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ATTITUDES AND PERSUASION

William D. Crano
Department of Psychology, Claremont Graduate University, Claremont, California 91711; email: William.crano@cgu.edu

Radmila Prislin
Department of Psychology, San Diego State University, San Diego, California 92182; email: rprislin@sunstroke.sdsu.edu

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■ **Abstract** Study of attitudes and persuasion remains a defining characteristic of contemporary social psychology. This review outlines recent advances, with emphasis on the relevance of today's work for perennial issues. We reiterate the distinction between attitude formation and change, and show its relevance for persuasion. Single- and dual-process models are discussed, as are current views on dissonance theory. Majority and minority influence are scrutinized, with special emphasis on integrative theoretical innovations. Attitude strength is considered, and its relevance to ambivalence and resistance documented. Affect, mood, and emotion effects are reviewed, especially as they pertain to fear arousal and (un)certainty. Finally, we discuss attitude-behavior consistency, perhaps the reason for our interest in attitudes in the first place, with emphasis on self-interest and the theory of planned behavior. Our review reflects the dynamism and the reach of the area, and suggests a sure and sometimes rapid accumulation of knowledge and understanding.

CONTENTS

INTRODUCTION

The study of attitudes and persuasion remains a vital feature of contemporary social psychology. Allport's (1935, p. 784) dictum that attitudes are our "most distinctive and indispensable concept" remains as true today as it was 70 years ago. It also is true that recent advances have incited even more activity than usual in this dynamic realm. Technological developments, including a growing appreciation for computer-mediated persuasion (McKenna & Bargh 2000, Postmes et al. 2001, Sassenberg & Boos 2003) and the use of virtual reality as a medium for study (Blascovich et al. 2002), have added heat to an already boiling pot.

Recent reviews (Ajzen 2001, Albarracín et al. 2005, Haddock & Zanna 1999, Olson & Maio 2003, Perloff 2003, Wood 2000) provide useful snapshots of the field, and distinctive subareas have attracted considerable attention. These subareas include the study of attitude functions (Maio & Olson 2000), attribute importance (van der Pligt et al. 2000), group norms (Terry & Hogg 2000), consensus and social influence (Prislin & Wood 2005), attitude representations (Lord & Lepper 1999), dual-process theories (Chaiken & Trope 1999), applied social influence (Butera & Mugny 2001b), media and persuasion (Bryant & Zillman 2002, Crano & Burgoon 2002), measurement and interpretation of implicit attitudes (Bassili & Brown 2005, Fazio & Olson 2003, Greenwald et al. 2002, Greenwald & Nosek 2001), and a long-overdue reconsideration of resistance (Knowles & Linn 2004). Special pleasures are provided readers of the proceedings of a Festschrift (Jost et al. 2004) held in honor of William J. McGuire (1966, 1969, 1985), author of arguably the finest reviews of attitudes and opinions to have graced the social psychological literature, and a retrospective of some of Robert B. Zajonc's studies, noteworthy both for their wondrous creativity and their impact (Bargh & Apsley 2001). With his Sydney symposium, Forgas and colleagues continue to contribute

to our understanding of attitudes and related constructs (Forgas & Williams 2000, Forgas et al. 2003).

In this review, we focus primarily on the literature published between 1999 and 2004. We opt for these boundaries to complement and update related reviews by Ajzen (2001), who covered the period up to 1999, by Fazio & Olson (2003), who were concerned with the use of implicit measures in social cognition, and by Wood (2000), whose focus was the interface between social influence and persuasion, with a strong emphasis on minority influence. Our focus, which is somewhat at variance with these earlier offerings, is on attitude formation; evaluative conditioning and mere exposure; attitude change; majority and minority influence; attitude strength; affect, mood, and emotion; and attitude-behavior consistency. Given the evident intensity of research, it is impossible even to note all of the important work in this area. We instead offer an integrative analysis that calls attention to emergent approaches to issues of long-standing concern.

ATTITUDE FORMATION

A prime factor that must be considered when reflecting on persuasion concerns the fundamental construct of attitude. Defining attitude has been ongoing at least since Thurstone's (1928) time. Today, most accept the view that an attitude represents an evaluative integration of cognitions and affects experienced in relation to an object. Attitudes are the evaluative judgments that integrate and summarize these cognitive/affective reactions. These evaluative abstractions vary in strength, which in turn has implications for persistence, resistance, and attitude-behavior consistency (Holland et al. 2002a, Petty et al. 2004).

EVALUATIVE CONDITIONING AND MERE EXPOSURE

Although sometimes confused, processes of attitude formation and change are not identical, nor are their outcomes. Attitude formation can occur in many ways, the principal distinction among them being the extent to which individuals consciously embrace or reject an attitude object. At the less aware end of the spectrum are the conditioning models. Olson & Fazio's (2001, 2002) implicit learning paradigm proposes that preferences can be learned below conscious awareness. Considerable research has backed this position (Hammerl 2000, Walther & Trasselli 2003; but see Field 2000, Priluck & Till 2004). Walther (2002) showed that the association of a valenced and a nonvalenced attitude object affects the evaluation of the latter, and this effect spreads to targets related to the initially nonvalenced object. Evaluative conditioning of this type is not dependent on strong temporal reinforcement contingencies, and so is unlikely to trigger awareness. Walther's spreading attitude effect suggests that evaluative conditioning is more than acquiescence to experimental demand (De Houwer et al. 2001, Dijksterhuis 2004).

Mere exposure to a stimulus also can influence attitude formation at below-conscious levels (Bargh 2001, Lee 2001), possibly because exposure frequency is experienced as affectively positive (Winkielman & Cacioppo 2004). It must be emphasized that mere exposure and conditioning are concerned with attitude formation, not change. Indeed, considerable evidence indicates that these "below conscious awareness" processes are unlikely to produce change (Cacioppo et al. 1992, Courbet 2003, Till & Priluck 2000, Walther 2002). This observation suggests that social marketing campaigns that associate positive role models with desirable behaviors (e.g., avoiding drugs or alcohol) might prove useful for those who hold neutral to positive initial attitudes toward the recommended actions, but they are unlikely to move the sinners to the inside of the church.

ATTITUDE CHANGE

Single- and Dual-Process Models

Factors that do affect attitude change have been a staple of social psychology from its earliest days. The standard models of change, which continue to garner considerable attention, take a number of different forms, but their basic understandings of the cause-effect patterns of attitude change are limited. In the classical models, messages are presented, processed, and if successful, move recipients' attitudes toward the advocated position. The revised attitude, in turn, may influence subsequent behavior under appropriate conditions. The elaboration likelihood model (ELM) and the heuristic/systematic model (HSM) are exemplars of dual-process models that embody this general process of message reception, attitude change, (and perhaps) behavior change (Chen & Chaiken 1999, Petty & Wegener 1999, Wegener & Carlston 2005). Dual-process models hold that if receivers are able and properly motivated, they will elaborate, or systematically analyze, persuasive messages. If the message is well reasoned, data based, and logical (i.e., strong), it will persuade; if it is not, it will fail. Auxiliary features of the context will have little influence on these outcomes. However, if message targets are unmotivated (or unable) to process a message, they will use auxiliary features, called "peripheral cues" (e.g., an attractive source), or heuristics (e.g., "Dad's usually right") to short-circuit the more effortful elaboration process in forming an attitudinal response. Such attitudes are less resistant to counterpressures, less stable, and less likely to impel behavior than are those formed as a result of thorough processing.

Without question, the dual-process models remain today's most influential persuasion paradigms, as they have been since their inception. In these models, source and message may play distinct roles that, in concert with motivation and ability to process information, determine the outcomes of persuasive interactions. Kruglanski and colleagues (Kruglanski & Thompson 1999a,b; Thompson et al. 2000) have challenged the dual-process view in their unimodel, which accepts the importance of motivation and ability in persuasion, but describes a single cognitive process that accounts for the effects of source and message in persuasion.

This position provoked a fascinating exchange of views in *Psychological Inquiry* [1999, Vol. 10(2)].

The cognition in persuasion model (Albarracín 2002, Albarracín & Wyer 2001) also takes a single-process perspective, but postulates a series of processing stages that occur in response to persuasive messages. The cognition in persuasion model has not amassed the comprehensive database of the dual-process models, but its interesting treatment of distraction, mood, and initial attitude variations suggests it may supply useful insights into fundamental persuasion processes.

Source

The bustle of research focused on persuasion processes has refocused attention on many unresolved issues. Nearly 20 years have passed since the initial ELM publications, but attempts still are underway to specify a theory-based model of message strength (Areni 2003, Hosman et al. 2002). Another old chestnut, the sleeper effect, also has come under renewed scrutiny. Consistent with ELM/HSM-based expectations, discounting before or after a message is elaborated, as a consequence of source status or other instructional manipulations, moderates the sleeper effect (Kumkale & Albarracín 2004).

Source effects also have received considerable attention over the past two decades in minority influence research, the study of the ways in which a minority faction can persuade the majority to accept its (counterattitudinal) position. Majority sources typically produce immediate change related to the focus of their persuasive messages. Such change, however, often is transitory. Minority sources, on the other hand, often produce change on issues related to, but not identical to, the topic of their persuasive message (indirect change). When minorities do effect focal change, it usually occurs after a temporal delay (Crano 2001b). Minority influence findings pose problems for dual-process theories, as source status ordinarily is considered a peripheral (heuristic) cue, and thus long-term changes in response to minority sources are theoretically incomprehensible. Attempts at integrating these anomalous findings (Crano 2000, 2001b) have drawn on social identity theory to illustrate how apparently peripheral cues can motivate systematic processing.

Message

Message effects have come under increased scrutiny owing to recent research on the unimodel. Kruglanski and colleagues have proposed that a need for closure might result in primacy effects in persuasion (Pierro et al. 2004), as might the cognitive load of the persuasion context (Kruglanski & Stroebe 2005). In addition, the unexpectedness of a source/message pairing has been found to amplify a message's persuasive muscle (Erb et al. 2002). Apparently, source/message inconsistencies increase message scrutiny, resulting in greater effects—assuming high message quality (Petty et al. 2001b).

Dissonance

An alternative to the "attitudes cause behavior" paradigm posits that attitudes may be a consequence as well as a cause of behavior. One of the most long-lived expressions of this approach is dissonance theory, advanced by Festinger (1957), who undoubtedly would be astonished to find controversy still attending his classic study with Carlsmith (Festinger & Carlsmith 1959, Harmon-Jones 2000b), and active research on free choice (Kitayama et al. 2004), postdecision regret (Brownstein et al. 2004), and even selective exposure to (in)consistent data (Jonas et al. 2001). Joule & Azdia (2003) have supported their "radical model," which argues for a return to the original version of dissonance theory, and rejects the many alternatives that have developed over the years (also see Beauvois & Joule 1999). Harmon-Jones et al.'s (2003) action-oriented model, which posits that cognitive discrepancies generate dissonance because they interfere with efficient belief-consistent actions, also is compatible with the fundamental premises of dissonance, as is recent research that demonstrates vicarious dissonance arousal (Monin et al. 2004, Norton et al. 2003). In a useful integration, Stone & Cooper's (2001, 2003) self-standards model posits that inconsistent dissonance results might be attributed to dissimilar standards people had set for themselves, and the consequences of variations in self-esteem for discrepancies between these standards and actions (Cesario et al. 2004, Olson & Stone 2005). Discrepancies could cause disparities in dissonance arousal as a consequence of varying self-standards.

Matz & Wood (2005) showed that disagreement with group members mediates the effects of dissonance arousal mechanisms, and McKimmie et al. (2003) suggest that group support attenuates dissonance, consistent with social identity–based expectations. Spillover from research on implicit attitude measures (Fazio & Olson 2003) is evident in Gawronski & Strack's (2004) finding that a standard dissonance manipulation affected explicitly measured, but not implicitly measured, attitudes. Their explicit measure produced clear dissonance effects, but their implicit measure did not. The authors suggest that dissonance will occur on judgments that involve explicit propositional syllogistic reasoning, but not on affective, association-based (implicit) beliefs. This analysis suggests a dual-process approach in which associative versus propositional processes respond differently to persuasion pressures.

MINORITY AND MAJORITY INFLUENCE

Attitude change induced by a minority source represents a special case in persuasion. Minority influence researchers focus on intraindividual processes that are activated in response to opinion-based minority advocacy. These processes include cognitive reactions or thoughts recipients generate to minority appeals (Wood 2000). A hallmark of the prevailing information-processing approach is the examination of cognitive responses, either in their own right or as mediators of change. Responses generated to minority and majority advocacy are compared, and social conditions, usually represented by group membership, are treated as

part of the information to be processed (El-Alayli et al. 2002, Prislin & Wood 2005).

Social Consensus

An emerging focus in the information-processing approach concerns the role of social consensus (Erb & Bohner 2001). Because level of consensus is the defining feature of majority and minority status, it presumably is crucial to understanding social influence. Some hold that mere consensus has evaluative implications, i.e., positions are valued proportional to the level of support they receive. These valenced inferences bias the processing of attitude-relevant information, which in turn determines ultimately the positions that are adopted. In a test of this idea, Erb & Bohner (2001) documented that consensus did bias information processing; it did not operate merely as a peripheral cue that fostered heuristic adoption of a position (Martin et al. 2002). This view resonates with Mackie's (1987) objective consensus approach to social influence, which postulates systematic processing of consensually advocated positions because of their presumed validity, greater likelihood of adoption, and positive identity implications. Disagreements with consensually advocated positions violate expectations, and thus motivate systematic processing to facilitate understanding. The important role of consensus also was recognized in a recently proposed attributional model of persuasion (Ziegler et al. 2004), which posits that minority and majority messages, which reflect different levels of consensus, are elaborated under different conditions. Ziegler et al. showed that a nonconsensual (minority) message was elaborated when it was consistently advocated and highly distinctive; a consensual (majority) message was elaborated when it was inconsistently advocated and not distinctive.

Minority Effects on Attitude Formation/Change

It appears that incongruence with consensus-implied expectations activates message processing to the extent that consistent advocacy of a nonconsensual (minority) position, and inconsistent advocacy of a consensual (majority) position, violates expectations. This proposition seems most likely in contexts involving attitude formation (versus attitude change). The formation versus change distinction has received increased attention in minority influence research (Crano 2001a, Crano & Alvaro 1998, Crano & Hannula-Bral 1994) and may prove useful in disentangling earlier inconsistencies.

Further evidence that degree of attitude formation may moderate processing was supplied by Erb et al. (2002), who found greater elaboration of minority (versus majority) messages when they challenged well-formed attitudes, but more elaboration of majority messages when they targeted ill-formed attitudes. This line of research is consistent with Moscovici's (1980) proposition that conflict is a necessary precondition for minority-induced attitude change, although the change may be indirect or delayed. Normative support based on majority

consensus, conversely, which is championed by the mere (and objective) consensus approaches, may function more powerfully in attitude formation contexts. A variable that might interact with the attitude formation/change distinction concerns the perceived subjective or objective nature of the issue or decision under investigation. Models of minority and majority influence that deal comprehensively with attitude formation or change, the objective or subjective nature of the issue, focal versus indirect attitude change, and the transitory or persistent nature of this change are not common, but their development is a hopeful sign of progress (Butera & Mugny 2001a, Crano & Alvaro 1998, Crano & Hannula-Bral 1994, Gordijn et al. 2002).

Cognitive Responses

Cognitive responses to minority and majority influence need not be limited to message processing and resultant attitudinal reactions. The scope and quality of thought also may affect problem solving. Supporting Nemeth's (1995) model of convergent-divergent thought, De Dreu & West (2001) found that minority dissent stimulated innovation in organizational teams by inspiring critical, divergent problem analyses. Active discussion and participatory decision making encouraged minority dissent and processing of the minority's message (De Dreu 2001). Added benefits of minority dissent included improved integrative complexity (Antonio et al. 2004), an enlarged range of unshared information considered by group members, and superior problem solving (Brodbeck et al. 2002, Choi & Levine 2004). Authentic minority dissent proved more efficient than simulated ("devil's advocate") minority dissent in generating superior thought processes (Nemeth et al. 2001). In an extension of this orientation, De Dreu et al. (1999) demonstrated that minority-induced indirect attitude change was caused by divergent thought, whereas majority-induced focal change was caused by convergent thought. The causal link was established by independent manipulations of consensual support and processing mode.

Leniency

Arguing that consensual support derives its meaning from group membership, a thriving line of research highlights the link between size of support for attitudinal positions and social identification (Crano 2000, David & Turner 1999, Falomir et al. 2000, Gordijn et al. 2001, Mackie & Hunter 1999, Phillips 2003). Integrating insights of social identification and the information-processing approaches, Crano's (2001b) leniency contract postulates that in-group minorities exert influence because of the lenient, open-minded evaluation afforded members of the same social category. The counterattitudinal nature of minority advocacy precludes its direct acceptance by the majority. Although not directly accepted, minority advocacy is nevertheless elaborated by the majority as they attempt to understand the unexpected position held by their in-group members. Shared in-group membership allows for relatively open-minded elaboration, which ultimately creates pressure for change on related attitudes. If sufficiently great, such change puts pressure on

the focal issue, which consequently is modified to restore cognitive consistency. Empirical tests have supported the model and documented that changes on related attitudes persist long enough to trigger changes on the focal issues to reestablish balance within the attitudinal system (Crano & Chen 1998). Together with findings that attitudes changed in response to minority advocacy are resistant to subsequent persuasive attacks (Martin et al. 2003), these results suggest that minority-inspired attitudes may be especially strong.

Shared group membership may affect reactions to social influence not only through motivated reasoning about in-group (minority) members but also through social cognition processes (Mackie & Hunter 1999). In-group status may contribute to an individuated representation of minority arguments, whereby each minority member is perceived as an independent information source. Perceived independence of judgment, considered a prerequisite for the validity of advocacy (Asch 1952), may enhance the persuasive power of in-group minorities. These minorities may capitalize on the effects of individuated representation of arguments by employing communication strategies that emphasize an active (Kerr 2002), consistent advocacy (Myers et al. 2000), while appealing to a shared superordinate belief system within the group (Smith et al. 2000).

Dynamics

The dynamic nature of social influence is evident not only in cognitive adjustments within an individual but also in structural adjustments within a group (Latané & Bourgeois 2001; Prislin et al. 2000, 2002; Vallacher et al. 2002b). According to Prislin and colleagues' dynamic gain-loss asymmetry model of change in minority and majority positions, movement from valued majority to devalued minority is experienced as loss; the opposite movement is experienced as gain. These movements have implications for influence because losses generally are experienced more intensely than gains. Empirical support for this postulated asymmetry was obtained in a series of studies that documented new minorities' dramatically negative reactions toward their groups, which were not offset by new majorities' mildly positive reactions toward theirs (Prislin et al. 2000, 2002). In the attitudinal domain, new minorities tended to agree with the newly emerging consensus (Prislin et al. 2000) and to interpret attitudinal differences among group members as diversity rather than deviance (Prislin et al. 2002). In contrast, new majorities strengthen their attitudes by enhancing attitudinal importance, broadening the latitudes of positions they find unacceptable, and expressing less tolerance of opposing views. These complementary attitudinal and group-reaction results suggest that the likely response of new majorities to new minorities is hostility or antagonism.

Dynamic changes in minority size also can affect influence, as expanding minorities become more influential as they gain converts (Clark 1999, 2001). Empirical investigations of the processes underlying this effect reveal that the increased power of expanding minorities stems from targets' increased elaboration of their

appeals, as they try to understand what drew others to the minority. Interestingly, expanding majorities seem to lose their capacity to influence. Their expansion apparently triggers reactance in targets who struggle to preserve freedom of thought (Gordijn et al. 2002).

Dynamic models of social influence have begun to capture the complexity of influence processes exchanged between real-life minorities and majorities. Pioneering attempts to examine these processes in organizational (De Dreu 2001), political (Levine & Kaarbo 2001, Smith & Diven 2002), cross-cultural (Ng & Van Dyne 2001), self-evaluative (Vallacher et al. 2002a), economic and other settings (Butera & Mugny 2001b) promise to enrich theory and to foster innovative methodological approaches. Particularly relevant theoretically is the issue of the motives that drive influence exchanges between minorities and majorities, and temporal changes in information processing strategies that mediate social influence (Prislin & Wood 2005). These issues likely will mark the next generation of social influence research.

ATTITUDE STRENGTH

Dimensionality

Attitudes changed in response to minority influence generally are stronger than those that evolve in response to majority pressure (Martin et al. 2003). The study of attitude strength suggests why this might be so. Recent research on attitude strength has addressed the issue of latent structure, which involves the interconnectedness of various strength-related features and the processes that underlie their development. Factor-analytic studies documented the multidimensional structure of attitude strength, but findings regarding dimensionality have proved inconsistent (Bassili 1996, Krosnick et al. 1993, Prislin 1996). Recent studies have relied on experimental methods to examine dimensionality by focusing on the antecedents and consequences of various strength-related features. The logic guiding these studies is that to the extent that strength-related features signify the same latent dimension, they should have the same antecedents and produce the same consequences, but should not cause each other (Bizer & Krosnick 2001, Visser et al. 2003). Research based on this reasoning has demonstrated that attitude importance, though related to attitude accessibility and commitment, is a distinct construct. It was differentially affected by various aspects of subjective experience with the attitude object (Bizer & Krosnick 2001, Holland et al. 2003), and had distinct effects on information processing and behavior (Visser et al. 2003).

Processes

Findings about antecedents of strength features led to questions about the processes through which such features develop. Emerging evidence suggests a dual-process

mechanism. Supporting this possibility is the finding that attitude certainty may be inferred effortlessly from ease of attitude retrieval (accessibility) (Holland et al. 2003), or through an effortful analytic process of retrieving attitude-pertinent beliefs (Haddock et al. 1999). This latter analytic process also was suggested in the development of attitude accessibility from the elaboration of attitude-relevant information (Priester & Petty 2003). Future research would benefit from a unifying framework for addressing the issues of dimensionality and the development of attitude strength.

A related, emerging, theme concerns the social foundations of attitude strength. Indicating that not only attitudes but also meta-attitudinal characteristics (e.g., strength) are sensitive to social support, research demonstrates that attitudes are judged as more important (Prislin et al. 2000) and are expressed more quickly (Bassili 2003) when they are socially shared. Attitude certainty increases through projections of similarity with in-group and dissimilarity with out-group members (Holtz 2003, 2004). Increased attitude certainty and decreased ambivalence as a consequence of social support render attitudes resistant to persuasion (Visser & Mirabile 2004). Thus, attitude strength originates, at least in part, from the social context in which attitudes are held.

Resistance

Likely growing out of interest in features that make attitudes strong, research on resistance to persuasion is reviving an old and long-dormant interest (McGuire 1964). This revival has created an outburst of efforts to conceptualize resistance and understand its underlying processes (Knowles & Linn 2004). Numerous conceptualizations have been offered, with most defining resistance in terms of the outcome of a persuasive attempt (versus a process or motivation) (Jacks & O'Brian 2004, Quinn & Wood 2004, Tormala & Petty 2002). Resistance to persuasion can originate in cognitive and affective reactions to the appeal (Fuegen & Brehm 2004, Jacks & Devine 2000, Pfau et al. 2001). Negative cognitive and affective reactions can be combined in a number of specific resistance strategies, whose likelihood of use appears to vary with their social desirability. Apparently, socially desirable strategies that attack the appeal are more likely to be used than are those that derogate the appeal's source (Jacks & Cameron 2003). The impact of different strategies in resisting persuasion may vary over time. A rare longitudinal study of resistance revealed a relatively persistent effect of counterarguing over time, but only a delayed impact of strengthening of the existing attitude (Pfau et al. 2004).

Highlighting the role of metacognitive factors (people's perceptions and thoughts about their own cognitive states and processes) in resistance to persuasion, Tormala and collaborators argue that resistance does not necessarily leave initial attitudes intact (Tormala & Petty 2002). Rather, resistance strengthens initial attitudes to the extent that it is perceived as succeeding even in the face of strong messages (Tormala & Petty 2004a) emanating from expert sources (Tormala

& Petty 2004b). When resistance is perceived as effortful, or achieved through creation of mediocre counterarguments, initial attitudes, though preserved, may weaken (Petty et al. 2004). Activation of the resistance process depends on motives created by the persuasive context (Wood & Quinn 2004), thus allowing for interventions that may instigate defensive motivation to resist deceptive and potentially harmful persuasion (Sagarin et al. 2002).

Ambivalence

A related line of research experiencing a renaissance is concerned with attitudinal ambivalence (Conner & Sparks 2002, Jones et al. 2000). The current popularity of the construct first introduced almost four decades ago (Scott 1966) likely reflects its innovative conceptualization of attitudes. Allowing attitudes simultaneously to include both positive and negative evaluations opens the question of the operative (structural) or experiential (phenomenological) status of ambivalence. Newby-Clark et al. (2002) argue that structural coexistence of mutually opposite evaluations generates the experience of ambivalence if the evaluations are simultaneously accessible.

The theoretical value of the ambivalence construct lies in its novel definition of attitudes as two separate dimensions rather than a single bipolar dimension. In the empirical literature, however, ambivalence has been treated mostly as a distinct aspect of attitude strength (Armitage & Conner 2000, Maio et al. 2000a,b, van der Pligt et al. 2000), as is evident in research on the moderating role of ambivalence on information processing, attitude change, and attitude-behavior consistency. Not only is information processing more effortful at high levels of ambivalence (van Harreveld
et al. 2004, van der Pligt et al. 2000), it is qualitatively different (Broemer 2002). The well-documented moderator effects of ambivalence on attitude-behavior consistency (Armitage 2003, Armitage & Conner 2000, Conner et al. 2002, Costarelli & Colloca 2004, Sparks et al. 2004), attitude pliability (Armitage & Conner 2000), and decision making (Hänze 2001) provide additional evidence of strength properties. Higher levels of ambivalence are associated with weaker attitude-behavior relationships, greater attitudinal pliability, and elaboration-oriented versus action-oriented approaches to decision making.

In line with the emerging emphasis on the social foundations of attitudes, there is growing evidence about the importance of social factors in generating and alleviating ambivalence. Priester & Petty (2001), extending research on antecedents of ambivalence from typically examined intrapersonal to interpersonal factors, demonstrated that perceptions of interpersonal attitudinal discrepancy contributed to subjective ambivalence beyond personal influence factors. The experience of ambivalence motivates the search for corrective information, making those with ambivalent attitudes especially susceptible to consensus influence (Hodson et al. 2001).

Ambivalence toward social targets appears especially important because of its role in forming social perceptions (Bell & Esses 2002, Maio et al. 2001) and

regulating social relations. At the group level, perhaps the strongest argument for the link between attitudinal ambivalence and social relations has been proposed in the theory of ambivalent sexism (Glick & Fiske 2001, Glick et al. 2004), which posits that simultaneously held hostile and benevolent attitudes toward men and women not only reflect, but support, gender inequality. Feather's (2004) alternative explanation sees the origin of ambivalent attitudes in contradictory values. Uniting these and other approaches to ambivalent attitudes toward social groups is the motivational position, within which ambivalence is understood as a compromise strategy of satisfying opposing social motives (Mucchi-Faina et al. 2002). Elucidating motivational conflicts underlying attitudinal ambivalence remains an important challenge.

AFFECT, MOOD, AND EMOTION

The study of affect or emotion in attitudes continues to generate research on attitude structure, wherein affect is examined as part of the holy affect-cognition-behavior trinity of attitude organization, as well as research on attitude change, where affect is examined as a determinant of the judgmental processes underlying reactions to persuasive messages. Affect as a distinct component of attitude structure is assumed to have primacy in responses to attitude objects (Cervellon & Dubé 2002, Huskinson & Haddock 2004). According to the affective primacy hypothesis, emotional associations to an attitude object are activated more rapidly than are nonemotional (cognitive) associations. However, Giner-Sorolla (2001, 2004) suggests the primacy of affective (over cognitive) reactions only at high levels of extremity, and for affectively based (versus cognitively based) evaluations. Consistent with prevailing dual-process models, Giner-Sorolla (1999) theorizes that the affect associated with an attitude object varies along a continuum ranging from immediate to deliberate. Immediate affect is evident in evaluative bipolar feelings and emotions that are activated rapidly and effortlessly, whereas deliberate affect is evident in discrete, qualitatively different emotions that are activated gradually, over time. This distinction resonates with Ito & Cacioppo's (2001) evaluative space model, which postulates a multiplicity of evaluative mechanisms. The presumed independence of evaluative mechanisms allows for the lower level structures automatically to process attitude objects in terms of affective significance while higher level mechanisms direct attention to other features of the object. Evaluative processing at different levels ultimately may result in dual attitudes whose implicit (automatic, immediate) and explicit (deliberate, delayed) expressions are evaluatively unharmonious.

The distinction between affect and cognition in attitude structure has implications for attitude change. According to the matching hypothesis, persuasive appeals are effective to the extent they match the structural (affective-cognitive) makeup of the targeted attitude (Edwards 1990). Revisiting this hypothesis, Fabrigar & Petty (1999) resolved methodological difficulties of previous research and found that

affective persuasion was more effective in changing attitudes based on affect than attitudes derived from cognitions, but the obverse, that cognitive persuasion was more effective in changing attitudes derived from cognitions, was not supported.

Fear

Affect has been examined not only as a distinct component of attitude structure but also as a contextual variable with implications for persuasion (Petty et al. 2001a). The contextual conceptualization is concerned with two types of feelings and emotions: those activated by the persuasive message, and general feelings and emotions unrelated to the persuasive appeal. The former, often operationalized as message-activated fear and studied in persuasive campaigns aimed at health-related attitudes, has produced conflicting results (Petty et al. 2003). Relying on dual-process models of persuasion, Das et al. (2003) examined information processing as well as attitude change in response to fear appeals. They found that fear appeals generated favorable cognitive responses and consequent attitude change if participants felt vulnerable to threat. Thus, vulnerability operated as a motivator that fostered positive evaluation of the arguments in the fear-arousing message and resultant attitude change.

Information and Processing

Associated research has investigated the manner in which affect that is unrelated to a persuasive appeal shapes reactions to the appeal and the processes through which such influence occurs. Conceptualizing extraneous, appeal-unrelated affect as information whose impact is best understood within the dual-process models of persuasion, Albarracín and colleagues (Albarracín 2002, Albarracín & Kumkale 2003, Albarracín & Wyer 2001) found that reliance on affect as information was determined by ability and motivation to process the persuasive appeal. Affect served as information in persuasion at moderate levels of processing, where it was identified as a potential criterion for judgment. At low levels of processing, affect was not identified, and at high processing levels, it was recognized as irrelevant for judgments about persuasive appeals. Thus, ability and motivation to process have a curvilinear impact on the influence of extraneous, appeal-unrelated affect (Albarracín & Kumkale 2003).

Attempts to understand how affect influences processing have focused on the disparate effects of valenced affective states on elaboration. Previous research strongly suggested supremacy of negative states in promoting argument elaboration. Recent research paints a more complex picture. Bohner & Weinerth (2001) observed the facilitative effects of negative affect on processing only when the persuasive appeal was considered legitimate. Negative affect triggered by a legitimate appeal presumably signaled potential threat and motivated careful scrutiny. In contrast, negative affect associated with an appeal judged illegitimate was interpreted as a reaction to the illegitimacy, which lowered motivation for careful message scrutiny.

In a demonstration of the opposite effect, Raghunatan & Trope (2002) showed that positive mood may serve as a resource when processing self-relevant appeals. According to the mood-as-resource hypothesis, positive moods serve as buffers, enabling a person to process potentially threatening but useful information about self-relevant issues. Supporting the hypothesis, the authors found that under conditions of high self-relevance, positive mood fostered careful scrutiny of negative information, which in turn led to attitude change. In contrast, under the conditions of low self-relevance, negative mood, which apparently served as information, led to more elaborate processing.

Certainty and Carryover

In addition to hedonic tone, affective states are characterized by a number of features stemming from the appraisal process. Much like meta-attitudinal characteristics of attitude strength (Bassili 1996), these meta-cognitive characteristics of affective states represent impressions of one's feelings and emotions (control, responsibility, certainty). Of these, the certainty associated with an emotion appears especially consequential for processing persuasive appeals. Tiedens & Linton (2001), drawing on previously documented congruency along appraisal dimensions between incidental emotional states and subsequent judgments (Lerner & Keltner 2000), reasoned that certainty associated with an emotion could spill over to subsequent judgments and ultimately determine processing intensity. In support, they found that both positive and negative emotions characterized by certainty fostered heuristic processing, whereas positive and negative emotions characterized by uncertainty promoted systematic processing. Moreover, the same emotion had different effects on processing, fostering elaboration when associated with uncertainty, but attenuating processing when associated with certainty. Thus, certainty associated with an emotion carries over to determine certainty about subsequent persuasive situations and resultant processing.

The carryover effect of emotional states is evident in research on emotion-induced biases in likelihood estimates (DeSteno et al. 2002). Using emotional states as information, people arrive at biased estimates of the likelihood of events, overestimating emotion-congruent events and underestimating emotion-incongruent ones (DeSteno et al. 2000). These emotion-induced biases in likelihood estimates imply that the persuasive impact of messages may depend on the match between emotions and the emotional framing of messages. In support of this hypothesis, DeSteno et al. (2004) found that participants reacted favorably to persuasive appeals to the extent that the emotional consequences mentioned in the appeal matched the emotions they experienced while receiving the appeal.

Contemporary research demonstrates that there is more to the affect-persuasion relationship than the mere valence of emotional states. Specific emotional states and their associated appraisal-related characteristics determine reactions to persuasive appeals through a matching process, which appears to be highly specific. In this process, emotional states function as signals that inform targets of

persuasive appeals about their environments. The biasing effect of emotional states, however, has been demonstrated under a restricted range of conditions. Moreover, it is reasonable to assume a multiplicity of mechanisms responsible for emotional states' effects. Future research should establish the boundary conditions of such effects and identify the mechanisms implicated in their operation.

ATTITUDE-BEHAVIOR CONSISTENCY

Because attitudes predict behavior, they are considered the crown jewel of social psychology. Sparked by LaPierre's (1934) pioneering study, research on the predictive power of attitudes and the moderation of attitude-behavior bonds remains vital, vigorous, and continuous. Moderators of attitude-behavior consistency (ABC) fall into three categories: meta-attitudinal, self-interest, and assessment-related. Cook & Sheeran's (2004) meta-analysis of 44 studies that examined meta-attitudinal characteristics indicative of attitude strength (accessibility, involvement, certainty, ambivalence, affective-cognitive consistency, and temporal stability) revealed that all the characteristics except involvement moderated ABC, with temporal stability being the strongest. Extending these findings, Holland et al. (2002b) demonstrated that strong (versus weak) attitudes not only were more predictive of behavior, but also were less sensitive to behavioral feedback. Strong attitudes remained stable irrespective of the behavior exhibited between two attitude assessments, whereas weak attitudes were significantly affected by behavior.

Self-Interest

However strong, attitudes may not be manifested behaviorally if the manifestation violates the norm of self-interest. Ratner & Miller (2001) showed that the fear of publicly supporting favored causes in which one had no stake prevented nonvested individuals from acting on their attitudes. Self-interest moderates ABC, as shown in research on the effect of vested interest across a range of policy-relevant decisions (Lehman & Crano 2002). In general, the more closely attitudes are tied to the self, the more likely they are to serve as a basis for attitude-consistent actions. Their potency in determining behavior likely stems from their stability, as self-defining attitudes are less sensitive to context (Sparks 2000).

Assessment

In a demonstration of the moderating roles of the mode of assessment, Neumann et al. (2004) showed that explicit measures of attitudes assessing deliberate, reflective evaluations (e.g., questionnaires) were better predictors of self-reported, deliberative behavioral intentions. In contrast, implicit measures assessing automatic, impulsive evaluations (e.g., Implicit Association Test; Greenwald et al. 1998) were

better predictors of automatic avoidance/approach tendencies in reactions toward people with AIDS. Taken together, these studies suggest that underlying, latent characteristics of evaluations reflected in different measures of attitudes may be largely unrelated functionally. As such, they may activate different processes that make unique contributions to behavior (Gawronski & Strack 2004, Vargas et al. 2004).

Theory of Planned Behavior

The MODE model (motivation and opportunity as determinants of spontaneous versus thoughtful information processing; Fazio & Towles-Schwen 1999) proposes that attitudes guide behavior either through deliberate or spontaneous (automatic) processes. The former are activated by strong motivation and the opportunity to engage in conscious deliberation; activation of the latter depends on accessibility. The most prominent of the deliberative processes models is the theory of planned behavior (TPB) (Ajzen 2001; Ajzen & Fishbein 2000, 2005), which postulates that behavior follows from intentions and perceived control over behavior. Intentions are derived from considerations of attitudes, subjective norms, and perceived behavioral control. A voluminous TPB-inspired literature testifies to the model's heuristic value. A meta-analysis of 185 studies revealed that the constitutive elements of the theory explained significant variance in intentions (18%) and subsequent behaviors (13%); subjective norms emerged as the weakest predictor (Armitage & Conner 2001).

Terry et al. (2000a) criticized the conceptualization of the normative component of the TPB and offered an alternative more in line with a social influence perspective. Drawing on social identity and social categorization theories, they argued that only attitudes supported by in-group norms would predict behavior. Support for this reasoning was found in a series of studies demonstrating stronger ABC in participants exposed to attitude-congruent (versus incongruent) in-group norms (Terry et al. 2000b, White et al. 2002), especially when participants strongly identified with the group (Smith & Terry 2003).

Behavioral intentions, the most immediate predictor of behavior in the TPB, represent plans to act toward desired goals. The impressive volume of research on the predictive validity of intentions allowed for several meta-analytical reviews, which recently were included as entries in an overarching synthesis. Sheeran's (2002) meta-analysis of 10 meta-analyses revealed that on average, intentions explained 28% of variance in subsequent behavior. Quite a sizeable portion of unexplained variance is problematic, regardless of whether intentions are conceptualized as causes of actions, as is the case in the TPB, or as focal constitutive conditions of actions (Greve 2001). Reasoning by analogy to attitude strength, Sheeran & Abraham (2003) argued that strong, but not weak, intentions predict behavior. Empirical evidence for this argument was found in studies showing that behavior was closely related to strong intentions indicated by high certainty, attitudinal rather than normative control, greater experience, self-relevance, and

anticipated regret for inaction (Abraham & Sheeran 2003, Sheeran & Orbell 2000). These properties made intentions stable over time (see also Conner et al. 2000), rendering them reliable predictors of behavior.

Alternatively, predictive validity of intentions may be improved by correcting for the hypothetical bias (Ajzen et al. 2004). This bias, evident in activation of unduly favorable beliefs and attitudes in the context of a hypothetical behavior (intention), was found responsible for inconsistency between intentions to make monetary donations and actual donations to a scholarship fund. When warned of the bias, participants corrected their overly optimistic intentions, making them better predictors of their later actual behavior (Ajzen et al. 2004).

In addition to interventions aimed at making intentions more realistic or strong, consistency between intentions and behavior may be increased by developing a plan for engaging in an intended behavior (Gollwizer 1999). Implementation intentions involve making decisions in advance about crucial aspects of behavior initiation and maintenance. The environmental cues contained in implementation intentions are thought to activate behavior automatically. The association between context and behavior should cue enactment of behavior upon every encounter with relevant contextual factors. In support of the hypothesis that implementation intentions promote performance of an intended behavior, Sheeran & Orbell (1999, 2000) found that individuals who specified in advance how, when, and where they would perform a behavior were more likely than those who did not make such plans to adhere to their intentions to regularly take vitamin C and to attend cervical cancer screening (also see Fishbein 2000, Fishbein et al. 2002).

Whereas implementation intentions establish conscious strategies for attaining desired goals, self-regulatory volitional efficiency contributes to goal attainment through conscious and nonconscious mechanisms that address operationally how behavior is achieved (Kuhl 2000). Orbell (2004) found that volitional efficiency, assessed as concentration on a goal and self-determination, moderated the effects of behavioral intentions on actual behavior; participants high on volitional efficiency were more likely than those low on volitional efficiency to act on their intentions. Moreover, volitional efficiency mediated the effect of perceived behavior control on behavior, supporting Ajzen's (2002) claim that a direct effect of controllability on behavior is as much attributable to internal, self-regulatory capacity as it is to external behavioral influences.

Habit

An aspect of the TPB that has generated lively exchanges among researchers is the role of habits or frequently performed past behaviors (Ouellette & Wood 1998) in predicting future behavior. In contrast to the TPB postulate that effects of any distal variable, including past behavior, are mediated by intentions, Verplanken & Aarts (1999) argue that intentions may lose their predictive power once strong habits are formed. In such cases, a reasoned process of deliberation presumably

is replaced by a spontaneous mode of operation, which is automatically activated upon encountering relevant cues. Criticizing the construct of habit on conceptual and operational grounds, Ajzen (2002) argues that residual effects of past behavior cannot be attributed to habit. Rather, he calls for further explorations of factors responsible for translations of beliefs into actions. Far from being settled, this debate on habits will likely generate new insight into automaticity versus reasoning in human action. James (1890), Tolman (1932), and Hull (1943) might be amused to discover that the focal issue of their times is still hotly debated in the twenty-first century.

CONCLUDING REMARKS

This review has pointed to some likely foci of attention and, hopefully, progress in the years to come. We expect that considerable efforts will continue to be made to understand the nature of attitudes that are measured via explicit versus implicit methods. Theories that make sense of overlaps and discontinuities in the constructs defined by standard and implicit measurement techniques are beginning to develop within specific subfields (e.g., dissonance, affect and persuasion), and more encompassing models may be anticipated. Hand in glove with this progression is a revitalized interest in attitude formation (versus change), which will help integrate basic social-psychophysical concerns with the less exotic pursuits of persuasion practitioners. Study of the effects of minority sources in influence, which helped rejuvenate persuasion research, likely will continue to feature prominently. Recent models that integrate dual process conceptions of attitude change with social identity approaches promise to contribute to a deeper understanding of the fundamental persuasion process in the social context. We anticipate that deliberative processes of change will be differentiated more precisely from more automatic processes, and this development should further advance understanding, as will study of the effects of incongruous pairings of source with message. Internal and external pressures will likely orient persuasion research more strongly toward applications; even fundamental theory-building research may be grounded more firmly in the problems of the real world. This progression is not to be shunned, as we may infer from the recommendations Campbell (1988) advanced so many years ago in his "Experimenting Society" homily. The requirements, indeed, demands, placed on persuasion researchers have never been greater, nor have been the opportunities to contribute meaningfully to science and society. It will be fascinating to see how, not whether, the field responds.

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