

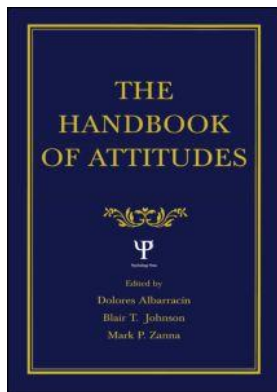
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Dolores Albarracín, Blair T. Johnson, Mark P. Zanna

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Alice H. Eagly, Shelly Chaiken

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Attitude Research in the 21st Century: The Current State of Knowledge

Alice H. Eagly
Northwestern University

Shelly Chaiken
New York University

It is both an honor and a burden to be invited by the editors of this handbook to write a final chapter that comments on the progress of the current generation of attitude researchers and that suggests directions for the future. As we read through the chapters, our foreboding at the magnitude of the task of studying such a large number of rather long chapters changed to pleasure and excitement about the growth and deepening of attitude theory and research that the authors of these chapters have so ably described. Each chapter represents a formidable scholarly effort by authors who analyze a particular area of attitude research in a way that both celebrates achievements and charts issues needing new research.

For us, much of the appeal of research on attitudes lies in the breadth and inclusiveness of the set of issues that fit within this domain. Because attitudes were classically defined as encompassing cognition, affect, and behavior (Katz & Stotland, 1959; Rosenberg & Hovland, 1960), the area has long had the potential to serve as an integrative force within psychology. Attitude theory and research thus were cognitive long before psychology's cognitive revolution but also emphasized motivation and emotion even in the height of the field's shift toward cognition. Moreover, the prediction of behavior has always been a core issue in the study of attitudes.

Most psychological research is somewhat specialized insofar as it addresses single response classes such as perception, cognition, or emotion. In contrast, attitude research encompasses all response classes even though it focuses on evaluation in the sense of the goodness versus badness of entities. In addition, because the entities that are evaluated can be anything that is discriminated by individuals, the study of attitudes encompasses all classes of stimuli. In contrast, most other research areas within social psychology are confined to a single stimulus class, such as the study of interpersonal attraction, which pertains to people as stimuli, or the study of prejudice, which pertains mainly to social groups as stimuli.

In the relatively long history of attitude theory and research, the potential breadth of the field seemed not to be fully realized by the scope of the research undertaken. Two reasons for this limitation stand out. First, many problems are inherently attitudinal, such as the study of prejudice or interpersonal attraction, proceeded with limited input from mainstream attitude theory, despite its obvious relevance. Second, most attitude researchers concentrated on a particular

set of issues that remained encapsulated mainly within social psychology. For example, during the early history of attitude research, there was much interest in whether and how attitudes could be measured (see Himmelfarb, 1993; Krosnick, Judd, & Wittenbrink, chap. 2, this volume). Although attention to assessment constituted a healthy beginning, helping attitude research to gain scientific credibility, these assessment advances did not consistently prove their worth in studies of attitudinal functioning, whose practitioners often adopted relatively casual measurement practices. Subsequent attitude research, stimulated by World War II, came to focus on persuasion and attitude change, to the neglect of other attitudinal topics (Hovland, Janis, & Kelley, 1953; see Johnson, Maio, & Smith-McLallen, chap. 15, this volume). These efforts were widely admired by many social psychologists but did not hold center stage within psychology as a whole. Somewhat later, after attitude researchers were challenged by an apparent deficit in attitudes' ability to predict behavior, many moved forward to the critical psychological issue of how behavior can be predicted and what processes mediate between attitudes and behavior (Ajzen & Fishbein, chap. 5, this volume). Although the achievements of attitude-behavior research are formidable, its scientific profile within psychology as a whole has been modest.

To many psychologists, the study of attitudes has seemed to be just one of many relatively small research areas, pursued by a subgroup of social psychologists. Yet the potential exists for attitude research to provide a broadly inclusive psychological framework. In this chapter, we consider whether in the contemporary period the potential inclusiveness of attitude theory is being realized to a greater extent than in the past. The chapters of this handbook provide an ideal opportunity for addressing this question. The set of issues considered in the chapters encompasses nearly all of those pursued by attitude researchers who find their disciplinary home within psychology departments. We consider the extent to which attitude theory and research now include concerns and questions that lie within its conceptual boundaries but beyond the traditional research topics pursued by earlier attitude researchers. In analyzing whether attitude researchers have in fact achieved integrative frameworks, we focus on several issues in this chapter.

We first address the central issue of the nature of attitudes themselves, including the perennially challenging question of how attitudes should be defined. This issue links to contemporary efforts to understand attitudes that are assessed by explicit and implicit measures and that can sometimes appear as dual or multiple attitudes. Also in this section, we consider whether attitudes should be regarded as stable and enduring or contextual and repeatedly constructed and reconstructed. We then consider the increase in attention to affective processes, involving emotions and moods, and relate affective phenomena to central issues in attitude theory. Our chapter then turns to issues of motivation and recognizes the power of motivational analyses to organize and elucidate many attitudinal phenomena, including the processes that mediate attitude formation and change. Our chapter then analyzes perspectives that emphasize the interpersonal and social context of attitudes, an area of increasing sophistication and integrative power. Finally, we recognize continued growth in research on other attitudinal topics and suggest directions for additional development of the field.

THE NATURE OF ATTITUDES

Attitudes as Tendencies to Evaluate

Definitions of attitude have varied over the years, although they have centered on evaluation that is associated with, or directed toward, a particular entity or *attitude object*. Most definitions have been consistent with Campbell's (1963) discussion of *acquired behavioral dispositions*, that is,

states of the person that come into being on the basis of some transaction with the environment. Consistent with Campbell's treatment, attitudes do not exist until an individual distinguishes an attitude object as a discriminable entity, sometimes without conscious awareness, and responds to this object on an explicit or implicit basis. That initial response may be shaped in part by hard-wired predispositions, as in the case of a fearful response to snakes or spiders (Oehman & Mineka, 2001), or, more generally, by heritable precursors (Tesser, 1993). Nonetheless, an attitude toward an entity such as snakes does not come into being until an individual first encounters an instance of the entity. The initial response, presumably negative in the case of a snake, then leaves a mental residue in the person that predisposes him or her to an unfavorable or avoidant response on subsequent encounters. This evaluative residue of past experience is a hypothetical construct—that is, an intervening state that hypothetically accounts for the covariation between stimuli relevant to the attitude object and the evaluative responses elicited by these stimuli.

In *The Psychology of Attitudes* (Eagly & Chaiken, 1993), our general review and integration of attitude theory and research, we referred to this residue as a *tendency* to evaluate. The term *tendency* reflected a careful choice, intended to avoid restricting attitudes in a temporal sense by implying either that they must be enduring or that they are necessarily short-term and temporary. Because in psychology the word *state* implies temporariness and the word *disposition* implies greater permanence, neither term seemed appropriate to refer to attitude as an acquired behavioral disposition. Moreover, an appropriate term would not imply that attitudes are necessarily accessible to consciousness. In order that the definition of attitude could serve as a broad umbrella for attitude research, we therefore settled on attitude as a *psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor*.

In concert with many other theorists (Zanna & Rempel, 1988), we argued that attitudes can be formed through cognitive, affective, and behavioral processes and expressed through cognitive, affective, and behavioral responses. Attitudes thus can have varied antecedents on the input side and varied consequences on the output side. Yet, we parted company with some of these theorists by objecting to the definition of attitude as being a response per se—for example, the categorization of the attitude object on the evaluative continuum (Zanna & Rempel, 1988). Similarly, we part company with Kruglanski and Stroebe's (chap. 8, this volume; see also Wyer & Albarracín, chap. 7, this volume) definition of attitudes as *evaluative judgments*. Categorizations, evaluative judgments, and, more generally, overt or covert evaluative responses are best regarded as *expressions* of the tendency that constitutes attitude. Although evaluative judgments and categorizations of instantiations of an attitude object are of course attitudinal in the sense that they express attitudes, they are not synonymous with attitude itself. Attitude is a tendency or latent property of the person that gives rise to judgments and categorizations, as well as many other types of responses such as emotions and overt behaviors. The separation in attitude theory between the inner state that constitutes attitude and the responses that express this inner state is crucial to understanding the relation between these tendencies, which are residues of past experience, and current responding, which reflects a variety of influences in addition to those that emanate from the inner state. This separation between the tendency that constitutes attitude and its expression in attitudinal responding facilitates theory development concerning attitude change, the attitude-behavior relation, and other attitudinal phenomena.

Regarding attitudes as latent properties of the person challenges psychologists to specify the nature of that inner state. By providing a minimalist definition of attitudes merely as psychological tendencies to evaluate in *The Psychology of Attitudes*, we welcomed continuing debate on the description of the psychological and physiological events that constitute that state and thus underlie attitudes. Theorists of attitudes define these constituents of attitudes in varying ways, depending on their particular theoretical preferences (Wegener & Carlston, chap. 12, this

volume). For example, Fazio (1989) defined attitudes as an association in memory between an attitude object and an evaluation. This way of thinking about the latent property that constitutes attitude follows from associative learning models, such as associative network models of memory (Anderson, 1983). Also reflecting an associative learning approach, Fabrigar, MacDonald, and Wegener (chap. 3, this volume) defined attitude as "a type of knowledge structure stored in memory or created at the time of judgment" (p. 80).

A recent effort to specify the nature of the psychological tendency that constitutes attitude is Bassili and Brown's (chap. 13, this volume, p. 552) proposal that attitudes are "emergent properties of the activity of microconceptual networks that are potentiated by contextually situated objects, goals, and task demands." This definition thus links the attitude concept to connectionist models in which attitudes are represented by a pattern of activation of units within a module (Smith, 1996; Smith & DeCoster, 1998). The microconcepts that populate this inner state contain evaluative information and thus are consistent with the consensual definition of attitudes as evaluative. Borrowing a term from Rosenberg (1968), Bassili and Brown named this inner state an *attitudinal cognitorium*.

Psychologists should neither expect nor desire a consensus about the precise definition of the inner state known as attitude. We instead welcome the various insights that flow from particular specifications of this state. Such specifications are metaphoric because they do not have an inherent reality in terms of a psychological tendency or state that can be directly verified. In other words, researchers cannot directly observe object-evaluation associations, knowledge structures, or microconcepts. Instead, thinking about attitudes in terms of one of these specifications of the tendency to evaluate enables and guides theorizing about attitudes. Each treatment favors certain types of hypotheses about attitudinal functioning. For example, Doob (1947) defined the inner state that constitutes attitude as a learned, implicit anticipatory response, a treatment that borrowed language from the then-popular framework of Hullian learning theory. Although attitude researchers no longer are guided by this particular metaphor, it enhanced understanding within one theoretical tradition.

Attitude researchers should welcome these specific, distinctive instantiations of the latent tendencies that constitute attitudes because each of them serves as a metaphor for a particular theoretical perspective. Each promotes certain insights about attitudes, and its proponents have the challenge of proving its ability to inspire testable hypotheses that are subsequently confirmed. All of these metaphors are consistent with the essential definition of attitude as an evaluative tendency. This broad definition of attitude thus transcends particular theoretical preferences and embraces psychologists' shifting metaphors for understanding the inner state that constitutes attitude.

Attitudes as Enduring or Temporary Constructions

Our minimalist definition of attitudes as evaluative tendencies allowed it to encompass the variability of attitudes along a temporal dimension. Some attitudes are relatively enduring, in some cases formed in early childhood and carried through one's lifetime. Other attitudes are formed but then are changed. Still other attitudes are formed but not subsequently elicited and thus they recede or, in effect, disappear from the psyche. Understanding the determinants of attitudinal persistence remains an underdeveloped agenda in attitude research, but surely elementary observations of social life suggest that attitudes may vary from ephemeral to enduring.

The main reason why some investigators have concluded that most, if not all, attitudes are unstable, constantly emerging anew in specific situations, is that they have equated variability in the expression of attitudes with variability in the evaluative tendency that constitutes attitude. This attitudes-as-constructions position (Schwarz & Bohner, 2001; Wilson & Hodges, 1992) conflates variability in attitudinal responses with variability in attitude itself. Constructionist

theorists are entirely correct to argue that attitudinal judgments are constructed anew on each occasion of encountering an attitude object because such judgments are influenced by the specific context in which they take place as well as by the particular aspect of the attitudinal tendency to evaluate that is activated. These context effects should be and are pervasive, as Schwarz and Bohner (2001) argued, because attitudinal judgments are not pure expressions of attitude but outputs that reflect both attitude and the information in the contemporaneous setting (see Wegener & Carlston, chap. 12, this volume). This setting contains cues that elicit the attitude, information that provides new inputs to the attitude, and contextual stimuli that provide standards against which to judge the current instantiation of the attitude object. The observed attitudinal judgments or other responses such as overt behaviors reflect this composite of influences. Whereas attitudinal responses, such as judgments, are therefore labile depending on the judgment context, the inner state or latent construct that constitutes attitude can be relatively stable. Therefore, judgments often vary around an average value that is defined by the tendency that constitutes the attitude. We thus agree with Krosnick et al. (chap. 2, this volume) that to understand this variability, psychologists must model the psychological processes that mediate between the person's evaluative tendency and the particular attitudinal responses that are elicited in varied circumstances.

Attitudes as Implicit or Explicit

An important development in contemporary research on the nature of attitudes is the proposal that attitudinal responses can be implicit as well as explicit. Researchers have devoted considerable attention to understanding attitude expressions that are implicit in the sense that they are not consciously recognized by the individual who holds the attitude (Greenwald & Banaji, 1995). Several chapters provided thoughtful discussions of these developments (Ajzen & Fishbein, chap. 5, this volume; Bassili & Brown, chap. 13, this volume; Krosnick et al., chap. 2, this volume).

Researchers have theorized that, even when a person does not have conscious access to an attitude, it may be automatically activated by the attitude object or cues associated with the object. Attitudes that are implicit in this sense can direct responding, especially more spontaneous behaviors (Dovidio, Brigham, Johnson, & Gaertner, 1996). In contrast, explicit attitudes to which one has conscious access may be activated in a more deliberative manner that requires cognitive effort. Such attitudes may under some circumstances override implicit attitudes, and they better predict behaviors that are under volitional control (see review by Ajzen & Fishbein, chap. 5, this volume).

Much attention has been directed to innovative implicit measures, which seek to assess attitudes without asking respondents for direct reports of these attitudes (Fazio & Olson, 2003; Krosnick et al., chap. 2, this volume). These methods continue a long history of *indirect measurement* in attitude research, which includes disguising attitude measures as tests of knowledge (Hammond, 1948) and assessing physiological responses (e.g., pupillary responses, Hess, 1965; eletromyographic activity in facial musculature, Schwartz, Ahern, & Brown, 1979). Although such measures succeed in assessing attitudes without asking for a verbal report, there is, as Fazio and Olson (2003) indicated, no assurance that respondents are unaware of implicitly assessed attitudes or that these attitudes are in some sense unconscious.

The question of exactly what implicit measures assess is the focus of considerable contemporary research. Clouding understanding are the generally low correlations between attitude assessments that use different implicit measures as well as the variable magnitude of correlations between implicit and explicit measures (Ajzen & Fishbein, chap. 5, this volume; Fazio & Olson, 2003). The issues raised concern the validity of the instruments as well as the nature of the processes that underlie these measurements. The Implicit Association Test (IAT), for

example, the most popular implicit measure of attitudes (Greenwald & Nosek, 2001), likely reflects, at least in part, associations that are common in one's environment and thus may be culturally determined and not necessarily endorsed by the individual respondent. Olson and Fazio (2004) frame this issue in terms of *extrapersonal associations* that do not contribute to an individual's evaluation of an attitude object and propose a variant *personalized IAT* that reduces the influence of such associations. Others argue that IAT responses reflect a mix of controlled and automatic processes (Conrey, Sherman, Gawronski, Hugenberg, & Groom, 2004), whereas ideally the measure would assess only the automatic processes inherent in the notion of attitudes that are not necessarily accessible to introspection.

Given the imperfections and ambiguities of current implicit measures of attitudes, researchers would be well advised to use caution in claiming that the IAT or other indirect or implicit measures assess attitudes that are implicit in the sense that the attitudes are unconscious or not accessible to introspection. These measures may sometimes assess implicit attitudes, but the jury is still out on this matter. Moreover, dissociations between implicitly and explicitly measured attitudes can reflect a variety of factors other than lack of awareness of implicitly measured attitudes, including discordance in the specific content of explicit and implicit measures and social desirability constraints that make people reluctant to admit to certain attitudes on explicit measures.

Dual and Multiple Attitudes

The idea that people can hold more than one attitude simultaneously has arisen in several guises in attitude research. One manifestation of this idea is the concept of attitudinal ambivalence, whereby an individual may be described as holding two attitudes, one positive and one negative, in relation to the same attitude object (Eagly & Chaiken, 1998; Fabrigar, MacDonald, & Wegener, chap. 3, this volume). Ambivalence can arise from various sources and challenges the traditional idea of attitudes as located on a single bipolar continuum. The gains from separating positive from negative attitudes are several (Cacioppo, Gardner, & Berntson, 1997). For example, this separation coordinates with findings indicating that positive and negative responding have different physiological correlates and that negative aspects of people's attitudes often exert stronger effects on behavior and judgments than positive aspects. It is therefore often useful to regard attitudes as consisting of coexisting positive and negative tendencies.

Another manifestation of the multiple attitude idea is Wilson, Lindsey, and Schooler's (2000) conception of dual attitudes, by which people have an implicit attitude and an explicit attitude toward the same attitude object. Implicit attitudes can be automatically activated, whereas explicit attitudes require motivation and capacity to be retrieved from memory. Whereas the construct of ambivalence implies that positive and negative evaluations can both be activated, producing a subjective state of conflict, Wilson and colleagues assumed that generally only one of the dual attitudes is active. Such bipartite attitudes can arise, for example, when new information changes an attitude, creating a new explicit attitude. Yet the old attitude may continue to be present, but often in implicit form.

In agreement with Bassili and Brown (chap. 13, this volume), we believe that attitudes can be not merely dual, but multiple. If the inner tendency of evaluation has been laid down by many encounters with the attitude object at various points in time, different aspects of that residue of past experience may form the basis of attitudinal responding under differing circumstances. Consider, for example, people's attitudes toward their mothers. An affect-laden attitude is ordinarily formed by the young child, and this attitude is elaborated and changed by numerous inputs as the child matures. For example, a rebellious teenager may form a negative attitude in response to a mother's restrictions. The attitude of the mature son or daughter becomes more complex with more knowledge of the mother's functioning in a wider range of settings.

However, the adult child may sometimes revert to a childish or adolescent attitude, perhaps without awareness of the activation of such attitudes, when returning to the family home and engaging in some of the social interactions that resemble those of earlier periods. The residue of past experience that constitutes the attitude is thus multifaceted and can be crystallized in various forms, depending on situational cues. The attitude active at any point in time may be more implicit or more explicit. A tentative, working hypothesis is that attitudes exist on an implicit-explicit continuum, depending on the degree to which the individual has conscious access to them. Awareness of one's own attitude may sometimes be ambiguous, sometimes vague and imperfect, and sometimes absent.

Once More, the Nature of Attitudes

Given these complexities of implicit and explicit attitudes and attitudes that may be dual or multiple in other senses, does it make sense to define attitude as *a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor* (Eagly & Chaiken, 1993)? We believe that this definition remains appropriate. The more recent proposals of ambivalent, dual, or multiple attitudes are compatible with the idea of attitudes as acquired dispositions that take the form of evaluative tendencies. But are these more complex formulations consistent with the "some degree of favor or disfavor" aspect of the definition? They are consistent if theorists allow for multiple tendencies—positive attitudes and negative attitudes, old attitudes and new attitudes, and implicit attitudes and explicit attitudes. The evaluative content of such attitudes may be quite discrepant, and therefore the evaluative responses that are influenced by these attitudes may be discordant. People may thus have multiple attitudes toward the same attitude object. Yet, in many circumstances, attitudes are not multiple but can be quite simply represented by a single point along a pro-con dimension. For example, attitudes toward everyday products such as shampoos and breakfast cereals may generally be unitary, whereas attitudes toward more richly experienced attitude objects such as family members may commonly be multiple. Mapping these complexities should be high on the agenda of attitude research.

UNDERSTANDING THE CONTRIBUTION OF AFFECT TO ATTITUDES

Zajonc's (1980, 1984) arguments for the primacy of affect stimulated a growth of interest in affective processes among attitude researchers. This growth is well represented in this handbook. Schimmack and Crites (chap. 10, this volume) document the enormous increase in attention to affective issues since 1980. Basic to these advances is identification of this domain as an aspect of attitudes. Specifically, fewer psychologists now use the terms *affect* and *affective* synonymously with *evaluation* and *evaluative*. In contemporary terminology, evaluation is viewed as integrative of all response classes, including affects in the sense of emotions and moods. Nonetheless, terminology remains problematic. Sometimes the terms affect and affective processes seem to refer quite loosely to all processes that cannot be identified as cognitive and therefore to a wide range of emotional and motivational constructs and mechanisms that do not fit easily under the rubric of cognitive structures and processes.

More constructive for scientific progress are less generic terms that do not lump together all affective and motivational phenomena. Affect thus refers to the feelings, moods, emotions, and sympathetic nervous-system activity that people experience. Like behaviors and cognitive responses, these affective responses express positive or negative evaluation of greater or lesser extremity. Affects are ordinarily understood as a momentary or short-lived pleasant or unpleasant

states of one's feelings or emotions (Clore & Schnall, chap. 11, this volume; Schimmack & Crites, chap. 10, this volume). Consequential for the study of attitudes are affects that are experienced as caused by an attitude object and those that are merely associated with an attitude object.

Much of the attention that psychologists have devoted to understanding and classifying affective processes has not been carried out by attitude researchers but has been independently developed (Schimmack & Crites, chap. 10, this volume). For example, emotion researchers developed and refined theories that disentangle the cognitive, affective, and physiological processes that underlie emotions. Similarly, there is progress in understanding how endogenous bodily states interact with exogenous events to create moods. Developing the implications of this new knowledge for attitude research remains a future agenda.

Attitude Formation by Affective Processes

One reason that research on affect is important is that it has special relevance to the question of how attitudes are formed. This issue has received less attention over the years than the question of how attitudes are changed. So-called simple, elementary, or primitive learning mechanisms, such as classical conditioning, may constitute a major set of processes by which attitudes are formed (see Wegener & Carlston, chap. 12, this volume), although attitudes are of course also formed through the presentation of complex verbal information. Redressing the balance in attitude research to give greater consideration to attitude formation is a welcome shift, regardless of whether researchers concentrate on simple affective and cognitive processes or more complex information processing. Yet, elementary learning mechanisms have not turned out to be simple as detailed knowledge has developed concerning how they work. In particular, debates continue about whether these simple learning mechanisms are primarily affective rather than more generally evaluative and whether people have conscious access to the processes underlying these mechanisms.

Attention to elementary learning processes in attitude formation is not a new theme. Conditioning and mere exposure have long attracted attention (see Eagly & Chaiken, 1993), and these phenomena are the focus of considerable recent research. Emerging from these efforts is a consensus that some of these processes are affective at least in the basic sense that they are not mediated by conscious thinking about the nature of the associations that are learned.

Classical Conditioning. In the classical Pavlovian conditioning model, when a stimulus comes to signal a positive or negative experience, the stimulus acquires positive or negative affect. With respect to the processes that mediate classical conditioning, recent reviews of research (Boakes, 1989; Lovibond & Shanks, 2002) have continued to reiterate Brewer's (1974) early conclusion that existing evidence does not support the conclusion that classical conditioning occurs in humans without their awareness of the contingencies that are produced (see Clore & Schnall, chap. 11, this volume; Schimmack & Crites, chap. 10, this volume). Instead, the individual acquires an expectancy as the conditioned stimulus comes to function as a signal of the later event. Because people generally have conscious access to such expectancies, the promise that classical conditioning might provide unambiguous evidence of noncognitive evaluative processes has faded.

Evaluative Conditioning. The promise that learning without awareness could be demonstrated in humans has met with greater success within the evaluative conditioning paradigm. Thus, important in understanding simple learning mechanisms is the distinction between classical conditioning and evaluative conditioning (Baeyens, Eelen, Crombez, & Van den Berg, 1992). In classical conditioning a first event (e.g., the sounding of a bell) comes to signal a second event (e.g., food powder in the mouth), so that the participant prepares for

the later event. In contrast, evaluative conditioning follows from the association of stimuli or from the mere fact that the meanings of two stimuli are processed together, ordinarily because of their spatiotemporal contiguity. In view of this distinction, most of the demonstrations of attitude conditioning that were labeled classical conditioning would now be classified as evaluative conditioning. For example, Staats and Staats (1957) showed that pairing nonsense syllables with positive or negative words changed evaluative responses to the syllables and considered this research to demonstrate classical conditioning.

Conditioning that associates stimuli in the manner of the Staats and Staats (1957) experiment is aptly described as occurring in an evaluative association paradigm. Such conditioning is resistant to extinction through presentation of the stimulus in the absence of the stimuli earlier associated with it, whereas classical conditioning does show extinction. Also, a reasonably strong case has been made that evaluative conditioning can occur without awareness (De Houwer, Thomas, & Baeyens, 2001), as the target stimulus (conditioned stimulus, or CS) merely takes on the affective tone of the associated stimuli (unconditioned stimulus, or UCS) without signaling that the UCS will follow. The mediation of such effects deserves attention and apparently does not consist of the formation of expectancies. Clore and Schnall (chap. 11, this volume) raise the issue of whether such effects occur because (a) the UCS makes salient features of the CS that are consistent with the UCS or (b) the CS makes the participant think, consciously or unconsciously, of the UCS, without the expectation that it will occur. These proposals of elementary cognitive mechanisms raise questions about the extent to which the associative paradigm should be described as solely affective rather than a broader mix of both affective and cognitive processes.

Whatever the detailed mediation of evaluative conditioning may turn out to be, the recent attention to this mechanism promises to shed light on phenomena such as the persistence of many prejudices and stereotypes even in the face of disconfirming information. Moreover, the effects of evaluative conditioning can spread from one attitude object to another—that is, the affect transferred to the target stimulus then spreads to stimuli associated with the target stimulus through an associative chain (Walther, 2002). This spreading affect appears to be resistant to extinction and is not the product of conscious deliberation. This phenomenon has provocative implications for prejudice: Bad feelings about a single member of a social group may spread to induce negative attitudes toward other members of the group.

Mere Exposure. The mere exposure paradigm whereby repeated presentations of a neutral stimulus produce a pleasant response continues to attract research attention, in part because of ambiguity concerning the correct explanation of the phenomenon. Mere exposure effects are no doubt ubiquitous in daily life and constitute an important mechanism of attitude formation. The automaticity of the phenomenon rests on demonstrations that mere exposure effects are weaker when stimuli are consciously perceived compared with subliminally presented (Bornstein & D'Agostino, 1992). When people are aware of the stimulus presentations, cognitive processes intervene, perhaps in the form of new associations about the stimuli or knowledge that the true source of one's positive affect is the repeated exposures. Such processes apparently lessen the mere exposure effect.

Many hypotheses have competed to provide explanations of mere exposure effects. Perceptual fluency explanations appear to be strong candidates. These explanations have been refined, with increasing consensus that fluency does carry positive affective value. Yet, it is also possible that fluency intensifies emotions or that the absence of negative consequences following a stimulus serves as a positive unconditioned stimulus (see Clore & Schnall, chap. 11, this volume; Schimmack & Crites, chap. 10, this volume). Regardless of the continuing lack of clarity about causation, some earlier candidates for explaining mere exposure have been abandoned (e.g., deliberative inference processes, response competition; see Eagly &

Chaiken, 1993), and current candidates feature a range of relatively automatic processes. The robust quality of the mere exposure effect continues to attest to its likely importance in daily life as a prominent mechanism through which attitudes are formed.

Affective Priming

One of the signature phenomena on which claims of the primacy of affect are staked is affective priming, which examines the influence of an attitude object prime on responses to a subsequently presented target object. It is unclear whether this paradigm implicates affect in the sense we have defined it, or more general evaluation. At any rate, so-called affective priming was initially demonstrated by Fazio, Sanbonmatsu, Powell, and Kardes (1986), who exposed participants to positive or negative adjectives preceded by positive or negative attitude object primes (e.g., music, guns). When the interval between the prime word and target word was short (about 0.3 second), the response of classifying the target word as positive or negative was quicker if the prime and target word had the same valence compared with opposite valence. For example, exposure to a positive noun as a prime (e.g., music) facilitated categorizing a positive adjective (e.g., appealing) as positive relative to categorizing a negative adjective (e.g., repulsive) as negative (see Klauer, 1998).

Although Fazio and his colleagues initially argued that these effects occur only for more accessible attitudes, later research showed that these effects can occur for more or less accessible attitudes (Bargh, Chaiken, Govender, & Pratto, 1992) and even for completely novel attitude objects (Duckworth, Bargh, Garcia, & Chaiken, 2002). Moreover, affective priming has been demonstrated with subliminal prime stimuli (see Klauer & Musch's, 2003, review). In a related paradigm, participants make good-bad ratings of neutral stimuli, which tend to be assimilated to the valence of the subliminal primes that preceded them (Murphy & Zajonc, 1993).

Research on affective priming is consistent with the position that all attitude objects can elicit automatic evaluation. However, questions have been raised about Bargh's (1997) claim that attitude objects are processed evaluatively before they are processed semantically, or descriptively (Clore & Schnall, chap. 11, this volume). In experiments independently varying the semantic and evaluative similarity of stimulus words to target words, Storbeck and Robinson (2004) demonstrated semantic priming but not affective priming at the short prime-target latencies that produced affective priming in other experiments. Their procedures established semantic congruence and incongruence by having the positive and negative primes and targets come from the same general category (e.g., butterfly and skunk from the category animal) or from different categories (e.g., butterfly and skunk from the category animal; angel and devil from the category religion). This research suggests that semantic categorization precedes evaluative categorization and that declarative memory is generally organized semantically rather than evaluatively. Although affective priming is readily demonstrable in laboratory experiments in which primes and targets have distinctively different semantic meaning, this research raises questions about the priority of affective categorization in natural settings in which stimuli may often be amenable to semantic categorization. We expect that this set of issues will produce considerable debate because of its challenge to claims of the primacy of affect.

Types of Affects

Research on affect has continued to emphasize the development of taxonomies of affects (see Schimmack & Crites, chap. 10, this volume). Critical to attitude research is the distinction that many researchers make between emotions and moods. Emotions generally have a known cause, which attitude researchers treat as the attitude object. For example, a wife becomes angry at her husband, and this negative feeling influences her attitude toward him. Similarly, sensory affects, triggered by sensory experiences such as tastes and smells, provide information about the

attitude objects from which they emanate. In contrast, moods more often are free-floating affective states that are not necessarily associated with a cause yet can have implications for attitudes.

Attitude researchers have explored how moods affect attitudes, with interest in memory-based models, heuristic models, and affect-as-information models (Clore & Schnall, chap. 11, this volume). According to Clore and Colcombe (2003), mood may be just one of many affectively meaningful cues that convey evaluative information; other such cues could include unconsciously primed evaluative concepts, visceral feelings, and feedback from facial musculature. This view seems plausible. Insofar as such experiences do not produce beliefs and are not accessible to consciousness, they challenge earlier views that cognitions or beliefs are necessarily the crucial precursors of attitudes (Fishbein & Ajzen, 1975).

Moods also exert indirect effects on information processing and thus affect the types of information that are used and the amount of scrutiny given to evaluative information contained in persuasive communications. Basic findings in these areas have been known for some time—for example, the tendency for positive moods to reduce systematic processing of arguments—and researchers continue to refine their understanding of the processes by which such effects occur (Clore & Schnall, chap. 11, this volume).

Despite this continuing interest in the effects of moods, understanding of the effects of specific emotions on attitudes or of emotions in general is not very well developed. This situation is surprising, given the early interest of attitude researchers in fear-arousing appeals and the development of sophisticated theories of the influence of such appeals on attitudes (Janis, 1967). Research on fear appeals has continued, primarily in relation to health communications (Das, deWit, & Stroebe, 2003), and there is a growing interest in political communication (Marcus, 2002). However, relatively little research has considered the full array of emotions that may affect the persuasiveness of messages.

An exciting focus of future research could be the role of positive emotions, such as joy, contentment, and love, in relation to attitudinal phenomena. According to Fredrickson (2001), positive emotions enlarge people's momentary thought-action repertoires and build personal resources that foster effective coping. This theory could be specified with respect to attitudinal effects—for example, positive emotions might enhance the correspondence between positive attitudes and relevant behaviors. In addition, it would be informative to compare the persuasiveness of communications arousing positive emotions with that of communications not arousing emotions or arousing negative emotions such as fear.

Psychologists also should devote more effort to understanding how affective experiences contribute to the formation of attitudes, especially experiences associated with specific emotions such as fear, pain, joy, and excitement. People thus experience positive and negative emotions on a moment-to-moment basis, often in relation to a particular attitude object. These experiences contribute to the global evaluation that constitutes attitude. Research suggests specific principles that govern the relation between affective experiences and global evaluations. In particular, global evaluations appear to be predictable from a peak-and-end rule whereby the affect at the moment of peak affective intensity and the affect at the end of the episode predict global evaluation, with little impact of the duration of affective episodes (Fredrickson, 2000; Fredrickson & Kahneman, 1993). The generality of these principles with respect to a wide range of attitude objects deserves exploration.

MOTIVATION AS AN ENDURING THEME IN ATTITUDE RESEARCH

Motives refer to the goals or end-states toward which people strive, and motivation refers to the power of motives to energize and direct thoughts and behavior. As Marsh and Wallace (chap. 9, this volume) point out, motives can be conceptualized at varying levels of abstraction. The term

need generally refers to a general end state (e.g., high self-regard) that is served by attaining various more specific goals (e.g., holding a good job, being invited to parties). In the study of social influence and persuasion, most interest centers on motives that are formulated as broad needs, and many attitudinal phenomena are thought to reflect these needs.

Invoking motives connects attitudinal phenomena to broader themes of psychological functioning, and therefore motivational themes lend breadth and scope to attitude theory. Motivation was a major theme in most early attitude theories and was prominent in incentive and drive-reductions theories, cognitive consistency theories (particularly dissonance), and functional theories of attitudes (see Eagly & Chaiken, 1993). Because motives associate attitudes with wide-ranging concerns of individuals, these early attitude theories were big-picture theories. With the cognitive revolution of the 1970s, attention turned, at the expense of motivation, toward detailed issues of cognitive processing. As abundantly demonstrated in many of the chapters in this handbook, motivational issues have once again taken center stage in attitude theory and research.

Types of Motives

Functions of Attitudes. Older motivational traditions in attitude research were often framed in terms of attitudes' functions (see Johnson et al., chap. 15, this volume), and functional analyses have continued to invigorate attitude research, especially in the 1990s (see Maio & Olson, 2000). Investigators of attitudes developed functional analyses to answer the question of why people hold attitudes. Functions, as invoked by attitude theorists, signify the individual's broad goals or needs that direct attitudinal processes.

Attitude theorists generally agree that the fundamental and overarching function of attitudes is to produce knowledge of objects' favorable or unfavorable implications (Kruglanski & Stroebe, chap. 8, this volume). Smith, Bruner, and White (1956) named this function *object appraisal*. It encompasses the cognitive aspects of appraising attitude objects (Katz's, 1960, *knowledge* function) as well as the assessment of attitude objects' potential to provide rewards and punishments (Katz's, 1960, *instrumental* or *utilitarian* function). Because the object-appraisal function essentially restates, in abstract motivational language, the definitional proposition that attitude is a tendency to evaluate an object, theorists have also proposed less abstract functions, which acknowledge less broad but still very personal goals. Attitudes' facilitation of rewarding outcomes has thus been broken down into less abstract descriptions of several different types of rewarding outcomes. In this manner, theorists have specified additional functions of attitudes such as value expression, social adjustment, and ego defense (see review by Eagly & Chaiken, 1998).

Attitudes can be regarded as serving a wide array of even more specific goals such as anxiety reduction that do not necessarily fit easily within the taxonomies of functions proposed by early attitude theorists. Also, Kruglanski and Stroebe (chap. 8, this volume) argued that some functional analyses might be better regarded as specifying functions served by attitude objects rather than functions of holding the attitude—for example, Prentice and Carlsmith's (1999) analysis of attitudes toward possessions and Shavitt's (1990) analysis of attitudes toward products.

Other Typologies of Motives. Motivational concepts have arisen in the context of theories of social influence and persuasion. Demonstrating the power of a motivational scheme to organize social influence findings, Prislin and Wood (chap. 16, this volume) framed their chapter on social influence in terms of three fundamental social motives: the needs (a) to understand reality, (b) to achieve a positive and coherent self-concept, and (c) to relate to other people and convey an appropriate impression to them. The first two of these motives

were prominent in classic theorizing about informational and normative motives that govern conformity in group settings (Deutsch & Gerard, 1955). This classification is similar to the earlier tripartite proposal by Chaiken and her colleagues (Chen & Chaiken, 1999; Chaiken, Liberman, & Eagly, 1989). Focusing on persuasion settings, they classified message recipients' motivations in terms of three motives: *accuracy motivation*, the desire to align attitudes with objective reality; *defense motivation*, the desire to form, maintain, or defend particular attitudinal positions, and *impression motivation*, the desire to express attitudes that facilitate positive self-presentation. Although Prislin and Wood's self-concept motive is framed more broadly than Chaiken's defense motivation, the two schemes are quite similar.

A related triad of motives reflects an older tradition in persuasion research that understood message recipients' motivations in terms of the psychological state of *involvement*, which consisted of arousal induced by an association between an attitude and the self-concept. Johnson and Eagly (1989) proposed that this broad involvement term had been used in three distinct ways by attitude theorists: *outcome-relevant involvement*, induced by an association between an activated attitude and an individual's ability to attain desirable outcomes; *value-relevant involvement*, induced by an association between an activated attitude and the individual's important values; and *impression-relevant involvement*, induced by an association between an activated attitude and the public self. The impression-relevant component of this scheme is virtually identical to the impression components of the Prislin and Wood (chap. 16, this volume) and the Chaiken et al. (1989) classification. If understanding outcomes is regarded as a critical aspect of understanding reality and values are regarded as crucial to the self-concept, the other two components of this treatment of involvement are at least partially overlapping with the other tripartite schemes.

Concentrating on persuasion settings, Briñol and Petty (chap. 14, this volume) provided a motivational frame for research on individual differences in attitude change. They organized individual difference variables that have been important in attitude research in terms of four motives that they argued govern thinking and action: the needs (a) to know, (b) to achieve consistency or internal coherence of one's explanatory system, (c) to develop and maintain a positive self-concept, and (d) to obtain social inclusion and approval. This organization raises the question of whether individual difference variables that are similar in terms of representing one of these broad motives have similar effects on persuasion and social influence. With respect to the agreement of this classification of motives with the other lists of motives we have noted, it is largely concordant, except for the addition of the consistency and internal coherence motive, which could be regarded as part of the first, or knowing, motive.

A Definitive List of Motives?

It is not surprising that there is considerable overlap between the motivational taxonomies that are popular in attitude research. Even though researchers have identified motives based on research traditions in somewhat different areas of investigation (e.g., persuasion, social influence, individual differences), the schemes are quite similar. It is especially clear that an accuracy or appraisal motive appears in all of the formulations, whether as a need for objective appraisal or accuracy or understanding outcomes in one's environment. Reflecting on these motivational themes in research in attitudes and social cognition, Kunda (1990) contrasted a motive to arrive at accurate beliefs with motives to arrive at particular, directional conclusions (see also Kruglanski, 1980). The directional conclusions could include positive self-regard, cognitive consistency, social approval, value affirmation, and other positive states.

These motives that foster directional conclusions are more variable across the various motivational taxonomies and have been identified at somewhat differing levels of abstraction. For example, the need to develop and maintain a positive self-concept is commonly included in lists

of motives and may underlie more specific motives such as value-relevant involvement and the value-expressive function because values are intimately associated with positive self-regard. For that matter, the need to relate to other people and convey an appropriate impression could also reflect the need for positive self-regard.

With types of motives conceptualized sometimes more broadly and sometimes more narrowly, there appears to be no definitive list of motives in attitude theory. Theorists strive to strike a balance between very general abstractions about motivation—for example, the idea that people seek to maximize perceived utilities—and more concrete descriptions of motives—for example, the idea that people seek to make a positive impression on others. Whereas very general abstractions have an elegant simplicity, more concrete renditions of motives can be more obviously useful to explain behavior in particular circumstances.

Motives and Information Processing

In general, motives to achieve accurate beliefs and to arrive at directional conclusions can be somewhat in conflict, with accuracy motives restraining directional motives. Despite this restraint by reality, a wide range of preferences for directional conclusions bias exposure to information, processing and thinking about information, and memory (Kunda, 1990; Wyer & Albarracín, chap. 7, this volume). Consistent with Marsh and Wallace's (chap. 9, this volume) review, an especially common theme in attitude research is that attitudes themselves are a source of motivational and cognitive bias by fostering attitude-consistent beliefs through biased processing of information.

Development of the insight that motivation affects cognition requires understanding of the circumstances under which these varied effects occur and the mechanisms through which bias exerts its effects. One common sequence is that motivation triggers cognitive processes by which people reach desired conclusions (Chaiken et al., 1989; Kunda, 1990). These cognitive processes may involve counterarguing threatening information, bolstering prior attitudes, and many other specific mechanisms (Abelson, 1959). In a persuasion context, motives may affect attitudes through a variety of processes discussed in the context of dual process theories of persuasion. The heuristic-systematic model (HSM) has thus pointed to the influence of motives on heuristic and systematic processing (Chaiken et al., 1989), and the elaboration likelihood model (ELM) has implicated these and other processes (Briñol & Petty, chap. 14, this volume).

Prediction from motives to attitudinal processes can be less than straightforward because there is no necessary relation between the motives that are activated and the manner in which messages are processed. Motives may be served by a wide range of specific processes. For example, within the dual-process tradition of persuasion theories, a motive may be served by a thoughtful, systematic analysis of the message content or by a more superficial analysis (Chen & Chaiken, 1999).

Despite these complexities, the authors of the chapters have suggested several overarching principles that may link motives with attitudinal processes. In general, people appear to prefer and select information that satisfies their goals. One specification of this principle assumes that to the extent that people desire to defend their existing attitudes (i.e., defense motivation; Chaiken et al., 1989), they are biased in favor of attitudinally agreeable information and against attitudinally disagreeable information. This bias has often been named the *congeniality bias* or *hypothesis* (Eagly & Chaiken, 1993, 1998). For example, people who anticipate defending their own view choose to read information that supports their own view, whereas those who focus on accuracy of understanding choose to read a less biased sample of the available information (Prislin & Wood, chap. 16, this volume).

Another principle is that matching motives to persuasive information can enhance its persuasiveness (Katz, 1960). Such *matching effects* are common in persuasion research. For example,

matching persuasive messages to attitude functions increases persuasion (Lavine & Snyder, 1996; Johnson et al., chap. 15, this volume). A recent example of a quite subtle matching effect pertained to regulatory fit and persuasion (Cesario, Grant, & Higgins, 2004). In these studies, a state of fit was induced by matching message recipients' promotion or prevention focus to descriptions of an eager or vigilant means of attaining goals. Messages that fit message recipients' self-regulatory orientation—that is, eager means with promotion focus and vigilant means with prevention focus—were more persuasive than those that did not fit. Regulatory fit evidently makes people feel “right” because their personal orientation is congruent with their strategic manner of pursuing goals, and the subjective experience of feeling right transfers to the persuasive message.

Another useful principle, discussed by Prislin and Wood (chap. 16, this volume), is that stronger motives tend to favor more thoughtful processing. This generalization follows from the well accepted proposition that systematic or elaborative processes require both the motivation to process information and the capacity to process it (Chaiken et al., 1989; Petty & Cacioppo, 1986). Given adequate capacity, motivation is crucial to thoughtful processing.

These ideas about the effects of motives are also consistent with Chaiken's (1987; Chen & Chaiken, 1999) argument that processing strategies that demand less cognitive effort are applied before those that require more effort. If we assume that people desire both to minimize effort and to achieve adequate judgmental confidence, they may first process messages more simply or heuristically and, if this approach does not yield adequate confidence, then invoke systematic processing. In the more formal terms of Chaiken's *sufficiency principle*, perceivers' actual level of confidence is often lower than their desired level of confidence. High levels of motivation deriving from variables such as task importance generally increase the gap between actual and desired levels of confidence because they raise the desired level of confidence. When confidence is less than desired, people will attempt to bring their confidence to the desired level. If low-effort processes do not close the confidence gap, high-effort, systematic processing is more likely to occur.

Motives and Memory for Attitude-Relevant Information

Some of the reasons that psychologists have developed complexity in their understanding of motivational effects are well illustrated by research on memory for attitude-relevant information. Researchers' traditional expectation was for a congeniality bias whereby people have better memory for attitudinally congenial than uncongenial information. The usual assumption was that people are motivated to defend their attitudes against challenging material. People were presumed to accomplish this defense by screening out uncongenial information at various stages of information processing: Individuals might thus avoid exposure to uncongenial information; if exposed to it, they might not pay attention to it or distort its meaning; and subsequently not store or retrieve it effectively.

Despite some early confirmations of the congeniality hypothesis in attitude memory experiments, much of the early research suffered from methodological weaknesses, and congeniality effects have been inconsistently obtained over the years (see meta-analysis by Eagly, Chen, Chaiken, & Shaw Barnes, 1999). The flaw in the reasoning of early theorists is their assumption that motivation to defend attitudes necessarily proceeds through passive processes that allow message receipts to avoid the challenging implications of the information. Instead, given sufficient motivation and capability, people are likely to mount an active defense, which enhances memory for counterattitudinal information. This explanation of the common absence of congeniality effects on memory was confirmed by Eagly, Kulesa, Brannon, Shaw, and Hutson-Comeaux (2000), who showed that congenial and uncongenial messages were equally memorable. More important, the processes by which the messages became memorable differed.

Agreeable information appeared to be remembered by a fairly superficial process by which message recipients matched the information to their existing attitudes, whereas disagreeable information was remembered by active and skeptical scrutiny of its content. This research thus illustrates the inadequacy of the simple congeniality bias hypothesis for understanding memory effects and shows that memory for persuasive information can be achieved through differing processes.

Motivated Reasoning and Biased Processing

In summary, the effects of motives and goals on information processing and persuasion are an important contemporary theme of attitude research. Research has provided many illustrations of the biasing effects of attitudes, and, as Marsh and Wallace's (chap. 9, this volume) review ably summarizes, there is also considerable evidence that variables such as stimulus ambiguity moderate the biasing effects of attitudes (Chaiken & Maheswaran, 1994). The classic theme that attitudes themselves bias information-processing and reasoning has broadened so that researchers have explored the effects of a range of motives on attitudinal processes. Bringing these varied phenomena together into a coherent theoretical structure should be high on the agenda of attitude researchers.

THE SOCIAL CONTEXT OF ATTITUDES

In *The Psychology of Attitudes*, we argued that researchers had given insufficient attention to the social context of attitudes. Although we noted some important exceptions to the neglect of social context, we argued that then-popular attitude theories had seldom taken into account the structure of social settings within which attitude change occurs in natural environments. Because of this neglect, most theory had remained narrowly psychological, even though some pioneers in the study of attitudes had given considerable attention to social context. For example, some had delineated forms of social power or of role relationships that bind influencing agents and targets (French & Raven, 1959; Kelman, 1961). Although such models had pointed the way toward treatments of attitude change that connect social and the psychological influences within a common framework, at least by the early 1990s these approaches had not inspired as much further development as some social psychologists had anticipated. Instead, theory had developed mainly as strictly psychological although, as we have already noted, some researchers acknowledged distinctively social motivation in the form of motives for social inclusion and making a positive impression on other people.

We acted on our advocacy of increased attention to the social context of attitude formation and change by including a chapter on this topic in *The Psychology of Attitudes*. In this chapter, we recognized research and theory on social influence that retained considerable focus on psychological processes while taking social context into account. Our chapter therefore reviewed classic work on normative and informational influence as well as on the role of relationships within which influence takes place. We discussed research on conformity and minority influence in considerable detail because some of these investigations had incorporated some of the theoretical advances of modern theories of persuasion, especially dual-process theories (see Johnson et al., chap. 15, this volume), and joined these insights with analyses that recognized the importance of social context.

The integrative analyses of conformity and minority influence that we discussed were the vanguard of renewed attention to social influence. The newer developments in this general area are ably reviewed by Prislín and Wood (chap. 16, this volume). Important in these developments is the meta-analysis of minority influence research by Wood, Lundgren, Ouellette,

Busceme, and Blackstone (1994), which greatly clarified typical research findings pertaining to minority and majority influence. Wood and her colleagues thus showed that minorities can have quite variable effects, depending on the motives that they arouse, and that understanding how minorities are portrayed is crucial to understanding these effects.

Recent and notable efforts to understand the social context of attitude change include dynamic models of social influence that are designed to elucidate changes in influence processes that occur over time (Prislin & Wood, chap. 16, this volume). These efforts include dynamic social impact theory, which models opinion distributions in groups (Latané & Nowak, 1997). In addition, Prislin and her colleagues (Prislin, Limbert, & Bauer, 2000) have applied a dynamic gain-loss asymmetry model built on the principle that the decreasing size that changes a majority into a minority is experienced as a loss whereas the increasing size that changes a minority into a majority is experienced as a gain. Because people react more strongly to losses than gains, having one's subgroup change from majority to minority status has negative effects that are larger than the positive effects of having one's subgroup change from minority to majority status. These and other effects of changes in minority and majority status have begun to capture some of the complexities of influence in long-term groups.

Many challenges remain in studying attitudes under conditions that take into account some of the complex embedding of change in dyadic and group processes that extend over time. To build on psychological theories of attitudes and social influence, researchers must relate these social phenomena to the psychological processes that govern changes in attitudes and to the motives that organize and direct these changes. Although progress in these directions has not been rapid, researchers have made important advances in recent years.

THE INTERACTIVE RELATIONS BETWEEN ATTITUDES AND BEHAVIOR

The Influence of Attitudes on Behaviors

One of the greatest successes of attitude research is the substantial progress made in predicting behavior from attitudes subsequent to the low point of Wicker's (1969) claim that attitudes are very poor predictors of behavior. Wicker's challenge inspired research on the attitude-behavior relation from several theoretical perspectives. In our earlier reviews of this research (Eagly & Chaiken, 1993, 1998), we acknowledged the important principle, first articulated by Fishbein and Ajzen (1974; Ajzen & Fishbein, 1977), that relatively good prediction can be readily achieved if researchers design their measures of attitudes and behaviors at the same level of generality. This principle received major emphasis in this handbook (see Ajzen & Fishbein, chap. 5, this volume; Jaccard & Blanton, chap. 4, this volume) and still remains valid.

A number of points in Ajzen and Fishbein's (chap. 5, this volume) excellent discussion of the current status of attitude-behavior research should serve as invitations to additional research on attitude-behavior relations. One useful idea that deserves to be pursued is that attitudes toward objects influence behavior through their effects on attitudes toward behaviors, regardless of the extent to which individuals engage in deliberative processes. Also suggesting new directions is Ajzen and Fishbein's discussion of the *literal inconsistencies* that occur when people fail to carry out their intentions. As they note, the formation of implementation intentions pertaining to when, where, and how people will carry out their intentions can reduce intention-behavior discrepancies (Gollwitzer, 1999). An important direction of research is the elaboration of the mechanisms whereby implementation intentions induce behavior consistent with intentions. These mechanisms may include more automatic links whereby environmental cues elicit goals or motives without people being aware of this activation. These

unconscious goals or motives, along with more conscious ones, may then affect information processing and behavior, as Bargh (1990, 1997) has maintained in the context of his auto-motive model.

Ajzen and Fishbein (this volume) also ably evaluate the current status of the theories of reasoned action and planned behavior, which they and others have developed over many years. This popular perspective has survived numerous challenges to its validity, despite considerable debate about the extent to which its various formulations provide a sufficient causal explanation of people's intentions and actions. Ajzen and Fishbein acknowledge that other investigators have added various predictors not included in their original models but argue that these predictors are efficacious mainly in particular behavioral domains—for example, moral norms account for additional variability for predicting behaviors that have a clear moral aspect (e.g., cheating, community volunteering). They recognize that such additions can improve the prediction of behavior beyond that yielded by the predictors included in the standard reasoned action and planned behavior models. However, they maintain that, because these gains in predictability are small, the rule of parsimony suggests caution in adding additional predictors. They also argue that emotions and other noncognitive determinants of behavior are important but act indirectly though affecting the attitudes and intentions that are accessible during behavioral performance. These conclusions invite careful evaluation in new research.

Departing from the reasoned action and planned behavior theories are approaches that give a major role to automatic processes in inducing behavior. Some researchers have examined the role of habit in controlling behavior (Ouellette & Wood, 1998). Proponents of habit as a determinant of behavior have reasoned that with repeated performance in stable contexts, behavior habituates because the processing that initiates and controls the performance becomes automatic. In contrast, conscious decision making by means of processes such as those specified by reasoned action and planned behavior theories predominate when behaviors are not well learned or when they are performed in unstable or difficult contexts. Under these conditions, past behavior nonetheless affects behavior, but by contributing to intentions, which subsequently guide behavior.

Despite the impressive evidence for these views offered by Wood and her colleagues (Ouellette & Wood, 1998; Wood, Quinn, & Kashy, 2002), Ajzen and Fishbein (chap. 5, this volume) remain skeptical that past behavior affects later behavior through its impact on habit. They argue that frequent performance is no guarantee that a behavior has habituated and point out that researchers have not so far produced a valid independent measure of habit strength. Another of their arguments is that the tendency for people to revert to an earlier response in the face of difficulty in implementing a new response may create the illusion that behavior is habitual. Jaccard and Blanton (chap. 4, this volume) weigh in with the view that the processes through which past behavior affects future behavior can be difficult to demonstrate directly and unambiguously. They describe several processes, including habit, by which past behavior can influence future behavior. Jaccard and Blanton also give excellent advice on measurement and statistical analyses appropriate for predictions of behavior (e.g., how to scale behaviors and statistically analyze behavioral counts vs. continuous behavioral variables). Investigators should thus proceed to clarify the role of habit compared with other mechanisms in accounting for the effects of prior behavior on future behaviors.

Attitude-behavior relations have also been interpreted in terms of automatic linkages that do not depend on habit. The best known contender in this tradition is Fazio's (1990) MODE (motivation and opportunity as determinants of behavior) model, which features an automatic link between attitudes and behaviors as well as a more deliberative route involving cost-benefit analysis of the utility of behaviors (see also Fazio & Towles-Schwen, 1999). According to this approach, attitudes can be automatically accessed without active attention or conscious thought and then, by biasing perceptions in the immediate situation, these attitudes may cause

behavior to follow without any conscious reasoning process. Increasing the plausibility of relatively automatic attitude–behavior links is research suggesting that implicit but not explicit measures of attitudes can predict a variety of more spontaneous and subtle behaviors, such as nonverbal behaviors, that are for the most part not consciously controlled (Ajzen & Fishbein, chap. 5, this volume). The details of the relatively automatic route from attitudes to behavior remain to be more fully understood. One possibility is that, as Marsh and Wallace (chap. 9, this volume) suggest, attitudes can be primed or activated in such a way that they activate goals or motives that then affect behavior. For example, subliminally priming a liked significant other increased commitment to a goal that the significant other had for participants and improved goal performance (Kruglanski, Shah, Fishbach, Friedman, Chun, & Sleeth Keppler, 2002). This mediational route as well as the mediation by biased information processing postulated by Fazio are just two possibilities for explaining the automatic links between attitudes and behaviors. No doubt researchers will continue to investigate the details of more automatic attitude–behavior relations.

The Influence of Behaviors on Attitudes

At an early point, social psychologists came to appreciate that attitude change is sometimes a consequence of engaging in behavior. Seminal experimental evidence suggested that people were often persuaded by the messages that they themselves had delivered (Janis & King, 1954), and later studies frequently confirmed this finding.

This handbook contains a fine review of behavior-attitude relations (Olson & Stone, chap. 6, this volume) that reveals a great deal of forward progress since our earlier reviews of this area (Eagly & Chaiken, 1993; Chaiken, Wood, & Eagly, 1996). Ever since the provocative research by Janis and King (1954) on role-playing and by Festinger and Carlsmith (1959) on counterattitudinal advocacy, researchers have attempted to delineate the processes through which behavior affects attitudes. Many candidates vie for a piece of the causal territory, and Olson and Stone consider a full range of explanatory theories and possible mechanisms.

This updating of the status of debates on the processes by which counterattitudinal behavior affects attitudes underscores once again the enormous generativity of cognitive dissonance theory in this domain. Olson and Stone (chap. 6, this volume) recount the history of Festinger's version of dissonance theory and the subsequent generations of experimentation that first demonstrated dissonance effects and then set the parameters that defined the conditions under which these effects occur.

Especially important is Olson and Stone's (chap. 6, this volume) review of new models that have extended the dissonance model and taken into account the numerous boundary conditions that research has established. The self-standards model proposed by Stone and Cooper (2001) argues that people can interpret their behavior in relation to varying standards. Their behavior may violate normative standards if it departs from what is regarded as appropriate in their culture, or it may violate personal standards if it departs from what an individual regards as appropriate according to his or her personal self-concept. Only if personal standards are violated should self-concept variables moderate the arousal that constitutes cognitive dissonance. Attitude change would ordinarily follow from violation of self-standards, but self-affirmation could reduce arousal through having people think about positive aspects of themselves that are unrelated to the source of the dissonance. This new model is integrative of several earlier dissonance models and has proven to be quite successful in accounting for the varied effects of counterattitudinal behavior on attitudes. This approach also resonates with aspects of the motivational taxonomies that we have noted in this chapter, especially in its recognition of people's concern with appropriateness, which pertains to the impression they make on others, as well as their concern with personal standards, which are crucial to a positive self-concept.

Additional possibilities have also emerged as contenders for accounting for dissonance effects, including an action-orientation model and constraint satisfaction connectionist models (Olson & Stone, chap. 6, this volume). The cognitive dissonance tradition is thus alive, well, and generating new theory and experimentation as we near the 50th birthday of the first publication of the theory (Festinger, 1957).

THE ENDURING IMPORTANCE OF THEORY AND RESEARCH ON PERSUASION

Persuasion research remains an important focus of contemporary attitude research. As Johnson et al. (chap. 15, this volume) explain, the issue of how attitudes are formed and modified as people gain information about attitude objects was an early focus of attitude research in the 1950s. The research area gained momentum in the 1970s with more sophisticated attention to the cognitive processes that underlie persuasion. Theories of persuasion made major advances in the 1980s, with the introduction of dual-process models. The elaboration likelihood model (Petty & Cacioppo, 1986; Petty & Wegener, 1999) and the heuristic-systematic model (Chaiken et al., 1989; Chen & Chaiken, 1999) then took center stage in persuasion research. These models both assume qualitatively different dual modes of processing and thus contrast more effortful modes of processing with less effortful modes. Johnson et al. (chap. 15, this volume) provide an effective discussion of these two models, appropriately noting their differences and similarities.

The elaboration likelihood and heuristic-systematic models have been enlarged over the years. The elaboration likelihood model has provided an organizational scheme for several of the reviews contained in this handbook (Briñol & Petty, chap. 14, this volume; Wegener & Carlston, chap. 12, this volume; Fabrigar et al., chap. 3, this volume). As this theory has expanded, encompassing a wide range of psychological processes, its practitioners often find coherence among complex and contingent empirical findings. However, with many persuasion variables serving multiple roles, depending on message recipients' level of elaboration, the theory has a flexibility that some attitude researchers believe makes the theory difficult to disconfirm.

Newer entrants as persuasion models include Kruglanski's (Thompson, Kruglanski, & Spiegel, 2000) unimodel, which posits that a single process accounts for the range of findings that dual-process theories explain in terms of qualitatively different processes. The initial statement of this theory proved to be controversial when it was published with commentaries in *Psychological Inquiry* (Kruglanski & Thompson, 1999), and attitude researchers remain divided on the merits of the approach. Kruglanski's claim that all persuasive information represents a type of evidence from which conclusions may be drawn surely is a truism. However, the processes by which conclusions are drawn are amenable to classification in terms of qualitatively different types of processes. The gains from postulating distinct processes are evident in the large body of research inspired by the elaboration likelihood model and the heuristic-systematic model. Although many of these findings can be reinterpreted in terms of the unimodel, the gains from this reinterpretation remain a subject of debate. It is unlikely that most of these phenomena would have been discovered without the metaphor of dual processes, and the gains from an arguably more parsimonious interpretation are not yet clear.

Another newer entrant is Albarracín's (2002) cognition in persuasion model (CPM), which posits that a sequence of processes occur when responding to a persuasive message. According to this model, the cognitive processes involved in forming attitudinal judgments are relatively invariant but the order and type of information that enter via these processing steps can vary. Like McGuire's (1972) information-processing model and Wyer's (Wyer & Srull, 1989) social

information-processing model of impression formation, Albarracín's approach gives a major role to message reception processes and introduces contemporary social cognitive theory in considering the various steps of the model.

CONCLUSION

In the introduction to this chapter, we asked whether the wide territory set forth in the traditional conceptualizations of attitude as encompassing cognition, affect, and behavior has in fact been effectively occupied by attitude theory and research. We are encouraged by the chapters of this handbook and give a tentative affirmative response to our question.

There are several especially heartening themes in the chapters of this book. One trend is that most authors invoke evidence that is not necessarily confined within the purview of social psychology; they link their attitudinal analyses to research in other areas within cognitive and personality psychology and neuroscience. One clear trend is a rapprochement of attitude research with research on social cognition. Sophisticated cognitive models are increasingly incorporated into attitude theory (Wegener & Carlston, chap. 12, this volume; Wyer & Albarracín, chap. 7, this volume). In addition, as we explained earlier in this chapter, the understanding of affective processes has greatly enlarged, with renewed attention to elementary processes of attitude formation and change. Also, emotion research, especially pertaining to moods, has had considerable impact on the study of attitudes. Finally, consideration of motives has become more routine in attitude research, with attention to the effects of varied motives on multiple aspects of attitudinal processes. This motivational theme links attitude research to basic research on motivation in psychology.

The chapter by Ottati, Edwards, and Krundick (chap. 17, this volume) speaks more directly than other chapters to the issue we raised about the scope of attitude research. These authors demonstrate that attitude research and theory are in fact serving as an integrative function both within and beyond social psychology. For example, Ottati and colleagues identify many parallels between research on impression formation, ordinarily considered to be in the domain of social cognition, and research on attitude formation and change. These two streams of research have influenced research on the evaluation of political candidates, among other topics. Research on interpersonal attraction has also moved in parallel with many themes in attitude research, with the development of increasingly explicit links between the research areas. As we discussed earlier in this chapter, theory and research on social influence have incorporated important themes from the study of persuasion. Finally, the study of ideology, traditionally within the domain of political science, is profiting substantially from insights emanating from research on attitudes and social cognition (Jost, Glaser, Kruglanski, & Sulloway, 2003; see review by Eagly & Chaiken, 1998).

The most obvious opportunity for attitude theory and research to prove their worth is in understanding of prejudice and discrimination. Because prejudice is generally given an attitudinal definition, as a negative attitude toward a group, and discrimination consists of negative behavior toward group members, the principles of attitude formation and change and attitude-behavior prediction should be front-and-center in the study of prejudice and discrimination. However, social cognitive research on stereotyping and stigma has been more important to the study of prejudice research than has attitude research. Therefore, we urge attitude researchers to take a more active interest in the study of prejudice. The content of several chapters shows that some investigators have already moved in this direction (e.g., Briñol & Petty, chap. 14, this volume; Ajzen & Fishbein, chap. 5, this volume; Ottati et al., chap. 17, this volume).

The study of attitudes by psychologists is familiar territory for us, and this domain is now far richer and more elaborated than it was when we wrote our 1993 book. That endeavor was

a labor of love for a field of scientific and intellectual activity that has powerfully attracted us for all of the years of our careers in social psychology. This handbook only deepens our fascination with the study of attitudes.

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