

## *Attitudes: Foundations, Functions, and Consequences*

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It is difficult to imagine a psychological world without attitudes. One would go about daily life without the ability to think in terms of 'good' and 'bad', 'desirable' and 'undesirable', or 'approach' and 'avoid'. There would be no activation of positivity or approach tendencies upon encountering objects that would engender positive outcomes, but, perhaps more seriously, there would also be no mental faculty for avoiding negative objects in one's environment. Our environment would make little sense to us; the world would be a cacophony of meaningless blessings and curses. Existence would be truly chaotic, and probably quite short.

For these reasons, the attitude construct has proven indispensable in social psychology's understanding of why we think, feel, and do the things we do. Indeed, the field of social psychology was once defined as the study of attitudes (Thomas and Znaniecki, 1918). Even a quick perusal of the various books and review chapters on the attitude construct reveals that virtually every one begins with broad assertions about how pervasive evaluation is in everyday life (e.g., Fazio, 2001; Petty and Cacioppo, 1981). Osgood et al.'s (1957) showed that most of the meaning in language comes from evaluation. Certainly, attitudes have occupied a central position in social psychology for decades (Allport, 1935; Doob, 1947; McGuire, 1985).

How do we come to evaluate objects in our environment as positive or negative? What are the functions of these evaluations? How are they represented in memory, and how does this representation affect the ways they operate in predicting behavior? History has proven these questions to be some of the most important, and challenging, of

social psychology. Our goal in this chapter is to describe some of the ways in which researchers have approached these questions about the nature of attitudes, and to relate some of the insights that the field has collected in nearly 100 years. We do not aspire to be exhaustive. But we do hope to provide a broad coverage of attitude function and consequences, enough to stimulate the reader's thinking in ways that might later prove useful in filling some of the gaps of understanding that challenge the field. We discuss the classic tripartite view of attitudes and some more recent developments concerning how attitudes might be conceptualized. Next, some important qualities of attitudes, including various indices of attitude strength, are covered. We then turn to the question of why people form and hold attitudes; that is, what functions attitudes serve. Finally, we address the attitude-behavior relation, and provide a framework for thinking about the conditions under which attitudes are more likely to guide behavior.

### THE CLASSIC THREE-COMPONENT VIEW

Historically, the most prominent framework for the study of attitudes has been the tripartite, or three-component model (Katz and Stotland, 1959; Rosenberg and Hovland, 1960). In this view, the attitude is an unobservable psychological construct which can manifest itself in relevant beliefs, feelings, and behavioral components (Eagly and Chaiken, 1993). Because the attitude exists only

within the mind of the person, one must look for it in more observable realms (MacCorquodale and Meehl, 1948). So, for example, one's positive attitude toward chocolate might appear in favorable beliefs ('A good piece of chocolate really improves my day'), feelings ('Chocolate melting in my mouth brings me such a tranquil feeling'), and behavior ('I'm eating chocolate now').

At first glance, the tripartite view seems to be a foregone conclusion for several reasons. First, it provides a way of cataloguing various attitudinal responses and a framework for their study (e.g., Breckler, 1984). Second, it has served as a road map for guiding research on attitude formation and change (see Eagly and Chaiken, 1993, for a review). Third, it matches fairly well the intuitive distinction between the components. Indeed, the heart-head dichotomy has roots as far back as Plato, and has enjoyed privileged status in many popular psychological theories (McGuire, 1969, 1985). It also seems to exhaust the universe of possibilities of attitudinal responses (one would be hard-pressed to invent a response that could not fit somewhere in one of the three categories). However, the tripartite view includes several assumptions about the nature of attitudes that might better be left unmade (Zanna and Rempel, 1988). Indeed, these questions should remain open as empirical questions worthy of investigation.

Specifically, the tripartite view suggests that while one can not get into the head of the attitude-holder to study his or her attitude toward, say, abortion, that attitude should be observable in reported thoughts, feelings, and behavior toward the topic of abortion. That is, the attitude should manifest in all three ways (Rosenberg and Hovland, 1960). By this definition, all three components must be present for an evaluative tendency to exist. However, research suggests that attitudes can form as a result of any one (or combination) of the three components, and, moreover, that which forms the roots of the attitude has implications for the strength and persistence of the attitude (e.g., Abelson et al., 1982; Bem, 1972; Chaiken et al., 1995; Fazio and Zanna, 1981; Fishbein and Ajzen, 1975; Tyler and Rasinski, 1984).

The tripartite view also makes the dubious assumption that the three classes of evaluative responding must be consistent with each other, given their common dependency on an underlying construct. However, it is easy to imagine someone who believes that reproductive rights should be protected, but whose emotional reactions to the issue of abortion are quite negative (Breckler and Wiggins, 1989; Rosenberg, 1968). Such inconsistencies between affective and cognitive responses to an attitude object have important implications (which we discuss later), but they risk being overlooked (or the attitude would not really be considered an attitude) within a traditional tripartite model. Finally, and perhaps most problematic, is the

assumption of attitude-behavior consistency. The assumption that attitudes always guide behavior not only rails against common sense, but also inhibits some important questions from being asked regarding the conditions under which attitudes might best predict behavior, as we shall see later in the section on attitude-behavior relation.

With such ambiguity surrounding the tripartite model, it is not surprising that several researchers have attempted to reduce the number of components to two or even one. For example, some advocates of a one-component view argue that cognition forms the foundation of all attitudes, and that feelings and behaviors toward the attitude object simply derive from beliefs, as when, on the basis of cool-headed hard evidence, one decides to prefer Macintosh to Windows computer operating systems (e.g., Fishbein and Ajzen, 1975; Fishbein and Middlestadt, 1995). Others have insisted that 'feelings need no inferences', and that one's affective reactions to an object can precede any beliefs about it, as when one has a 'bad feeling' about a new acquaintance but can not seem to say why (e.g., Monahan et al., 2000; Zajonc, 1980). Finally, evidence exists that, in the absence of either beliefs or feelings about the attitude object, one can infer an attitude into existence from past behavior toward the attitude object, as when one author of this chapter noticed that he consistently bought olive-colored shirts, and therefore must like the color olive (e.g., Bem, 1972; Fazio, 1987). In any case, in light of several decades of evidence to the contrary, the assumption that all three components must be present and in agreement seems dubious indeed.

Zanna and Rempel (1988) re-examined some of the assumptions of earlier models of attitudes, including the tripartite view, and arrived at a less presumptuous formulation of the attitude construct. First, they regard attitudes simply as categorizations of an object or issue along an evaluative dimension. Essentially, this definition accords with Thurstone's (1946) classic, single-factor view of attitudes as 'the intensity of positive or negative affect for or against a psychological object' (p. 39). Second, Zanna and Rempel (1988) retain the notion that attitudes can form and manifest themselves from beliefs, feelings, and behavior, but strip away with the problematic assumptions of the traditional tripartite model. In their view, attitudes can be based on any combination of the three components, and they leave the issue of agreement between the three components as an empirical question. Thus, an attitude might develop through cognitive, affective, or behavioral processes, and no assumptions are made about which component might predominate, how the components interact in determining an overall evaluation of an attitude object, or how the components might affect one another.

A similar approach is evident in the view of attitudes proposed by Fazio and his colleagues

(Fazio, 1990, 1995; Fazio et al., 1982). Here, attitudes are viewed as associations in memory between attitude objects and their evaluation (Fazio, 1990; 1995). These associations are based on cognitive, affective, and/or behavioral knowledge of the attitude object, from which is derived a 'summary' evaluation. The strength of the association between an attitude object and its evaluation becomes an important quality of the attitude, one that will be discussed later (Fazio, 1995).

#### COGNITIVE, AFFECTIVE, AND BEHAVIORAL PROCESSES OF ATTITUDE FORMATION

Newer conceptualizations of the attitude construct advance the possibility that attitudes can form in multiple ways. The three key means of attitude formation we discuss implicate cognitive, affective, or behavioral processes.

#### Cognitive routes

An attitude is formed on the basis of cognitions when one comes to believe either that the attitude object possesses (un)desirable attributes, or that the attitude object will bring about (un)desired outcomes. Like the example of computer operating systems mentioned earlier, such an attitude is marked by an emphasis on beliefs about the attitude object. Perhaps the best known cognitive model is Fishbein and Ajzen's (1975) expectancy-value model. They argue that an attitude toward a given object is the sum of the expected value of the attributes of the object. Expectancy is defined as the estimate of the probability that the object has a given attribute, and the value of an attribute is simply one's evaluation of it. For each attribute, an expected value is computed by multiplying the expectancy and the value of the attribute. An overall attitude toward the object is reached by taking the sum of the expected values of all the attributes an attitude object is thought to have (e.g., Smith and Clark, 1973). Other models, such as Anderson's (1991) information integration theory, also describe attitude formation as a function of combinations of various beliefs and their evaluative implications (e.g., Anderson, 1981, 1982).

This all sounds very cerebral, and indeed it is. Surprisingly, Fishbein and Ajzen (1975) make the claim that all attitudes are based on beliefs about the attitude object, and that all attitudes are formed via the summation of subjective probabilities and values (see Fishbein and Middlestadt, 1995, for a recent argument to this effect). But while beliefs about attitude objects certainly contribute to our evaluations of them, and while some evidence

supports the model's account of how beliefs about attitude objects combine (e.g., Cronen and Conville, 1975), the model fails to address some important issues. Correspondence between the model's predictions and empirical data implies nothing about the process by which those attitudes are derived. Whether people actually engage in the probability assessment and summation processes these theorists describe is another question, and there are certainly ways other than their expected value equation that people arrive at the same attitude (see Eagly and Chaiken, 1993, for a critique of the model). Moreover, as evidence we will discuss below indicates, evaluations can form in the absence of beliefs about the object.

Other cognitive models focus more on the qualitative aspects of belief-based attitude change. The 'Cognitive-response' model addresses questions of how perceivers react to and elaborate on information (in the form of persuasive arguments) relating to an attitude object (Greenwald, 1981; Petty et al., 1981). Such models lack the precision of the mathematical models, but address some of the person, situation, and message variables that affect attitude development and change (for a review, see Petty and Cacioppo, 1986). Cognitive response models have been studied mostly within persuasion settings, and so the reader is referred to Chapter 10 to read more about this and its more modern descendants.

#### Affective routes

Attitudes formed from affect stem from emotional reactions to the attitude object. Like the example of chocolate mentioned earlier, one can be said to have an affectively based attitude when either positive or negative feelings are evoked when considering the attitude object. Social psychologists have uncovered three primary ways in which attitudes might be formed on the basis of affect: operant conditioning, classical conditioning, and mere exposure. Traditionally, operant conditioning has been used by experimental psychologists interested in basic learning principles, and is typically defined by the frequency of a response – positive outcomes increase the rate of response, and negative outcomes decrease it (e.g., Hull, 1951; Thorndike, 1932). Attitudes can be learned in a similar way when considered as a response. Attitudinal responses that lead to positive outcomes are more likely to occur again in the future, and attitudinal responses that lead to negative outcomes are less likely to occur. In a classic example, Hildum and Brown (1956) telephoned university students and acted as survey researchers interested in attitudes toward policies at their school. Some students' responses were answered with a 'good!' by the surveyors (responses that suggested a positive attitude

toward a university policy). These researchers found that positively reinforced responses were more likely to occur later – students whose positive responses toward a university policy were reinforced voiced more positive responses to university policies later. Insko (1965) found that reinforced responses were more likely to occur even when tested a week later in a different setting.

Classical conditioning is similar to operant conditioning, but the response emitted is thought to be internal. That is, no overt response is necessary to learn through classical conditioning; one need only attend to covariations between objects in one's environment. Through repeated pairings of some attitude object (such as a new beverage) and other clearly positive or negative objects (such as a sexy model), the affect associated with the second object comes to be associated with the attitude object. For example, Staats and Staats (1958) paired national names (such as 'Swedish') with positive or negative words, and found that the nation paired with positive words was evaluated more positively than the nation paired with negative words. Others have paired the onset or offset of shock with other words and have shown similar effects (Zanna et al., 1970). While some researchers have questioned whether this 'evaluative conditioning' can occur in the absence of awareness of the between the conditioned and unconditioned stimuli contingencies (e.g., Field, 2000), there is now evidence to suggest that people are quite good at encoding environmental covariations in memory even if they never consciously 'notice' them (for a review, see Seger, 1994). For example, Olson and Fazio (2001), in the context of a study about 'attention and surveillance', told participants that they would see a variety of 'random' words and images on the computer screen, and that they should press a response button whenever they saw a predetermined target item appear. While they were being vigilant for the target items, several other words and images were presented, supposedly as distracters to make the task more challenging. Embedded in this stream of random images were critical pairings of novel objects (Pokemon cartoon creatures) with either positive or negative words and images. Tests of explicit memory indicated that participants were completely unaware of the systematic pairings, but a surprise evaluation task indicated that they found the Pokemon creature paired with positive items more pleasant than the Pokemon creature paired with negative items (see also Olson and Fazio, 2002). Because these attitudes can form in the absence of conscious beliefs about the attitude object, classical conditioning stands to be a potentially ubiquitous form of attitudes in the real world (for a review, see De Houwer et al., 2001).

The evidence regarding operant and classical conditioning argues for the existence of attitudes on the basis of only affect. So does research concerning

the mere exposure effect. The underlying premise of the effect is that simply making an object 'accessible to the individual's perception' increases liking for it (Zajonc, 1968: 1). In a now classic experiment, Zajonc presented nonsense words (which he presented as Turkish words; for example, 'biweejni'), Chinese ideographs, or yearbook photos, to participants in varying numbers of repetitions. Participants were then asked to guess the meaning of the Turkish/nonsense words or Chinese ideographs, or to estimate how much they might like a person in one of the yearbook photos. His simple finding was that the more participants were exposed to a given item, the more favorably they evaluated it. Later researchers found that the effect generalized to many other attitude objects, and that it is most robust when the exposure is subliminal (Harmon-Jones and Allen, 2001; Monahan et al., 2000; see Bornstein, 1989; Zajonc, 2001, for reviews). Thus, short of the minimal amount of (probably nonconscious) cognitive work required to categorize the repeatedly presented items as familiar, familiarity appears to breed liking even in the absence of beliefs about the object.

### Behavioral routes

Without either clear feelings or beliefs about a potential attitude object, one may have still had past experience with it, as in the example mentioned earlier of one author's tendency to purchase olive-colored clothing. Bem (1972) claimed that this past behavior can be used to infer an attitude toward an object through self-perception. For example, Bandler et al. (1968) exposed participants to electric shocks, and induced them to either escape (that is, terminate) the shock or not. Although the shocks were of equal intensity, participants reported the shocks from which they had escaped to be more painful. Presumably, they inferred from their termination of the shocks that they must have been painful. Self-perception can also lead one to discount one's behavior as a source of information about one's attitudes, as when an intrinsically rewarding behavior comes to be associated with external rewards. For example, Lepper et al. (1973) found that children who had earlier freely engaged in an enjoyable activity enjoyed it less after having experienced an event in which they engaged in the activity in order to receive a reward (see Chapter 10, this volume, for a more in-depth discussion of self-perception and related processes).

In summary, attitudes can be based on either affect, cognition, or behavior, and the existence of an evaluation based on one of the elements need not imply the existence of the other two elements. Attitude researchers have taken Zanna and Rempel's advice, and have spent a good deal of

energy in exploring the complex structural relationships between the three bases of attitudes, and how these bases affect the nature and behavior of attitudes (e.g., Edwards, 1990; Millar and Millar, 1990). In fact, some of the most exciting work on attitudes premises itself on the often conflictual relationships between the elements. We describe some of these dynamics below in our discussion of the structural qualities of attitudes.

#### QUALITIES OF ATTITUDES

When prompted with a political survey question, two individuals might both rate George W. Bush as a '-2' on a -3 to +3 scale. However, even though their *reported* attitudes might look the same, their underlying evaluations may be very different. For example, one individual might have to think about it for a while before settling on an answer, whereas the other might explode with a vehement '-2!' immediately after being asked. For one individual, the attitude may stem primarily from affect, whereas for the other it may involve a thoughtful consideration of Bush's stands on important national issues. Such differences in the underlying qualities may have important implications for attitude function. Despite their numeric equivalence, one person's attitude might be stronger than the other's.

Many indices of attitude strength have been proposed. Among them are attitude certainty, importance, and centrality, as well as ego involvement, knowledge, commitment, and conviction. There is certainly overlap between the various strength measures, but, as of yet, there is little consensus on whether the many measures might be reduced to a simple few (see Bassili, 1996; Petty and Krosnick, 1995; Visser et al., in press). In the interest of brevity, we will focus on only a few of these measures, beginning with attitude accessibility.

#### Attitude accessibility

Recall that in the framework described by Fazio et al. (1982), an attitude is seen as an association in memory between an attitude object and its summary evaluation. The strength of that association can vary, and all attitudes are thought to exist somewhere along this strength continuum (Fazio, 1990, 1995). One end of the continuum is marked by nonattitudes (Converse, 1970); these are evaluations that simply are not available in memory. When prompted to make an attitudinal response, someone with a nonattitude toward a given object must construct one based on any currently known or observable attributes of the object. The other end

of the continuum is characterized by strong associations in memory between attitude objects and their respective evaluations. Such attitudes are capable of being automatically activated upon encountering the attitude object (Fazio, 1995). So, whereas the sight of an obscure brand of juice activates little from memory, and an evaluation of that juice must be based on whatever is known or might be learned about it at the time, the mere sight or aroma of coffee activates an impressive rush of positivity in many a coffee drinker.

This reasoning underlies a common measurement of associative strength, latency to respond to attitudinal inquiries, or 'attitude accessibility' (e.g., Powell and Fazio, 1984). In this procedure, participants are presented with labels or images of several attitude objects, and are asked to indicate, as each object is presented, whether they like or dislike the attitude object by pressing one of two response keys as quickly as possible. Because strong attitudes require less cognitive work to report, they are responded to much more quickly than weaker ones. Thus, response latencies to attitudinal judgments serve as an indicator of associative strength.

Because strong attitudes are capable of automatic activation, the mere presentation of the attitude object can activate positivity or negativity, depending on the attitude. Borrowing from work in cognitive psychology on automatic activation (e.g., Schneider and Shiffrin, 1977), Fazio and colleagues (e.g., Fazio et al., 1986) reasoned that if an attitude object's presentation automatically activates, say, positivity, responses to other positive items should be facilitated. Measurement of the activation of some other positive item in memory after presentation of the first positive item could then serve as an indirect indicator of the extent to which positivity is automatically activated in response to the first item (Fazio et al., 1986, 1995). In this paradigm, an attitude object, say, 'coffee', is presented for a short duration (usually 100–300 milliseconds), and it is followed by either a positive or a negative adjective. The participant's task is to indicate whether the adjective means 'good' or 'bad' by pressing one of two corresponding response keys. If the attitude toward coffee is sufficiently strong (and positive), and is followed by the word 'awesome', one should be quicker to identify 'awesome' as a positive word. Analogously, one should be slower to identify a negative word, say, 'horrible', as negative.

In their first demonstration of the paradigm, Fazio et al. (1986) presented attitude objects as primes that had been idiosyncratically selected for each participant as strong and weak. In a later experiment, accessibility was manipulated by having participants repeatedly express their evaluations of some attitude objects in an earlier phase of the procedure. In both cases, attitudes characterized by stronger object-evaluation associations were relatively more capable of automatic activation. For

these relatively accessible attitudes, participants were quicker to identify evaluatively congruent target adjectives that followed the presentation of the attitude object (see Fazio, 2001, for a review of recent developments concerning the affective priming paradigm and automatic attitude activation). These relatively strong attitudes are then more likely to direct attention to the attitude object, affect perceptions of it, and guide behavior toward it, as we shall see later.

### Ambivalence

Any given attitude object may be characterized by both positive and negative qualities. To the extent that such inconsistencies are unresolved, an individual may possess both positive and negative evaluations of the attitude object. In other words, the individual's attitude can be viewed as 'ambivalent' (Kaplan, 1972).

Traditional measures of attitudes assume that attitudes exist somewhere between absolutely negative and absolutely positive, and require respondents to place their attitude toward a given object somewhere on a single dimension scale, typically anchored at one end with 'dislike', and at the other end with 'like' (Himmelfarb, 1993; Thurstone, 1928; see Cacioppo et al., 1997, for a bidimensional conception of attitudes). Such scales deny the possibility that someone might feel *both* positively and negatively toward a given object (that is, ambivalent), or *neither* positively nor negatively toward a given object (that is, indifferent). The meaning of the zero or neutral point on the scale then becomes questionable, because, presumably, respondents would respond somewhere near the zero or neutral point whether they feel both positivity and negativity, or neither (Converse, 1970; Kaplan, 1972). As one might suspect, there are important differences between the two cases that we will discuss below. Researchers interested in ambivalence have circumvented this problem by requiring respondents to make two estimates toward a given object – one with regard to the positivity they feel toward the object, and another with regard to the negativity they feel toward the object. A variety of methods exists for computing indices of ambivalence based on these responses, but all agree that ambivalence exists to the extent that respondents indicate feeling some degree of both positivity and negativity toward the object (Kaplan, 1972; Priester and Petty, 1996; Thompson et al., 1995).

Many researchers would argue that ambivalence is an unstable and subjectively uncomfortable state (e.g., Newby-Clark et al., 2002), and some of the consequences of ambivalence are based on this premise (Katz, 1981; Katz and Hass, 1988). One such consequence is 'ambivalence amplification', which is the notion that behavior toward the attitude

object is amplified, or extremized, in either the positive or negative direction, in an effort to reduce ambivalence (e.g., Hass et al., 1994). For example, Katz and Hass (1988) argue that many whites hold ambivalent attitudes toward blacks – they believe that blacks deserve egalitarian treatment and respect as individuals, but they simultaneously believe that blacks violate the American values of hard work and independence. The result is often exaggeratedly positive or negative treatment of blacks.

Ambivalent attitudes are marked by other important qualities as well. Because ambivalence is thought to be an unstable state, ambivalent attitudes are prone to change (Bargh et al., 1992; Bassili, 1996), and are relatively less predictive of behavior (Armitage and Conner, 2000). They are also more context dependent, meaning that whether the positive or the negative component is activated depends on the particular situation (Moore, 1980).

### Evaluative-cognitive consistency

As Zanna and Rempel (1988) note, numerous permutations of agreement or disagreement between affect, cognition, and behavior, as well as the overall summary attitude, are theoretically possible and interesting. For example, the 'heart' (affect) and 'mind' (cognition) may not cohere perfectly, or the summary evaluation may correspond more closely to affect than to cognition, or vice versa.

One such form of potential inconsistency within the structure of an attitude has received much more attention than others. Although originally labeled affective-cognitive consistency, the research is more appropriately referred to as involving evaluative-cognitive consistency, as Chaiken et al. (1995) have argued. The research concerns the degree of consistency between an individual's overall evaluation of an attitude object and the evaluative implications of his or her beliefs about the object. Beginning with the work of Rosenberg (1960, 1968), interesting relations have been observed between the extent of such correspondence and indications of attitude strength. Chaiken and Baldwin (1981) found that individuals whose attitudes were characterized by greater evaluative-cognitive consistency were less influenced by the implications of a linguistically biased questionnaire that made salient either their pro- or anti-environment behaviors. Whereas participants with initial attitudes characterized by low consistency displayed attitude change in the direction of the salient behavioral information, those with higher evaluative-cognitive consistency were unaffected. Their attitudes remained stable. In a parallel manner, Rosenberg (1968) obtained evidence that greater evaluative-cognitive consistency was associated with greater resistance to counterpersuasion and Norman (1975) found such intra-attitudinal correspondence to be associated

with greater consistency between attitudes and subsequent behavior. Chaiken et al. (1995) provide a more detailed and comprehensive review of research concerning such measures of structural consistency and their relation to attitude strength.

We have reviewed a few important qualities of attitudes: attitude accessibility, ambivalence, and evaluative-cognitive consistency. Much more work has been done on these and other qualities of attitudes, and, more generally, on various indices of attitude strength (Petty and Krosnick, 1995). Likewise, ambivalence can take additional forms beyond those mentioned here (Zanna and Rempel, 1988). Our review has been necessarily selective, but we hope we have succeeded in communicating at least some of the important complexities of attitude structure. Next we address the functions that attitudes serve; that is, why we evaluate.

#### ATTITUDE FUNCTION: THEN AND NOW

In the late nineteenth and early twentieth centuries, psychologists divided themselves rather decisively into two camps: structuralists and functionalists. Structuralists believed that psychology's purpose should be merely to describe the phenomena of the human mind, and not speculate why these phenomena exist (e.g., Titchener, 1910). Functionalists, however, were interested in the adaptive significance of psychological phenomena, and held that understanding human psychology required an appreciation of the premise that the human mind has evolved to solve certain adaptive problems – that psychological phenomena have specific functions (e.g., James, 1952). We would agree that, in the case of attitudes, understanding why we evaluate is a crucial component to understanding attitudes more generally.

#### Theoretical perspectives

Consideration of the functions served by attitudes began in the 1950s. Smith et al. (1956) and Katz (1960) each proposed a series of attitudinal functions aimed at covering the various reasons why people evaluate objects in their environment. Katz's taxonomy included a utilitarian, knowledge, ego-defensive, and value-expressive function. The utilitarian function is premised in the behaviorist principle of seeking rewards and avoiding punishment in one's environment. In this sense, attitudes help to ensure the organism's survival, but, more broadly, any attitude based on an interest in maximizing pleasure and minimizing pain for oneself can be considered utilitarian (Green and

Gerken, 1989). The knowledge function is related to the utilitarian function in that it helps in navigating one's environment, but, according to Katz, it also fulfills a specific need to organize one's world and make sense of an otherwise daunting information environment (see also Allport, 1935). Dividing the world into likes and dislikes provides the kind of order and predictability that, according to Katz, we all crave. Smith et al. (1956) proposed an 'object-appraisal' function, which can be thought of as a combination of Katz's utilitarian and knowledge functions. They argue that such an attitude provides a way of 'sizing up' objects in one's environment, saving the time and energy that would be required constantly to compute new attitudes toward objects. Such 'ready-aids' allow organisms to navigate more efficiently their environment and quickly decide whether an object should be approached or avoided. We have more to say about this particular function later.

Katz's ego-defensive function and what Smith et al. called the 'externalization' function are quite similar. Both are rooted in psychoanalytic defense mechanisms such as repression and projection, which are argued to provide a means of preserving the self-concept in the face of some threat. For example, Katz (1960) argued that prejudice is often the result of one's own feelings of inferiority, and that derogating an out-group can make the individual feel better by comparison. Beyond prejudice, ego-defensive attitudes can serve to protect the self under conditions of any threat (such as economic depression and health risks; Eagly and Chaiken, 1993).

'Value-expressive' attitudes are thought to affirm the self and one's identity. Katz and others (e.g., McGuire, 1985; Steele, 1988) propose that people have an inherent need to solidify their beliefs about who they are, and that expressing important aspects of the self verifies one's identity. Some attitudes – ones of great importance to the individual – become a kind of realization of one's identity when expressed. A firmly held conviction, such as opposing all forms of war, should lead one to adopt proattitudinal positions and perform proattitudinal behaviors for the purpose of affirming the self. But while value-expressive attitudes perform important functions at an individual level, we would say that the attitude is performing what Smith et al. (1956) termed the 'social adjustive' function when one's antiwar stance wins praise and promotes friendship with like-minded others. Such attitudes can influence relationships and fulfill the need to relate to others.

#### Empirical progress

Perhaps owing to its intuitive appeal, functional theory was readily accepted by researchers interested in attitudes. However, the theory actually stimulated surprisingly little research (Eagly and Chaiken, 1993). Indeed, until recently, there was

little experimental evidence to support some of the fundamental tenets of functional theory. This lack of empirical progress may have been due to a lack of adequate measures and operationalizations of function. Without some means of assessing the function that was being served by a given attitude, little could be decided either way on the merits of functional theory (Herek, 1986). Fortunately, progress is apparent in more recent work. Some of these advances include approaches to the assessment of attitude functions (e.g., Herek, 1987), consideration of individual differences concerning attitude functions (e.g., Snyder and DeBono, 1987), and examination of the ego-defensive (e.g., Fein and Spencer, 1997) and object-appraisal (e.g., Fazio, 2000) functions in particular. Each will be reviewed in turn.

Herek (1987) derived an open-ended measure of assessing attitude function. Essays that participants wrote about their attitudes were content-analyzed for their functional themes. Although Herek's original formulation was aimed at assessing the functional orientations of attitudes toward stigmatized groups, theoretically, it could be applied to other attitude objects as well (Eagly and Chaiken, 1993). Indeed, related open-ended, thought-listing measures of function have been fruitfully employed to study a wide array of attitude objects (e.g., Prentice, 1987; Shavitt, 1990).

Others have taken an individual-difference approach to the study of attitude function. Snyder and colleagues argue that self-monitoring, the extent to which one is concerned with how appropriate his or her behavior is in others' presence, has implications for attitude function (Lavine and Snyder, 2000; Snyder, 1974; Snyder and DeBono, 1987). They argue that high self-monitors' attitudes are more likely to serve a social adjustive function, and that low self-monitors' attitudes are more likely to serve a value-expressive function. As evidence for this assertion, DeBono (1987) presented arguments against the deinstitutionalization of mentally ill patients to high and low self-monitoring college students who were in favor of deinstitutionalization. One set of statements emphasized that most students were opposed to deinstitutionalization (thus appealing to the social adjustive function), while another set emphasized that opposing deinstitutionalization was consistent with important personal values (thus appealing to the value-expressive function). The intent of this design was to test an idea that came from early theorizing on attitude function and persuasion: the functional matching hypothesis – the idea that persuasive arguments will lead to greater attitude change if they match the functional basis of the attitude. Consistent with this hypothesis, high self-monitors were more swayed by the social adjustive statements, and low self-monitors were more convinced by the value-expressive arguments. Petty and Wegener (1998) later showed that

this effect of functional matching was the result of greater scrutiny of arguments that match the function of the attitude, and, hence, is limited to messages employing strong arguments.

In a different twist on the individual difference approach, Prentice (1987) argues that people differ in their functional orientations in general – specifically, that functional orientations toward their valued possessions indicate functional orientations of their attitudes more generally. She derived participants' functional orientations through their open-ended descriptions of why they valued their favorite possessions, and was able to determine the degree to which a given individual was 'symbolic' (that is, value-oriented) or 'instrumental' in orientation. For example, some people may say that they love their car because it symbolizes their freedom, and others may simply appreciate its performance or reliability. Knowing their functional orientations, Prentice then presented people with different arguments about a variety of attitudinal issues. Consistent with the functional matching hypothesis, symbolically oriented individuals were more receptive of symbolic arguments, and instrumentally oriented individuals were more receptive of instrumental arguments.

However, Shavitt (1990) has shown that attitude objects themselves promote different kinds of functions. Using thought-listing procedures, she identified attitude objects for which attitude function inhered to the object. For example, attitudes toward perfume and greeting cards usually serve a social-adjustive, or what Shavitt refers to as a 'social-identity', function, whereas attitudes toward air conditioners and coffee are utilitarian in nature. Persuasive messages that matched the typical function of the attitude object proved more effective than mismatched arguments did. Thus, not only can specific attitudes differ in their symbolic or instrumental functions, but people differ in their symbolic or instrumental orientations toward objects in general, and objects themselves can lend themselves to different attitude functions.

Other recent advances concerning attitude function come from work on the ego-defensive function of prejudice. Fein and Spencer (1997) argue that derogating a member of an out-group can provide a boost to the self-image after it has been threatened, but is less likely if one has recently experienced self-affirmation. Participants who had been given self-esteem-damaging feedback regarding their performance on an intelligence test were more likely to derogate a job candidate in a later task. Moreover, mediational analyses indicated that to the extent that these threatened participants derogated the candidate, their self-esteem improved. Fein and Spencer (1997) also found that participants who had recently affirmed their core values were less likely to derogate a job candidate on the basis of ethnicity or sexual orientation.



More recently, these authors have shown that the automatic activation of negativity toward a member of a stereotyped group can be mediated by threats to the self (Spencer et al., 1998). Several studies in social cognition suggest that stereotypes of out-groups can be activated automatically, but only in cases where participants are not under 'cognitive load', that is, distracted by some additional task. Spencer et al. (1998) exposed participants to either an Asian-American (Experiment 1) or an African-American (Experiments 2 and 3) while under cognitive load, and assessed the degree to which negative stereotypes were activated, using a word fragment completion task (for example, 's—y' might be completed as 'shy', showing activation of the Asian stereotype). Earlier, participants had completed an intelligence test, and half were told that they performed poorly on it (thus evoking a self-image threat), while the other half were told that they performed relatively well. Only the participants who had received negative feedback showed evidence of stereotype activation, suggesting that they were prepared to apply their stereotypes to the Asian- and African-American targets in ego defense.

These studies by Fein and Spencer (1997) and Spencer et al. (1997) provide strong evidence that negative evaluations of members of out-groups can serve an ego-defensive function. Interestingly, very recent work suggests that evaluations of out-group members can be positive in cases where the out-group member reacts favorably to the perceiver, and negative in cases where the out-group members reacts negatively to the perceiver (Sinclair and Kunda, 1999). Thus, it appears that evaluations of out-group members might be used flexibly to arrive at whatever best suits the ego in a given situation.

#### THE OBJECT-APPRAISAL FUNCTION

So far we have shown evidence that liking or disliking a given attitude object can serve one of several psychological functions, and that function drives the direction of the attitude, whether the attitude assumes a positive or negative valence. That is, the function served by a given object for a given individual forms the basis of the attitude. The object-appraisal function, however, is unique in that it implies that merely having an attitude, regardless of its valence, is functional for the individual (Fazio, 1995; Fazio et al., 1992; for a more extensive review, see Fazio, 2000). As suggested in the opening of this chapter, having precomputed evaluations allows one to navigate one's environment efficiently, without being forced to decide, upon encountering each new object, whether it should be approached or avoided. Indeed, object appraisal is the most primary and widely applicable of the attitude functions.

Accessible attitudes in particular are likely to serve this object-appraisal function (Fazio, 2000). Recall that these attitudes are characterized by strong object-evaluation associations, and hence are most easily brought to mind in the presence of the attitude object. The stronger the object-evaluation association is for a given object, the less work one must do in 'sizing up' the object when presented with it. As we shall see, the functional benefits of accessible attitudes span from guiding attention to important objects in one's environment to arriving at better-quality decisions, and to free up resources to deal with other environmental stimuli.

#### Visual attention

Considering the number of objects in one's visual environment at any given time, some items must be filtered out of perception as unimportant, and others must be focused on because of their hedonic value. Roskos-Ewoldsen and Fazio (1992) hypothesized that attitude objects toward which people hold accessible attitudes perform this basic perceptual function by guiding attention toward hedonically relevant stimuli in the environment. They either measured attitude accessibility (using the response latency technique mentioned earlier), or increased the accessibility of attitudes with a manipulation whereby participants were induced to rehearse their attitudes repeatedly. The attitude objects used were simple line drawings of objects, and participants were shown several such drawings in a visual array (some of which included the drawings toward which attitudes were highly accessible). Whether attitude accessibility was measured or manipulated, participants were quicker to notice objects toward which they had accessible attitudes. These attitude objects were more likely to attract attention even when they were presented as distracters in a task where their presence was completely irrelevant. Thus, objects toward which people have accessible attitudes are at an advantage to be noticed (much like when a coffee drinker is quick to notice the aroma of coffee in the air). These attitudes simply affect what we see, and such a function is valuable in a world filled with distractions. Objects that have been associated with positive or negative outcomes in the past are important to attend to in order to ready approach or avoidance responses, and accessible attitudes fulfill this attentional function.

#### Categorization

Objects can be categorized in multiple ways, and the categories into which they fall can affect further information processing and behavior. For example, a cigarette can be thought of as a much needed 'fix'

to a smoker, an annoyance to a nonsmoker, or a serious health hazard to an asthmatic. How an object is categorized can depend on one's attitudes. Smith et al. (1996) reasoned that the presentation of an attitude object activates, at least to some extent, each category into which it might be placed, and that which category predominates depends on the attitudes one has toward the categories. The category associated with the most accessible attitude toward it is likely to guide attention toward the relevant aspects of the stimulus, and encourage categorization of the object into that category. So in the same way that attitude-evoking objects attract attention, attitude-evoking categories increase the likelihood that they will be used to categorize objects that may fit into them.

Smith et al.'s (1996) experiments focused on a given attitude object and two potential categories into which it might fit (for example, 'yogurt' might be a dairy product or a health food). Attitudes were rehearsed for one category (say, health foods) through repeated expression to increase their accessibility, and judgments of whether the category was animate or inanimate were made for the other category (say, dairy products). Participants performed this task for several categories. Later in the experiment, participants were presented with the attitude object (yogurt) for the first time, and were instructed to use it as a cue to remember the earlier items. Recall the earlier reasoning that each category into which an object might be placed should receive some activation. If the attitude toward the category 'health food' was made more accessible, greater attention should be drawn to the health food-relevant attributes of yogurt. The result would be a greater tendency to categorize yogurt as a health food, which would then serve as a recall cue for the earlier rehearsed items. This is exactly what Smith et al., found – categories toward which participants had more accessible attitudes were more effectively cued by attitude objects that could be members of the category. Analogous results were found even when there was a one-week delay between the attitude-rehearsal phase and the cued recall phase. Thus, accessible attitudes promote the construal of objects in a manner that is hedonically meaningful for the perceiver.

A similar study replicated these same basic results using people of various races as attitude objects (Fazio and Dunton, 1997). To assess the extent to which race was attitude evoking, Fazio and Dunton (1997) adapted the priming measure of attitudes mentioned earlier, using black and white faces as primes (Fazio et al., 1995). Participants then took part in a 'second experiment', where they made similarity judgments about many combinations of pairs of individual photos that varied on a number of dimensions, including race. Fazio and Dunton found that the attention of participants for whom race was attitude evoking (whether it was a

positive or a negative attitude) was drawn to the races of the photo pairs, which led them to use race to categorize the faces and make their similarity estimates. Arguably, that act of categorizing the faces by their race could then affect perceptions, judgments, and later behavior toward the targets.

### Decision making

Perhaps the most direct evidence that accessible attitudes satisfy the object-appraisal function would be a demonstration that decision making that allows for the use of accessible attitudes is less effortful than decision making that does not. Fazio et al. (1992) did this by measuring participants' blood pressure while they were forced to make pair-wise preference ratings in a rapidly presented series of abstract paintings. Some participants had rehearsed their attitudes toward the individual paintings before the preference task, thus increasing the accessibility of their attitudes toward the paintings. The task was much easier for these participants, as indicated by their lower blood pressure while performing it, as compared to those who did not rehearse their attitudes (see also Blascovich et al., 1993).

This research not only indicated that accessible attitudes ease decision making but also provided evidence that they increase the *quality* of decision making. After completing the pair-wise preference task, participants were asked to rank order the paintings at their leisure (providing unlimited time to offer their evaluations of the paintings presumably allowed participants to be more accurate). Their rank orderings were then compared to the preferences reported in the speeded pair-wise preference task. Greater correspondence between the preferences reported in the pair-wise task and the ranking task was found for those whose attitudes had been made more accessible. So, when the environment demands rapid reactions, accessible attitudes not only reduce the stress of decision making but also enhance the quality of the decisions.

### Freeing resources for coping with other stressors

These findings illustrate the various ways in which accessible attitudes make navigating one's environment an easier task. But, more broadly, having accessible attitudes toward a variety of objects can free up one's cognitive resources considerably – resources that may then be used to deal with other environmental stressors. One's first semester in college is filled with stressors, and Fazio and Powell (1997) investigated whether entering college with accessible attitudes towards college-related activities helped reduce the impact of these stressors.

They measured the accessibility of a variety of college-related attitudes (such as studying in the library, pulling an all-nighter, and potential majors) of incoming freshmen, using the latency to respond to attitudinal inquiries measure. Comparing students' response latencies to items concerning college activities to other filler issues, they were able to derive a general estimate of the extent to which each student arrived at college 'pre-equipped' with accessible attitudes toward a variety of stressors they were soon to face. Students also reported a wealth of information about their current levels of stress, depression, and other mental health-related states, as well as information about their current physical health. Two months later, they returned and completed the same mental and physical health measures. The relationship between these measures from time 1 and time 2 varied as a function of having accessible attitudes. For those students who began college with relatively poor health, the number of stressors they were experiencing affected their recovery in that fewer stressors at time 1 led to better health at time 2. However, the relationship between stressors and improved health was moderated by attitude accessibility – those students with accessible college-related attitudes and fewer stressors at time 1 improved more. For students who began college in relatively good health, more stressors at time 1 led to poorer health later. But for those who had accessible attitudes, the negative effect of stressors on later health was diminished. Thus, having a reservoir of accessible attitudes to draw from frees one's energies for dealing with other stressors, and the deeper the reservoir, the more energy one will have for dealing with whatever life might present.

### **Costs of accessible attitudes**

So far, we have seen that attitudes perform important functions for the perceiver, and that accessible attitudes in particular are well suited to serve the object-appraisal function. However, recent research suggests that the efficiency with which accessible attitudes allow one to navigate the environment might come at some cost. For example, the generally adaptive ability of accessible attitudes to guide one's attention to the attitude object (Roskos-Ewoldsen and Fazio, 1992) presumably cannot be 'turned off' in situations where attending to the object distracts one from more pressing tasks. Such might be the case when the proverbial male driver runs into a parked car after his attention is automatically drawn to an attractive female pedestrian. Thus, the relevance of the attitude object to the immediate task concerns is critical as to whether possession of the attitude proves beneficial or costly. If the objects to which they pertain are relevant to the immediate task goal, accessible

attitudes may facilitate performance. If irrelevant, they may impair task performance. If no pressing task demands are occupying the perceiver, having attention automatically drawn to attitude-evoking objects can orient the individual to objects in the immediate environment that are potentially rewarding or harmful.

A somewhat different cost of accessible attitudes may arise in some special circumstances. Accessible attitudes may color one's perceptions at a very fundamental level, such that the world is forced to fit the view implied by the attitudes. At the level of a specific attitude object, a strong attitude might 'do the work' of perception such that the perceiver is unable to notice new qualities of the object. Fazio et al. (2000) investigated this possibility in a series of experiments in which participants viewed several photographs of faces while either rehearsing their attitudes toward the faces (and thus making the attitudes more accessible), or performing a control task. In a later detection phase, they were shown a variety of faces, and were asked to indicate whether each face they saw was the same or different in some way from a face they had seen earlier. Some of the faces were, in fact, exactly the same as those they had seen earlier. Some, however, were 'morphs' of earlier faces with other faces they had not seen. Some of the morphs were relatively close to the original (for example, a composite of 63 percent of the original face and 37 percent of a new face), while others were quite different from the originals (for example, 13 percent original and 87 percent new). Participants naturally found it more difficult to identify morphs that most closely resembled the original photos. However, for those who had rehearsed their attitudes toward the original photos, the task was apparently much more difficult. These participants took much longer to identify a morphed face as different from the original, and took especially long to perform the task in cases where the morph was close to the original. Apparently, their accessible attitudes interfered with their ability to perceive accurately whether the faces had changed or not. In subsequent experiments, participants with relatively accessible attitudes toward the faces made more errors in identifying the morphs, and, perhaps most telling, perceived less change in the morphed images than did control participants. The former were more likely to view a morphed image as a different photo of a person they had seen earlier than as a photo of a new person. Thus, like lenses designed to view particular objects, accessible attitudes have the tendency to color one's perceptions and decrease the likelihood of noticing changes in the objects. To the extent that an object remains relatively stable over time, this potential cost should be minimal, and well offset by the many functional benefits of attitudes we have already discussed. However, in cases where the object has undergone

some change since the time that the attitudes were formed, our attitudes risk leading us astray.

In summary, we have seen that attitudes can serve a variety of functions, from affirming and protecting the self (the value-expressive and ego-defensive functions), to securing relationships with others (the social-adjustive function). We have spent considerable time on the object-appraisal function, for this function is the most basic and adaptive. We have seen how attitudes, especially accessible ones, can guide attention and categorization, ease and improve decision making, and facilitate the navigation of a novel environment – but that these functions can come at a cost. The field has seen advances in function measurement and identifying functions in individuals, as well as in our understanding of the functional matching hypothesis. We have also seen how functions vary by individual, attitude object, and situation. For a much more extensive treatment of the functions served by attitudes, see Maio and Olson (2000).

#### THE ATTITUDE-BEHAVIOR RELATION

It's fitting that the final section of our chapter addresses the end product of attitudes: behavior. The two have suffered a troubled history together, and their relation can be a tenuous one (see McGuire, 1985, for a review). For a long time, and in no small part due to the very definition of attitudes, it had been assumed that attitudes predict subsequent behavior. Indeed, the very value of the attitude construct would be called into question if this were not the case. However, coffee drinkers often say 'no' to a cup of coffee, staunch Democrats sometimes vote Republican, and social psychologists have been known to get people to eat worms (e.g., Comer and Laird, 1975). That is, attitudes sometimes do not predict behavior.

When the assumption of attitude-behavior correspondence began to receive serious scrutiny in the late 1960s and early 1970s, such instances of low attitude-behavior correlations were regarded as very problematic. In fact, some advocated abandoning the attitude construct altogether (LaPiere, 1934; Wicker, 1971). However, while it may be the case that attitudes often do not predict behavior, there is ample evidence that they sometimes do. Eventually, researchers (e.g., Regan and Fazio, 1977; Zanna and Fazio, 1982) began calling for research asking not *whether* attitudes predict behavior, but, rather, *when* attitudes predict behavior. That is, under what conditions might we expect an attitude-behavior relation? This question has occupied a sizable chunk of the attitude literature, and has been addressed from a variety of angles, including characteristics of the individual, the situation, and the attitude itself.

Characteristics of the individual have probably been the least studied approach to the question of attitude-behavior consistency, so we will just briefly touch on some examples. Self-monitoring, mentioned earlier with respect to its relationship to attitude functions, also can affect the attitude-behavior relation. Evidence suggests that because high self-monitors are more sensitive to their social situation, they are more affected by it. Hence, they are more likely to be influenced more by situational pressures than their own attitudes (Snyder, 1974). Low self-monitors, however, display greater attitude-behavior consistency (e.g., Snyder and Swann, 1976; Zanna et al., 1980). Self-awareness has a kind of opposite affect – people who are more self-aware are more attuned to their internal states, including their own attitudes. Thus, greater self-awareness has been shown to lead to greater attitude-behavior consistency (Carver, 1975).

Some of the poor predictive power of attitudes on behavior can be accounted for by a lack of correspondence in specificity between the two. Most research has attempted to predict a specific behavior, say, consuming chocolate today, based on a global attitude, say, toward chocolate. However, a number of influences other than attitudes might affect chocolate consumption today, and Ajzen and Fishbein (1977) made just this point when they advocated what they called the 'correspondence principle'. According to the principle, attitudes and behavior correspond when their degree of specificity corresponds. For example, if we were interested in predicting whether or not someone might consume chocolate today, we should ask about his or her attitude toward consuming chocolate today. Consistent with this reasoning, reviews of the literature have shown that the predictive power of attitudes is greater when the level of specificity between attitudes and the behavior they purport to predict are better matched (e.g., Ajzen and Fishbein, 1977; Davidson and Jaccard, 1979; Kraus, 1995). Another approach has been to look at behavior aggregated across several instances. Thus, in order best to predict our chocolate consumer's behavior from his or her attitude, we should use his or her global attitude toward chocolate to predict behavior not only today, but across a longer time span. Improved predictive power comes from this aggregation approach as well (Fishbein and Ajzen, 1974; Weigel and Newman, 1976).

Fishbein and Ajzen's (1975) 'theory of reasoned action' takes into account the correspondence principle and contextual influences on behavior. In their model, behavior is proximally determined by 'behavioral intentions', and these behavioral intentions are, in turn, determined by two families of variables, attitudes toward the behavior and subjective norms. The attitude toward the behavior is the product of the expectancy-value equation mentioned earlier. Subjective norms are similarly computed,

based upon the expected value of the perceived social consequences of performing the behavior. The values of both attitudes toward the behavior and subjective norms can be either positive or negative, increasing or decreasing, respectively, the likelihood of forming a behavioral intention. In sum, the model proposes that attitudes toward the behavior and subjective norms cause the formation of a behavioral intention. The behavioral intention then determines the behavior to be performed.

Ajzen (1991) later added the notion of 'perceived behavioral control', the extent to which people believe they *could* perform the behavior. This variable is argued to affect attitudes toward the behavior and perceived subjective norms, as well as have a direct effect on both behavioral intentions and the behavior itself. For example, if one is too busy or lacks the money to buy chocolate, a positive attitude toward the behavior is less likely to develop, a behavioral intention is less likely to form, and the behavior itself is less likely to occur. Especially with respect to challenging behaviors, the inclusion of perceived behavioral control has been found to increase the predictive power of the model (e.g., Ajzen and Madden, 1986; Kelly and Breinlinger, 1995; see Bandura, 1982, for a related discussion on self-efficacy).

Although these models have received considerable empirical support, they suffer from some shortcomings. At the definitional level, attitudes become increasingly specific in these models, a feature which risks turning the attitude-behavior relation into a tautology. For example, it would be rather unimpressive to demonstrate that an attitude 'toward eating the chocolate on the counter within the next two minutes' could reliably predict such a behavior. In these models, attitudes risk becoming temporary constructions, mere layovers on the flight to behavior, and general, enduring attitudes are relatively ignored.

The most problematic assumption of these models, however, is that behavior is treated as intentional, thoughtful, and based on the output of deliberate consideration of expected values of the behavior. Certainly, this is not always, and perhaps not even usually, the case. In fact, we have already seen evidence that attitudes can exert a direct impact on judgments and behavior, unmediated by thought, let alone intentions. In our section on attitude function, we saw how attitudes can affect fundamental processes such as visual attention and categorization. Accessible attitudes in particular are thought to affect judgments and behaviors through a spontaneous process.

This is not to say that attitudes do not often exert their influence via the deliberative route described earlier. Indeed, the literature on judgment and decision making provides a host of examples of very thoughtful, deliberate judgment and behavior processes, characterized by weighing of decision

alternatives, attention to the self and social implications of a particular act, and attention to the attributes of the attitude object (e.g., Einhorn and Hogarth, 1981). Clearly, people sometimes make deliberate decisions, but often their judgments and behaviors flow more spontaneously from their attitudes. The critical distinction between these two processes is whether decisions are 'data-driven', where the perceiver goes through the effortful process of attending to, analyzing, and interpreting relevant information, or relatively more 'theory-driven' and spontaneous, where the perceiver's decision is more directly based on the attitude that is automatically activated from memory. The model we describe next addresses the issue of whether and when one process or the other is likely to occur.

#### THE MODE MODEL

'MODE' is an acronym based on *Motivation and Opportunity as DEterminants* of the attitude-behavior relation – these are the two variables argued to determine whether a spontaneous or deliberate attitude-behavior process might occur. The basic premise is that when both are adequately present, behavior will be driven by deliberative processes, but when either is absent, any impact of attitudes on behavior will occur via a more spontaneous process (for more extensive reviews, see Fazio, 1990; Fazio and Towles-Schwen, 2000).

Motivation can mean a variety of things, but integral to its definition is the exertion of effort. This effort can be focused on making the best, most accurate decision, or a fear of coming to an invalid conclusion, and would be reflected in a thorough consideration of the behavior's potential consequences (e.g., Kruglanski and Webster, 1996). For example, our chocolate lover might have the rare opportunity to visit an exclusive candy store in another country and, on this special occasion, engage in a systematic appraisal of each potential purchase before making a decision. Here, the motivation to make the best choice is high, suggesting that greater attention will be given to the attributes of each potential purchase. However, our chocolate lover must have ample time to peruse each item before making a selection. That is, there must be enough opportunity to engage in the deliberative decision-making process. If either motivation or opportunity is lacking, the decision will more likely be based on whatever attitude is activated from memory. So if our chocolate lover is tired and unmotivated to investigate systematically each selection, or is in a hurry, it is likely that whatever attitude is activated will guide behavior spontaneously. For example, the first chocolate bar encountered might activate positivity, and then be purchased.

Several studies provide evidence of the MODE model's assumptions. Sanbonmatsu and Fazio (1990) presented participants with information on two department stores, and participants were asked to decide on which they would go to buy a camera. One store was good in all respects but one – the camera department. The other store had a good camera department, but was of poor quality overall. Whether participants chose the first or the second store provided an indicator of whether they were using their global attitudes toward the store as the basis for their decision (if they chose the first one) or were focusing on the relevant attributes of the store (if they chose the second). To manipulate motivation, some participants were provided with an extra incentive to be accurate – they were told that they would have to justify their answers to the experimenter and other participants later. Others were not given these instructions. To manipulate opportunity, some participants were given a short time limit to reach a conclusion, while others had ample opportunity to investigate each department store. The MODE model's predictions were confirmed in that only participants in the high-motivation, high-opportunity condition chose the department store with the better camera department. In other words, only with both motivation and opportunity did a deliberative decision-making process ensue, one that involved effortfully retrieving the specific attributes of each department store from memory. Participants without motivation or opportunity relied on their global attitudes toward the stores.

Earlier, we discussed the tendency to judge information consistent with one's attitude more favorably. Schuette and Fazio (1995) investigated this effect within the context of the MODE model. Using a paradigm developed by Lord et al. (1979), they provided participants with information on two empirical studies that were supposedly conducted to investigate whether capital punishment was an effective deterrent, one that supported the death penalty, and one that opposed it. After reading about the studies, participants were asked to judge their quality. Motivation was manipulated similarly to the Sanbonmatsu and Fazio (1990) study. Attitude accessibility was also manipulated in Schuette and Fazio's experiment through the repeated expression manipulation mentioned earlier. They found that participants' judgments were biased by their attitudes – studies that were consistent with their attitudes were seen as higher in quality. However, this effect occurred only for those with low motivation and more accessible attitudes. More motivated participants, and those with less accessible attitudes, presumably attended more to the specific features of the studies, as opposed to their conclusions, when judging the quality of the research.

That attitude accessibility played a role in this study is an important point. Recall that accessible

attitudes are more likely to be activated in the presence of the attitude object, and more likely to have a host of influences on perception, categorization, and so on. Indeed, as we have argued, the less accessible the attitude is toward a given object, the more the individual will be forced to follow a more deliberative process of evaluating it. It is this interplay – between the relatively automatic processes associated with a spontaneous decision route, and the more deliberative, attribute-based decision route – that is at the center of the MODE model. Without an accessible attitude, a deliberative decision-making process is the only alternative. With it, it is a matter of whether motivation and opportunity are present as to which process will occur. Given sufficient motivation and opportunity, individuals can overcome the effects of an accessible attitude.

This latter point is relevant to a postulate of the MODE model. The model argues that many decisions are based on 'mixed' processes, those that include both automatic and deliberative components. Take, for example, an attitude that has been automatically activated in the face of the attitude object. If motivated and able, the individual may try to 'correct' for the influence of the attitude, and reach a less biased conclusion (see Wegener and Petty, 1995). Such a process may have occurred in Schuette and Fazio's study (1995) for those participants whose attitudes toward the death penalty were made more accessible, but who had the motivation to be accurate. Their attitudes were probably activated when presented with the death-penalty studies. However, their motivation to be accurate may have led them to consider more carefully the features of the studies they were judging, and to attempt to curb the influence of their attitudes while doing so.

Racial prejudice is a domain where the interplay of automatically activated attitudes and motivation to avoid their biasing effects is particularly applicable. For example, many white Americans feel negativity toward blacks, but are motivated to avoid being biased by race. The interaction between attitudes and motivation in this case stands to be particularly informative as to when and how racial prejudice appears in society. Research testing the MODE model's predictions in the domain of racial prejudice has utilized a priming measure of racial attitudes (Fazio et al., 1995). In this version of the priming task, photos of faces of various races serve as potential primes, and response latencies to identify the connotation of positive and negative adjectives serve as a measure of activation of either positivity or negativity. For example, on a given trial, a black face might appear on the screen, followed by the adjective 'awful'. If negativity is activated in response to the black prime, identifying 'awful' as a negative word should occur relatively quickly. An overall attitude estimate can be derived toward blacks and whites by comparing response

latencies to positive and negative adjectives following black primes to those following white primes. The benefits of this method of attitude measurement over traditional paper-pencil measures are several. First, the priming measure is unobtrusive, which allows the measurement of attitudes participants may be unwilling to report honestly. Moreover, the strength of evaluative associations is being measured in this procedure, not merely the valence of the attitude (see Fazio and Olson, 2003, for a review).

The priming measure is also well suited to test whether race-related judgments can be driven by the spontaneous attitude-to-behavior process posited by the MODE model. Evidence for this assertion comes from several relevant studies. For example, after completing the measure, participants in one study were given a mock 'debriefing' by a black experimenter, who then completed friendliness ratings for each participant (Fazio et al., 1995). The ratings were related to attitude estimates derived from the priming measure – those with more negative automatically activated attitudes were seen as less friendly toward the black experimenter. In another study (Jackson, 1997), these attitude estimates were reflected in judgments of the quality of an essay purportedly written by a black undergraduate. Similarly, they also predicted participants' ratings of a black relative to a white applicant for a volunteer position in the Peace Corps (Olson and Fazio, 1999).

So far we have evidence of the priming measure's predictive validity, and, consequently, that race-related judgments can be influenced by relatively spontaneous processes, largely driven by the attitude that is automatically activated. But according to the MODE model, such attitudes should have less influence on judgments and behaviors when there is adequate motivation and opportunity. Regarding motivation, Dunton and Fazio (1997) developed a measure of motivation to control prejudiced reactions, a 17-item scale that contains items such as, 'I feel guilty when I have a negative thought or feeling about a black person' and, 'In today's society, it is important that one not be perceived as prejudiced in any manner.' By assessing racial attitudes with the priming measure, and motivation to control prejudiced reactions, both automatic and deliberate contributions to race-related judgments and behaviors can be examined.

Evaluations of a 'typical black male undergraduate' were collected in Dunton and Fazio's (1997) study, and attitude estimates and motivation scores were jointly used to predict them. Confirming the MODE model's predictions, racial attitudes and motivation to control prejudice interacted to predict the evaluations. For participants with little motivation, racial attitude estimates predicted evaluations such that more negative evaluations of the 'typical

black male undergraduate' were found for those with negative attitude estimates. This relation was attenuated, and eventually reversed, as motivation increased. Motivated individuals with negative automatically activated racial attitudes exhibited positive evaluations of the black, indicating that participants with negative attitudes were able to overcome the influence of their attitudes if properly motivated. Similar evidence for correction of automatically activated attitudes was found by Olson and Fazio (in press), where the targets about which participants formed impressions consisted of a variety of photos of people of various races in various occupational roles. Automatically activated racial attitudes predicted the impressions of black relative to white targets made by low-motivation participants, suggesting a spontaneous attitude-to-behavior process. The more positive the attitude, the more favorable the impression. However, more motivated participants for whom negativity was automatically activated expressed relatively favorable evaluations of the black targets.

In sum, sometimes judgments and behavior appear to be driven by relatively automatic attitude-to-behavior processes. Nevertheless, given proper motivation and opportunity, people are able to overcome their attitudes in the judgments they make. We have not, however, addressed the role of opportunity in this domain of race. While there is little research that systematically investigates the role of opportunity with respect to racial prejudice, there is evidence to suggest that some behaviors are more controllable than others. Nonverbal behavior, such as eye contact, smiling, and shoulder orientation, can be difficult to control (for a review, see DePaulo and Friedman, 1998). In the MODE model's terms, the lack of control that people have over their nonverbal behavior can be characterized as a lack of opportunity – if negativity is automatically activated, it may appear in behavior despite one's intentions. Recent research has indicated that these less controllable behaviors do relate more strongly to automatically activated racial attitudes than do more controllable verbal responses (e.g., Bessenoff and Sherman, 2000; Dovidio et al., 1997, 2002).

#### CLOSING COMMENTARY: ATTITUDES AS STABLE ENTITIES VERSUS MOMENTARY CONSTRUCTIONS

We have reviewed a considerable amount of evidence illustrating that not all attitudes are equal. Both the functional value of attitudes and the influence that they exert on judgments and behavior can vary. In particular, the evidence indicates that attitudes characterized by stronger object-evaluation associations in memory and, hence, greater

accessibility, are relatively more functional, in the sense that they ease decision making, orient visual attention and categorization processes in a useful manner, and free resources for coping with stressors. Likewise, such attitudes are relatively more powerful in terms of the influence that they have on information processing and, ultimately, behavior.

Recently, some scientists have proposed a view of attitudes as momentary constructions (Schwarz and Bohner, 2001; see also Wilson and Hodges, 1992, and Zaller and Feldman, 1992). These formulations contrast with Allport's (1935) classic view of attitudes as enduring entities that determine behavioral responses. Instead, attitudes are viewed as evaluative judgments that are always computed from scratch on the basis of information accessible at that moment. Indeed, the dependence of verbal self-reports of attitude on context is cited as evidence for the theoretical perspective.

As an example of such contextual dependence, we can consider Stapel and Schwarz's (1998) research concerning General Colin Powell's decision in 1995 to join the Republican Party but not seek the party's presidential nomination. By asking participants to indicate either which political party Powell had recently joined, or which party's overtures that he run as a candidate he had rejected, the researchers induced participants to include or exclude the highly respected Colin Powell in their mental representation of the Republican Party. The respondents evaluated the Republican Party more favorably when the preceding question invited Powell's inclusion rather than exclusion from the representation of the party. Such evidence is cited as support for the idea that attitudes are momentary constructions.

While it is unquestionably provocative, we think the constructionist viewpoint is at variance with the accumulation of evidence that we summarized earlier. Although attitudinal reports certainly are dependent on context, findings such as Stapel and Schwarz's (1998) do not rule out the possibility that pre-existing memorial associations influence the production of these reports. *Verbal reports* of one's attitude are always constructions in that they involve, as Schwarz and Bohner (2001) articulate, issues of question comprehension, scale interpretation, and the identification and employment of appropriate standards of comparison. However, our theoretical perspective is that such reports can be influenced by previously formed attitudinal judgments, and the extent to which this occurs will vary as a function of the accessibility of the attitude from memory. Is it at all plausible to expect the attitude of a die-hard Republican, one who has voted Republican his or her entire life and donated time and money to party activities, to change as a function of whether Colin Powell is or is not momentarily construed as a loyal party member? Is there any reason to believe that an individual with an allergy

to peanuts would need to construct anew a negative attitude toward peanut butter each time a judgment is called for? Much like the attitude of the infamous Dr Seuss character describing Green Eggs and Ham, attitudes are sometimes remarkably unaffected by context: 'I would not like them here or there. I would not like them anywhere. I do not like green eggs and ham. I do not like them, Sam-I-am ... I would not, could not, in the rain. Not in the dark. Not on a train. Not in a car. Not in a tree. I do not like them, Sam, you see.'

In fact, the influence of momentarily salient contextual features on attitude reports has been found to vary as a function of the degree to which individuals' attitudes are accessible from memory (Hodges and Wilson, 1993). Verbal reports are less influenced by momentarily salient information when attitudes are relatively more accessible from memory (see Chaiken and Baldwin, 1981, for similar evidence regarding the moderating effects of evaluative-cognitive consistency on attitude reports). The same is true for behavioral decisions (Fazio et al., 1989, 1992). Relatedly, the stability and persistence of attitudes over time and/or in resistance to counterinformation has been found to increase as attitude accessibility increases (Bassili, 1996; Bassili and Fletcher, 1991; Fazio and Williams, 1986; Zanna et al., 1994).

Finally, a logical problem inherent to the constructionist perspective should be noted. Consider again the influence of Colin Powell's inclusion or exclusion from the mental representation of the Republican party on evaluations of the party. The phenomenon hinges on Powell himself being positively evaluated. Were the positive attitudes toward Powell not themselves a pre-existing evaluative association in memory? If so, then some attitudes clearly are not constructed anew each time the object is encountered. If not, then the attitudes toward Powell, as well as the Republican Party, needed to be constructed on the spot, a fact which opens the entire formulation to a problem of infinite regress. Ultimately, some relevant evaluation has itself to be represented in memory.

From our theoretical perspective, the constructionist view of attitudes is just as implausibly extreme as the classic, but now outdated, view of attitudes as omnipotent determinants of perception, judgment, and behavior. Clearly, an adequate resolution has to lie somewhere between these two extremes. Attitudes vary in terms of the strength of their object-evaluation associations in memory. The resultant accessibility of the attitude from memory determines not only the power and functionality of the attitude, but also the extent to which construction processes are involved in response to any situational need to evaluate the object in question.



## CONCLUSION

We have spanned a wide range of attitude phenomena in this chapter. From how we define attitudes, to their origins, to their functions and consequences, we hope to have communicated an appreciation of what has become a vast literature, capable of occupying at least these authors' careers. To the question, 'How much have we learned about attitudes over the years?', the answer is an emphatic, 'a lot'. To the question, 'How much about attitudes is still unknown?', the answer is also an emphatic, 'a lot'. Attitudes have been viewed as the shining star of social psychology, as well as its problem child. Time has told, however, that the attitude construct is indispensable to social psychology, and an essential variable in understanding human behavior.

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