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The Agony of Ambivalence and Ways to Resolve It: Introducing the MAID Model

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People are generally averse toward conflict between beliefs and/or feelings underlying their attitudes—that is, attitudinal ambivalence. This review integrates literature on attitudinal ambivalence with theories on decision making and coping strategies to gain a better understanding of when and how people deal with feelings of ambivalence. First it shows that ambivalence is experienced as being particularly unpleasant when the ambivalent attitude holder is confronted with the necessity to make a choice concerning the ambivalent attitude object; then, incongruent evaluative components of the attitude become accessible, and feelings of uncertainty about the potential outcomes arise, which may involve the anticipation of aversive emotions. Several coping strategies are employed when ambivalence is experienced as unpleasant. Emotion- and problem-focused coping strategies are discussed. The article concludes with a discussion of the MAID (model of ambivalence-induced discomfort), which aims to describe the consequences of ambivalence.

Keywords: *attitudes; judgment; decision making; ambivalence; dissonance*

Before ordering our extra hot grande decaf nonfat hazelnut espresso macchiato, there are quite a few choices we have to make, and such choices might require a lot of information. It is inevitable that this information will be, at least in some instances, evaluatively incongruent. In such cases, we can experience ambivalence.

We can be ambivalent about personal matters (e.g., follow a low fat–high carbohydrate diet that is heart healthy but has a higher risk of obesity, opt for childbirth in a hospital or in a domestic setting) or societal issues

(e.g., support U.S. military presence in countries such as Iraq and Afghanistan, vote for a political party intending to increase taxes to combat global warming, boycott products that rely on cheap child labor). Previous reviews on ambivalence emphasized definitional issues of ambivalence (Jonas, Brömer, & Diehl, 2000) and the relationship with dimensions of attitude strength (Conner & Sparks, 2002). In the present article, we combine the literature on attitudes with that on affect and decision making and focus on the affective, cognitive, and behavioral consequences of ambivalence.

In the current review, we first turn to the notion that the experience of ambivalence is unpleasant. We assess the evidence in support of this notion and argue that it holds under specific circumstances. We discuss these circumstances and describe when ambivalence is accompanied by an unpleasant, aversive state of arousal. In this context, we also address the role of emotions, with special emphasis on anticipated regret. In the second part, we investigate how people cope with these feelings of discomfort, and we show that ambivalent attitude holders are quite adaptive in their approach to reducing their discomfort. In the final section, we introduce the MAID (model of ambivalence-induced discomfort); we describe the various components of this model; and we discuss its implications for research on ambivalence.

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WHAT WE TALK ABOUT WHEN WE TALK ABOUT ATTITUDINAL AMBIVALENCE

Research on ambivalence has spawned from the observation that bipolar measures of attitude have an inherent limitation. Several researchers have argued that the common bipolar measures of attitude fail to distinguish between people who are torn between two sides of an issue and those who simply do not care. This has become known as the bipolar problem (Kaplan, 1972; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995). Attitudes are most often measured using bipolar measures. Such measures represent attitudes by means of a unidimensional evaluative continuum and usually present participants with two words that are reciprocally related, such as *weak* versus *strong*. Bipolar measures of attitude are ubiquitous. However, such a unidimensional continuum does not allow for distinguishing ambivalent attitudes from indifferent ones because both attitudes can be expressed only by ticking the “neutral” midpoint of the bipolar scale. An illustration of the difference between ambivalence and indifference is provided in the film *Girl, Interrupted* (Mangold, 1999), based on the experiences of writer Susanna Kaysen in a mental hospital in the 1960s. In the film, Kaysen has the following discussion with a doctor at the hospital:

- Kaysen: I'm ambivalent. In fact, that's my new favorite word.
 Dr. Wick: Do you know what that means, *ambivalence*?
 Kaysen: I don't care.
 Dr. Wick: If it's your favorite word, I would've thought you would . . .
 Kaysen: It *means* “I don't care.” That's what it means.
 Dr. Wick: On the contrary, Susanna. *Ambivalence* suggests strong feelings . . . in opposition. The prefix, as in *ambidextrous*, means “both.” The rest of it, in Latin, means “vigor.” The word suggests that you are torn . . . between two opposing courses of action.
 Kaysen: Will I stay or will I go?
 Dr. Wick: Am I sane . . . or am I crazy?
 Kaysen: Those aren't courses of action.
 Dr. Wick: They can be, dear—for some.

As shown by this dialogue, it is important to distinguish between ambivalence and indifference because being torn between two sides of an attitudinal issue or behavioral action is fundamentally different from, and in some ways even opposed to, not caring. In other words, being ambivalent about an attitude object does not imply that one does not have an opinion.

Kaplan (1972) was the first to distinguish between ambivalence and indifference, and he suggested separately assessing the positive and negative components of

attitude. He regarded respondents who simultaneously hold strong positive and negative feelings as being ambivalent, whereas he categorized those with weak positive and negative feelings as being indifferent (Thompson et al., 1995). The work by Cacioppo and colleagues echoes this sentiment (Cacioppo & Berntson, 1994; Cacioppo, Gardner, & Berntson, 1997). They showed that positive and negative evaluations are stochastically and functionally independent, and they argued that attitudes should be represented by a bivariate space rather than a bipolar continuum.

The literature on the bipolar problem thus suggests that holding an ambivalent attitude involves having strong feelings about an attitude object. Research that distinguishes different types of ambivalence points in a similar direction. An important distinction in such literature is that between potential ambivalence (e.g., Kaplan, 1972) and felt ambivalence (e.g., Jamieson, 1993; Priester & Petty, 1996). The former refers to the coexistence of evaluatively incongruent beliefs, about which the attitude holder is not necessarily aware. This potential unawareness in the case of potential ambivalence can be related to work by Petty, Tormala, Briñol, and Jarvis (2006), who in their PAST model (i.e., “prior attitudes are still there” model) argued that in the realm of attitude change, there can be conflict between a newly endorsed attitude and an older rejected attitude. Moreover, they argued that people are not necessarily aware of the internal conflict that can result from this discrepancy. In other words, ambivalence can be implicit. Felt ambivalence, however, assumes awareness and so refers to levels of experienced conflict between the two sides of the attitudinal issue. Felt ambivalence refers to psychological discomfort resulting from conflicting beliefs or feelings.

Another distinction involves ambivalence as a result of conflicting cognitions or that as a result of conflicting affective responses. In those cases, one speaks of intracomponent ambivalence. When affect and cognition are in conflict with each other, one speaks of intercomponent ambivalence (Maio, Esses, & Bell, 2000) or affective–cognitive ambivalence (Lavine, Thomsen, Zanna, & Borgida, 1998). There are several other examples of internal conflict that are similar in nature. For instance, people can have conflicting goals (e.g., Locke, Smith, Erez, Chah, & Schaffer, 1994) and can experience conflict between long-term goals and short-term impulses (e.g., Fujita, Trope, Liberman, & Levin-Sagi, 2006; Giner-Sorolla, 2001; Nordgren, van der Pligt, & van Harreveld, in press). Finally, a person may also experience ambivalence when important others hold attitudes that are different from one's own (Priester & Petty, 2001). Although it is important to realize that internal conflict comes in many flavors, we believe that

they are fundamentally similar in the sense that to each of them, Lewin's definition (1935) of conflict applies: "Conflict is a situation where oppositely direct, simultaneously acting forces, of approximately equal strength, work upon the individual" (p. 123).

AMBIVALENCE AND DISCOMFORT

The earlier distinction between different types of ambivalence suggests that ambivalence can be associated with feelings of discomfort. There have been a few studies that aimed to provide direct empirical evidence, but these appear inconclusive. I. Katz and colleagues (e.g., I. Katz, 1981; I. Katz & Hass, 1988) argued that being made aware of one's incompatible beliefs should generate psychological discomfort; Hass, Katz, Rizzo, Bailey, and Moore (1992) provided support for this view. They examined the relation between intergroup ambivalence and negative affect and found that racial ambivalence is related to a more negative mood. However, Maio, Greenland, Bernard, and Esses (2001) found a negative relation between intergroup ambivalence and physiological arousal. (A possible explanation for these opposing findings is discussed later.)

Given these conflicting findings concerning ambivalence and experienced negative affect, it makes sense to focus on when ambivalence is associated with discomfort. Newby-Clark, McGregor, and Zanna (2002) argued that ambivalence is associated with discomfort only when the positive and negative components of attitude are simultaneously accessible. Only then does the ambivalent attitude holder become aware of his or her conflicting thoughts or feelings. In other words, only when both components are accessible does potential ambivalence lead to experienced ambivalence. Newby-Clark et al. showed that this effect is most pronounced for people who are high in preference for consistency (Cialdini, Trost, & Newsom, 1995).

Newby-Clark and colleagues (2002) relied on response times to Kaplan's measure (1972), separately assessing the positive and negative evaluations. These response times are most likely a combination of the activation of the associations and the time needed to formulate a response. De Liver, van der Pligt, and Wigboldus (2007b) designed a study that focused directly on the simultaneous activation of positive and negative associations. Using an adapted Implicit Association Task, they found that for ambivalent attitudes, the positive and negative components of attitude were equally accessible. In a second study, they examined the strength of these associations. Participants were presented with positive, negative, ambivalent, and neutral attitude objects, which were subliminally preceded by positive, negative, or neutral

primes. Participants were asked to indicate whether they considered the objects positive or negative; response times were then assessed. Results showed that when an ambivalent attitude object is preceded by a positive or negative prime, the attitude becomes more accessible, as compared to when neutral primes are presented. This is most likely the case because the valenced prime facilitates one of the two evaluative responses that are at the core of the ambivalent attitude; that is, the neutral prime did not facilitate the accessibility of the ambivalent attitude. Like Newby-Clark and colleagues, de Liver et al. focused on felt ambivalence rather than potential ambivalence.

As argued before, ambivalence is experienced as unpleasant when the positive and negative components are simultaneously accessible. Of course, this is not always the case. An ambivalent smoker does not always feel agony when he or she lights a cigarette, and fast-food chains would be out of business if consumers felt an intense conflict every time they order a large portion of french fries with even larger amounts of ketchup. Whether both evaluative components are activated may depend on contextual factors. For example, as one smells french fries while waiting in line at a fast-food restaurant, the positive component of one's attitude toward french fries becomes salient. Seeing someone at the fast-food restaurant who is morbidly obese, however, would make the negative component salient as well and thus lead to ambivalence. I. Katz, Wackenhut, and Hass (1986), for example, argued that racial ambivalence is primarily salient in an intergroup context. In line with this reasoning, Costarelli and Palmonari (2003) showed that ambivalent attitude holders who identify strongly with their in-group are motivated to maintain their social identity by negatively evaluating a salient outgroup. Presumably, for low identifiers, the intergroup context is not important or salient enough to evoke discomfort.

This finding may explain the conflicting findings of Hass et al. (1992) and Maio et al. (2001) discussed earlier. Whereas Hass and colleagues found that participants with high levels of racial ambivalence revealed a negative mood, Maio found a negative correlation between intergroup ambivalence and physiological arousal. An important difference between the two studies is that Hass and colleagues found their effect of ambivalence on mood only when they had enhanced the salience of the intergroup context by exposing participants to audio material concerning a recent racial conflict. In the study by Maio and colleagues, however, the ambivalence manipulation and subsequent measures were presented as a filler task. Moreover, ambivalence of Welsh students was measured with regard to Dutch and Austrian people. Most likely, these Cardiff students were not as much acquainted with these groups as the American participants were with the racial groups

(Black/White) used in the study by I. Katz and colleagues (1986). As a consequence, the intergroup context was presumably not as salient as in the Hass et al. study, which may explain why Maio et al. did not find the expected positive relation between ambivalence and arousal. It does not, of course, explain why they found a negative correlation. The authors argued that the reason was based on their sample of European students—namely, that for them, more balanced and, hence, more ambivalent intergroup attitudes are more acceptable than univalent intergroup attitudes.

Research on ambivalence and discomfort thus shows that ambivalence is experienced as unpleasant when the positive and negative components of attitude are simultaneously salient and accessible. Such simultaneous accessibility may have different causes. For example, by engaging in introspection, one may already become aware of one's conflicting cognitions. Also, seeing someone exhibit behavior that is related to the attitude (e.g., eating a large portion of fries) could have this effect. In the current review, we focus on a determinant that, in our view, is an important cause of simultaneous accessibility in daily life: having to make a discrete evaluative choice.

AMBIVALENCE, DISSONANCE, AND CHOICE

A number of studies addressed the question of when ambivalence is experienced as unpleasant, but relatively little attention has been given to why ambivalence is unpleasant to begin with. In arguing why ambivalence is unpleasant, reference is often made to the seminal work of Heider (1946) and, especially, Festinger (1957), who have shown that people prefer attitudes to be in accordance with each other, as well as attitudes and behavior. Researchers have argued (e.g., Jonas et al., 2000; McGregor, Newby-Clark, & Zanna, 1999) that ambivalence is likely to be unpleasant for similar reasons. In terms of self-discrepancy theory (Higgins, 1987), ambivalent attitude holders are confronted by a discrepancy between their actual (ambivalent) attitude and their ideal (univalent) attitude, which is likely to lead to unwanted affective responses. We believe, however, that there is an important difference between dissonance and ambivalence. This difference concerns the level of commitment to one of the available alternatives.

Ambivalent attitude holders often “sit on the fence”; they have not yet committed themselves by making a choice between the opposing behavioral beliefs. Dissonance, however, is most commonly the result of a commitment to behavior that is in conflict with one's attitude. This difference in commitment between ambivalence and dissonance can be related to the distinction between judgment and choice. Hogarth (1981) argued

that the most important difference between judgment and choice involves the level of commitment. The author illustrated this point with the distinction between aiming (judgment) and pulling the trigger (choice). He also argued that the mere anticipation of commitment can already lead to feelings of conflict. This work is similar to that of Gerard and Orive (1987), who suggested that when one anticipates interacting with an attitude object, one feels an opinion-forming imperative, thus motivating one to form a relatively clear evaluative stance.

Along this line of reasoning, we argue that conflict and feelings of discomfort will be most pronounced when people are ambivalent and when a choice needs to be made. In that context, the ambivalent attitude holder is directly confronted with conflicting thoughts and/or feelings.

For ambivalent attitude holders, being forced to make an explicit choice can even lead to having to trade off personally important values. For example, someone may have ambivalent feelings about abortion because it involves a conflict between the personally important values of freedom and protection of life. Research has shown that conflict between values can lead to considerable negative affect (e.g., Baron & Spranca, 1997). When the situation does not involve choice so that commitment can remain low, there is less reason for discomfort, even when feeling ambivalent.

De Liver et al. (2007a) argued that when a choice presents itself, ambivalent attitude holders have an integration goal. They are motivated to integrate their conflicting evaluations in one evaluative response. As long as this is not achieved, the goal will heighten felt ambivalence and, thus, experienced discomfort. To test whether ambivalent attitude holders experience more discomfort when a choice is anticipated, de Liver and colleagues compared participants who had to commit to a choice with those who did not. Participants were presented with evaluatively incongruent information about a job applicant. In the choice condition, participants had to decide whether to hire the applicant or not, whereas in the control condition, participants were merely asked to evaluate the applicant's writing skills. Results showed that participants who were told that they had to make a decision reported more felt ambivalence as compared to those who knew that they could remain on the fence. There were no differences in terms of potential ambivalence, thus suggesting that discomfort is enhanced when a choice has to be made.

Results obtained by Armitage and Arden (2007) point in a similar direction. In the realm of attitudes toward low-fat dieting, the researchers examined the relation between experienced and potential ambivalence across stages of change. They found that correlations between potential ambivalence and felt ambivalence are significantly higher in stages of action and maintenance. In other words, potential ambivalence will be felt and

experienced as unpleasant when directly associated with relevant behavior.

A more direct examination of this relation among ambivalence, commitment, and experienced discomfort was provided by van Harreveld, Rutjens, Rotteveel, Nordgren and van der Pligt (in press), who related ambivalence to skin conductance level. They manipulated ambivalence about a new labor law and asked participants to write an essay about this topic. They were told that the university newspaper could publish the essay. Within the ambivalent condition, they created two subgroups. Participants in the ambivalence-with-choice condition were told that they had to choose between writing an essay that was unequivocally positive about the labor law or one that was negative. Participants in the ambivalence-without-choice condition and in the control condition were not instructed to choose a side and could thus write a moderate essay, in accordance with their ambivalent attitudes.

Results of the van Harreveld et al. study (in press) showed that ambivalence was related to high levels of arousal when a choice had to be made, even before writing the essay. When ambivalent attitude holders did not have to commit, they experienced the same levels of arousal as univalent attitude holders. These findings, with those of de Liver et al. (2007a) and Armitage and Arden (2007), indicate that ambivalence is indeed related to discomfort, but this is particularly the case when participants have to commit to one side of an issue. Next, we turn to the different ways in which people cope with ambivalence-induced discomfort.

Difficulty Jumping Off the Fence

Felt ambivalence is apparently unpleasant, and people would presumably be motivated to get rid of this unpleasant feeling. One potential way to reduce ambivalence is to make a choice. In terms of de Liver and colleagues' terminology (2007a), when the integration goal is achieved through making a choice, the activation of the goal should decrease (see also Förster, Liberman, & Higgins, 2005). Similarly, on the basis of cognitive dissonance theory, one would expect ambivalent attitude holders to bring their attitude in accordance with their choice and thus develop a polarized attitude after having made a decision. De Liver et al. indeed found that felt ambivalence decreased for participants who had made a choice, whereas participants in the control condition showed no decrease in ambivalence.

So, if choosing helps to reduce the unpleasant feelings that are associated with ambivalence, why don't ambivalent attitude holders choose and bring an end to their woes? Closer examination of the literature reveals that merely choosing is not enough. It is not the choice itself that reduces ambivalence but the cognitive

processes that are associated with it. Reducing ambivalence thus requires cognitive elaboration, which relies on resources that are not always sufficiently available.

In a follow-up study to the one described above, de Liver et al. (2008) aimed to show that cognitive processes that are instigated by the choice situation lead to ambivalence reduction. Specifically, ambivalent attitude holders were put under cognitive load when they were exposed to the initial ambivalent information (i.e., during activation) or in a later stage, when their evaluation of the attitude object was assessed. Results show that cognitive load during activation leads to lower levels of ambivalence; cognitive load during evaluation, however, leads to higher levels of ambivalence. De Liver et al. argued that this finding suggests that during activation, cognitive load curtails the development of an ambivalent attitude structure because the conflicting information is not processed thoroughly enough. During evaluation, cognitive load hinders the process of ambivalence reduction, thereby leading to relatively high levels of ambivalence when compared to the control group. In other words, resolving internal conflict is something that requires cognitive effort, which is not always sufficiently available, of course. We return to the relation between ambivalence and cognitive effort later. First, however, we turn to a factor that, in our view, causes ambivalent attitude holders to be hesitant before jumping off the fence.

Anticipated Affect

Dissonance research emphasizes the importance of anticipated consequences of evaluative conflict (e.g., Cooper & Fazio, 1984). Cooper and Worchel (1970) and Cooper, Zanna, and Goethals (1974) showed that when counterattitudinal behavior is not associated with negative consequences, no attitude change occurs. In other words, people experience dissonance when they feel responsible for negative consequences of their behavior. Although this notion is not unchallenged (e.g., Harmon-Jones, Brehm, Greenberg, Simon, & Nelson, 1996), many studies (e.g., Johnson, Kelly, & LeBlanc, 1995; Scher & Cooper, 1989) have shown that people experience dissonance only when they feel responsible for the negative consequences of their behavior.

We argue that these anticipated consequences of choice drove the effects observed in the studies by van Harreveld et al. (in press) and de Liver et al. (2007a). Specifically, we believe that ambivalent attitude holders who are making a discrete choice anticipate possible negative and positive outcomes associated with each alternative. For instance, say that someone has to choose whether or not to buy a new Saab. Considering buying the Saab can lead to the anticipation of positive consequences (improved status, driving home fast) but also negative consequences (fuel

price, car breaking down all the time). Conversely, considering not buying the car also leads to anticipation of consequences positive (preservation of the environment) and negative (being uncool). The outcomes associated with each alternative are uncertain, and this uncertainty results in discomfort and arousal.

Despite the fact that both alternatives are associated with potential positive and negative outcomes, we believe that especially negative potential consequences are anticipated because possible negative outcomes generally tend to loom larger than positive outcomes (Eyal, Liberman, Trope, & Walther, 2004), and research on the negativity bias (e.g., Ito, Larsen, Smith, & Cacioppo, 1998; Skrowonski & Carlston, 1989) suggests that these negative thoughts carry considerable weight. The ambivalent attitude holder who can remain on the fence does not have to think about potential consequences or outcomes and will so experience feelings of uncertainty to a lesser extent or not at all.

The second study in van Harreveld et al. (in press) supports this line of reasoning. They not only replicated the effect of choice-related ambivalence on arousal (which we described earlier) but also measured the extent to which participants were uncertain about the consequences of their dichotomous choice. They found that for ambivalent attitude holders that have to make a discrete choice, the relation between ambivalence and physiological arousal is fully mediated by uncertainty about the possible consequences. It thus appears that ambivalence is unpleasant when a choice needs to be made because of the uncertainty about the consequences associated with the choice. In our view, ambivalent attitude holders are uncertain because they anticipate negative affect, which may arise when they discover that they made the wrong decision.

Several anticipated emotions might play a role here, such as guilt, disappointment, and fear. However, the emotion that has been most directly associated with decision making is regret (e.g., Loomes & Sugden, 1982). Regret is considered to be a consequence of a decision that lead to an unwanted outcome and, thus, counterfactual thinking about what might have been (Epstude & Roese, 2008; Roese, 1997). Moreover, regret tends to involve a sense of responsibility for the choice that led to the unwanted outcome (e.g., Zeelenberg, van Dijk, & Manstead, 1998). We believe that anticipated regret plays an important role in the realm of ambivalent choices, for three reasons.

First, in his reformulation of cognitive dissonance theory, Festinger (1964) suggested that regret plays a role in relation to postdecisional dissonance. He argued that after making a decision, individuals tend to focus their attention on unfavorable aspects of the chosen alternative and on desirable aspects of the rejected alternatives. Moreover, he argued that somewhere between this

enhanced salience of dissonant cognitions and the reduction of dissonance (e.g., by spreading the alternatives), feelings of regret ensue. In line with this reasoning, findings by Walster (1964) suggest that regret precedes processes of dissonance reduction. We believe that whereas the experience of regret is related to postdecisional dissonance, the anticipation of regret is likely to occur for ambivalent attitude holders before making a decision.

Second, many studies have shown that actions are associated with levels of regret higher than those of inactions (e.g., Gilovich & Medvec, 1994, 1995). For the ambivalent attitude holder (who wants to remain on the fence), having to make a discrete choice can in many ways be viewed as an action, which is likely to enhance the anticipation of regret. A similar reason why ambivalent choices can be associated with the anticipation of regret can be found in the work of B. Schwartz (2000; B. Schwartz et al., 2002). He argued that when one has to make a decision and when an exhaustive comparison of all the choice alternatives is impossible, feelings of regret will be anticipated. B. Schwartz et al. (2002) argued that maximizers are prone to this effect (i.e., people who prefer options that have the highest utilitarian value).

The third reason why we believe regret is an important factor in relation to ambivalence can be found in research on procrastination. Luce and colleagues (Luce, 1998; Luce, Bettman, & Payne, 1997), for example, suggested that one way of coping with a difficult decision is to avoid making a decision altogether. Anderson (2003) reviewed the literature on decision avoidance and, building on the work on inaction inertia (Tykocinski & Pittman, 1998; Tykocinski, Pittman, & Tuttle, 1995) and decision making (Simonson, 1992), concluded that an important reason to avoid making decisions is the anticipation of regret. We argue that this is the case for ambivalent decision makers. Future research, however, should shed light on whether anticipated regret underlies the obtained findings concerning ambivalence and uncertainty.

DEALING WITH THE AGONY OF AMBIVALENCE

We have now examined the circumstances under which ambivalence is experienced as unpleasant, and we have argued that choosing between the alternative options is not as straightforward a solution for ambivalent attitude holders as it may seem at first. We now turn to the question of how ambivalent attitude holders do go about resolving their states of conflict. We introduce both emotion-focused and problem-focused coping strategies and discuss when each strategy is most likely to be employed.

As discussed above, early research on the relation between ambivalence and discomfort focused on racial

ambivalence (e.g., I. Katz, 1981; I. Katz & Hass, 1988). Not surprisingly, initial research on the consequences of ambivalence was carried out in an intergroup context. Leippe and Eisenstadt (1993), for example, found that people with racially ambivalent attitudes were more likely to comply with a request to write a counterattitudinal essay. One could argue that they were inclined to comply because writing the essay could help to swing the balance of their ambivalent attitudes.

Response amplification is another issue that has been studied in the context of racial ambivalence (I. Katz, 1981). Specifically, increased accessibility of negative behavior from both minority- and majority-group members tends to lead to a relatively negative evaluation of the minority group. Conversely, when positive behavior of both groups is most accessible, it leads to an amplified positive evaluation of the minority group. Various researchers have suggested that ambivalent attitude holders are prone to do this (e.g., Britt, Boniecki, Vescio, Biernat, & Brown, 1996; Monteith, 1993). This tendency is even more pronounced when there is a motive to reduce ambivalence (D. W. Bell & Esses, 2002).

In general, ambivalent attitude holders are expected to try to tip the balance in one direction to get rid of the arousal associated with their ambivalence. The processes through which people resolve ambivalence are likely to resemble those discussed in the context of dissonance theory (Festinger, 1957), which assumes that people prefer that their attitudes and behavior be congruent with one another. In the case of aversive ambivalence, congruence does not refer to attitude and behavior but to a preference for evaluatively congruent beliefs and feelings about an attitude object. In part, we base our conceptualization of coping strategies on the work by Lazarus and Folkman (1984) and Luce and colleagues (Luce, 1998; Luce et al., 1997), who suggested that there are two basic forms of coping with the negative feelings associated with a difficult choice. On one hand, there is emotion-focused coping. This can be in the form of procrastinating or downplaying the importance of the situation. On the other, there is problem-focused coping—that is, increasing one's effort to make the best choice. We believe that this broad distinction between emotion-focused coping and problem-focused coping is useful in relation to ambivalence-induced discomfort.

Emotion-Focused Coping

Luce et al. (1997) found that people who are faced with a difficult decision not only deliberate but look for opportunities to avoid having to make a decision altogether. This finding is in accordance with the procrastination literature that shows that an aversive task, such as having to make a difficult decision, can lead to

avoidant behavior (e.g., Steel, 2007). For example, if someone experiences considerable difficulty in choosing between a very cool gasoline-slurping car or a very uncool hybrid car, that someone will likely postpone making a decision. Sirois (2004) showed that procrastination is related to thoughts about how things could have been better. Such counterfactual thinking is the basis of regret, and the findings of Sirois thus provide further support for our suggestion that anticipated regret can play a mediating role in the relation between ambivalence and psychological discomfort.

Luce et al. (1997) showed that decision making avoidance is successful in reducing negative affect associated with the difficult choice that lies ahead. They argued that the opportunity to choose an avoidant option mitigates the intensity of emotions and that increasingly emotion-laden decision-making environments are associated with increased preference for avoidant options (procrastination). Their studies showed that choosing an avoidant option results in less retrospective negative emotion and that increased initial negative emotion results in increased choice of avoidant options.

Luce et al. (1997) suggested that another emotion-focused coping strategy, besides avoiding the decision, is that of redefining the situation. In the realm of ambivalent choices, we suggest that this can be done through the denial of responsibility. Research on dissonance has demonstrated that feeling responsible for one's choice is a necessary prerequisite for experiencing dissonance (e.g., Wicklund & Brehm, 1976). If one is forced to perform counterattitudinal behavior, there is no responsibility, and dissonance is simply not pertinent. Research has more recently shown that denial of responsibility for a decision can be an effective mode of dissonance reduction that helps to mitigate negative affect (Gosling, Denizeau, & Oberle, 2006).

Interestingly, research on regret stresses the importance of perceived responsibility. One conclusion of this literature is that for regret to occur, there has to be a sense of responsibility for one's behavior (e.g., Zeelenberg et al., 1998). We argue above that one reason why ambivalent attitude holders experience arousal when facing a decision is that they anticipate feelings of regret that may arise when the wrong choice is made. As a consequence, denying responsibility for the decision may be an effective way to reduce anticipated regret and, thus, ambivalence-induced discomfort. For example, say that someone is ambivalent about smoking and has to choose whether or not to smoke when going out with friends. One way to reduce discomfort is to convince oneself that it will be impossible to resist peer pressure; thus, there really is no other option than to light up. Similarly, when deciding whether or not to open and eat a bag of potato chips, one may focus on genetic factors

that have led to a predisposition to give in to high-caloric temptations (cf. Throsby, 2007).

Problem-Focused Coping

Avoiding a decision or denying responsibility for this decision is not always possible. Luce and colleagues' argument (1997) is that when confronted with a difficult choice, one has the option to invest effort into making a decision, with the aim to increase confidence about one's choice. One way to do this is to change the attitude in such a way that ambivalence (and, thus, uncertainty) is reduced. Again, this finding can be related to research on cognitive dissonance, which has shown that dissonance can be reduced by changing one's attitude—for example, by trivializing dissonant cognitions (Simon, Greenberg, & Brehm, 1995), bolstering consonant cognitions (Sherman & Gorkin, 1980), or actively seeking for cognitions that support the counterattitudinal behavior (Frey, 1981).

There are important similarities between how people resolve dissonance and ambivalence but also a few differences. As argued before, the dissonant attitude holder has already committed to an alternative and is thus motivated to feel as though he or she made the best decision. Yet, the ambivalent attitude holder is not yet committed to an alternative and is motivated to invest cognitive resources into making the best decision. In terms of the earlier example of choosing between two cars, a person could, for example, thoroughly examine Web sites reporting consumer experiences with each car. In accordance with this assumption, a number of studies have shown that ambivalence is associated with a relatively effortful systematic processing of information. For example Luce et al. (1997) found that in a predecisional stage, people search by attributes when the choice at hand is difficult (i.e., they compare the alternatives in terms of the important attributes or characteristics). Similarly, van Harreveld, van der Pligt, de Vries, Wenneker, and Verhue (2004) found that ambivalent attitude holders go through an effortful process of integrating attributes when forming an attitude (see also van Harreveld & van der Pligt, 2004). Briñol, Petty, and Wheeler (2006) obtained similar findings in the realm of self-evaluations.

Jonas, Diehl, and Bromer (1997) also found that ambivalent attitude holders process information systematically. In their study, ambivalent attitude holders had many attitude-related thoughts and, interestingly, a strong attitude–intention relationship. The authors argued that the reason for systematic processing is that ambivalent attitude holders want to reduce the uncertainty associated with ambivalence. Monteith, Devine, and colleagues made a similar point (Devine & Monteith, 1993; Devine, Monteith, Zuwerink, & Elliot, 1991;

Monteith, 1993; Monteith, Devine, & Zuwerink, 1993). They found that that egalitarian people who become aware of their sometimes prejudiced thoughts and thus experience an internal conflict show increased cognitive activity, supposedly to reduce this internal inconsistency.

Maio, Bell, and Esses (1996) substantiated this assumption. They found that the difference in effectiveness between weak and strong persuasive arguments was larger for ambivalent attitude holders, thereby suggesting that the latter group processed the information more systematically than the former. Broemer (2002) obtained similar findings but only for negatively framed messages. All these findings suggest that ambivalent attitude holders are motivated to process information more thoroughly than less ambivalent attitude holders. Interestingly, Maio and colleagues also found that this increased receptiveness to the strong persuasive message helped to reduce feelings of ambivalence.

To rule out alternative factors that may cause the relation between ambivalence and systematic processing, de Liver et al. (2007a) examined whether ambivalent attitude holders are less able to reduce their ambivalence if systematic processing is curtailed. They indeed found that ambivalence decreases after a decision is made, unless ambivalent attitude holders are put under cognitive load. In that case, feelings of ambivalence remain stable. This finding provides further evidence for the assumption that the reduction of ambivalent feelings over time is often the result of an effortful cognitive process.

Cunningham, Johnson, Gatenby, Gore, and Banaji (2003) made another compelling case for the relation between ambivalence and systematic processing of information. They found greater ventrolateral prefrontal cortex activity in judgments associated with ambivalence. As a result, the authors argued that ambivalent attitude holders go through a controlled evaluative process to resolve evaluatively complex information.

Both Maio et al. (1996) and Jonas et al. (1997) argued that ambivalence is related to systematic processing because ambivalent attitude holders are uncertain and so wish to reduce this uncertainty. One investigation addressing the motivational factor behind the ambivalence–systematic processing link is that by Nordgren et al. (2006), who found that the link is due to experienced anxiety. They manipulated ambivalence and gave participants a placebo pill. Depending on experimental condition, this pill supposedly led to either relaxation or arousal. In the relaxation condition, they replicated the finding of Jonas et al. that ambivalence leads to more attitude-related thoughts. They found that this effect disappeared, however, in the arousal condition. In other words, when ambivalent attitude holders can attribute their discomfort to a factor other than their ambivalence, they no longer show systematic processing of information.

Less Effortful Problem-Focused Coping

The research described above supports the suggestion by Luce et al. (1997) that problem-focused coping strategies involve efforts to make the best choice and that ambivalence is related to thorough, systematic processing of information, weighing both sides of the issue. In our view, problem-focused coping can also take less effortful forms. If the ultimate goal of processing new attitude-relevant information is to reduce ambivalence, biased systematic processing could, for example, also be an effective way to reduce ambivalence. This is especially true because biased systematic processing is often cognitively less effortful than unbiased systematic processing. The latter most likely involves positive and negative thoughts, which need to be integrated. As such, research on impression formation and stereotyping has shown that integrating inconsistent information is associated with increased processing time and effort (Rojahn & Pettigrew, 1992; van Harreveld et al., 2004; Vonk & van Knippenberg, 1995).

Kunda (1990) gave more evidence for the increased effort associated with unbiased, as compared to biased, systematic processing. She reviewed the evidence for effortful processing in case of accuracy motivation (e.g., Kruglanski & Freund, 1983; Tetlock, 1983, 1985) and concluded that it is "impressive in its diversity": "The work on accuracy-driven reasoning suggests that when people are motivated to be accurate, they expend more cognitive effort on issue-related reasoning, attend to relevant information more carefully, and process it more deeply, often using more complex rules" (p. 481). Kunda argued that although biased processing can be effortful under high involvement (e.g., Howard-Pitney, Borgida, & Omoto, 1986), it generally appears that unbiased processing is the more effortful of the two.

The notion that ambivalence can be reduced through biased systematic processing is contrary to Conner and Sparks's suggestion (2002) that ambivalent attitude holders are likely to engage in unbiased processing of attitude-relevant information to reduce their uncertainty. However in a literature review, Brownstein (2003) provided a large amount of evidence suggesting that biased predecision processing does occur. He argued that biased processing increases when the difficulty of the decision increases. Because decisions are, by definition, difficult for ambivalent attitude holders, one would expect them to be prone to biased processing.

The matter of biased predecision processing was a heavily debated issue in the 1960s. Festinger (e.g., Festinger & Walster, 1964) maintained that biased predecision processing does not occur. Gerard (1967), however, argued that during the predecisional stage, decision makers bolster their initial preference for one of the available alternatives. A study by Mann, Janis, and Chaplin (1969) indicated that when participants thought

that further information about choice alternatives was forthcoming, they were not biased. However, when participants thought that additional information would not become available before the choice needed to be made, they engaged in bolstering through amplifying initial differences in attractiveness of choice alternatives.

In terms of how bias can help coping, we want to argue that in the early stages of information processing, bias can lead to selective attention for information about the attitude object, which can help ambivalent attitude holders to reduce their ambivalence. Indirect evidence that ambivalent attitude holders may employ such a strategy is provided by Lavine, Borgida, and Sullivan (2000), who showed that attitude involvement (which tends to be high for ambivalent attitude holders) leads to biased information-gathering strategies. Research by van Harreveld (2001) supports this view. He found that ambivalent attitude holders who are low in tolerance for ambiguity adopt a one-sided approach when it comes to searching new information about the attitude object. Similarly, Nordgren, van Harreveld, and van der Pligt (2006) found that ambivalent attitude holders, when experiencing discomfort, report one-sided thoughts and arguments in a thought-listing task. Moreover, biased processing is related to a subsequent reduction of ambivalence, indicating that biased systematic processing is an effective coping strategy.

If ambivalent attitude holders indeed process information in a biased way, the question remains regarding the direction of this bias. It seems plausible to assume that if there is even a slight tendency toward one of the two evaluative extremes, this will be the direction of the bias. This finding is accordance with work by Nordgren et al. (2006), who found that the direction of bias in a thought-listing task could be predicted by the initial evaluative direction of the attitude, even if the magnitude was modest. Similarly, recent studies by Clark, Wegener, and Fabrigar (2008) found that ambivalent attitude holders selectively focus on pro-attitudinal information and avoid counterattitudinal information.

Although biased systematic processing is less effortful than unbiased systematic processing, heuristic processing (Chaiken, 1980) is an even less cognitively demanding way to reduce ambivalence. Ambivalent attitude holders facing a decision can, for example, cope heuristically by conforming to the majority or by choosing the same alternative as someone whom they view as an expert. Although heuristic processing as a means of coping with ambivalence has not been studied extensively, ambivalent attitude holders have been known to process heuristically. Zemborain and Venkataramani Johar (2007), for example, showed that motivation to reduce conflict leads ambivalent attitude holders to become less likely to check the reliability of information about the attitude object before being persuaded. Studies by

Hodson, Maio, and Esses (2001) also point toward the heuristic processing of ambivalent attitude holders. The researchers found that such attitude holders are more persuaded by consensus information than are their non-ambivalent counterparts. Later on, we argue that when cognitive resources are highly constrained (because of time pressure, e.g.), heuristic processing can be deployed as means to reduce ambivalence.

Coping Preferences

Based on the empirical evidence reviewed above, we believe that emotion-focused coping can occur through procrastination or denial of responsibility. Problem-focused coping can occur with high levels of cognitive effort (unbiased systematic processing) or with low levels of cognitive effort (biased systematic processing and heuristic processing). In the present section, we discuss when each of these strategies is most likely to be deployed by ambivalent attitude holders, and we present a number of factors that, in our view, influence the preference of ambivalent attitude holders for each coping strategy described earlier.

Motivation and ability are two important determinants of how people resolve ambivalence. Payne, Bettman, and Johnson (1993) developed an effort-accuracy framework in which they argued that decision makers have to trade off two goals: minimizing cognitive effort and maximizing accuracy. For ambivalent attitude holders facing a decision, the goal of minimizing cognitive effort can lead to procrastination because this strategy is the least demanding. Aiming to maximize accuracy, however, should lead to systematic processing. In terms of which goal is likely to prevail for ambivalent attitude holders, the work by Luce et al. (1997) suggests that minimizing effort has the upper hand. They argued that when facing a difficult decision, people turn to procrastination as the first coping strategy. When the decision cannot be avoided, however, problem-focused coping comes into play.

We also believe that procrastination is least demanding in terms of cognitive effort and, therefore, an often-preferred coping strategy. However, if the decision is unavoidable, having to make this presumably important and difficult decision sustains levels of anticipated regret. Because responsibility for the decision is an important prerequisite for regret to occur, denial of responsibility can be an effective way to reduce anticipated regret and thus take the sting out of the ambivalent decision. Unfortunately, it is not always possible to blame someone else for one's choices. Whether denial of responsibility is possible influences the extent to which regret will be anticipated and, thus, the extent to which one strives for an accurate decision.

We have distinguished three forms of problem-focused coping that differ in terms of their required cognitive

effort. We believe that the extent to which one strives for accuracy determines which strategy is employed. Whereas unbiased systematic processing aims for an accurate decision, this is, to a lesser extent, the case for the low-effort strategies, biased systematic processing, and heuristic processing. We thus predict that higher levels of accuracy motivation lead to more effortful coping. In case of lower levels of accuracy motivation, less effortful strategies will be used. This relates to the work of Janis and Mann (1977), who in their conflict theory related the motivation to make an adequate decision to biased processing. They suggested that when people anticipate regret, they do not process information in a biased way. If no regret is anticipated, however, biased processing can occur (see also Lerner & Tetlock, 1999).

Whereas the anticipation of regret influences the motivation to process information in a high- or low-effort way, the ability to engage in each process plays a role. As argued before, when ambivalent attitude holders anticipate regret, they are motivated to engage in effortful information processing. However, a high-effort coping strategy requires cognitive resources that are not always available. Therefore, under conditions of low motivation and/or low ability, ambivalent attitude holders will rely on low-effort forms of problem-focused coping. Low ability could be caused by the simple fact that conscious thought is engaged with a different task, by ego depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998), or by time pressure.

Again, there are parallels with the dissonance literature, which has shown that to reduce dissonance, people use whatever means are available in a given situation. For example, when offered different ways to reduce dissonance, people choose the opportunity that presents itself first (Aronson, Blanton, & Cooper, 1995); they also prefer direct ways over indirect ways to reduce dissonance (Stone, Wiegand, Cooper, & Aronson, 1997). Similarly, we believe the ambivalent attitude holder is flexible in adapting to the situation at hand. When there is no opportunity to reduce ambivalence by means of unbiased systematic processing, biased systematic processing may do the job instead.

In the realm of problematic decision making, coping strategies can also be employed simultaneously, according to Luce et al. (1997). For example, a study by Ferrari and Dovidio (2000) showed that procrastinators search elaborately for attitude-relevant information. Similar findings were obtained by Hänze (2001), who found that systematic processing, as well as avoidance, is likely when one experiences ambivalence. He also addressed when each strategy is most likely to occur and found that in case of high involvement and need for cognition (Cacioppo & Petty, 1982), ambivalent attitude holders are likely to show amplification. According to Hänze (2001), these people want to know about the issue before they make a decision.

Individual differences also play a role in determining the preferred coping strategy. For example, research has shown that when one experiences dissonance, an action-oriented mind-set (Kuhl, 1984) leads to a spreading of alternatives (Harmon-Jones & Harmon-Jones, 2002). In the present context, this finding suggests that people high in action orientation are more inclined to engage in problem-focused coping than are those who are state oriented.

Earlier we discussed the work of Newby-Clark et al. (2002), who showed that preference for consistency (Cialdini et al., 1995) determines whether potential ambivalence is experienced as unpleasant, which of course should also influence the decision on how to cope. Olson and Zanna (1982) examined repressors and sensitizers (P. A. Bell & Byrne, 1977)—a distinction that refers to the defensive strategies that people employ when confronted with anxiety-provoking stimuli. Repressors tend to prefer avoidant strategies, whereas sensitizers are inclined to approach threatening stimuli. Olson and Zanna have shown that when experiencing cognitive dissonance, sensitizers are more likely to engage in intellectualization and rationalize their counterattitudinal behavior. This finding is reminiscent of the distinction made by Miller (1987) between monitoring and blunting, where high monitors / low blunters are inclined to seek information relevant to a current threat, whereas low monitors / high blunters seek distraction. Future research should indicate if ambivalent repressors (blunters) rely on emotion-focused coping, whereas ambivalent sensitizers (monitors) use problem-focused strategies.

MAID

In the current article, we discuss different antecedents and consequences of ambivalence-induced discomfort. We describe when conflicting evaluations are experienced as unpleasant, and we present the most likely strategies that people use to cope with this unpleasantness. We now present the Model of Ambivalence-Induced Discomfort (MAID), which combines and summarizes these insights. The model is presented in Figure 1. It contains a number of steps, all based on questions regarding important factors related to the ambivalent attitude.

The first question (Q1) involves whether a dichotomous choice needs to be made. For ambivalent attitude holders, choice situations are most likely to lead to simultaneous activation of evaluatively incongruent components and, thus, to felt ambivalence. Without such a dichotomous choice, potential ambivalence is less likely to result in high levels of felt ambivalence (e.g., Armitage & Arden, 2007; de Liver et al. 2007a).

The Q2 rhombus in the model refers to the feelings of uncertainty about the outcomes of a decision that can

arise for ambivalent attitude holders. Research by van Harreveld et al. (in press) has shown that these feelings of uncertainty are a necessary precondition for arousal to occur. When there is no uncertainty about the outcomes of a choice, levels of arousal are similar to those of univalent attitude holders. We have argued that on a specific level, these feelings of uncertainty most likely consist of negative anticipated affective responses, such as regret. Ambivalent attitude holders who do not anticipate negative affect in relation to their choice may still hold conflicting cognitions (i.e., have potential ambivalence), but they are not in the “hot seat” like their uncertain counterparts and will therefore not experience a similar necessity to cope.

Ambivalent attitude holders, however, do have a problem once faced with a choice associated with uncertain outcomes. As influenced by the work of Luce et al. (1997), we argue that the first inclination is to examine whether it is possible to postpone the decision (Q3). If this is possible, procrastination will occur. If not, more effort needs to be invested in making a decision. How this decision is approached first of all depends on the anticipation of regret (Janis & Mann, 1977).

The Q4 rhombus in our model concerns how effectively these feelings of anticipated regret are reduced. Specifically, one can attempt to reduce anticipated regret by denying one's responsibility for the decision—for example, by emphasizing pressure from outside forces to choose a particular option. Whether or not this strategy is successful will influence subsequent coping choices. When perceived responsibility is low, one no longer expects feelings of regret as a result of a sub-optimal decision, so one can rely on low-effort heuristics in trying to tip the balance.

In the Q5 rhombus of the model, responsibility is undeniable, and regret is still anticipated. As a consequence, ambivalent attitude holders are motivated to invest time and effort in trying to make the best possible choice. In other words, the high-effort route is preferred over the low-effort route. However, a factor that determines which of the two routes is actually used is the extent to which cognitive resources are available. When there are sufficient cognitive resources, those who anticipate regret can process information more elaborately and will engage in high-effort unbiased systematic processing. When cognitive resources are restricted, they necessarily have to rely on the low-effort route, which can involve biased systematic processing or heuristic processing. This illustrates the flexibility that people have in coping with ambivalence-induced discomfort. Thus, when the high-effort route is prevented in any kind of way or turns out to be ineffective, the low-effort route will be taken instead.

For reasons of clarification, we have distinguished two separate routes in the MAID. However, one could argue that the problem-focused coping strategies could also be

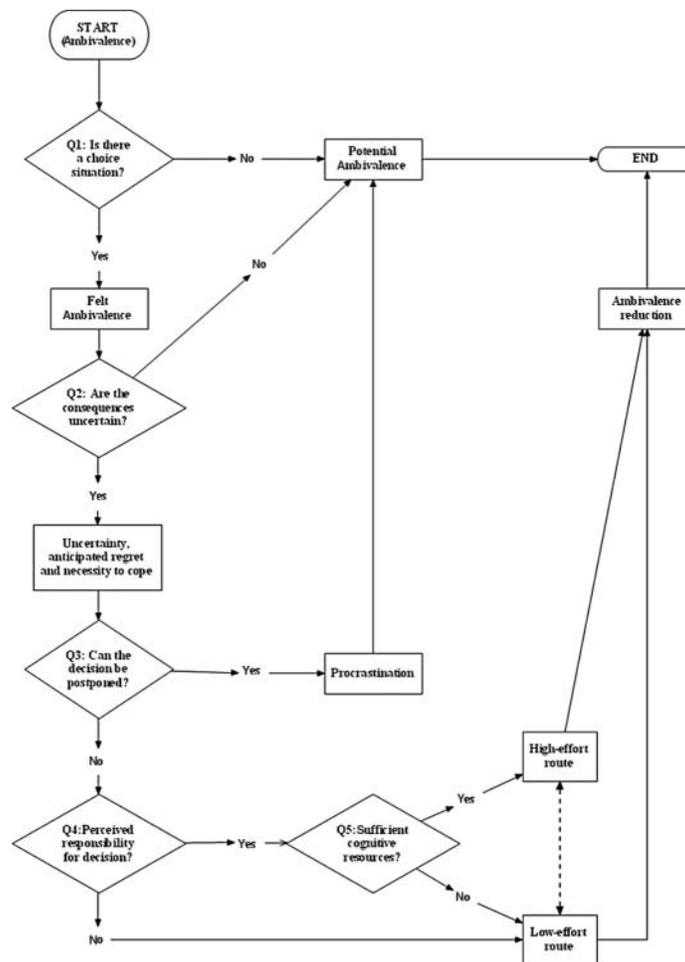


Figure 1 MAID: Model of ambivalence-induced discomfort.

represented on a continuum ranging from low-effort (heuristic) processing, via biased systematic processing, to the most effortful coping strategy: unbiased systematic processing. Regardless of these different potential representations, our main point remains: Coping strategies requiring different amounts of cognitive effort will be deployed depending on motivational factors as well as potential constraints of cognitive resources.

Whereas procrastination and denial of responsibility reduce the unpleasant feelings associated with the ambivalent choice, ambivalent attitude holders employ both the high- and low-effort route to actually reduce ambivalence through processes of self-persuasion. As seen in Figure 1, we believe that both routes can have an attenuating effect on ambivalence. MAID illustrates that ambivalence is a dynamic process, with ambivalent attitude holders often going through different behavioral and psychological stages that can help them make

ambivalence more bearable or, in other cases, eventually lead them to acquire evaluative congruence.

CONCLUSION

Folk wisdom has it that the line between love and hate is quite thin. When this line disappears and positive and negative thoughts (or feelings) occur at the same time, the simultaneous activation of positive and negative attitude components can lead to evaluative conflict or attitudinal ambivalence. By relating the literature on ambivalence with that on affect and decision making, we have shown that ambivalence can be experienced as unpleasant and a motivation to cope with this unpleasant feeling. The motivation to reduce ambivalence increases when the ambivalent attitude holder believes that a choice is imminent. The choice situation leads to

the simultaneous accessibility of the positive and negative components of the attitude, and these conflicting thoughts or feelings are experienced as unpleasant. This is mainly due to uncertainty about the outcomes of the decision and, specifically, the anticipation of negative emotions that may arise should the decision turn out to be wrong. Although a host of emotions may play a role here, such as disappointment, guilt, and fear, our focus has been on anticipated regret because this has been linked most extensively to decision making.

There is less reason for ambivalent attitude holders to experience discomfort when there is no discrete choice to be made. In fact, one could think of circumstances where ambivalence is actually desirable, as brought forward by Maio and Haddock (2004): "Ambivalence may be desirable when an issue is controversial. In this situation, people who appear ambivalent may give the impression of being fair and knowledgeable" (p. 435).

When ambivalence is undesirable, ambivalent attitude holders can reduce ambivalence in different ways. We have distinguished procrastination, denial of responsibility, unbiased and biased systematic processing, and heuristic processing as the most likely strategies. With the MAID, we attempted to show when each of these coping strategies is most likely to be used. Postponing the decision is the first option, and when this is not possible, feelings of anticipated regret may enhance the necessity to cope. Denial of responsibility for the decision can sometimes reduce these feelings of anticipated regret and thus take the sting out of the ambivalent feelings.

When these alternatives fail, however, one will attempt to change the attitude to reduce ambivalence. Whether this occurs via a high-effort route (unbiased systematic processing) or low-effort route (biased systematic processing or heuristic processing) depends on the availability of the required cognitive resources. What approach the ambivalent attitude holder uses to reduce ambivalence thus depends on the situation at hand, but it may also be related to personality variables. For example, people differ in the extent to which they can tolerate ambiguity and the extent to which they can satisfice when making a decision. Future research should develop our insight into the interplay between situational and personality variables in relation to ambivalence-induced discomfort.

We expect the ambivalence–discomfort relation to be most pronounced for attitudes that are central (Judd & Krosnick, 1982) or have a value-expressive function (D. Katz, 1960) because the quality of a behavioral choice related to the attitude object has direct consequences for the self. Research on the congeniality effect (Eagly, Chen, Chaiken, & Shaw-Barnes, 1999) has shown that attitudes that are linked to the self are associated with biased memory for attitude-related information.

On the basis of these findings, we expect biased predecision processing to be even more pronounced once the attitude object has a value-expressive function.

From the literature on attitude strength, we can draw a number of potential moderators of ambivalence-induced discomfort other than choice; however, we believe that the current review has, in a broader sense, implications for ambivalence as a dimension of strength. A considerable amount of research has demonstrated that ambivalent attitudes are weak (e.g., Conner & Sparks, 2002; Thompson et al., 1995). For example, ambivalent attitudes have been found to be less predictive of behavior, less stable (Armitage & Conner, 2000), and more susceptible to persuasive messages (Bassili, 1996). Bargh, Chaiken, Govender, and Pratto (1992) showed that ambivalent attitudes are less accessible than nonambivalent attitudes, and they interpreted this as an indication that ambivalent attitudes are weak.

However, one could also argue that some of these findings reflect the potential aversive nature of ambivalence. For example, the longer response times that are associated with ambivalence are perhaps not so much the result of slower activation of the ambivalent attitude but that of the resolution of the conflict that arises when people have to act on their attitude. This conflict is unpleasant, and the longer response times may thus reflect avoidant behavior toward the attitude object.¹ Similarly, ambivalent attitude holders may be more pliable because they deliberately want to change the aversive status quo. Sometimes ambivalent attitude holders even show behavior that is associated with strong attitudes. For example, ambivalent attitude holders tend to have more attitude-related thoughts and often invest more cognitive effort in processing new information about the attitude object. Future research could examine the relation between ambivalence and dimensions of strength, controlling for feelings of discomfort.

In the current review (and in research on ambivalence in general), the focus has been on situations where an attitude object elicits both positive and negative feelings. However, people quite often experience similar feelings of conflict when they have to choose between two alternative evils ("Should I stay, or should I go?") or two similarly positive alternatives (Buridan's ass starving between two stacks of hay). We have shown that mixed feelings can cause discomfort, especially when a choice has to be made. The uncertainty about the consequences if a decision should turn out to be the wrong is what motivates one to reduce decisional conflict, and we believe that this uncertainty plays a similar role when choosing between two equally positive or two equally negative alternatives. This notion is supported by research on the tyranny of freedom (e.g., Iyengar & Lepper, 2000; B. Schwartz, 2000), which shows that

when one buys a consumer product, a large number of alternatives can lead to lower levels of satisfaction about the eventual choice. B. Schwartz et al. (2002) have shown that this effect is stronger for maximizing individuals, suggesting that, again, anticipated negative emotions such as regret can play an important role here.

The literature on choice conflict does suggest that there are differences between choosing between attractive alternatives versus choosing between evils. Choosing between equally attractive alternatives constitutes an approach–approach conflict, whereas choosing between two equally unattractive options is an avoidance–avoidance conflict (Lewin, 1951). The latter choices are very difficult and are experienced as being psychologically unpleasant (Houston, Sherman, & Baker, 1991). Houston, Doan, and Roskos-Ewoldsen (1999) gave an illustration what these effects can lead to. They presented a study in which they show that negative campaigning in presidential elections—that is, where candidates mainly speak in unfavorable terms about their opponents—may lead to voters' experiencing an avoidance–avoidance conflict, which can in turn lead to a lower turnout on Election Day.

The findings presented in this review have potential value for programs aiming toward behavioral change. Many health-related behaviors (e.g., smoking, drinking alcohol, and eating unhealthy foods) are associated with ambivalence. However, people do not walk around all day feeling bad about their indulgences. In fact, feelings of discomfort arise only when temptation presents itself and one has to choose whether or not to indulge. The current review suggests that when trying to change attitudes, the persuasive message is most likely to have the full attention of the ambivalent attitude holder when he or she is experiencing behavioral conflict. Of course, the ambivalence-induced discomfort can itself serve as a deterrent through processes of evaluative conditioning. Gruesome pictures of the lungs of heavy smokers on packs of cigarettes (such as those in Canada) are an example of a behavioral change policy in which one enhances ambivalent feelings of smokers whenever they want to light a cigarette. Therefore, it is not surprising that smokers use covers to put over their packs of cigarettes so that they do not have to see these pictures whenever they reach for a cigarette.

The fact that many temptations are accompanied by feelings of ambivalence may help to design behavioral change strategies. However, there is also a downside to this relation. Research has shown that although people are already notoriously bad at resisting temptation (e.g., Nordgren, van der Pligt, & van Harreveld, in press), they are probably even worse in controlling themselves when they experience the negative affect that can be the result of ambivalence. The reason is that temptation

often involves weighing short-term gains (e.g., enjoying ice cream) versus long-term costs (gaining weight). Several studies have shown that negative affective states lead people to be inclined to choose the short-term gains (J. C. Schwarz & Pollack, 1977; Wertheim & Schwartz, 1983). Thus, although being aware of one's ambivalent feelings about fatty foods can lead to negative affect, this affective response can lead to a decreased ability to resist temptation. This process may take place parallel to the coping strategies discussed in the current article.

In terms of future research, we would like to argue that apart from the investigation of the relation with various indices of strength, it might be more fruitful to further examine the consequences of ambivalence. Previous research addressed the consequences for information processing, and we have shown that there can be behavioral consequences of ambivalence, such as procrastination. Although the current review aims to be a first step in focusing on choice, future research should investigate other factors that may determine the causes of ambivalence-induced discomfort.

With this review and the presentation of the MAID, we have aimed to show that research on attitudes can benefit from research on affect and decision making, and vice versa. On the basis of the present findings, we believe that it is time to change the way that we think about ambivalent attitudes. A focus on the psychological and behavioral consequences of ambivalence should enhance our insight into an attitude that is related to many of our daily behaviors and one that is increasingly prevalent in modern society.

NOTE

1. A closer look at how response times are generally assessed raises further questions about the supposed negative relation between ambivalence and accessibility. In studies on attitude accessibility, participants are usually presented with a dichotomy (i.e., good or bad). Although such a measure is useful for univalent attitude holders, ambivalent attitude holders simply do not have a response option that adequately reflects their attitude. Researchers have argued that ambivalent attitudes fundamentally differ from univalent attitudes because the former are simultaneously linked to positive and negative evaluations (Cacioppo, Gardner, & Berntson, 1997; Petty, Briñol, & DeMarree, 2007). The simultaneous presence of positive and negative associations is difficult to express on a dichotomous response scale, which could explain the slower response times for ambivalent attitude holders on these scales.

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