for the theories that specify negativity effects. Specifically, if negative behaviors are more nonnormative, pro-

Authors' Note: Please direct correspondence to David Trafimow, Department of Psychology, MSC 3452, New Mexico State University, PO Box 30001, Las Cruces, NM 88003-8001; e-mail: trafimow@crl.nmsu.edu.

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vide a greater contrast with expectations, or receive a deeper level of processing because of their perceived novelty, then why are positivity effects obtained for abilities? Clearly, these theories are insufficient unless some additional assumptions are made.

The failure of these theories to account for positivity effects opened the door for the proposal of other mostly cognitive theories. For example, Skowronski and Carlston (1987, 1989) proposed the idea of cue-diagnosticity; some behaviors are better indicators of the presence of the corresponding trait than are others. Gidron, Koehler, and Tversky (1993) proposed the idea of scope; some traits allow for the performance of more behaviors than do others, and so the performance of a behavior outside of a trait's scope provides strong evidence that the person actually has the opposite trait. Finally, Reeder and Brewer (1979) proposed the idea of implicational schemas; people have notions about the relations between particular traits and relevant behaviors.

An example should clarify the similarities and differences between the three theories. Imagine that someone performs both an honest and a dishonest behavior. All three theories predict that an observer will give the dishonest behavior more attributional weight; however, the reasons for this prediction differ. According to cue-diagnosticity, a dishonest behavior has greater diagnosticity than does an honest one (i.e., it implies a greater probability that the person has the corresponding trait) and therefore carries more attributional weight. According to the notion of scope, dishonest behaviors are presumed to be outside the scope of honest people, but honest behaviors are not presumed to be outside the scope of dishonest people, and so the performance of a dishonest behavior suggests a stronger conclusion than does the performance of an honest behavior. Finally, the implicational schema idea suggests that people have schemas about the types of behaviors that honest and dishonest people perform. Because dishonest people are presumed to perform honest and dishonest behaviors but honest people are presumed not to perform dishonest behaviors, the performance of a dishonest behavior strongly implies that the person is dishonest.

The foregoing example indicates that all three theories can easily account for the fact that negativity effects are particularly strong in the domain of morality—immoral behaviors have high cue-diagnosticity, moral traits have less scope, and moral people are "not allowed" to perform immoral behaviors. These theories also do an excellent job of accounting for positivity effects in the ability domain. Suppose someone successfully sings Mozart's "Queen of the Night" aria. Because people without good singing ability would be extremely unlikely to negotiate this aria successfully, the successful performance has high cue-diagnosticity. Or, in terms of scope, the successful performance of the aria is outside the scope of "bad singer," which means the person must be a good singer. Finally, the implicational schemas idea suggests that people have an ability schema indicating that people with abilities can perform well or badly but people without abilities can only perform badly. Thus, the successful performance of a difficult task indicates high ability.

Although the foregoing theories provide good accounts of the available data, we believe they are limited by an insufficient emphasis on affect in the attributional process. The reasons for this assertion are presented in the next section.

WHY AFFECT MIGHT MATTER

Kant's Perfect and Imperfect Duties

Immanuel Kant (1797/1991) argued that people have at least two classes of duties. Some of these duties must always be performed and are called *perfect duties*; they are perfect in the sense that they allow for *no* exceptions regardless of circumstances, times, moods, or any other considerations. These can be contrasted with *imperfect duties*, which can be violated, on occasion, without decreasing the moral status of the person who performed the violation. For example, consider a beggar who asks a person for money. According to Kant, it is absolutely forbidden for the person to perform the dishonest behavior of telling the beggar that he or she does not have any money. But it is not forbidden for the person to perform the uncharitable behavior of refusing to make the donation. Because honesty is a perfect duty, whereas charitability is not, honesty violations cause a decrease in the moral worth of the person, whereas charitability violations do not.

In addition to his philosophical distinction, Kant also made the psychological claim that people *believe* that this distinction is correct, even if they cannot verbalize it—a claim that is independent of the validity of the philosophical distinction and that is subject to empirical verification. Specifically, if one treats perfect and imperfect duties as a psychological distinction (rather than a philosophical one), it follows that there should be morality dimensions where negativity effects are *not* obtained. The hypothesized acceptability of violations of imperfect duties implies that they should fail to carry much attributional weight, a prediction that has been confirmed by Trafimow and Trafimow (1999) and Trafimow (2001). Accordingly, these researchers concluded that Kant's distinction between perfect and imperfect duties provides a valid a priori principle for distinguishing when strong negativity effects should or should not be

obtained in the domain of morality. A caveat is that although the distinction is dichotomous for Kant, it works better as a continuum when applied to attributions (Skowronski & Carlston, 1992; Trafimow, 2001; Trafimow & Trafimow, 1999). Examples of perfect duties are "honesty" and "loyalty" and examples of imperfect duties are "charitability," "friendliness," and "cooperativeness" (P. Croskery, 1994, personal communication; Kant, 1797/1991; Trafimow, 2001; Trafimow, Reeder, & Bilsing, 2001; Trafimow & Trafimow, 1999).

Is there an even more basic principle behind the perfect-imperfect continuum? Of interest, Kant proposed a procedure for knowing whether any particular duty is perfect or imperfect, but it is too lengthy to discuss here (see Korsgaard, 1985, for a review). It is sufficient to mention that Kant's procedure involves an immense amount of cognitive work and philosophical sophistication and so it is unlikely that anyone other than moral philosophers would actually use it. Because people behave *as if* they use Kant's rational method, but it is not plausible that they *actually* use it, there must be some kind of shortcut that leads to similar conclusions. We propose that affect provides this shortcut.

The logic of our proposal depends on two assumptions. First, we assume that violations of perfect duties arouse a great deal of negative affect compared to violations of imperfect duties (when all else is equal). Second, we assume that the amount of negative affect generated by an immoral behavior is largely responsible for the attributional weight it carries. Because Schwarz and Clore (1983) and Schwarz, Clore, and Conway (1994) have shown that individuals often consult their affective reactions to stimuli when evaluating them, it is not unreasonable to suppose that attributional weight should be influenced by these affective reactions. It follows that violations of perfect duties should carry more attributional weight than violations of imperfect duties.

Although we used the Kantian scheme to arrive at the first assumption, there are other ways of arriving at it. One such way is provided by evolutionary theorists, who often favor affective explanations for psychological phenomena. Johnston (1999) suggested that affect provides meaning to the universe, and Cosmides and Tooby (1992) made a more specific argument that pertains to dishonesty and betrayal (violations of the perfect duties to be honest and loyal). According to these researchers, dishonesty and betrayal had stronger negative effects than other immoral behaviors on the likelihood of survival and gene propagation during our evolutionary history. Consequently, humans evolved a tendency to have strong negative affective reactions to these particular types of negative behaviors—a legacy with which we are still left today.

A third way of arriving at the first assumption is provided by research on relationships and morality. Even in ancient times, philosophers argued that dishonesty and disloyalty are particularly damaging to relationships (e.g., Aristotle (c. 330 BC [1982]). Recent research suggests a similar conclusion. For example, Lawson (2000) had participants imagine telling their friends (or being told by friends) kind lies or the truth. Compared to the truth, both tellers and receivers viewed even kind lies as unacceptable, manipulative, and as indicating that the relationship is less meaningful. Even in children and adolescents, issues of loyalty, trust, and honesty frequently arise in relations with friends (Bukowski & Sippola, 1998). Thus, given the importance of loyalty and honesty in relationships, it seems reasonable to assume that violations in these areas would be likely to elicit particularly strong negative affect.

Although there are several ways to arrive at the proposal that violations of perfect duties cause more negative affect than do violations of imperfect ones, and therefore carry more attributional weight, the proposal nevertheless needs to be tested. To do this, we operationally defined "attributional weight" as the ability of an immoral behavior to counteract an initial positive expectancy about a person. A behavior's attributional weight is assumed to be inversely proportional to the number of exemplars of the behavior necessary to counteract an initial positive expectancy about a person. To the extent that more such exemplars are needed, the behavior has less attributional weight (Trafimow & Trafimow, 1999). Studies 1 and 2 employ a correlational approach to test the proposal. Studies 3 and 4 adopt an experimental approach to examine the causal influence of affect on the attributional weight given to immoral behaviors. Finally, Study 5 tests the possibility that negative affects arising from different emotions have differential influences on attributional weights.

STUDY 1

Participants were asked to indicate how many violations of perfect or imperfect duties it would take to change their opinion about someone and were later asked to say how the violations made them feel. The predictions are that (a) it should take fewer violations of perfect than imperfect duties to counteract a positive expectancy, (b) violations of perfect duties should arouse more negative affect than violations of imperfect duties, and (c) negative affect should be negatively correlated with the number of duty violations necessary to counteract a positive expectancy. However, our theorizing suggests no reason to predict that differences in the positive performances of duties, whether perfect or imperfect, should result in differences in positive affect.

Method

Participants. One-hundred and two undergraduate psychology students from a large southwestern university participated in the study. Participation partially fulfilled a class requirement.

Procedure. Participants were asked about violations of perfect or imperfect duties. The perfect duty of honesty was contrasted with the imperfect duties of charity, cooperativeness, and friendliness.[1] For example, participants were asked, "Suppose you thought a person was honest, how many dishonest behaviors would the person have to perform for you to change your mind?" Similar questions pertained to uncharitable-charitable, uncooperative-cooperative, and unfriendly-friendly, and the questions were arranged in a Latin Square order. Participants also were asked about the other direction, and these items also were presented as part of a Latin Square order. An example item was as follows: "Suppose you thought a person was dishonest, how many honest behaviors would the person have to perform in order for you to change your mind?"

Later, participants rated how negatively (or positively) it would make them feel if someone they thought was honest/charitable/cooperative/friendly (or dishonest/uncharitable/uncooperative/unfriendly) performed a trait-incongruent act such as an act of dishonesty/uncharitability/uncooperativeness/unfriendliness (or, in the negative expectancy condition, an act of honesty/charitability/cooperativeness/friendliness). Ratings were made on a scale from 0 (*not at all negative/not at all positive*) to –3/+3 (*extremely negative/extremely positive*), such that the negative affect scale was always used to assess responses to a negative behavior and the positive affect scale was always used to assess responses to a positive behavior. Again, these items were presented in Latin Square design.

Results

Within-participants comparisons of means. Each of our four hypotheses was tested with a planned contrast pitting the perfect duty against the three imperfect ones, and these contrasts are displayed graphically in Figure 1. Consistent with predictions, perfect duties (dishonest behaviors) required fewer violations than imperfect duties (uncharitable, uncooperative, or unfriendly behaviors) to counteract a positive expectancy ($M = 2.26$ vs. $M = 3.16$, $M = 3.22$, and $M = 3.20$) (see Figure 1a). Moreover, a greater number of perfect duties (compared to imperfect duties) were necessary to override the negative prior belief that the target person had the relevant negative trait ($M = 7.35$ vs. $M = 4.78$, $M = 5.14$, and $M = 5.49$) (see Figure 1b). Finally, the violation of a perfect duty induced more negative affect than did violations of imperfect duties ($M = –1.75$ vs. $M = –1.02$, $M = –1.07$, and $M = –1.50$) (see Figure 1c), $p < .01$, for each of the three planned contrasts. However, there was no difference in the positive affect induced by the positive performance of a duty, regardless of whether it was perfect or imperfect ($M = 1.58$ vs. $M = 1.69$, $M = 1.54$, and $M = 1.63$) (see Figure 1d), $F(1, 303) < 1$.

Correlations. To provide a more exact determination of the relation between negative affect and attributional weight, we computed within-participants correlations between the negative affect associated with violations of particular duties (i.e., dishonest, uncharitable, uncooperative, or unfriendly behaviors) and the number of violations deemed necessary to override a positive expectancy (i.e., that the person is originally expected to be honest, charitable, cooperative, or friendly) across the four types of duty violations. We also computed within-participants correlations between the positive affect associated with the performance of positive behaviors and the number of such performances deemed necessary to override a negative expectancy. Consistent with predictions, there was a significant within-participants correlation indicating that as more negative affect was aroused, fewer violations were deemed necessary to override a positive expectancy, mean $r = –.37$, $t(81) = –6.69$, $p < .001$. In contrast, the correlation between the positive affect associated with the performance of positive behaviors and the number of such performances deemed necessary to override a negative expectancy was not significant, mean $r = .14$, $t(61) = 1.89$, $p = .06$. In addition, the absolute value of the correlation was significantly greater for negative than for positive behaviors, $t(61) = 2.50$, $p < .05$. On the chance that the relatively large mean correlation for the negative behaviors was due to only a few extreme participants, we also analyzed the within-participants correlations in terms of frequencies. When negative behaviors were analyzed, 74% of the within-participants correlations were in the expected direction and only 26% were not (binomial test: $p < .001$). In contrast, when positive behaviors were analyzed, there was no discernible difference in the proportions of supportive versus disconfirming correlations (55% and 45%, $p > .20$). In summary, the mean ratings illustrated in Figure 1, as well as the within-participants correlations, indicate that negative affect is fairly strongly associated with negative attributional weight but positive affect is only weakly (and nonsignificantly) associated with positive attributional weight.

STUDY 2

Although consistent with our predictions, the data obtained in Study 1 were limited in several ways. First, participants in Study 1 were asked about violations of

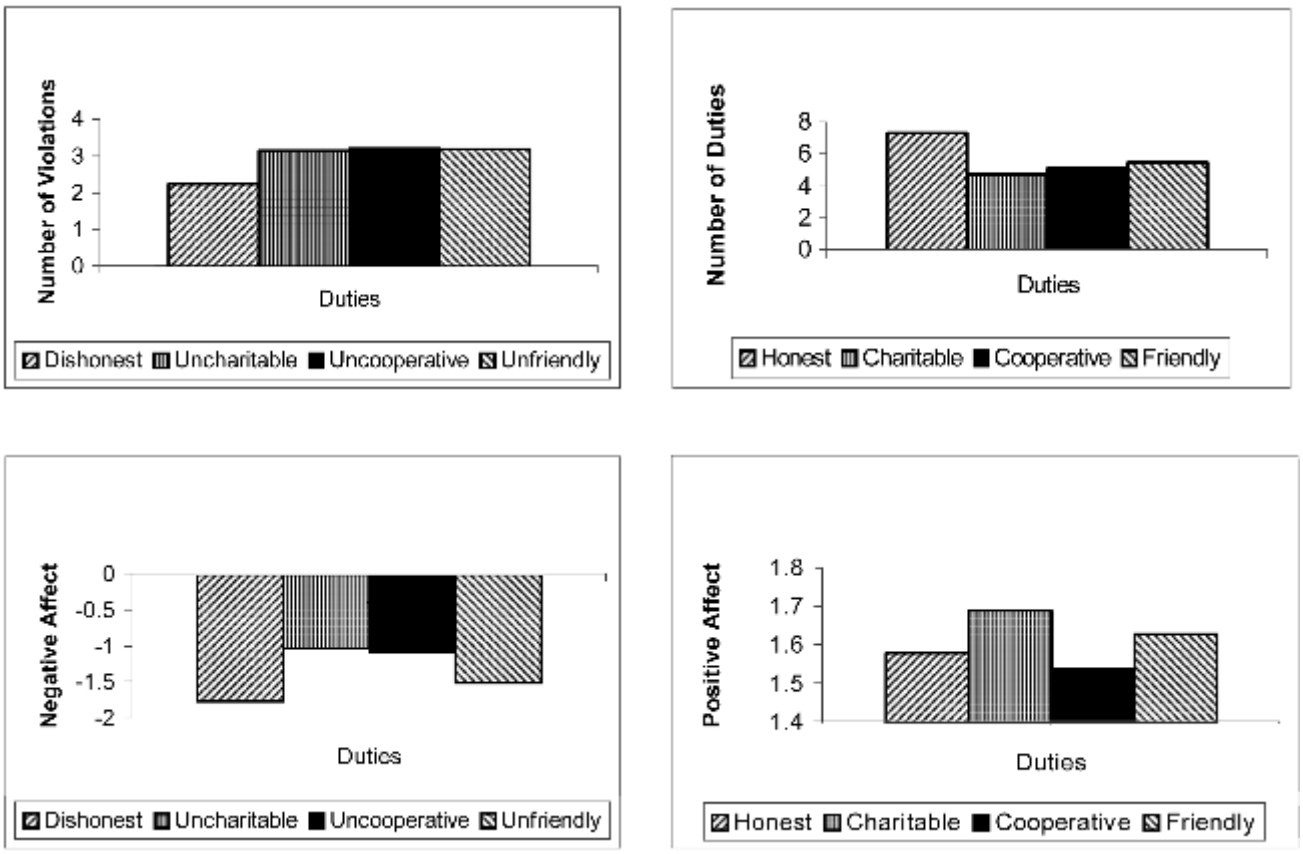

Figure 1 **Mean number of violations of duties necessary to override a positive expectancy (Figure 1a), mean number of positive behaviors necessary to override a negative trait expectancy (Figure 1b), mean negative affect (Figure 1c), and mean positive affect (Figure 1d) as a function of whether the relevant trait dimension is honest-dishonest, charitable-uncharitable, cooperative-uncooperative, and friendly-unfriendly.**

rather abstract duties (i.e., honesty) instead of considering specific examples. Although abstract stimulus materials are useful for eliminating biasing effects due to specific content, it is reasonable for the reader to wonder if similar findings would be obtained even with specific examples (see Trafimow & Schneider, 1994; Trafimow & Trafimow, 1999). Second, the results of Study 1 are based on a single measure of attributional weight, namely, we asked participants to indicate how many negative behaviors it would take for them to override a positive expectancy. To show that the impact of affect is not limited to a single operationalization of "attributional weight," we tested another operationalization of this construct in Study 2. Specifically, we asked participants to provide trait ratings of a target person. (For exploratory purposes, we also asked participants to indicate their confidence that a person who violated a particular duty had the corresponding negative trait and to indicate how "extreme" they thought the behavior was.) Finally, because there was no evidence in Study 1 for the importance of positive affect in influencing positive trait attributions, Study 2 was concerned only with negative affect.

We predicted that violations of perfect duties (e.g., dishonest behaviors) would induce more negative affect than violations of imperfect duties (e.g., unfriendly behaviors). Moreover, it was predicted that this difference in negative affect (in response to violations of perfect vs. imperfect duties) would differentially affect subsequent trait attributions.

Method

One disadvantage of using specific behaviors, rather than the abstract ones that were used in Study 1, is the necessity of finding behaviors that are equivalently placed on their respective dimensions. Thus, in the present study, where we used the perfect dimension of (dis)honesty and the imperfect dimension of (un)friendliness, we needed to find dishonest behaviors that were as "dishonest" as unfriendly behaviors were "unfriendly." In a pilot study, 28 participants generated a large number of dishonest and unfriendly behaviors. Subsequently, in another independent pilot study, a large sample of 81 participants rated all of the behaviors that had been generated on their dishonesty or

TABLE 1: Mean Affect and Significance Tests for Pairs of Dishonest and Unfriendly Behaviors: Study 2

Pair	*Dishonest*	*Unfriendly*	t	p
1	3.36	2.61	6.94	<.01
2	3.03	2.78	2.68	<.01
3	2.73	2.35	4.09	<.01
4	2.71	2.17	5.02	<.01

TABLE 2: Mean Trait Attribution and Significance Tests for Pairs of Dishonest and Unfriendly Behaviors: Study 2

Pair	*Dishonest*	*Unfriendly*	t	p
1	3.45	3.01	5.05	<.01
2	3.25	3.08	1.92	.058
3	2.90	2.65	3.07	<.01
4	3.10	2.28	8.34	<.01

unfriendliness. Our hope was that this large sample would provide stable estimates of dishonesty or unfriendliness, which in turn, were converted to *Z* scores, so that direct comparisons could be made between the dishonesty of the dishonest behaviors and the unfriendliness of the unfriendly behaviors. Finally, we chose four pairs of dishonest and unfriendly behaviors that were matched on *Z* scores to use as the materials in Study 2.

Participants

One hundred and forty-three undergraduate psychology students from a large southwestern university participated in the study. Participation resulted in extra credit for the students.

Procedure

After the presentation of each of the four dishonest and four unfriendly behaviors, participants completed four ratings for a total of 4 (ratings) × 4 (behaviors within each type) × 2 (dishonest and unfriendly types of behaviors) = 32 items. These ratings pertained to trait attribution ("How dishonest is this person?"), confidence ("How confident are you that this person is dishonest?"), affect ("How does this behavior make you feel?"), and extremity ("How dishonest is the performed behavior?"). Participants responded to all four questions on 4-point scales ranging from 0 (*not at all dishonest/confident/negative/dishonest*) to –4 (*extremely dishonest/confident/negative/dishonest*). These questions were counterbalanced to ensure that there were no order effects.

Results

Table 1 shows the mean affect scores for each dishonest-unfriendly pair and Table 2 shows the mean attribution scores for each dishonest-unfriendly pair. Consistent with predictions, when treating the pairs as repeated measures, both affect and trait attribution scores were stronger for dishonest than for unfriendly behaviors; mean affect scores are 2.96 and 2.48, $F(1, 142) = 89.91$, $p < .01$, and mean attribution scores are 3.18 and 2.76, $F(1, 142) = 85.46$, $p < .01$.

According to our theorizing, violations of perfect duties (e.g., dishonest behaviors) induce more negative affect than do violations of imperfect ones (e.g., unfriendly behaviors). This difference in negative affect, in turn, has a direct impact on corresponding trait attributions. We tested this theorizing by performing within-participants mediation analyses, which resulted in a mediation analysis for each participant (see Finlay, Trafimow, & Jones, 1997; Finlay, Trafimow, & Moroi, 1999; Mischela, 1990; Sheeran, Trafimow, Finlay, & Norman, 2002; Trafimow et al., in press; Trafimow & Finlay, 1996, 2001; Trafimow, Kiekel, & Clason, Viswesvaran & Ones, 1999, for other examples of within-participants regression approaches).[2] Figure 2 presents the mean path strengths. Not surprisingly, the type of behavior significantly predicted both affect and trait attributions (mean correlations are .25 and .24, $p < .01$, in both cases) and affect predicted trait attributions (mean correlation is .49). More important, the direct path from behavior type to trait attribution, controlling for affect, decreased significantly ($p < .01$) from when affect was not controlled, although it was still different from zero (mean standardized path coefficient = .12, $p < .01$). Thus, there was mediation, although it was partial. Finally, the indirect path from behavior type to trait attribution, mediated by affect, was significant (mean standardized path coefficient from behavior type to affect was .25 and mean standardized path coefficient from affect to trait attributions was .46, $p < .01$, in both cases).

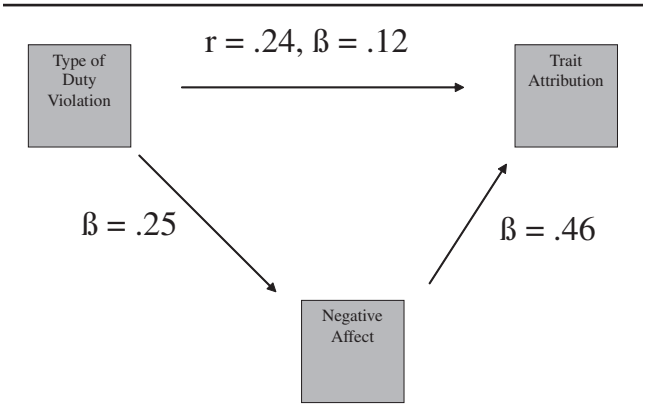

Figure 2 Mean direct path from Type of duty violation to Trait attribution, and mean mediated path through Negative affect.

STUDY 3

Taken together, Studies 1 and 2 provide strong evidence to support the claim that the negative affect induced by violations of duties is associated with their attributional weight, regardless of whether attributional weight is operationalized as the number of exemplars needed to counteract a positive expectancy or as a final trait attribution. However, to provide a compelling argument that the negative affect associated with an immoral behavior causes its degree of attributional weight, it is necessary to manipulate negative affect. Thus, we predicted that the negative affect produced by an experimental mood induction would interact with the type of violation (perfect vs. imperfect) under consideration in determining the number of violations that are necessary to counteract a positive expectancy. To see why, let us first consider violations of imperfect duties (e.g., the performance of an unfriendly behavior). According to our theorizing, it is the affect caused by violations of duties that, in turn, endows them with attributional weight. The reason violations of imperfect duties carry less attributional weight is because their performance does not induce much negative affect. If negative affect is induced by other means, however, and is still present when violations of imperfect duties are encountered, then attributional weight should be increased. In other words, the "adding" of negative affect to violations of imperfect duties should increase their impact, and fewer such violations should be required to counteract an initial positive expectancy (e.g., when there is more negative affect, fewer unfriendly behaviors should be required for observers to infer that a target person is unfriendly).

Matters are different when violations of perfect duties are considered. Remember that violations of perfect duties (e.g., a dishonest behavior) are presumed to induce strong negative affect, which gives them strong attributional weight. The findings from Studies 1 and 2, as well as demonstrations by Trafimow (Trafimow, 2001; Trafimow & Trafimow, 1999), indicated, for example, that only one or two dishonest behaviors are necessary to cause the person to be deemed as dishonest. Thus, there may be a "ceiling" effect for the negative affect induced by violations of perfect duties (or a "floor" effect for the number of additional behaviors necessary to counteract an initial positive impression), and inducing even more negative affect should not greatly decrease the number of such violations necessary to counteract a positive expectancy. In summary, we predicted that inducing negative affect via a mood induction would significantly reduce the number of violations of imperfect duties necessary to counteract a positive expectancy, but this effect would be attenuated or eliminated where violations of perfect duties are concerned.

Method

Participants. Two-hundred eighty-six undergraduate psychology students from a large southwestern university participated in the study. Participation partially fulfilled a class requirement.

Procedure. Participants were randomly assigned to one of two negative affect induction conditions (movie vs. newspaper) or a control condition in which no attempt was made to induce changes in affect. Participants in the movie condition watched two short video clips from the movie *Full Metal Jacket.* The first video clip was of a soldier in Vietnam killing a Vietnamese woman and the second clip was of a soldier committing suicide in the bathroom. Participants in the newspaper condition read two short articles. One article was about a police officer who was killed in a crash and the second article was about the Daniel Pearl kidnapping and murder. Finally, there was a control condition where participants neither watched film clips nor read articles. To ensure that the affect manipulations were effective, we conducted independent pilot studies to verify that significant amounts of negative affect were produced in the movie and newspaper conditions. Participants ($N = 81$) indicated that negative affect increased from before they were exposed to either the story or film to afterward (high scores mean more negative affect; for the story, $M_{\text{Before}} = 2.87$ and $M_{\text{After}} = 5.96$; for the film, $M_{\text{Before}} = 3.25$ and $M_{\text{After}} = 4.94$; $p < .001$, in both cases).

After the affect induction, participants in the movie and newspaper conditions received a questionnaire with various items about the movie or newspaper, respectively. These questions were designed to aid in the deception that we were actually interested in their opinions about the clips or the articles.

Subsequently, participants participated in an ostensibly unrelated study where they read four scenarios about violations of duties that were arranged in a Latin Square order. Our hope was that negative affect from the film clips or articles would be attributed to the scenarios. These scenarios were exactly alike except that the name of the participant and type of duty violation varied (i.e., the scenarios dealt with dishonest, disloyal, uncharitable, or unfriendly behavior). Thus, the scenarios were as follows:

> Imagine you were observing someone named Bob/Joe/Pete/Jim. You had talked to several other people about Bob/Joe/Pete/Jim and everyone consistently agreed that he was a(n) honest/loyal/charitable/friendly person. Thus, you also assume that Bob/Joe/Pete/Jim is a(n) honest/loyal/charitable/friendly person. However, as you observe Bob/Joe/Pete/Jim, you notice that he performs a(n) dishonest/disloyal/uncharitable/unfriendly behavior. Given the above information, how

TABLE 3: Mean Number of Violations Necessary to Counteract a Positive Expectancy as a Function of Induced Affect, Violation Type, and Replication: Study 3

	Perfect Duties		*Imperfect Duties*	
Induced Affect	*Dishonest*	*Disloyal*	*Unfriendly*	*Uncharitable*
Movie	1.81	1.73	2.49	2.36
News	1.63	1.53	2.22	2.29
Control	1.91	1.58	3.48	3.00

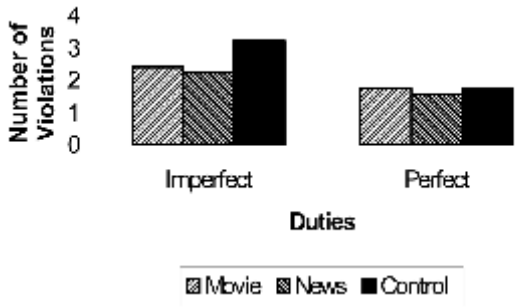

Figure 3 Mean number of violations necessary to counteract a positive expectancy as a function of Induced affect and Violation type: Study 3.

many additional dishonest/disloyal/uncharitable/unfriendly behaviors would Bob/Joe/Pete/Jim have to perform for you to stop assuming that Bob/Joe/Pete/Jim is a(n) honest/loyal/charitable/friendly person? Please write a number in a blank provided.

Results

The data were subjected to a 3 (induced affect: movie vs. newspaper vs. control) × 2 (violation type: violations concerned perfect vs. imperfect duties) × 2 (replication: perfect duty violations pertained to honesty and loyalty and the imperfect duty violations pertained to charitability and friendliness) mixed ANOVA. The latter two factors were within-participants.

Table 3 contains all cell means. There was a main effect of Induced affect, indicating that, averaged across the various violation types and replications, fewer violations were required to counteract a positive expectancy when negative affect had been induced than when it had not (means are 2.10, 1.92, and 2.49 for the movie, newspaper, and control conditions, respectively), $F(2, 283) = 4.44$, $p < .02$. There was also a main effect for Violation type, fewer violations of perfect than imperfect duties were required to counteract a positive expectancy ($M = 1.70$ and $M = 2.64$), $F(1, 283) = 82.34$, $p < .001$. More important, these main effects were qualified by an Induced Affect × Violation Type interaction, $F(2, 283) = 7.05$, $p < .001$. As Figure 3 demonstrates, the number of violations of imperfect duties required to counteract a positive expectancy was less when negative affect had been induced than when it had not (means are 2.43, 2.26, and 3.24 for the movie, newspaper, and control conditions, respectively); however, the number of violations of perfect duties required was not influenced by the Induced affect manipulation (means are 1.77, 1.58, and 1.75 for the movie, newspaper, and control conditions, respectively). More focused planned contrasts indicate that inducing negative affect, whether through movie clips or newspaper articles, decreased the number of violations of imperfect duties required for a correspondent trait attribution relative to the control condition ($M = 2.35$ and $M = 3.24$), $F(1, 283) = 61.31$, $p < .001$, but there was no influence of Induced affect for violations of perfect duties ($M = 1.68$ and $M = 1.75$), $F(1, 283) < 1$.

STUDY 4

Studies 1 and 2 demonstrated an association between the affect induced by violations of duties and the corresponding attributional weight of those violations. Study 3 demonstrated that the relationship between affect and trait attributions was causal. When negative affect was experimentally added to violations of imperfect duties, they gained attributional weight. However, because violations of perfect duties induce negative affect anyway, which results in the requirement of very few violations to counter a positive expectancy, the induction of negative affect failed to have much influence when violations of perfect duties were considered. According to this reasoning, it should be possible to "take away" negative affect and obtain exactly the reverse interaction. For violations of imperfect duties, where there is little negative affect involved, taking away nonexistent negative affect should have no influence on their attributional weight. In contrast, for violations of perfect duties, which we assume induce a good deal of negative affect, taking this negative affect away should decrease their attributional weight.

To test these predictions, it was necessary to invent a way of taking away the negative affect that we assume results from the violation of perfect duties, but not imperfect ones. One way of doing this is to induce people to assume that the negative affect engendered by violations of perfect duties is due to another source. If the negative affect is assumed to be due to a source other than the immoral behavior, then it provides less of a reason to endow the behavior with attributional weight. In contrast, because violations of imperfect duties are presumed not to induce strong negative affect, the influence of this type of manipulation on their attributional weight should be attenuated. Thus, the main hypothesis

TABLE 4: Mean Number of Violations Necessary to Counteract a Positive Expectancy as a Function of Picture, Violation Type, and Replication: Study 4

	Perfect Duties		*Imperfect Duties*	
Misattribution Manipulation	*Dishonest*	*Disloyal*	*Unfriendly*	*Uncharitable*
Misattribution	2.26	2.54	2.72	2.65
Control	1.66	2.05	3.18	2.68

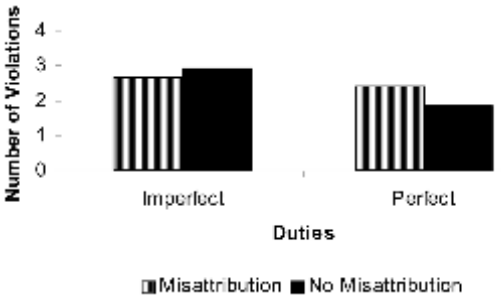

Figure 4 Mean number of violations necessary to counteract a positive expectancy as a function of Picture and Violation type.

for Study 4 was that causing participants to "assume away" negative affect from violations of perfect duties to another source would significantly decrease their attributional weight but that this effect should be attenuated for violations of imperfect duties. We reiterate that the form of the predicted interaction in Study 4, where affect is being "taken away," is the reverse of what was predicted for Study 3, where affect was "added in."

Method

Participants. One hundred eleven undergraduate psychology students from a large southwestern university participated in the study. Participation partially fulfilled a class requirement.

Procedure. Participants were told "on the next page you will see a picture with a particular pattern embedded in it. This pattern has been used in studies that have taken place in Massachusetts; Arizona; Colorado; Virginia; New York; Texas; Cambridge, England, and Edinburgh, Scotland." Some of the participants were then told, "The pattern is used for the purpose of creating negative emotions without the viewer being conscious of the effect," whereas the remaining participants were told that the picture would "create no emotional response." Subsequently, the participants were shown a picture with a pattern of lines and shapes that had no inherent meaning, and the picture was not meant to represent anything or to induce affect.

After the misattribution manipulation, all participants were presented with, and responded to, scenarios about target persons who violated either perfect or imperfect duties, similarly to Study 3. Finally, a manipulation check was performed to ensure that participants were unaware of the real purpose of the picture manipulation (in fact, none of the participants were aware of the real purpose).

Results

The data were subjected to a mixed 2 (misattribution vs. no misattribution: participants told that the picture would induce a negative mood vs. not told this) × 2 (violation type: violations concerned perfect vs. imperfect duties) × 2 (replication: perfect duty violations pertained to honesty and loyalty and the imperfect duty violations pertained to charitability and friendliness) ANOVA. The latter two factors were within-participants factors.

Table 4 contains all cell means. There was a main effect for trait type indicating that people needed fewer violations of perfect than imperfect duties to counteract a positive expectancy ($M = 2.18$ and $M = 2.78$), $F(1, 107) = 20.70$, $p < .001$. However, consistent with the theory, this main effect was qualified by a two-way Misattribution × Trait Type interaction, $F(1, 107) = 7.03$, $p < .01$. As Figure 4 illustrates, more violations of perfect duties (dishonest or disloyal behaviors) were required to counteract a positive expectancy in the misattribution condition than when there was no misattribution ($M = 2.40$ and $M = 1.85$). However, this effect was attenuated (and even slightly reversed) for violations of imperfect duties ($M = 2.68$ and $M = 2.93$). To ensure that the significant interaction was not due to the slight reversal for violations of imperfect duties, we performed two contrasts. The first contrast concerned the four cells where perfect duties were violated, and the misattribution condition was pitted against the condition where there was no misattribution. The second contrast concerned the four cells where imperfect duties were violated, and again the misattribution condition was pitted against the other one. Consistent with our theorizing, the former contrast was significant, $F(1, 107) = 8.18$, $p < .01$, whereas the latter one was not, $F(1, 107) = 1.61$, $p > .25$. Finally, the two-way interaction predicted by the theory was not qualified by a three-way Misattribution × Trait Type × Replication interaction, $F(1, 107) = 1.02$, $p > .1$, thereby indicating that the effect does not depend on the particular perfect or imperfect duty that is violated. In summary, the presence of negative affect is an important determinant of the number of violations of perfect duties required to counteract a positive expectancy, but not the number of violations of imperfect duties.

TABLE 5: Mean Number of Violations Necessary to Counteract a Positive Expectancy as a Function of Induced Affect, Violation Type, and Replication: Study 5

	Perfect Duties		*Imperfect Duties*	
Induced Affect	*Dishonest*	*Disloyal*	*Unfriendly*	*Uncharitable*
Disgust	1.88	2.29	2.03	1.97
Sadness	2.19	1.78	2.22	2.06
Fear	1.50	1.35	2.15	2.06
Control	1.81	1.61	3.10	2.94

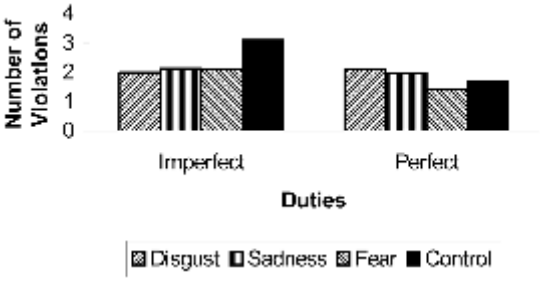

Figure 5 Mean number of violations necessary to counteract a positive expectancy as a function of Induced affect and Violation type: Study 5.

STUDY 5

Studies 1 and 2 demonstrate that the degree of negative affect induced by violations of duties is related to their attributional weight. Studies 3 and 4 demonstrate that this relationship is causal; more negative affect implies more attributional weight. Recently, however, emotion theorists have begun emphasizing that not all negative emotions will necessarily exert the same effect on judgment (see Lerner & Keltner, 2000; Lerner, Small, & Loewenstein, 2004). For example, although Lerner and Keltner (2000) did not study attributional weight, they found that different emotions with the same affective valence (i.e., anger and fear) had very different effects on the perception of risk. Similarly, Rozin, Lowery, Imada, and Haidt (1999) found that different negative emotions mapped onto violations of different types of moral codes. Consequently, it is unclear whether the impact of negative affect on attributions is limited to one specific type of negative emotion (e.g., disgust, but not fear) or whether, instead, the particular type of negative emotion is not as important as the simple fact that the experience has a negative valence. This question is important given recent arguments that research at the interface of emotion and judgment has focused too much on valence (positive vs. negative) at the expense of examining the specific cognition appraisals that may distinguish two emotions with similar valence (e.g., disgust vs. fear; see Lerner & Keltner, 2000, for a nice discussion of this point). Study 5 examines whether this effect of emotion on attribution is limited to specific negative emotions or whether any negative emotion will increase the attributional weight of certain behaviors.

Method

The method was similar to that used in Study 3. Participants watched a control film clip on gardening or they watched both the control clip and one designed to induce either core disgust, sadness, or fear (Gross & Levenson, 1995). As in Study 3, we predicted that viewing a video clip designed to elicit negative affect would increase the attributional weight of violations of imperfect duties but would not affect the attributional weight of violations of perfect duties. What we were not sure of was whether the results would generalize across a number of negative affect–laden emotions such as disgust, sadness, or fear or whether the effect would be restricted to a particular negative emotion.

Participants. One hundred and thirty-one undergraduate students participated in the study. Participation partially fulfilled a class requirement.

Procedure. All participants were first shown a neutral video on gardening. However, those in each of the three negative affect conditions watched an additional video clip that was designed to induce either disgust, sadness, or fear. The emotion-inducing video clips were obtained from Gross and Levenson (1995), who demonstrated their effectiveness in inducing the specific emotions of disgust, sadness, and fear, respectively.[3] Subsequently, participants responded to scenarios concerning people who violated perfect or imperfect duties. As in Studies 3 and 4, these scenarios were arranged in a Latin Square order.

Results

The data were analyzed as a 4 (induced affect: control vs. disgust vs. sadness vs. fear) × 2 (violation type: violations concerned perfect vs. imperfect duties) × 2 (replication: perfect duty violations pertained to honesty and loyalty and the imperfect duty violations pertained to charitability and friendliness) ANOVA. The latter two factors were within-participants factors.

Table 5 contains all cell means. As in the previous studies, fewer violations of perfect than imperfect duties were deemed necessary to counteract an initial positive expectancy ($M = 1.80$ and $M = 2.30$), $F(1, 127) = 13.66$, $p < .001$. More important, this main effect was qualified by an Induced Affect × Violation Type interaction, $F(3, 127) = 4.87$, $p < .01$. As Figure 5 demonstrates, the number of violations of imperfect duties required to counter-

act a positive expectancy was less when negative affect had been induced than when it had not (means are 2.00, 2.14, 2.11, and 3.10 for disgust, sadness, fear, and control conditions, respectively); however, the number of violations of perfect duties required was unaffected by the Induced affect manipulation (means are 2.09, 1.99, 1.43, and 1.71 for disgust, sadness, fear, and control conditions, respectively). More focused planned contrasts indicate that inducing negative affect, whether through disgust, sadness, or fear, decreased the number of violations of imperfect duties required, relative to the control condition ($M = 2.08$ and $M = 3.10$), $F(1, 127) = 26.21$, $p < .001$, but there was no discernible influence of Induced affect for violations of perfect duties ($M = 1.84$ and $M = 1.71$), $F(1, 127) < 1$.

DISCUSSION

The results can be summarized as follows. Studies 1 and 2 replicated previous findings by Trafimow and Trafimow (1999; also see Trafimow, 2001) showing that violations of perfect duties are endowed with greater attributional weight than are violations of imperfect duties. In addition, these studies revealed that violations of perfect duties resulted in more negative affect than did violations of imperfect ones. Finally, there was a significant statistical relationship between the amount of negative affect evoked by performance of negative behaviors and their attributional weight. Furthermore, this relationship persists regardless of whether the behaviors are presented in an abstract form (e.g., "performed an unfriendly behavior") or in a more concrete form (e.g., "pushed other people out of the way") and across different operationalizations of attributional weight.

Studies 3 and 4 tested the causal hypothesis that negative affect endows immoral behaviors with more attributional weight. In Study 3, negative affect was "added in," whereas it was "taken away" in Study 4. The assumption underlying both studies was that violations of perfect duties normally induce a substantial amount of negative affect, and so fewer violations are necessary to counteract a positive expectancy. In contrast, violations of imperfect duties normally do not induce much negative affect, and so a greater number of violations are necessary to counteract a positive expectancy. Thus, we reasoned in Study 3 that adding in negative affect should have little influence on the number of violations of perfect duties necessary to counteract a positive expectancy (because a substantial amount of negative affect is already present) but it should significantly reduce the required number of violations of imperfect duties that are necessary to counteract a positive expectancy. Conversely, when negative affect was taken away in Study 4, we expected the reverse interaction pattern; taking away negative affect should increase the required number of violations of perfect duties, but because violations of imperfect duties do not normally induce much negative affect, we expected this manipulation to have no influence on the required number of violations of imperfect duties. These predictions were all confirmed. Finally, the data from Study 5 suggest that the effects of negative affect on attributional weight are not restricted to a particular set of negative emotions; instead, it would appear that attributional weight can be affected by a wide variety of negative emotions such as disgust, sadness, and fear. These data have implications for the recent call to move "beyond valence" when studying the effects of emotion on judgment (Lerner & Keltner, 2000). Our data suggest that although the nonaffective components of emotion (i.e., cognitive appraisals) are certainly important, the valenced component of emotion (i.e., affect) plays an important role above and beyond that of the specific cognitive appraisals that distinguish similarly valenced emotions such as disgust, sadness, and fear.

In short, the present findings demonstrate that (a) on average, and when all else is equal, some types of negative behaviors tend to induce more negative affect than do others and (b) more negative affect leads to stronger trait attributions (in the absence of ceiling/floor effects). We suggested earlier that attribution theories with a heavy emphasis on cognitive variables, such as those that invoke notions of cue-diagnosticity, scope, or implicational schemas, are capable of accounting for previous attribution data. The present data are unique in that they make salient the causal role of affect in the attributional process. We see no simple way in which previous theories can account for these data unless some new assumptions are added to them. Our claim is not that the cognitively oriented theories are wrong but rather that they are incomplete as they are currently formulated. Indeed, the mediation analysis in Study 2 resulted in partial mediation, thereby suggesting that affect is not the only variable that matters and that there is still some variance to be accounted for by cognitive variables. Thus, we believe that a theory is needed that integrates the two types of variables to provide a full account of all of the findings in the relevant literature (Trafimow & Sheeran, 2004).[4]

Affect and Emotions

For the present purposes, we consider an emotion to be a combination of affect (i.e., hedonic tone, which comes in two flavors, which are "positive" and "negative") and cognition (i.e., thoughts and appraisals, although not necessarily conscious). We recognize that other definitions are also possible but we believe that the following reasoning is compatible with most definitions of affect and cognition (see Cacioppo & Gardner, 1999;

Clore, Schwarz, & Conway, 1994, for reviews). A consideration of the cognitive and affective components of the emotions manipulated in Study 5 may be particularly illuminating. The only characteristic of which we are aware that core disgust, sadness, and fear all have in common is that they each have a negative hedonic tone, that is, they all comprise negative affect. This shared negative affect, but different cognitive appraisals, suggests that the different types of emotion inductions in Study 5 had similar effects because they all have negative affect as a core component. Alternatively, they may have had similar effects for very different reasons having to do with the distinct cognitive components that these specific negative emotions do not have in common. Under the assumption that the simplest account is the best, we favor the former belief, namely, that negative affect is a primary source of attributional weight, although cognitive variables also may be important.

Directions for Future Research

The present studies do not disconfirm the role of traditional cognitive processes in endowing immoral behaviors with attributional weight but they do show that traditional cognitive processes alone are insufficient to account for the current data; affect plays an important role as well. But how much of a role does affect play? Ironically, given that our goal was to demonstrate the importance of affect, there are reasons to suspect that we have underestimated the role of affect in determining attributional weight. To see why, consider that, with the exception of Study 2, participants read about abstract behaviors (e.g., suppose a target person performs a dishonest behavior). Moreover, in all of the studies, these abstract behaviors were presented as being performed by strangers (e.g., participants were told that the behaviors were performed by "Joe") and so they were remote from the participants' own lives. Although one might reasonably expect affect to play an important role in self-relevant attributional processes (e.g., Stephan & Gollwitzer, 1981, showed that affect influences self-serving attributions), it seems less reasonable to expect that much affect would be aroused in the present paradigm or that substantial effects on attributional weight would be obtained. Despite these disadvantages, the fact that the predicted effects were obtained demonstrates the strength of this approach. In future research, with less sterile and more self-relevant stimuli, we expect that our understanding of the ability of affect to influence attributional weight will be further enhanced.

Assuming that affect gains in importance with more self-relevant stimuli, does this mean that cognitive factors become less important? Recent research by Trafimow and Sheeran (1998, 2004) suggests that this is not necessarily so. These researchers argue that affect and cognition should be measured on separate dimensions and so one is not necessarily the inverse of the other, as would be the case if they were opposite poles of the same dimension. The issue of attributional weight for self-relevant stimuli provides a case in point. As stimuli become more self-relevant and stimulate more affect, cognitive processing also might increase rather than decrease. This increased cognitive processing could enhance the importance of cognitive variables such as cue-diagnosticity (Skowronski & Carlston, 1987, 1989), scope (Gidron et al., 1993), and implicational schemas (Reeder & Brewer, 1979).

Finally, although the thinking for the present studies started with the Kantian distinction of perfect versus imperfect duties, this distinction needs to be qualified. This is because Kant's presentation implies a dichotomy whereby a duty is either perfect or imperfect, and a violation of a single imperfect duty makes one immoral. In contrast, the present focus on affect implies a continuum. At least where attributional weight is concerned, duties are "more perfect" to the extent that violations induce more negative affect. This analysis implies that there may be some behaviors that Kant would consider to be violations of perfect duties, that actually have less attributional weight than some duties that Kant would consider to be imperfect. As an example, Brown, Trafimow, and Gregory (in press) recently demonstrated that participants consider lying to save someone's life a moral behavior that is associated with positive (not negative) affect and carries positive attributional weight along an honest-dishonest dimension. Moreover, it is possible to imagine behaviors that Kant would consider to be imperfect, that arouse a great deal of negative affect and would carry a great deal of negative attributional weight. As an example, consider the unfriendly behavior of yelling at a waitress who accidentally spilled a drink; in an informal test, we found that this behavior induced a lot of negative affect and carried a great deal of attributional weight. To extend this idea to future research, we believe that it will be possible to make perfect duty violations into imperfect ones, or to make imperfect duty violations into perfect ones, by manipulating the degree of affect that is associated with the violation. This can be done easily, and less interestingly, by simply choosing more or less negative examples of the two types of violations or it can be done less easily, but more interestingly, by adding in or taking away negative affect, analogously to the procedures in Studies 3 through 5.

Conclusion

To our knowledge, the current studies provide the first compelling evidence that the attributional weight of immoral behaviors depends, to a substantial degree, on

the negative affect engendered by these behaviors. Consequently, the findings suggest that attribution researchers should devote more attention to affective processes. We do not view the present research as an indictment against the importance of traditional cognitive variables but rather as a demonstration of the importance of affect and as opening the door for future theories that integrate cognitive and affective variables.

NOTES

1. Goldberg (1990) showed that these traits all load on the same factor and Trafimow and Trafimow (1999) demonstrated experimentally that these traits are perceived by people as pertaining to morality.

2. There are three main reasons why we chose to perform within-participants analyses. First, the mediation that we hypothesized is a within-participants effect; for each person, we believe that affective reactions to perfect and imperfect duty violations determine their attributional weight. Second, because each participant responded with affect and attributions to multiple violations of both perfect and imperfect duties, performing within-participants analyses allowed the variance in these responses to be treated as true variance rather than error variance. Finally, because all participants were exposed to both categories of duty violations, there was no nonarbitrary way to assign unique scores for that variable to use in a between-participants analysis.

3. We thank James Gross and Robert Levenson for their aid in acquiring and using the films; they demonstrated that their films induced the appropriate negative emotions, thereby rendering it unnecessary for us to have to do so. We also gratefully acknowledge the useful comments made by Guido Peeters, Glenn Reeder, and Dom Simon in the preparation of this article.

4. We suspect that, in the domain of abilities, the relative importance of cognitive variables will be accentuated and that of affect may be diminished. We also believe that a variety of cognitive theories do an excellent job of accounting for the findings in the ability domain (e.g., Gidron, Koehler, & Tversky, 1993; Reeder & Brewer, 1979; Skowronski & Carlston, 1987, 1989; Trafimow, 1998). Nevertheless, it would not surprise us if future researchers were to find that affect influences trait attributions even in the domain of abilities.

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