

# Attitudes and Behavior

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## Abstract

Attitudes have generated interest in the social sciences because they have been presumed to exert a strong influence on behaviors. This article reviews the evolution of perspectives on the attitude–behavior link. It begins with early perspectives that assumed a strong attitude–behavior association and then discusses research and perspectives challenging this assumption. Next, various explanations for why attitudes sometimes fail to predict behaviors are reviewed. The article concludes with a discussion of contemporary themes in attitude–behavior consistency research such as the proposition that the processes by which attitudes influence behavior differs as a function of whether behaviors are deliberative versus spontaneous.

## Attitude–Behavior Consistency in Historical Context

For decades, the attitude construct has played a central role in many areas of the social sciences. Although definitions of attitude have varied over time and across disciplines, most contemporary researchers have come to view an attitude as a relatively general and enduring evaluation of an object, person, or concept along a positive to negative dimension (e.g., Eagly and Chaiken, 1993; Fabrigar and Wegener, 2010). Attitudes have generated great interest in the social sciences because they have long been presumed to exert a strong influence on behaviors, decisions, and judgments. Thus, in many applied settings, attitudes are measured in an attempt to predict behavior and are the target of persuasive appeals in an effort to shape behavior.

In the early phases of attitude research, the close association between attitude and behavior was largely an article of faith. Indeed, many early definitions of attitude were based on the assumption that attitudes predispose an individual to behave in a certain manner (e.g., Allport, 1935). Likewise, early theories of attitude structure explicitly assumed that behavior was closely intertwined with attitude. For instance, the tripartite theory of attitudes proposed behavior as one of the three fundamental components of attitudes (e.g., Katz and Stotland, 1959). Similarly, early indirect measures of attitudes such as the lost-letter technique relied on directly observable behaviors that were presumed to be manifestations of attitudes (Milgram et al., 1965). Thus, these measures were based on the implicit assumption that attitudes are strongly associated with behaviors.

Despite being the prevalent belief for the first few decades of attitude research, the assumption that individuals typically act in accordance with their attitudes remained largely untested. However, this belief was sharply challenged following the publication of LaPiere's (1934) widely known study on racial prejudice, which appeared to reveal virtually no correspondence between overt behavior toward a Chinese couple and a subsequent measure of attitudes. Subsequent decades produced a number of other studies that appeared to challenge the proposition that attitudes were predictive of behaviors. Indeed, by the 1960s, researchers began to reevaluate the attitude construct and its relationship to behavior. This debate led

some researchers to conclude that little, if any, relationship existed between verbal measures of attitude and overt behavior, and some went so far as to recommend abandoning the attitude construct entirely.

Of these various challenges to the utility of the attitude construct, none was more influential than Wicker's (1969) review of 47 studies that appeared to suggest a rather trivial relationship existed between measured attitudes and overt behavior. More specifically, Wicker (1969) asserted that correlations between measures of attitudes and subsequent behaviors rarely exceeded 0.30 and were often considerably closer to zero. Finding an average correlation of 0.15 across studies, Wicker (1969: p. 65) declared that "it is considerably more likely that attitudes will be unrelated or only slightly related to overt behaviors than that attitudes will be strongly related to actions." He further concluded that "Only rarely can as much as 10% of the variance in overt behavioral measures be accounted for by attitudinal data (p. 65)." Despite presenting a rather gloomy outlook on the status of the attitude–behavior link, Wicker acknowledged the possibility that a large number of factors could have led to a reduction in attitude–behavior correspondence and called for a closer examination of their role in this relationship.

The skepticism expressed by Wicker and others regarding the utility of attitudes as predictors of behaviors did not go unchallenged. For example, both Kelman (1974) and Schuman and Johnson (1976) noted that Wicker (1969) based his review on an extremely limited range of domains of social behavior. Indeed, of the 47 articles included in his review, 20 examined attitudes in relation to workplace performance and absenteeism, 16 dealt with racial prejudice, and a small handful (11) assessed miscellaneous topics – several of which contained multiple studies on the same topic. Thus, based predominantly on two domains of social behavior, Wicker reached sweeping conclusions regarding the nature of the attitude–behavior link. These critics noted that when other domains of social behavior were examined, much larger attitude–behavior correlations were often observed. These criticisms notwithstanding, Wicker's review and that of other skeptics of the attitude–behavior link had an undeniable impact on the field and gave rise to what came to be known as the 'attitude–behavior

problem.' Understanding the implications of the apparent weak association between attitude and behavior became one of the central themes of attitude research throughout the 1970s and 1980s.

### Explanations for Low Attitude–Behavior Associations

Since the early 1970s, the guiding questions in attitude–behavior consistency research have been when and why measures of attitudes sometimes fail to be associated with behavior. Responses to these questions have taken a myriad of forms. However, at the general conceptual level, most responses to these questions can be broadly classified as falling into one of three broad themes.

#### Measurement Explanations

One potential explanation for why an attitude measure might be a poor predictor of a behavior is that the measurement procedure might in some way fail to accurately capture the attitude and/or the behavior. Indeed, a number of attitude researchers (e.g., see [Kelman, 1974](#); [Schuman and Johnson, 1976](#)) were quick to point out that numerous studies in Wicker's review utilized poor measurement procedures. For example, some investigations actually failed to include measures of attitudes, but rather made assumptions about participants' attitudes. Other investigations obtained measures of attitude that were likely not taken from the same person who performed the behavior. Still other studies examined topics that were socially sensitive and thus participants might not have honestly reported their true attitudes.

Of these various measurement-related explanations for weak attitude–behavior associations, probably the one that has received the most attention in the literature is the attitude–behavior specificity principle. According to [Ajzen and Fishbein \(1977\)](#) there are four elements (i.e., the action, target, context, and time) that contribute to the generality/specificity of an attitudinal or behavioral measurement. An example of these elements might be drinking coffee (i.e., action) with a classmate (i.e., target) in a local coffee shop (i.e., context) at 3 p.m. today (i.e., time). According to the specificity matching principle, if the goal is to predict the specific behavior illustrated above, then the respondent should be asked to provide his or her attitude about drinking coffee with a classmate at a local coffee shop at 3 p.m. today. Of course, such a highly specific measure of attitude would not be expected to be a very accurate predictor of an individual's general coffee drinking behavior. Instead, general coffee drinking behavior should be most accurately predicted by a correspondingly general measure of attitude toward drinking coffee. Taken together, to the degree that each of these four elements is of equivalent specificity in a measure of attitude as well as a measure of overt behavior, one can expect to obtain strong attitude–behavior correspondence.

In one of the first demonstrations of this principle, [Weigel and Newman \(1976\)](#) administered a general attitude survey on environmental issues to residents of a New England town. Three months after completing the survey, participants were contacted on various occasions over the next 5 months and

provided with opportunities to engage in specific environment-related activities. Consistent with the principle of specificity, their results indicated general attitudes toward environmental issues were relatively poor predictors of any specific environmental behavior (with most correlations below 0.35), but were significantly better predictors of a comprehensive index that aggregated all the individual environmental behaviors ( $r = 0.62$ ). Reinforcing this point, reviews of the attitude–behavior consistency literature have indicated that instances of strong attitude–behavior correspondence were reliably found when measures of attitude and behavior matched in specificity, but weak and inconsistent attitude–behavior correspondence was frequently revealed when mismatches of specificity occurred ([Ajzen and Fishbein, 1977](#)).

#### Clarifying the Role of Attitude in Behavior

Although flaws in measurement can account for many cases in which attitudes have been found to be poor predictors of behaviors, such methodological explanations cannot fully explain variations in attitude–behavior associations. Thus, a number of attitude researchers have sought more conceptual explanations. One general approach has been to more precisely specify how attitudes might influence behaviors and the potential role of other constructs in this process.

Perhaps the best exemplar of this approach, and certainly the most influential, is the Theory of Reasoned Action (TORA; [Ajzen and Fishbein, 1980](#); [Fishbein and Ajzen, 1975](#)). This theory begins with the premise that the effects of attitude on behavior are not direct. Instead, the theory postulates that the most proximal determinant of a behavior is a behavioral intention. A behavioral intention represents the amount of effort an individual is willing to exert in order to perform a given behavior. Because intentions are assumed to capture the motivational factors that influence behavior, as intentions increase in strength, so too does the likelihood that a given behavior will be performed. Thus, from the perspective of the TORA, behaviors can largely be conceptualized as intentional actions that typically fall under the volitional control of the individual. Hence, determining an individual's behavioral intention is the key to yielding accurate predictions of behavior. However, it is important to recognize that there are many factors that can intervene and reduce the predictive power of measures of intentions on behaviors. For example, the extent to which a measure of intention and a measure of behavior are of corresponding levels of specificity, the time elapsed between measurement of an individual's intention and a measure of their behavior, and the introduction of new information which may alter the individual's intention can all influence the intention–behavior link.

The TORA further proposes that one of two major determinants of an individual's behavioral intentions is reflected in their attitude toward the behavior. Attitude toward the behavior can be broken down into behavioral beliefs, which reflect an individual's beliefs regarding the consequences of performing a given behavior, and an evaluation of those consequences. The second major determinant of behavioral intentions is subjective norms, which denote an individual's belief that other people important to the individual concerned expect that a particular behavior should or should not be

performed. Subjective norms, in turn, are comprised of an individual's normative beliefs, which represent the belief that other people important to the individual concerned expect the individual to behave in a specific manner, and their motivation to comply with the expectations of others.

The TORA provides a useful framework for understanding why attitudes are sometimes only moderately correlated with behaviors. First, because the effect of an attitude on behavior is indirect, this necessarily sets an upper boundary on the strength of association that can be expected. For example, even if one assumes a relatively strong association between attitude and intention (e.g.,  $r = 0.60$ ) and between intention and behavior (e.g.,  $r = 0.60$ ), the expected correlation between attitude and behavior will be comparatively modest ( $r = 0.36$ ). Second, in some contexts, one might expect much more modest associations between attitude and intention. For example, when normative pressures for a behavior are strong (a socially sensitive behavior) and subjective norms contradict the attitude, one might quite reasonably expect an attitude to only weakly influence intentions, and thus be only weakly correlated with behavior.

Over the years, a sizeable body of evidence has accumulated supporting the proposed relationships among attitudes, subjective norms, intentions, and behaviors across a wide range of different domains of social behavior (e.g., see Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). Furthermore, the efficacy of predicting behavior using intentions rather than attitude was confirmed in a *meta-analysis* of 87 studies by Sheppard et al. (1988), who found an average correlation between intention and behavior of 0.53. Despite the relative success of the TORA, a major theme of subsequent research has been whether attitudes and subjective norms are sufficient to fully explain variations in behavioral intentions or if the prediction of intentions could be improved by the inclusion of additional factors. Among the factors that have been proposed are habit (e.g., Ouellette and Wood, 1998), moral obligations (Gorsuch and Ortberg, 1983), anticipated regret (Richard et al., 1998), and perceived behavioral control (Ajzen, 1985).

Of these additional factors, perhaps the construct that has been most widely accepted is perceived behavioral control. First introduced within the framework of the Theory of Planned Behavior (TPB; Ajzen, 1985), this construct reflects a person's beliefs regarding the difficulty of performing a given behavior. Enacting some behaviors is unhindered by internal or external factors, and thus are instances of high perceived control. In other cases, the performance of behaviors can be impeded by a combination of these factors and thus represent instances of low perceived control. Examples of internal factors include an individual's skills, abilities, knowledge, and adequate planning; whereas examples of external factors might include time, opportunity, and reliance on the cooperation of others. The TPB identifies perceived behavioral control as a separate variable that can influence behavior directly as well as indirectly, mediated by behavioral intentions. The theory predicts a direct effect of perceived control on behavior when an individual's behavior is unlikely to be entirely under volitional control and perceptions of behavioral control are accurate. The indirect effects of perceived behavioral control via intention reflect the assumption that inherent in perceived behavioral control are motivational properties that impact an individual's intentions

to perform a behavior. If people believe that a given behavior is outside of their control, behavioral intentions may be reduced even though favorable attitudes and/or subjective norms regarding performance of the behavior exist. This suggests another context in which attitude-behavior correspondence may be weaker than anticipated. If perceived control over performance of the behavior is relatively low, a positive attitude might not be sufficient to produce a strong intention to perform the behavior.

Research investigating perceived behavioral control suggests the addition of this construct has led to significant improvement in the prediction of behavioral intentions as well as actual behaviors (Madden et al., 1992). In line with this, McEachan et al. (2011) recently conducted a *meta-analysis* examining the contributions of perceived behavioral control to the theory of planned behavior. Their data revealed correlations between behavioral intentions and attitudes, subjective norms, and perceived behavioral control ranged from 0.40 to 0.57, and generated a multiple correlation of 0.67.

A second construct acknowledged by many researchers to have an important role in the attitude-behavior relationship is habit (typically operationalized using measures of past behavior; e.g., see Ouellette and Wood, 1998). Most contemporary theorists define habits as tendencies to repeat certain behavioral responses that generally require minimal thought and effort and that occur within the confines of specific supporting contexts. Indeed, research has shown that repetition of a behavior within a specific context frequently leads to the development of cognitive processes that become automatic, thus resulting in minimal effort and attention to perform a behavior. Based on this logic, proponents of the habit construct argued that within contexts that support the development of habits or where specific behavior patterns are already well learned, habits will be strong predictors of future behavior.

Advocates of the habit construct have argued that because the Theory of Reasoned Action assumes that behavior is largely under volitional control of the individual, the theory is better suited for predicting behaviors involving a strong deliberative component rather than those behaviors characterized by habitual or spontaneous responding. Several empirical tests investigating the addition of habit (i.e., past behavior) as a predictor have indicated improved prediction of intentions as well as actual behavior. Most notably, Ouellette and Wood (1998) conducted a *meta-analysis* of 64 studies. Their findings suggested the magnitude of the effect of habit on behavior ( $r = 0.39$ ) was generally equivalent with that of alternative predictors. Although the effect was somewhat weaker than intentions ( $r = 0.54$ ), the data revealed a slight improvement over the effect of attitudes ( $r = 0.33$ ), and a moderate increase compared with the effects of perceived behavioral control ( $r = -0.21$ ) and subjective norms ( $r = 0.23$ ). This suggests that at least some of the low and inconsistent relationships between attitude and behavior found in prior research may be explained when considering the role of habit in behavior.

### Attitude Strength

A second conceptual response to understanding variations in the strength of the attitude-behavior link was to focus on more

precisely understanding variations in the underlying cognitive and motivational foundations of attitudes. The central premise of this approach is that although two people might report similar attitudes, the underlying strength of these evaluations might well differ. Thus, when assessing the attitudes of groups of people, it might be inappropriate to assume that the entire sample is reporting attitudes that reflect stable and meaningful evaluations of a particular object. Instead, within any sample of individuals there may only be a subset of people who have relatively well-formed, meaningful attitudes. For this later group, the link between attitudes and behavior might be quite strong, but this strong link might well be obscured by people in the sample who lack strong attitudes on the topic. Indeed, if the group lacking strong attitudes is larger than the group who holds strong attitudes, the overall attitude–behavior correlation might be quite weak. Of course, an important question that naturally arises from this perspective is how one determines whether an evaluation is meaningful and relatively well-formed? To this end, a great deal of research throughout the 1970s and 1980s was focused on identifying the specific properties of attitudes that determine their strength (for reviews, see Fabrigar and Wegener, 2010; Fabrigar et al., 2005; Fazio and Roskos-Ewoldsen, 2005; Petty and Krosnick, 1995; Visser et al., 2006). This research has documented numerous properties of attitudes that have been found to moderate the strength of the attitude–behavior link.

Some of these properties reflected features of the underlying cognitive structure of attitudes. Of these, one of the most widely investigated properties has been the accessibility of an attitude in memory. Attitude accessibility is defined as the strength of the object–evaluation link in memory and is represented by the ease or speed with which the attitude is brought to mind. Numerous studies in both laboratory and field settings have found that greater attitude accessibility is associated with stronger attitude–behavior associations, presumably because of the greater likelihood that an attitude will be activated from memory at the time of the behavior. A second property of cognitive structure that has been studied extensively in the context of attitude–behavior consistency is attitude ambivalence. This construct is defined by the simultaneous possession of positive and negative evaluative responses toward an object. Highly ambivalent attitudes are characterized by both positive and negative evaluations of an object whereas attitudes low in ambivalence reflect predominantly positive or negative evaluations of an object. The majority of studies indicate attitude–behavior associations become weaker as ambivalence increases. Other properties of cognitive structure that have been examined in the context of attitude–behavior consistency include working knowledge, affective–cognitive bases of attitudes, and attitude complexity.

Other determinants of strength explored in the context of attitude–behavior consistency have involved subjective beliefs regarding the attitude or the attitude object. Of these subjective beliefs, the two most widely researched have been attitude importance and attitude certainty. Attitude importance can be conceptualized as the subjective sense of psychological significance an individual attaches to an evaluation or an object (Eaton and Visser, 2008). Increased importance has been found to be associated with higher attitude–behavior consistency across a range of different social behaviors. Attitude certainty

reflects the extent to which an individual is confident in their attitude toward a particular object (Tormala and Rucker, 2007). Recently, attitude theorists have proposed that certainty can be decomposed into two conceptually distinct components: attitude clarity (i.e., the subjective sense that one has a clear notion of their evaluation of a given object) and attitude correctness (i.e., the subjective sense that one’s evaluation of the object is valid). Research in a variety of domains has found that higher attitude certainty generally translates into stronger attitude–behavior correspondence.

Other determinants of attitude strength have reflected variations in the processes by which attitudes are formed or changed. The first determinant of this type explored in the literature was direct versus indirect experience with the attitude object. Research has indicated that attitudes formed via direct experience are more predictive of behaviors than are attitudes formed via indirect experience. More widely studied has been the extent to which an attitude is formed or changed via extensive cognitive elaboration of attitude-relevant information. Influential theories of attitude formation and change such as the Elaboration Likelihood Model (ELM; Petty and Wegener, 1999) and the Heuristic-Systematic Model (HSM; Chen and Chaiken, 1999) have postulated that attitudes can be formed and changed via highly thoughtful versus nonthoughtful processes. Highly thoughtful attitude formation and change occurs when an individual is highly motivated and able to carefully scrutinize the central merits of information regarding the attitude object (sometimes referred to as the *central route* to attitudes). In contrast, when a person lacks motivation and/or ability to engage in extensive cognitive elaboration of attitude-relevant information, the person will look for simple cues in the formation/persuasion context (e.g., the credibility of the source of the message) to provide a nonthoughtful basis for arriving at an attitude (sometimes called the *peripheral route* to attitudes). The ELM postulates, and subsequent empirical research has confirmed, that attitudes arrived at via careful thought are more enduring and consequential and therefore more powerful determinants of behavior than attitudes arrived at via relatively nonthoughtful processes.

### Contemporary Themes in Attitude–Behavior Consistency Research

Since Wicker’s influential challenge, the attitude–behavior consistency literature has gradually evolved well beyond its central focus on whether attitudes predict behavior. For the most part, attitude researchers now no longer support or even seriously debate the extremely pessimistic conclusions advanced in the late 1960s regarding the utility of attitudes as predictors of behaviors (e.g., see Eagly and Chaiken, 1993; Fabrigar et al., 2010; Fazio and Roskos-Ewoldsen, 2005). In fact, attitude researchers (e.g., Eagly and Chaiken, 1993) have sometimes expressed surprise that given the vast body of empirical evidence that has accumulated in contradiction to the pessimistic conclusions of the late 1960s, some social psychologists continue to believe that attitudes are only weakly related to behavior. Moreover, it is now recognized that general characterizations of the association between attitudes and behaviors as weak or strong is misleading because conditions



exist in which associations between attitudes and behaviors can be either extremely strong or nonexistent. Thus, attitude-behavior consistency has moved beyond the question of whether attitudes predict behaviors, and even to some extent beyond the question of when attitudes do or do not predict behaviors. In recent years, the focus in attitude-behavior consistency has shifted in an effort to more precisely understand the processes by which attitudes influence behaviors and to more fully understand the processes underlying the effects of various moderators of attitude-behavior consistency.

### Distinguishing between Deliberative and Spontaneous Behaviors

Until as recently as the late 1980s, much of the research on attitude-behavior consistency assumed that a single process could be used to describe the manner in which attitudes influence behaviors. Indeed, two of the more prominent theories of the attitude-behavior relationship, the Theory of Reasoned Action (TORA) and Theory of Planned Behavior (TPB), were advanced as theoretical frameworks that could generally be applied under all conditions. However, this notion has been increasingly challenged in contemporary attitude-behavior consistency research.

Of the theories to challenge this assumption, the most prominent has been the Motivation and Opportunity as Determinants (MODE) model of attitude-behavior consistency (Fazio, 1990; Fazio and Towles-Schwen, 1999). According to the MODE, attitudes serve as guides when making decisions and thus have the potential to influence behavior through affecting an individual's appraisal of their decision alternatives. The MODE model distinguishes between two different types of attitude-to-behavior processes. This distinction revolves around the extent to which choosing a particular behavioral response entails effortfully deliberating between alternative courses of action or a relatively effortless and spontaneous reaction to one's immediate circumstances. When people are motivated and have the opportunity to carefully consider their actions, people will engage in a relatively effortful deliberation of the costs and benefits of performing a specific behavior and thus form an attitude toward the specific behavior. In such a situation, the process by which an attitude influences a behavior will generally resemble the processes as outlined by theories such as the TORA and TPB.

In other situations, people may lack motivation to carefully consider their actions (e.g., if the decision has little importance) or the opportunity to do so (e.g., if distractions are present in the decision environment or the decision must be made very quickly). In spontaneous behavioral contexts of this sort, the MODE proposes that people will be unlikely to carefully consider the positive and negative consequences of a given action and form a specific attitude toward the behavior in question and subsequently a behavioral intention. Thus, theories such as the TORA and TPB may provide a poor description of the processes by which attitudes influence behavior for spontaneous behaviors. Rather, the MODE postulates that more general attitudes toward the target (or targets) of the behavior will be the more consequential attitude (attitudes). Under spontaneous conditions, when an individual encounters the object that is the target of the behavior, the attitude toward that

object will be activated in memory (presuming it is sufficiently accessible). This attitude then biases the perception of the object in an attitude-congruent fashion and perceptions of the object will in turn influence how the behavioral situation is construed. Construal of the situation will in turn determine the behavioral response that is undertaken.

To illustrate this process, consider a case in which you are approached by a man who is a member of a particular ethnic group who explains he has lost his wallet and would like you to provide him with \$2 to purchase bus fare to get home. If your attitude toward that ethnic group is sufficiently accessible, it will be activated and influence your perceptions of the requestor. A positive attitude might result in you attending to the positive features of the person (e.g., the friendly facial expression and polite wording of the request). A negative attitude might direct your attention to negative features of the person (e.g., shabby clothing). These perceptions in turn could strongly influence if you construe the situation as a sincere request from someone in need (in which case you might well assist him) versus a dishonest ploy to get money (in which case you might decline the request).

Research on the MODE has supported a number of its key premises regarding differences in deliberative versus spontaneous behavior (see Fazio, 1990; Fazio and Towles-Schwen, 1999). For example, in one early test of the MODE, Sanbonmatsu and Fazio (1990) conducted an experiment in which they presented individuals with information regarding two department stores: Brown's Department Store and Smith's Department Store. The information provided about the stores was such that Brown's was described in a positive manner for most of its departments, but its camera department was described as comparatively poor. In contrast, information regarding Smith's was negative for most departments, but information about its camera department was positive. Participants were then asked to indicate which store they would choose if they needed to buy a camera. Motivation at the time of the decision was manipulated by requiring respondents to either justify their responses or not, and opportunity by limiting the amount of time respondents had to make their decision or not.

Following the logic of theories such as the TORA, people should consider the specific positive and negative implications of purchasing a camera from both stores and then form a specific attitude toward purchasing a camera from one of the stores versus the other. This attitude should in turn lead to an intention to purchase a camera from one of the stores. Such a process would suggest that the great majority of participants should select Smith's department store because it has the superior camera department. This outcome in fact did occur when participants had both motivation and opportunity to deliberate about their decisions. However, when motivation and/or opportunity were low, most participants actually selected Brown's despite the fact its camera department was inferior. This finding suggests that people did not consider the specific implications of their behavioral actions, but instead were influenced by their more global attitudes toward the stores (even though those global attitudes implied a non-optimal decision). This later finding is consistent with the predictions of the MODE and not readily explainable using theories such as TORA.

As it relates to attitude–behavior correspondence, findings from tests of the MODE suggest that established theories such as the TORA and TPB remain useful accounts of attitude–behavior consistency when people have sufficient motivation and sufficient opportunity to deliberate about their actions. In such cases an attitude toward performing a specific behavior is likely to be the best predictor of performance of that specific behavior. However, when sufficient motivation and/or opportunity are lacking, more global attitudes toward the target or targets of the behavior might well be more useful predictors of even a specific behavior. In summary, when attempting to predict behavioral responses, the extent to which that behavior is likely to be performed in a deliberative versus spontaneous manner needs to be considered.

### Implicit and Explicit Attitude Measures

Another topic that has received significant attention in contemporary attitude–behavior consistency literature is the utility of explicit versus implicit measures of attitudes as predictors of behaviors (for reviews, see Petty et al., 2008). Explicit attitude measures directly ask people to report their attitudes and are represented by various traditional self-report measures that have been commonly used in attitudes research for decades. In contrast, implicit measures do not ask people to directly report their attitudes. Instead, attitudes are indirectly measured, usually using some form of priming paradigm or dual judgment task. Among the implicit attitude measures that have enjoyed substantial popularity in the literature are affective or evaluative priming, the Implicit Association Test (IAT), the Personalized Implicit Association Test (PIAT), the Affect Misattribution Procedure (AMP), and the Go/No Go procedure.

One interesting finding to emerge in this literature has been that implicit measures tend to be better predictors than explicit measures of automatic or spontaneous behaviors and decisions whereas explicit measures tend to be better predictors than implicit measures of more controlled behaviors and decisions (e.g., Dovidio et al., 1997). This basic finding has been demonstrated in a number of studies, but its interpretation remains a matter of much debate. Some have argued that implicit measures and explicit measures capture fundamentally different types of attitudes that are represented in distinctly different memory systems (i.e., implicit/unconscious attitudes versus explicit/conscious attitudes). Thus, these researchers have argued that spontaneous or automatic behaviors are more influenced by our unconscious evaluations whereas deliberative behaviors are more influenced by our conscious evaluations. Others have argued that such measures do not represent fundamentally different attitudes in memory, but instead reflect a single stored evaluation that is manifested in both automatic evaluative judgments (which are comparatively free of motivational concerns and higher level cognitions regarding the evaluation) and more thoughtful evaluative judgments. These more thoughtful evaluative judgments are influenced by the evaluation in memory as well as motivational concerns (e.g., self-presentation concerns and desires to avoid bias) and *metacognitions* regarding the evaluation (e.g., beliefs regarding the validity of the attitude). Thus, these researchers have argued that because spontaneous behaviors should also be less

influenced by motivational concerns and *metacognitions*, implicit measures should logically be better predictors of these behaviors. Conversely, because deliberative behaviors are more likely to be influenced by motivational concerns and *metacognitions*, they should be better predicted by explicit measures which are also influenced by these factors.

### Processes Underlying Moderators of Attitude–Behavior Consistency

A final theme that has recently emerged in the literature is a greater focus on understanding why specific moderators of attitude–behavior consistency have their effects. For example, as was noted earlier, a number of properties of attitudes have been found to moderate the magnitude of the attitude–behavior link. However, attitude theorists (e.g., Fabrigar et al., 2005, 2010; Fazio and Roskos-Ewoldsen, 2005) have noted that although the list of moderators of attitude–behavior consistency is quite lengthy, the psychological mechanisms responsible for many of these moderator effects are unclear. As such, it is difficult to know to what extent various moderators reflect similar versus distinct underlying processes. Thus, researchers have returned to the study of well-established moderators of attitude–behavior consistency in an effort to better understand the mechanisms responsible for these effects. Indeed, some researchers have postulated that the wide range of moderators in the literature might well be explained by a relatively small set of underlying mechanisms. One recent exemplar of this approach is the Mechanisms Responsible for Prediction and Influence (MRPI) model (Fabrigar et al., 2010; see also Fabrigar and Wegener, 2010). The MRPI proposes that there are three mechanisms that may account for variations in the impact of attitudes on behavior. Building on the MODE, the MRPI postulates that the emergence of these processes depends on whether a behavior is performed in a deliberative versus spontaneous manner.

When people are spontaneous, the theory holds that attitudes influence behavior by serving as simple nonthoughtful cues to appropriate action. Indeed, as discussed earlier, under spontaneous conditions attitudes can provide a simple basis for action even when it might not be logical to rely upon them. However, to serve as a simple cue, an attitude must be activated from memory at the time of the behavior. Thus, under low-deliberation conditions, the theory argues that potential moderators of attitude–behavior consistency will have an effect to the extent that they are related to the likelihood of attitude activation (i.e., attitude accessibility).

When people are motivated and able to be thoughtful, the MRPI postulates that attitude–behavior consistency can be thought of as a type of inference process in which people consider (if the attitude is activated) whether the attitude provides an informative guide for the behavior. That is, people consider whether the bases of their attitude are relevant to the goals of the behavior. If the attitude is seen as a relevant guide, it will influence behavior. If it is judged as uninformative for the behavior, it will have little influence. Consideration of the relevance of attitudes should most likely occur when behaviors are highly deliberative because the metacognitive process of judging the applicability of an attitude and disregarding it or correcting for its influence

requires considerable cognitive resources. Thus, under high deliberation, potential moderators of attitudinal influence will exert effects to the extent that they have an impact on attitude accessibility and/or the extent to which an attitude is perceived as a valid guide to behavior.

To date, testing of the MRPI is still in its early stages. Evidence does exist for each of the processes proposed by the MRPI in the context of some moderators of attitude–behavior associations. However, no single moderator has been examined in light of all the processes and some moderators have yet to be examined in light of any of these processes. Thus, much research remains to be conducted before the utility of the MRPI can be fully determined. However, regardless of the ultimate outcome of these tests, the general approach of more fully exploring the processes responsible for the effects of moderators of attitude–behavior consistency is likely to continue to be a guiding theme in the literature.

## Conclusions

The link between attitude and behavior has been of interest to attitude researchers since attitudes first became a topic of systematic empirical inquiry. Although perspectives on this link have varied dramatically over the years, there is little doubt that important advances have been made. The question of whether attitudes can predict behavior has largely been put to rest and influential theories designed to explain the processes by which attitudes exert their influence on behavior have been proposed. Moreover, researchers have documented an impressive array of factors that can account for when attitudes will and will not be useful predictors of behavior, and have now begun to grapple with the mechanisms underlying the effects of these factors.

*See also:* Attitude Formation and Change; Attitude Measurement; Cognitive Dissonance; Heuristics in Social Cognition; Implicit Association Test; Implicit Social Cognition; Persuasion Theories; Social Cognition; Social Psychology; Values, Psychology of.

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