

A Multiple Pathway Anchoring and Adjustment (MPAA) Model of Attitude Generation and Recruitment

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The Multiple Pathway Anchoring and Adjustment (MPAA) model integrates prior research on attitude formation, accessibility, strength, and attitude-behavior relationships and responds to key challenges to the traditional view of attitudes as enduring predispositions that guide behavior. The MPAA model emphasizes multiple pathways to attitude formation, including outside-in (object-centered) and inside-out (person-centered) pathways. The model also provides a nonoverlapping cognitions rationale for the coexistence of competing attitudes. The MPAA model introduces two subjective assessment criteria (representational and functional sufficiency) to explain how an anchoring and adjustment process functions to permit attitudes to guide behavior.

In the traditional view, an attitude is a unified and enduring state of readiness to respond (Eagly and Chaiken 1993). The traditional view assumes a consistently updated (either from ongoing thought processes or salient situational factors) predisposition that serves as a convenient evaluative summary of some object, issue, or person. When confronted by a stimulus (and a need to evaluate it), a stored evaluation comes to mind automatically, guides thought, and helps direct behavior. However, evidence of temporal instability in attitudes, even in response to seemingly insignificant contextual changes, together with increasing reliance on state-based explanations (e.g., altered accessibility of concepts and moods, often as a consequence of priming and framing manipulations), has led to a constructivist challenge to the traditional view of attitudes (Schwarz and Bohner 2001). A second major challenge is posed by a recent conceptualization that questions the bedrock

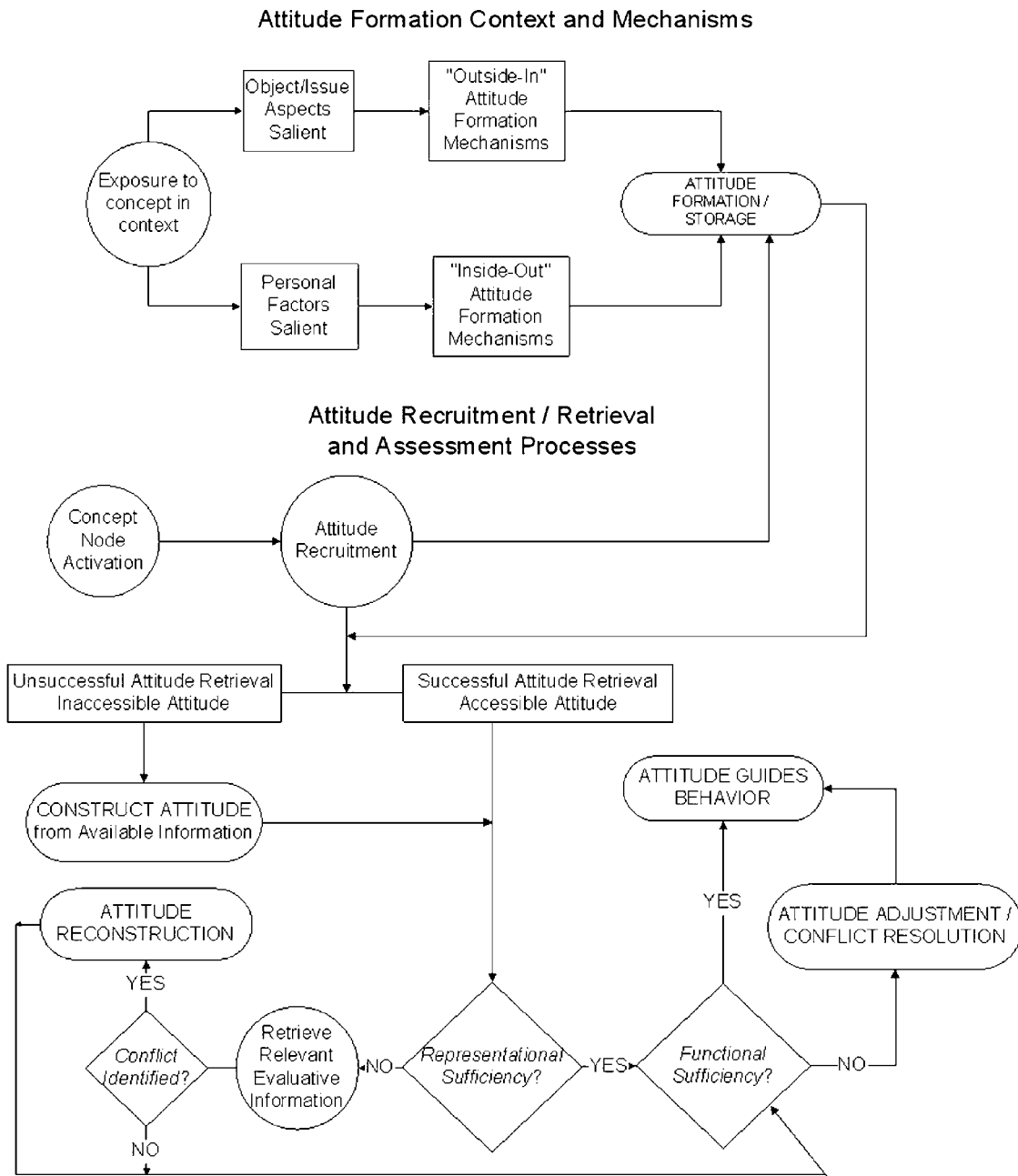
notion of a single unified attitude that can be used to guide behavior. According to the dual attitudes perspective (Wilson, Lindsey, and Schooler 2000), people may possess (simultaneously) both an implicit and an explicit attitude, even opposite in valence, toward the objects, people, and issues that are important in their lives. At issue, then, are concerns (Bassili and Brown 2005) not only about the viability of the attitude construct but also regarding the extent to which current attitude theories are adequate to account for subsequent behavior.

For many years, the attitude literature has been fragmented, both theoretically and empirically, so that analyses of attitude formation and change (e.g., via persuasion) were developed independently of models focusing on the impact of attitudes on behavior (Ajzen and Fishbein 2005; Fazio and Towles-Schwen 1999). Although two process models have dominated this discussion (see Bassili and Brown [2005]; Fabrigar, MacDonald, and Wegener [2005]; and Wyer and Albarracín [2005] for related analyses), neither attempts to integrate attitude formation, retrieval, and reliance (in guiding behavior). One is based on attitude accessibility and its precursors (typically frequency and recency of exposure to the issue or object, such as through direct experience, and amount of processing of the information; see, e.g., Petty, Haugtvedt, and Smith 1995), and one is based on action context-induced attitude construction. The latter is represented by two substantially different orientations: (1) a pure constructivist orientation in which evaluative judgments are assembled from cued cognitions and feelings; and (2) a program of research identifying conditions when attitudes are likely to be stable over time so that

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Dawn Iacobucci served as editor and Joseph Priester served as associate editor for this article.

FIGURE 1
A MULTIPLE PATHWAY ANCHORING AND ADJUSTMENT (MPAA) MODEL



the same attitude that was formed and stored also guides behavior. Our article summarizes these positions and presents an integrative model of attitude formation, recruitment, and behavioral influence processes.

MPAA MODEL OVERVIEW

Our conceptual framework views attitude formation, storage, recruitment/retrieval, and behavioral reliance in an in-

tegrated fashion, and, for that reason, it may be able to shed greater light on what these challenges really mean for attitude theory. Since roadmaps are often helpful, we present a model overview at this time. After describing the two main challenges mentioned earlier, we discuss how the MPAA deals with them.

The upper portion of figure 1 illustrates attitude formation mechanisms that act upon perceptual or retrieved represen-

tations of some object, person, situation, or issue (frequently identified as concept nodes). As we shall discuss in detail, a number of such mechanisms have been highlighted in the attitude literature. These differ in motivational orientation and both the amount and the nature of thought devoted to the evaluation. To deal with the challenge of nonunified (possibly dual) attitudes, we illustrate how various object/issue-centered (outside-in) pathways could lead to important differences in resulting attitudes from those emerging from person-centered (inside-out) pathways. The attitude formation process culminates in the storage of an attitude, making it available for subsequent recruitment/retrieval. In our conceptualization, even oppositely valenced attitudes toward the same object may coexist.

The bottom portion of figure 1 begins with the activation of a mental representation of a previously assessed object, either through actual exposure or as a thought process that brings that concept to mind. We will summarize relevant aspects of a now extensive literature examining automatic and controlled processes leading to attitude instantiation following such concept activation. The operation of contextual factors, and particularly their role in situationally constructed attitudes (as enumerated in the constructivist challenge), receives special attention. Unsuccessful attitude retrieval leads to a retrieval-cue-based memory search and on-line attitude formation.

Our model then diverges from prior accessibility/diagnosticity analyses of the impact of attitudes on choice and behavior by providing a more detailed assessment of likely anchoring and adjustment processes. As illustrated in figure 1 (and as will be discussed in detail), we hypothesize representational sufficiency and functional sufficiency assessments that are used to test the adequacy of retrieved or constructed attitudes as guides to behavior. Attitudes that are representationally sufficient truncate immediate retrieval of additional evaluative information, enabling nonretrieved (even oppositely valenced) attitudes to be maintained. Otherwise, conflicting evaluative information is likely to be accessed, and conflict reduction mechanisms would make it difficult for dual (or multiple) attitudes to exist unless these were hidden from conscious introspection. Our discussion of functional sufficiency assessment links it to both diagnosticity (Feldman and Lynch 1988) and applicability (Fabrigar et al. 2005) and the distinction between Ao and Aact in prior work based on the theory of reasoned action (Ajzen and Fishbein 2005). At this stage, in our model, attitudes are adjusted to meet situational demands. We regard functional sufficiency-initiated attitude modification to be exceedingly common. However, this seems sufficiently distinct from a truly constructive and generative process that it should not be described in that fashion. Further, we do not believe that anchoring on an existing attitude and then adjusting it to meet goals and constraints that are context based requires separate constructs (Aact vs. Ao). We now turn to an analysis of the two major challenges to the traditional view of attitudes.

TEMPORAL INSTABILITY AND CONSTRUCTED JUDGMENTS

Temporal instability in attitudes and the failure of such attitudes to predict behavior have led some to propose that most evaluative judgments are likely to be constructed rather than retrieved attitudes (see Schwarz and Bohner [2001] for a well-reasoned position on this issue). Indeed, the growing recognition that many of our attitudes depart from the traditional view of a stable, underlying predisposition to respond and may—at the extreme—be houses built on sand (Lord et al. 2004) has left the state of attitude theory in flux. Is it reasonable to think of attitudes as enduring predispositions to respond? If so, do we need to rethink the nature of these predispositions? The MPAA model provides a qualified yes to both questions; therefore, we start by examining the nature of temporal instability.

Recent attitude research has demonstrated temporal instability associated with the passage of time (e.g., through cognitive reorganization, changes in belief structure, and memory processes such as dissociation), the presence of ill-defined or multiple exemplars of the same attitude concept/category, changes in context (e.g., methods of elicitation, issue framing, mood, and composition of a set of choice alternatives), and changes in action demands (e.g., changes in goals that alter the bases for evaluation).

Several older research programs, particularly in the persuasion literature (e.g., research on the sleeper effect; see Kumkale and Albarracín [2004] for a recent meta-analysis), have also demonstrated shifts in attitude valence over time in relation to changes in the strength of association among relevant cognitions. A key finding in an important program of research on attitude instability (Wilson et al. 1984; Wilson and Hodges 1992; Wilson, Hodges, and LaFleur 1995; Wilson, Kraft, and Dunn 1989) was that merely asking people to analyze the reasons that they felt the way that they did generated attitudes that departed, over time, from their original attitudes. Wilson and his colleagues also demonstrated that attitudes changed when there was no time pressure to report an overall evaluation but did not change under time pressure. The most general explanation for intertemporal variation is that the accessibility of cognitive elements varies as a result of contextually generated factors and memory trace decay or interference and is responsible for meaningful variance in attitudes. Put differently, the implication is that the cognitive elements largely, but incompletely, overlapped at the two time periods.

Some question the utility of attitudes as an important psychological construct if such instability renders them incapable of serving as a reliable guide for behavior since this was traditionally advanced as a major reason for people to have attitudes. Attitude representation theory (Lord et al. 2004) was introduced to explain why both attitude consistency and attitude instability are observed over time. In this view, when people activate their mental representations of attitude objects (or issues), the immediate stimulus may/may not be similar to the original or prototypical object category

exemplar. Exemplar instability implies nonoverlapping cognitive associations, with resulting variance in reported attitudes and behavior. As Lord et al. (2004) acknowledge, traditional expectancy value models of attitudes capture the spirit of their position by defining an attitude as a weighted sum of accessible object associations/beliefs (weighted by the evaluations of these associations). However, such temporal instability, particularly in less firmly held or personally relevant attitudes, resulting from seemingly insignificant changes in context and means of elicitation, can be used to argue that fully intact and enduring attitudes are largely a fiction and do not deserve a privileged status. Attitudes can, instead, be viewed as emergent properties of mental representations. We will return to this issue.

Investigating sources of inconsistency between attitudes and behavior has been a focal point of attitude research during the latter half of the twentieth century. In general, after accounting for substantive changes in information/beliefs between the time attitudes and behavior are assessed (including changes in the attitude object/issue itself), two types of explanations for attitude-behavior inconsistency have been offered. The first, expressed most directly in the theories of reasoned behavior and planned behavior (Ajzen 1991; Fishbein and Ajzen 1975), attributes attitude-behavior inconsistency to errors and incompatibility in measurement. For example, assessing a person's attitude toward a political candidate and using it to predict whether that person will serve as a campaign volunteer is misguided since the latter involves specific considerations (e.g., time availability and activity preferences) that are simply not part of one's attitude toward the candidate. This type of explanation implies a failure to include essential moderator variables (e.g., situational factors, normative constraints, or interrelated attitudes).

The second category of explanation for attitude-behavior inconsistency focuses on process explanations (e.g., holding weak or inaccessible attitudes; whether people have the motivation, opportunity, and capacity to retrieve an attitude in a given situation). A recent meta-analysis (Glasman and Albarracín 2006) of studies in which attitudes toward unfamiliar objects and issues were experimentally induced underscored the important role of factors that contribute to attitude stability (e.g., attitude accessibility, personal relevance, belief consistency, and confidence) in strengthening attitude-behavior correlations—probably through increased nonconflicted thought. So, for example, holding a weak but favorable attitude toward a brand (say, one based on advertiser-supplied information rather than direct personal experience) may interact with product display (e.g., varying brand prominence in shelf placement) and time pressure to produce apparent attitude-behavior inconsistency if the original attitude is not retrieved immediately and cognitive resources are applied to another brand. In Fazio's MODE model (Fazio and Towles-Schwen 1999), these factors affect the perception of an attitude object at a given time and help to determine one's response to the object. This process explanation implies that, even if an attitude becomes accessible, if it fails to meet some type of internal criterion,

perhaps along a strength dimension, it is unlikely to guide behavior.

It is also worth noting, in the context of attitude-behavior inconsistency, that Doob's (1947) learning theory conceptualization proposed that an attitude was a generalized response tendency (hence, insufficient to guide behavior without further learning). Specifically, Doob argued that people learned a repertoire of responses linked to situations in which the object was embedded (similar to Hull's [1952] notion of a habit family hierarchy composed of alternative response tendencies), so variability in behavior was to be expected. Rokeach (1968) reflected a similar idea by proposing that behavior is guided jointly by an attitude toward the object and an attitude that incorporated situational features.

DEFINING AND RESOLVING THE CONSTRUCTIVIST CHALLENGE

As suggested earlier, one reaction to the combination of temporal and behavioral inconsistency has been to view the majority of attitudes as temporary and context-sensitive constructions. What, exactly, does constructing an attitude mean in these analyses? This could range from a truly generative process instigated by either an external stimulus or an internally generated thought to some type of anchoring and adjustment process whereby a relatively stable attitude is modified to meet specific contextual demands, including the activation of different exemplars from the same attitude object category (e.g., between-meal snacks include both junk food and healthier options) that vary in important respects.

The constructivist orientation is, at one level, an almost philosophical preference for bottom-up, distributed processing, and neural network explanations of behavior (Smith and DeCoster 1998). At another level, it is a preference for parsimony in constructs, given demonstrations of malleable evaluations (Schwarz and Bohner 2001). At still another level, it is simply a recognition that people take both preferences and situational factors into account, leading them to modify existing attitudes (Wegener and Carlston 2005). The strong version of a constructivist challenge goes to the very heart of the notion that people store and retrieve intact and enduring attitudes. Instead, evaluative judgments are said to be constructed in response to contextual cues that alter the accessibility and applicability of available information, as well as by temporary factors such as current feeling states and situational constraints (Schwarz and Bohner 2001).

In the strongest version of a constructivist view, not only are there no overall stored evaluative predispositions (attitudes) but also underlying (and presumably cued) beliefs have no fixed or stored evaluative components since they would similarly be subject to substantial contextual variations (Fabrigar et al. 2005). Indeed, at the extreme, there is no assumption of any evaluative memory organization. Each experience is stored in memory as a separate trace with weights specified by prior instantiation. Temporal inconsis-

tency can be modeled by connectionist representations of attitudes where context-sensitive weights attached to more primitive elements (e.g., beliefs, exemplars) contribute to variability in evaluative responses as a function of the available retrieval cues (Smith 1996; Smith and DeCoster 1998). (For a recent review and attempted development of a model based on potentiated microconcepts, see Bassili and Brown [2005].)

The constructivist challenge is impossible to resolve empirically. Even reaction time measures have difficulty distinguishing between retrieved and constructed judgments, since computation can be rapid (e.g., given few relevant and highly accessible pieces of information) or slow (e.g., for multifaceted and/or mixed valence belief elements).

Although it was probably not their intent, Fishbein and Ajzen (1975; Ajzen and Fishbein 2005) have provided ammunition for critics of the traditional view by showing that people rely strongly on extremely context-specific attitudes (Aact) rather than on the generalized attitudes that people would be more likely to hold and update in some enduring fashion. Thus, people, in deciding whether they are in favor (evaluate positively) or opposed (evaluate negatively) to behaving in a certain way at a specific time, would assess giving \$100 to political candidate X in the next week by integrating action-specific beliefs and evaluations rather than retrieving and relying on their attitude toward candidate X. It may seem unlikely that people carry around and update the almost infinite number of necessary Aact(s), and so it seems plausible that most are constructed when needed. But are they truly constructed out of then-accessible object/issue/situational associations, or are existing attitudes retrieved and then modified? The MPAA model attempts to answer this question by providing an expanded account of attitude retrieval and internal assessment and adjustment processes.

There is strong evidence of an immediate and automatic evaluation of even novel stimuli, including when people are not attempting to evaluate them and are under extreme memory load. This suggests an ease of construction that might have an impact directly on at least initial evaluative responses (Bargh and Ferguson 2000; Duckworth et al. 2002; Fazio et al. 1986). Note, however, that in conducting such research, storage of evaluative information in the form of attitudes that are then retrieved is ruled out by design, forcing an online evaluative process dominated by perceptual input or immediately prior (even subliminal) exposure to evaluatively relevant material.

Most agree that evaluative responses to the environment are a truly fundamental part of assigning meaning and preparing the organism for action and that people are virtually hardwired to recruit whatever information is accessible to those ends (Duckworth et al. 2002; Pham et al. 2001). But the extent of this construction should depend on both situational factors and prior learning. Just as research in the automatic instantiation tradition acknowledges that these immediate, adaptive evaluative responses are most likely overwritten or modified by deliberative processes, with sufficient motivation and opportunity, it follows that primary reliance

would likely be placed on retrieval of already stored attitudes were these accessible and adequate to the task (Fazio and Towles-Schwen 1999). Prior research has demonstrated that attitudes vary in strength (normally assessed via measures of accessibility or operationalized in terms of antecedents such as self-relevance and elaboration), typically holding extremity constant (Petty et al. 1995). Attitude strength moderates perceptual sensitivity toward alternatives as well as behavior (Priester et al. 2004). Priester et al. (2004) found support for the proposition that attitude construction is reserved for conditions in which attitudes are weak and provide less than clear guides to evaluative judgments (e.g., when attitudes are inaccessible or based on ambivalent knowledge, or when they result from little thought). Unlike weak attitudes, when attitudes resulted from high levels of elaboration, these evaluative judgments were faster than attribute-based judgments and were not facilitated by making attribute judgments first.

A comprehensive model should attempt to deal with attitudes that vary along a continuum whose definition (e.g., strength) has proven to be elusive but that incorporates prior processing and elaboration. We discuss this issue further in connection with representational and functional sufficiency. Although it may not be parsimonious to develop theory that incorporates both traditional attitudes and constructed judgments (especially since there is no convincing empirical evidence that this distinction is necessary), the majority of attitude theorists have always accepted the premise that having (rather than repeatedly constructing) directionally specific predispositions to approach or avoid can be a functionally efficient strategy (Fazio 1986; Tesser 1993). Fazio (2000), for example, outlines a number of important benefits of having readily accessible attitudes, including efficiently guiding attention, promoting meaningful categorization, enhancing the ease and quality of decision making, and freeing resources for coping with stressors. In addition, at least for objects, issues, and people that are important to us, we seem to have a consistent sense of our likes and dislikes, though these may be subject to change as new information is placed in their respective files (Wilson and Hodges 1992; Wyer and Srull 1989). In addition, research on decision making supports some combination of consistency, anchoring, and confirmation biases, which together suggest the existence of an evaluative starting point (hence an attitude) rather than a newly constructed, unbiased mode of assessment (see Brownstein [2003] for a recent review of research on such biases in decision making). The foregoing arguments and evidence speak to the utility of having what Fishbein and Ajzen refer to as Ao(s) and, in our view, of generating something like Aact(s) from that starting point when needed. Since the latter would be action specific, they may not share important characteristics of the traditional attitude construct, particularly as enduring predispositions and ways of organizing knowledge (see Zanna and Rempel 1988), and so one may prefer to refer to them instead as evaluative judgments unless they take on these additional properties.

The more basic philosophical challenge to the traditional

view argues against giving any privileged status to an unnecessary construct since an evoked attitude can simply be constructed from accessible information at the time it is needed. The logic of that position has been countered by the infinite regress arguments of Fazio and Olson (2003), who wondered how attitudes could be assembled out of retrieved nonevaluative information (e.g., in studies varying the inclusion of specific attributes or exemplars and where no evaluation of them was requested) unless spontaneous evaluations of them were made. And, if the latter existed, by what logic would evaluations (i.e., attitudes) that are linked more closely to behavior not exist? Heeding the conventional wisdom of not throwing out the baby with the bathwater, therefore, most attitude researchers do not regard the constructionist perspective to be a truly fundamental challenge to attitude theory, and they dismiss the relevance of easily concocted demonstrations of malleable attitudes (Jaccard and Blanton 2005). Indeed, Bassili and Brown (2005) offer the cogent observation that conclusions about the lack of attitude stability based upon research emphasizing shifting contexts is similar to concluding that a flag that changes direction when the wind shifts is not attached to a flagpole.

Nevertheless, we think that a model that incorporates online attitude construction and the construction of modified attitudes under specified conditions (as ours does) helps account for the reality of intertemporal variation and variability in attitude-behavior relationships. We develop this position in greater detail when we examine the inner workings of the MPAA model. We now turn to the second major challenge to the long-held view of attitudes as a unified state of readiness to respond at any given point in time (perhaps best expressed as an unequivocal behavioral orientation; Jones and Gerard 1967).

THE DUAL ATTITUDES PERSPECTIVE

The possibility that people regularly hold more than one attitude toward important objects, issues, and people and that they do not necessarily integrate these into a unified predisposition is advanced most strongly by Wilson and his colleagues (Wilson et al. 2000). They argue that people may possess dual attitudes. In this conceptualization, people often have long-standing (implicit) attitudes that are well practiced and that are typically easy to retrieve (similar, in their analysis, to habitual responses and motor behavior, such as a well-learned tennis serve). In addition, however, recently constructed evaluations (explicit attitudes) often develop but are, essentially, isolated rather than integrated: "We propose that people can have dual attitudes, which are different evaluations of the same attitude object, one of which is an automatic, implicit attitude and the other of which is an explicit attitude. The attitude that people endorse at any point in time depends on whether they have the cognitive capacity to retrieve the explicit attitude and whether the explicit attitude overrides the implicit one" (Wilson et al. 2000, 102).

Wilson and his colleagues take the position that many older (i.e., long-standing) attitudes are activated automati-

cally (perhaps outside of awareness) and have a pervasive impact on judgments, while more context-dependent (explicit) attitudes dramatically vary in accessibility (or may even fade from memory). They explain the coexistence of these two oppositely valenced attitudes in terms of the greater capacity and motivation needed to retrieve explicit attitudes, thus making it less likely that people will be forced to confront attitudinal inconsistency. To explain this, they suggest a variety of factors, including the possibility that one of the two inconsistent attitudes could be repressed. In addition, they suggest that people may have both an implicit/nonconscious system and an explicit/conscious system that independently direct evaluation. In still other cases, they argue that dual attitudes may arise through some overriding mechanism, which can be either motivated or automatic. In their view, contextual factors that heighten accessibility of an explicit attitude can cause an automatic override of the implicit attitude if people do not devote additional cognitive resources to search for a second, implicit, attitude. Unfortunately, the automatic override mechanism (as a post hoc explanation for the existence of dual attitudes) is almost a wild card in their model, since it leads to the opposite prediction from their general premise that implicit attitudes are more likely to be retrieved and to influence judgments (as quoted above).

More fundamentally, their explanation for the primacy of implicit attitudes as guides to judgment and behavior (i.e., their automatic activation and ability to influence implicit, uncontrolled responses similar to a well-ingrained habit) may apply only to a very small number of core or self-defining attitudes. Otherwise the logic runs counter to prevailing research on the importance of context in retrieval (see Higgins [1996] for an overview). More everyday (explicit) attitudes do not require as high a level of chronic accessibility, since they are primed by more strongly associated contextual cues. That is, both semantic and affective stimuli heighten the salience of the most strongly associated memory traces rather than the earliest-learned and more general associations (implicit attitudes). This would mean that the more contextually situated (explicit) attitudes should be instantiated initially. This is inconsistent with Wilson and his colleagues' basic premise and explainable only by assuming an overriding of implicit attitudes.

Research on the measurement of implicit attitudes (motivated by an attempt to overcome self-report and presentation limitations and biases attached to explicit attitude measurement; see Bassili 2001; Fazio and Olson 2003; Greenwald et al. 2002) is sometimes used to support the existence of dual attitudes. However this research does not assume and does not provide evidence for separate mental representations implied in the dual attitudes view. Greenwald and his colleagues (Brunel, Tietje, and Greenwald 2004; Greenwald and Banaji 1995; Greenwald, McGhee, and Schwartz 1998) developed an implicit measurement procedure (the IAT) in which slow keypad responses to pairings of evaluatively charged words and category-identifying words (where the same key represented, say, positive words

and minority group names) could be interpreted as a signal of conflicting evaluations. Some of this research indicates that evaluative associations measured by the IAT are often not accessible to conscious inspection and that a person could retrieve an explicit attitude while being unaware of a deeper long-standing and oppositely valenced attitude toward the same object or issue. However, other IAT research finds evidence not only of conscious awareness but of active efforts to suppress undesirable responses, so it is difficult to know whether an IAT-assessed attitude (say, one exhibiting racial prejudice) will guide behavior or whether the person is likely to take steps to inhibit/override it, making it less likely to guide behavior (Devine 1989). Indeed, there are growing concerns that implicit measurement tends to confound valence, familiarity, and salience and that the IAT may be particularly sensitive to subtle variations in salience (Rothermund and Wentura 2004).

MPAA: ATTITUDE FORMATION AND NONOVERLAPPING BELIEFS

The MPAA model starts with the idea that attitudes develop at different points in time through a variety of mechanisms involving personal experience, transmitted information, and inferential/analogical reasoning. We believe that the key to understanding the origin of holding more than one attitude toward the same object is that different focal thoughts may produce largely nonoverlapping belief structures. As mentioned earlier, in order to maintain such multiple attitudes, conditions at retrieval will need to favor a truncated memory retrieval process. In this view, Wilson et al.'s (2000) dual attitudes represent a special case brought about by conditions that favor widely different attitude formation mechanisms (e.g., socially anchored or self-protective vs. object-centered thought) and retrieval processes that forestall awareness of conflict.

Considerable attention has been devoted to identifying both content and process distinctions in attitude formation. One particularly influential taxonomy is the functional approach developed independently by Daniel Katz (1960) and M. Brewster Smith (Smith, Bruner, and White 1956), particularly in its application to prejudice and attitudes that mediate one's relationships with important others. (See Eagly and Chaiken [1993] for an excellent summary of research in this tradition.) Perhaps most relevant to this discussion is the analysis of the formation and change of prejudicial attitudes by Katz, McClintock, and Sarnoff (1957). Whereas a reasoned, utilitarian attitude toward a minority group (e.g., African Americans or gays) might be based on self-interest (e.g., competition for jobs, resources, or academic opportunity), one based on ego needs might protect the individual from more deeply rooted concerns over personal adequacy that may confirm his place in a social hierarchy. Shavitt (1990; Shavitt and Nelson 2000) has extended the functional approach to the study of product attitudes, emphasizing distinctions between utilitarian product attitudes and those that are based on social identity. The social adjustment (and later social identity; Shavitt and

Nelson 2000) function allows people to reinforce their connection to similar real and imagined others and to create separation from dissimilar real and imagined others by prompting specific beliefs and behaviors that signal identification externally (to important others and reference groups) and internally to the self. Central to each of these examples of different attitude functions is the principle that attempting to change an attitude without understanding the function it serves for the individual may be doomed to fail because the attempt does not make contact with the motivational source of the attitude. From a more cognitive perspective, there is likely to be less overlap among the beliefs and associations that underlie these three (utilitarian, ego-defensive, and social adjustment and identity) kinds of functionally different types of attitudes.

Another attitude formation distinction that has stood the test of time is between attitudes that primarily rest on a cognitive (i.e., belief-based) foundation as opposed to an affect-based process (Edwards 1990; Fabrigar and Petty 1999; Katz and Stotland 1959; Zanna and Rempel 1988). Since overlap is minimal between a reason-based assessment and one arising from an emotional or conditioned response, attitudes arising in these diverse ways are likely to be somewhat compartmentalized, at least initially. Albarracín and Wyer (2001) reported that attitudes can potentially be influenced by associations that have become conditioned to the object through learning and are elicited by thoughts about it but also by the affect (moods) that one happens to be experiencing for reasons that have nothing to do with the object itself. Under minimal motivation or opportunity to introspect, a somewhat isolated affect-based attitude could develop.

Central versus peripheral (Petty and Cacioppo 1986; Petty and Wegener 1999) and systematic versus heuristic (Chaiken 1980; Chaiken, Liberman, and Eagly 1989) modes of processing are classic exemplars of dual process distinctions in attitude formation and change (see Chaiken and Trope 1999). Once again, to the extent that attitudes are formed via largely distinct thought processes (e.g., message arguments vs. source attractiveness, accuracy-motivated thought vs. defense-motivated thought), the MPAA model holds that, with multiple opportunities to form an attitude, a single integrated attitude toward the same object or issue does not necessarily occur. Surprisingly, this possibility has escaped attention probably because the research focus has been on alternative modes of attitude formation via persuasion. Thus, it was not until Wilson and his colleagues' more specialized focus on dual attitudes that the field's attention was drawn to this possibility.

While the foregoing distinctions in attitude formation processes are worthy of being extended to multiple attitudes via an analysis of likely cognitive overlap, we believe that a great many objects and issues can, alternatively, be assessed from the inside out (with the self as the focal point) or outside in (with the object or issue as the focal point). Since that possibility has been accorded little attention in the literature, aside from Shavitt's earlier cited work, we emphasize it here. Thus,

the figure differentiates between an object-centered attitude and a self-centered attitude.

ATTITUDE FORMATION MECHANISMS

We use the term *object centered* to refer to any attitude whose focal point is external to the individual, hence strongly associated with some object, issue, or person being evaluated. While it is possible to identify a variety of pathways or mechanisms likely to lead to the formation of an object-centered attitude, the following have received considerable support.

Direct/Imagined Experience with the Object

A person might form an attitude on the basis of direct experience with the attitude object (Fazio et al. 1982; Fazio et al. 1986) or by an imagined attempt to experience the attitude object (Keller and McGill 1994; Pham 1998; Schwarz 1990). These effects can also occur outside of conscious awareness (Bargh and Chartrand 1999; Janiszewski 1988). We also utilize direct experience and trial as information-gathering strategies. Sometimes we simulate direct experience. Consider a husband and wife who are trying to decide on a particular locale for their upcoming vacation. They might imagine themselves in various situations (sipping drinks on a beach in Jamaica, cozying up to a fire in the snow-capped mountains of Colorado, etc.). By asking the question, how do I feel about it, the couple can generate attitudes toward each alternative based on the unique affective information derived from trying on the episode (Pham 1998; Schwarz and Clore 1983).

Analytical Attitude Construction

Much of the consumer research on attitudes since the mid-1960s has been dominated by combinatorial models of attitude formation, especially information integration theory and expectancy-value models. The underlying premise of such models is that an attitude represents the scale value or belief strength of associated cognitive elements, each weighted by their utility or importance and aggregated via the psychological equivalent of adding or averaging. At one level, this is a highly rational—or at least reasoned—version of a subjectively expected utility model (Ajzen 1996), whereby salient cognitions and beliefs weighted by their evaluations lead to an attitude and subsequent behavioral tendency (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975). For example, a person in a restaurant can generate an attitude toward a Thai dish by considering specific features of the attitude object (e.g., this dish contains fish, rice, curry, etc.) and the evaluative implications of those features (e.g., I like fish and curry, but I am watching my rice intake).

Analogical/Categorical Reasoning

A person may generate an attitude by considering its similarity to other liked or disliked objects (Fiske and Neuberg

1990; Gregan-Paxton and Roedder John 1997). In these instances, evaluative information associated with a similar attitude object is brought to mind as a basis for generating an attitude toward the specific attitude object. The classic example is, of course, stereotyping, in which comparatively little use is made of individuating information and reliance is placed instead on categorical information (Fiske and Neuberg 1990; Macrae, Milne, and Bodenhausen 1994). Or, following the example given above, a person unfamiliar with Thai food might already possess an attitude toward what is thought to be a similar type of food (e.g., Schezuan Chinese food) and, based on this initial categorization and an anchoring and adjustment heuristic (e.g., I've heard Thai food is somewhat more spicy), generate an attitude toward some menu item. In the vacation example, the couple may generate evaluative information toward the Jamaica trip by considering the similarity of a previous trip taken to the Bahamas.

The previously discussed pathways to attitude construction are illustrative of object/issue-centered thought (outside-in) processes that research in consumer behavior has emphasized. Brands promote their distinguishing features. Most choice settings are rich in object-centered information, and the goal of choosing one option leads to an emphasis on diagnostic information (Lynch, Marmorstein, and Weigold 1988). As a result, evaluations often flow from attributes made salient in a choice context. But attitudes are also constructed from the inside out.

Value-Driven Attitudes

As defined by Rokeach (1968, 1973), a value is “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (Rokeach 1973, 5). Evaluations of numerous attitude objects and situations may be based upon a relatively small number of values serving as standards. In this research tradition, the personal importance of the values favorable to and opposed to a behavior plays a major role in guiding action (Schwartz and Inbar-Saban 1988).

The 2004 presidential election was widely viewed as a case where many voters formed attitudes toward the candidates based on core value similarity rather than factors that are often critical in assessing candidates (e.g., their record and positions). In these instances, the object of evaluation triggers personal values and self-conceptions, and these generate attitudes (Ball-Rokeach, Rokeach, and Grube 1984; Stern et al. 1995). For example, a person might develop a favorable attitude toward some particular conservation-related behavior based on thoughts about what he believes in and what he stands for. Even though these thoughts involve particular objects (e.g., SUVs, recycling, and setting thermostats), resulting thought and appraisals are likely to focus on pertinent aspects of the self system rather than object-centered details. In specific situations, only subsets of values become active and affect subsequent responses. For example, valuing equality might favor do-

nating to charity and oppose purchasing a luxury item, whereas valuing a comfortable life might have the reverse influence (Krishnan 1997).

Social Identity–Based Attitude Generation

A person can generate an attitude by relating the attitude object to a valued social identity or an actuated perspective or frame of reference that a person possesses as part of the repertoire of who they are or want to appear to be (Reed 2004; Shavitt and Nelson 2000). Social identity can be defined as the self-relevant social categories that people use to express who they are. Consumers categorize themselves on the basis of demographics (e.g., African American), social roles (e.g., parent), and shared consumption patterns or preferences influenced by marketers (e.g., sports fan). The potential social identities a consumer may use in self-definition are numerous and fluid, varying over a person's lifetime and across situations. For example, one's professional social identity as a business person, engineer, or entrepreneur may be top of mind and important in a work setting; later, at home, one's social identity as a parent or spouse may move to the forefront; on the weekends, one's social identity as a sports fan or outdoor enthusiast may take precedence (Reed and Bolton 2005). Consider, for example, the important public policy issue of increasing the retirement age for social security eligibility to improve the system's solvency. If people think about the issue from a future retirement standpoint, they might be opposed to it. But if they were to think about it as grandparents, their attitudes could be quite different. Such identity-based judgments may be linked to a large number of frames of reference or points of view that reflect current or aspirational selves (Markus and Kunda 1986), and research has shown that attitudes generated on these bases are resistant to counterpersuasion attempts (Bolton and Reed 2004).

FORMATION AND STORAGE OF OPPOSITELY VALENCED ATTITUDES

We now illustrate how outside-in and inside-out mechanisms can lead to the formation and storage of dissimilar attitudes. As per figure 1, a generated attitude (formed via one of the foregoing mechanisms) is stored in memory. Suppose that, on some other occasion, the person thinks about the same object or issue but in a very different way. The textbook examples of figure-ground perception (e.g., young woman vs. old hag; a vase vs. two silhouettes) illustrate an extreme case of this, in that seeing one virtually blocks the other.

One way minimal cognitive overlap could come about is if the initial attitude was formed outside in, say, based on a few product attributes. But later (when an important reference group or key value was salient), an evaluative judgment about a product (one packaged, it turns out, in a non-biodegradable manner) was made, perhaps unhesitatingly, in an inside-out fashion. The two attitude formation episodes would be, then, as two ships passing in the night, having

something in common (i.e., the attitude object) but following separate paths. Neither the ships nor the attitudes collide. There is nothing to resolve; hence, there is no integrative or discrepancy reduction process.

Since there has been so much documentation of outside-in (typically attribute-based) attitude formation mechanisms in consumer research, in the interest of space, we buttress the case for inside-out attitude formation by highlighting research showing that a wide variety of stimuli (i.e., objects, issues, and events) are capable of being elaborated upon and evaluated in relation to what has been termed the self memory system (Conway and Pleydell-Pearce 2000; Klein and Loftus 1988). The likelihood of this happening is based on the accessibility of some personal trait, reference group, social identity, or self schemata. For convenience, we will refer to any of these aspects of the self memory system that are currently accessible in memory as one's working self-concept (Markus 1977). This perspective starts with the idea that people, at any given point in time, will have available a subset of social standpoints or categories that can become a part of their working or spontaneous self-concept (Bolton and Reed 2004; Markus and Kunda 1986; McGuire, McGuire, and Winton 1979). So, either people with chronically higher levels of that working self-concept or those in whom it has been heightened (e.g., imagine a minority group member in a large majority group) are likely to process a stimulus from a self system standpoint, possibly even outside of awareness. More active/conscious processing should lead to self-related elaboration and evaluation of the stimulus, thereby forming connections to that self schema in memory. Research on self-referencing (see Burnkrant and Unnava 1989; Meyers-Levy and Peracchio 1996; Rogers, Kuiper, and Kirker 1977) has established the importance of self-concept-based processing in consumers' responses to persuasive messages.

Thus, the beliefs that function as building blocks of such attitudes are likely to be different in content than those supporting an object-centered attitude. Because there is some link between the object or issue and the self memory system, there would be partial overlap among attitude components. Only in a truly extreme case would these memory systems be so inherently distinct that something approaching true attitude compartmentalization might occur.

ATTITUDE RECRUITMENT, RETRIEVAL, AND ASSESSMENT PROCESSES

In the MPAA model, attitude recruitment and retrieval is pivotal in determining both the likelihood that attitudes will guide behavior and whether a single integrated attitude is likely to emerge. We think of recruitment as a more inclusive operation than retrieval, referring to both associative processes and largely automatic use of accessible information, as well as to deliberative/controlled internal search. Current models of memory and information processing often assume that knowledge resides in an associative network of cognitive elements whose linkages vary in strength over time.

Just as the recall of factual knowledge (e.g., attribute ratings, clothes people were wearing at a party) is a function of a combination of processing operations at encoding and cues available at retrieval, so too the recall of a particular attitude should depend on (1) prior encoding processes (particularly their depth, elaboration, and personal relevance) in which one or more evaluations/attitudes evolved from a portion of the knowledge network (e.g., beliefs) and (2) the degree to which cues available at retrieval are linked to the particular network. From a processing standpoint, this position is consistent with the MODE model (Fazio and Towles-Schwen 1999), in which motivation and opportunity to process jointly determine whether attitude evocation will be either relatively automatic or deliberate. When motivation and opportunity are both low, people are unwilling to search memory for other relevant information once they have generated a sufficient attitude. When both motivation and opportunity are high, people are much more likely to engage in a deliberative process, thereby identifying other relevant information (such as an alternative basis for evaluation) and then resolving any discrepancy between them. Unless both motivation and opportunity are sufficiently high, a relative lack of deliberation can fail to produce the traditionally anticipated integrative attitude.

To illustrate, assume that at least one attitude has already been constructed and stored in memory, as illustrated in the top portion of figure 1 (with the added possibility that an oppositely valenced attitude has also been generated and stored). Next, an object, person, or issue becomes salient, either through externally mediated perceptual processes or activation of a concept in memory. At this point, stored attitudes (just as any information in memory) are likely to be accessed in direct proportion to (1) the strength of association between the retrieval cue and each attitude, thus a function of both frequency and recency of elicitation, and (2) the chronic accessibility of the attitude (regardless of context or retrieval cue). Attitudes based on a few important attributes (via an outside-in process) or a prominent aspect of one's self concept (via an inside-out process) are more likely to be chronically accessible than those based on transient or peripheral features.

A study by Cohen and Reed (2004) supports this analysis and provides preliminary evidence that a combination of a socially anchored attitude formation mechanism and a semantically linked retrieval cue led it, rather than a coexisting initial attitude, to guide behavior. In their study, people's initial attitudes on a personally involving issue were assessed. Then they participated in a chat room interaction with others who either brought forth a jointly held (i.e., socially anchored) and oppositely valenced attitude on the same issue or failed to provide a consensual basis for any related attitude. Two to 3 days later, all participants were telephoned by a fictitious survey organization whose name either contained or omitted a one-word reference to an aligned social identity (to cue the socially anchored attitude). Absent the retrieval cue, people's answers were consistent with their original attitude (even if a second socially anchored attitude was available). When the

retrieval cue was present, people's answers were consistent with the socially anchored (second) attitude, even though their initial attitudes were available. There was no evidence of attitude integration. This evidence is consistent with our more general nonoverlapping cognitions conceptualization of the formation and retrieval of more than one (oppositely valenced) attitude and is difficult to reconcile with the narrower (implicit and explicit attitudes) underpinnings of the dual attitudes formulation.

People typically do not bring all of the relevant knowledge they have available to bear on a judgment or decision. Retrieval is context dependent (Tulving and Thomson 1973) and for evaluative information is typically goal directed (Gollwitzer and Moskowitz 1996). Most generative models of memory typically include some type of verification criteria so that memory can be truncated without expending unnecessary time and effort (Kruglanski 1989). So, for example, having brought to mind the most strongly associated cognitive elements, response latency increases and becomes a useful stop signal. A truncated search is particularly likely to occur when an attitude comes to mind quickly (a signal of a well-formed, unambiguous, and strongly held attitude; see Lee and Labroo 2004; and Menon and Raghurir 2003), when there is time pressure, and when the accompanying affective state is positive (hence, there is no proprioceptive feedback suggesting that all is not well; see Pham et al. 2001; Schwarz and Clore 1988). In using retrieved information, we believe that people first apply a heuristic that is quickest and easiest to use and assess their confidence that the implications of this assessment are valid. If their confidence is above a minimum threshold (called a sufficiency threshold by Chaiken et al. [1989; Eagly and Chaiken 1993]), they proceed. If, however, their confidence is below their threshold, they apply additional cognitive resources and criteria and continue in this manner until their threshold is either reached or lowered.

REPRESENTATIONAL AND FUNCTIONAL SUFFICIENCY

While attitude accessibility is considered a necessary condition for it to guide behavior, the process through which this occurs is much less clear. Most fundamentally, attitude accessibility plays an internal priming-like function, directing attention to evaluatively consistent material (whether perceived or retrieved). When behavior is nondeliberative, accessibility is likely to carry significant weight because of this directive aspect. However, for the types of choices and behavior that are the subject of our framework, accessibility, in the absence of some determination of attitudinal adequacy and applicability, should not play a strong role unless opportunity and/or motivation to process information is quite low (see also Higgins 1996). One exception to this is when accessibility plays a fluency-like role, leading to the inference that the attitude is important, correct, or strongly held (Fabrigar et al. 2005).

The MPAA model proposes that two assessments intervene

between an accessible attitude and an attitude used to guide behavior. As shown in figure 1, these provide a further opportunity to bring to mind evaluatively inconsistent information and integrate it into a unified predisposition to respond. Models identifying attitude strength as a key predictor of product consideration and choice (holding accessibility constant) have received increasing attention (Priester and Petty 2003; Priester et al. 2004). Strength, in this research, is almost entirely a function of personally relevant elaboration of message content. However, this research is silent as to how attitude strength moderates both formation of consideration sets and overt behavior. In our view, when attitudes are brought to mind, two strength-related judgments (representational sufficiency and functional sufficiency) are probably made. The first reflects the clarity/ambiguity of the attitude: Do I have a well-formed, reasonably coherent position on this matter?

So, having brought to mind an accessible attitude, we hypothesize an almost immediate and possibly metacognitive representational sufficiency assessment (see Schwarz [2004] for a particularly relevant discussion) and, assuming that this assessment is favorable, a subsequent functional sufficiency assessment. The first of these, representational sufficiency, is probably most often nondeliberative rather than strategic, more similar to the notions of subjective fluency (Schwarz and Clore 1996) and reality monitoring (Johnson and Raye 1981). That is, representational sufficiency is likely to be virtually an automatic reflection of whether what has been retrieved represents one's own reasonably well-formed and coherent judgment as opposed to some hazy, vague thought with little sense of personal ownership. Fluency, described as the subjective experience of personal familiarity, has served as an important explanatory principle in research on the mere exposure effect.

Similarly, reality monitoring has been widely used to explain how people quickly assess the likelihood that they are, in fact, retrieving their own perceptual representation of some event rather than a false memory for that event, though this can be more of a deliberative process. A closely related finding is the relationship between ease of recall and subsequent confidence in the recalled content (Tormala, Petty, and Brinol 2002). The process we hypothesize is not based strictly on ease of recall but on something closer to the gestalt concept of good form as it applies to the retrieved mental representation. Just as people may use the ease of retrieving an attitude to infer how important the attitude is (Roese and Olson 1994), so too they may infer that the attitude is unambiguous and certain as well as confidently held (though the direction of influence is often confounded in empirical research; see Fabrigar et al. 2005). While typically immediate and nondeliberative, anything that causes the individual to reflect on the confidence or certainty with which an attitude is held (e.g., an increase in accuracy motivation, forewarning, or possibly instantiation of a negative mood) might make this assessment more thoughtful.

Assuming that an attitude is representationally sufficient, it still may not seem adequate for guiding behavior. We integrate this idea into our model as a functional sufficiency

assessment, which we define operationally as a perceived readiness to engage in a behavior or to make a decision based on a retrieved attitude. It reflects the adequacy of the attitude for the judgment, choice, or action at hand: Does this give me a good basis to proceed? If the answer to this question is no, it is likely that a more complete memory search follows to see if a more diagnostic guide is available or can be constructed out of available information (see the lower portion of fig. 1).

Cohen, Reed, and Belyavsky (2005) provide initial evidence that attitude accessibility and the mere production of an attitude are insufficient to determine whether an attitude will be relied on to guide behavior. In one of the analyses reported in that paper, Cohen and his colleagues examined whether attitudes that are accessible are necessarily judged to be representationally sufficient. They also examined the consequences of having an accessible but not representationally sufficient attitude. The critical manipulations were (1) whether people role-played hypothetical persons whose values were similar to their own or opposite to their own, since both conditions should lead to equal accessibility but the former should produce a greater sense of coherence (personal ownership of a well-formed attitude); and (2) whether the selected role-playing value was or was not more likely to be decision relevant and, thus, functionally sufficient as a guide to behavior. Evidence indicated that all conditions lead to equal accessibility but that the former produced a greater sense of coherence (i.e., personal ownership of a well-formed attitude). Importantly, readiness to act was significantly higher when people felt that they had a coherent personal attitude and the value on which it was based was more closely aligned with the behavior (functional sufficiency).

To our knowledge, there has been no discussion of an attitude adequacy assessment that is similar to representational sufficiency. Discussions of attitude adequacy skip our hypothesized initial step and examine behavior/decision relevance, sufficiency, applicability, or diagnosticity. The term *attitude ambivalence* (Fabrigar et al. 2005) has been used to describe the feeling of being torn between positive and negative beliefs (hence, conflict) as well as other types of perceived inconsistency, particularly between one's evaluative judgment and one's feelings (which may provide alternate bases for a response). The feeling of ambivalence produces some reluctance to rely on such an inconsistent attitude (Sengupta and Johar 2002).

Assuming that inconsistent attitudinal information is not retrieved initially, some factors motivating a more thorough search of memory or some assessment that would lead a person to discount a prior evaluation would need to occur to make people aware of a conflict, as illustrated in the lower left of figure 1. Consistent with representational sufficiency, people seem to regard the easy production of a response as evidence that it is valid (Lee and Labroo 2004; Menon and Raghbir 2003), and only the experience of unease at that point is likely to trigger further memory search. The observed presence of inconsistent evaluative information (as in dual attitudes) is then likely to spur attitude conflict res-

olution, making it much more likely that a single, integrated attitude will result. Although beyond the scope of the MPAA model, subsequent exposure to an object (and whatever new information is then available about it) is likely to initiate comparative as well as retrieval and recruitment processes with significant implications for attitude stability and change (see Albarracín, Wallace, and Glasman [2004] for a model of this type).

A further opportunity to retrieve conflicting evaluative information occurs at the functional sufficiency stage. Here, the person may experience doubt that the retrieved attitude is a sufficient guide to behavior, and that may spur a more deliberative internal search for relevant information. As discussed earlier, though a specific guide to action may then be constructed, to the extent that an attitude has been formed and stored in memory, that would seem to be the starting point (rather than reverting to the extreme upper portion of fig. 1 to start from scratch). Conflict resolution processes (assuming the retrieval of inconsistent attitudinal information) make it less likely that oppositely valenced or even inconsistent attitudes would coexist. Research is needed to identify conditions leading to one of several outcomes: (1) retaining one and abandoning the other, (2) integrating the two attitudes, (3) subcategorizing the object of evaluation (e.g., personal likeability of a political figure or celebrity vs. an assessment of his ability), and (4) rethinking one's evaluation to arrive at a new attitude.

CONCLUSIONS

Attitude theory and research has been a topic of continuing widespread interest in both psychology and consumer behavior. A total of 471 papers dealing with attitudes have been published in the *Journal of Consumer Research*, slightly more in the past 15 years than in the comparable heyday of attitude research. The increasing fragmentation of the attitude literature also reveals considerable debate and challenges to core ideas about the nature, role, and ultimate viability of the attitude construct. Proponents of the traditional view may have generalized too much from research dealing with particularly important, personally involving, and stable predispositions to respond. By the same token, research examining constructed evaluative judgments that arise from heightened contextual factors, priming, and framing manipulations and affective responses to stimuli should not dominate our thinking about the usefulness of having and relying (at least in part) on accessible and confidently held attitudes.

The MPAA conceptual framework has two main purposes. First, it offers a newly integrative treatment of attitude formation, storage, retrieval, and reliance that shows how interrelated these processes are and how seemingly diverse current viewpoints and research can be accommodated in a single framework. Second, it addresses two key challenges to the traditional view of attitudes. The first argues that the concept of attitudes is unnecessary both because evaluative judgments are largely context specific (hence, constructed on line) and because stored attitudes are seldom sufficiently

diagnostic to guide behavior. We try to provide greater clarity regarding when people are more likely to rely initially on a stored attitude rather than constructing an evaluative judgment, and we separate a purely constructive process from one that is better viewed as an anchoring and adjustment process. We propose two mechanisms, representational sufficiency and functional sufficiency, to explain this adjustment process.

The second challenge disputes the bedrock notion that evaluative information evolves into a unified predisposition to respond. However, we view the dual attitudes model as a special case of nonoverlapping cognitive elements and discuss how different pathways to attitude formation (including distinctions between outside-in and inside-out mechanisms) can produce attitudes of opposing valence toward the same object or issue because of minimal cognitive overlap. The largely unexamined distinction between outside-in and inside-out attitude formation pathways seems highly relevant to research on persuasion because creating a largely nonoverlapping attitude (by emphasizing important values and self-identity considerations) and then trying to provide retrieval cues to bring that attitude to the fore to guide behavior may well be a better approach than a frontal assault on a prior attitude.

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