SURVIVAL AND CHANGE IN JUDGMENTS: A MODEL OF ACTIVATION AND COMPARISON

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A model of judgment maintenance and change is proposed that specifies the various processes that take place at the time of making a judgment on the basis of memory-based and online information. This model proposes that attitude maintenance and change depend on three processes: recalling a prior attitude, recalling or receiving other attitude-related information, and comparing the prior attitude with attitude-related information. Unlike prior models, the activation/comparison model assumes that all three processes can elicit attitude change and maintenance under different conditions. For instance, the mere activation of attitude-related information that is consistent with a prior attitude will favor stability, whereas activation accompanied with comparison with a prior attitude will result in polarization of the prior attitude. Furthermore, even when prior attitude accessibility will elicit attitude maintenance in the absence of comparative processes, prior attitude accessibility can accelerate comparison and therefore change when comparative cues are present. Finally, people who are motivated to compare their prior attitudes with new information should by necessity first activate their prior attitude before comparison can take place. Consequently, attitude comparison cues may induce attitude survival if subsequent processing stops at the point of attitude activation and does not proceed to the stage of attitude comparison. Comparative principles are identified and the implications of this model are discussed in relation to prior theorizing on change in attitudes and nonevaluative judgments.

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I. Introduction

Social psychologists' current understanding of attitude change and maintenance faces two primary problems. One problem is fragmentation of the literature. Several bodies of research and theory identify mechanisms or thought processes that have different implications for the change and maintenance of attitudes over time. These mechanisms involve recalling a prior attitude about an object, considering online attitude-related information, and evaluating the prior attitude in light of the attitude-related information. However, past research has typically considered these processes at a molecular level, taking into account only one process at a time (for an exception, see Festinger, 1957; Festinger & Carlsmith, 1959). To our knowledge, no prior model of attitude change has attempted to explicate the complex consequences of these rather basic mechanisms for attitude change and survival.

The fragmentation of the attitude change literature contributes to a second problem. The predictions that can be made from isolated mechanisms are not the same as those that an integrative view allows. Our model emphasizes that understanding and predicting attitude change requires examination of three processes: (1) activating the prior attitude (retrieving it from memory), (2) activating information related to the prior attitude (which can be from memory or external), and (3) comparing the prior attitude with the related information (Fig. 1).[1] None of the processes in Fig. 1 is inevitable, and each process can have different implications for attitude change and maintenance. On one hand, the sole activation of either attitude-consistent information or the prior attitude itself will lead to attitude maintenance. On the other hand, online reconstruction of an attitude based on the sole activation of attitude-inconsistent information, as well as comparison of the prior attitude with attitude-consistent or inconsistent information, should generally produce attitude change. Nevertheless, these two processes do not always occur independently of each other, and better understanding of attitude change emerges from a joint consideration of the

[1]We define *attitudes* as evaluative judgments that are typically generated covertly, and may or may not be expressed to others. Both current and prior attitudes in this case represent the judgment component of attitudes, which is distinct from the representation of this judgment in memory or the representations of attitude-related information in memory (for treatments of the nature of attitude representations in memory, see Bassili & Brown, in press; Fazio, 1986; Wyer & Srull, 1989). We conceptualize *change* as a difference between a present attitude judgment about a topic and an attitudinal judgment about the same topic generated at an earlier time, even when this change results from seemingly fluid and temporary contextual factors (see e.g., Schwarz & Bohner, 2001; Tourangeau & Rasinski, 1988).

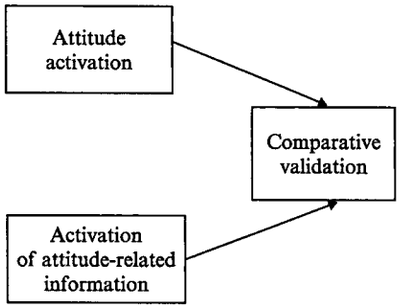

Fig. 1. Processes underlying attitude survival and change. Boxes represent processes.

two. Although the processes themselves are not counterintuitive, their joint implications elaborated in our model often contrast with prior assumptions and predictions.

Conceptualizing attitude activation and comparison as a sequential process implies that activating a prior attitude will often facilitate comparison. That is, the comparison process requires activation of both the prior attitude and attitude-related information, so spontaneous or externally induced attitude activation (step 1) will foster comparison (step 2) simply because such activation is a prerequisite for comparison. However, activation of both the prior attitude and attitude-related information does not guarantee comparison; attitude activation may not stimulate comparison if situational or individual factors discourage comparison.

Just as attitude activation facilitates comparison, comparison cues facilitate activation. When people are motivated to compare their prior attitude with attitude-related information, they may first need to activate the elements required for comparison if these elements were not already available before starting to compare. However, comparison cues do not guarantee comparison even if these cues lead to the activation of the elements required for comparison. The individual may not be sufficiently motivated or able to proceed from step 1 (activating attitudes) to step 2 (comparative validation).

An example may illustrate the need to investigate attitude activation and comparison in a concurrent fashion. For instance, considering only the activation of a prior attitude leads to the well-supported prediction that highly accessible prior attitudes survive or last longer than prior attitudes with low accessibility (Fazio, 1986). A woman who can easily recall her prior favorable attitude toward COPA airlines is more likely to sustain favorable attitudes than a person who can barely remember that "COPA"

is a Panamanian company, let alone an evaluation of the service provided by this airline. However, if attitude activation is considered in the context of comparative processes, it is easy to see how activating a prior attitude could lead to attitude change, rather than attitude maintenance. For instance, a woman who clearly remembers having a prior favorable evaluation of COPA airlines and is politely greeted by a COPA flight attendant may *reassess* the validity of her prior attitude in relation to the new information (comparative validation process). In doing this, the subjective validity of her prior attitude and the new information may increase due to the perceived fit between each cognition and prior knowledge (Wyer & Srull, 1989), her mood (Schwarz & Clore, 1983), or the sheer convenience of holding a given attitude (Festinger, 1964). Furthermore, when compared, her positive prior attitude and the new, also positive information should be mutually validating and combine to increase the positivity of the prior attitude (corroboration).

Polarization following subjective confirmation of an earlier conclusion, however, should not occur when people form a current attitude on the spot, ignoring a past attitude. For instance, the woman in our example may fail to retrieve her earlier favorable attitude toward COPA airlines at the time when she is greeted by the polite flight attendant. In this case, failure to retrieve the prior attitude should prevent the comparative validation process we described, leading to the online formation of a current attitude that is equally positive to the prior one. In conclusion, attitude survival may occur in a relatively incidental way even if the prior attitude is inaccessible, provided people consider attitude-relevant information that supports the prior attitude.

Attitude maintenance may also emerge from failed attempts to compare new information with a prior attitude. In our example, the woman who is politely greeted by the flight attendant may be asked to complete a consumer survey. In filling out the survey, she may try to recall an evaluation of the airline that she developed years ago and to integrate that attitude with the new information she gathered. However, she might become distracted in the middle of completing the survey and default to the prior attitude she recalled to perform a comparison. With such interruptions, motivation to perform a comparison will increase stability instead of change.

Because ability and motivation to think about an issue often are necessary to perform the processes in Fig. 1, our model has implications for the effects of these variables on attitude change. We argue that a prior attitude is most likely to survive when people activate the prior attitude but do not use evaluatively inconsistent information for either comparisons or online constructions. Therefore, people must have sufficient ability and motivation to retrieve the prior attitude, but not enough ability and motivation to process

relevant but inconsistent material.[2] Consider the influence of ability and motivation to think about an issue when the attitude-relevant information has the same evaluative implications as the prior attitude. Whereas comparison of a prior attitude with attitude-consistent information should lead to change (polarization), either recycling the old accessible attitude or forming an attitude on the go should lead to attitude survival. Thus, lower and moderate levels of processing ability and motivation should promote attitude survival more than high levels of these variables.

This chapter is organized in three sections. The next section (Section II) defines basic concepts pertinent to the model. The predictions described in Section III include an extended presentation of the potential forms of attitude change (e.g., polarization of prior attitudes, boomerang types of effects, and compromise between the prior attitude and the attitude-related information) based on the evaluative category or implication (good vs. bad) of the judgment and the relevant information, as well as the processing stages that develop (Part A of Section III). The chapter then reviews the influences of attitude activation and comparison (Part B of Section III) and the predicted effects of general processing ability and motivation on attitude change (Part C of Section III). In Section IV, we contrast the predictions of our model with prior models of attitudes, including algebraic models, such as information-integration theory (Anderson, 1974), Sherif and Hovland's (1961) social judgment theory, and more recent models of communication and persuasion.

II. Attitude Change and Survival: Preliminary Definitions

People form attitudes when they link an object to an evaluative category in the process of evaluating the object (good vs. bad, positive vs. negative; see Ajzen & Fishbein, 1980, 2001; Eagly & Chaiken, 1993; Fazio, 1986; Wyer & Srull, 1989; Zanna & Rempel, 1988). The attitude object can be a concrete target, a behavior, an abstract entity, a person, or an event (e.g., Fishbein & Ajzen, 1974). For example, individuals form evaluations of social groups

[2]Prior research has shown that people's ability and motivation to think about an object can induce different inferences about the validity of a given type of information (Chaiken, 1980; Petty & Cacioppo, 1986). For instance, people use their mood as information when they think about their mood to a moderate extent (Albarracín & Kumkale, 2003) but not when ability and motivation are either high or low. Moreover, individuals may correct for the influence of mood when they have high ability and motivation, resulting in reverse effects of mood on judgment (see Ottati & Isbell, 1996). These effects are orthogonal to the effects of concern in this chapter, as they affect the actual validity of the prior attitude and the attitude-related information but not the processes that guide attitude change and maintenance.

(e.g., prejudice), their own behaviors (attitude toward the behavior; Fishbein & Ajzen, 1975), their personal attributes (attitudes toward the self, including self-esteem), and other people (person impressions). Moreover, individuals form these attitudes on the basis of different types of information. For instance, Eagly and Chaiken (1993; see also Ajzen, 2001; Albarracín, 2002; Petty & Wegener, 1999) maintain that attitudes can be based on cognitive, affective, and behavioral information. A person who values health and believes that smoking poses health risks is likely to develop a negative attitude toward smoking (Fishbein & Ajzen, 1975). People who experience positive mood may favorably evaluate their lives or conclude that a political candidate is desirable (Clore & Parrott, 1994; Isbell & Wyer, 1999; Schwarz & Clore, 1983, 1996). Moreover, according to Bem (1965, 1972; Bem & McConnell, 1970), individuals often consider their past behavior and infer their attitudes from that behavior, particularly when they lack a firm prior attitude about the object being considered (for relevant evidence, see Chaiken & Baldwin, 1981). Although affective and behavioral information often gives way to attitudes, attitudes are neither affective nor behavioral in nature: They are evaluations (Eagly & Chaiken, 1993; Zanna & Rempel, 1988).

Three attitude dimensions are relevant to the model's predictions. Attitudes are first characterized by their *evaluative category* or *implication* stemming from people's classifications of objects as good or bad (e.g., Bargh, Chaiken, Govender, & Pratto, 1992). Moreover, attitudes vary in the *extremity* or the polarity of the value assigned to the evaluative category (Thurstone, 1959). For example, an individual may moderately or strongly dislike former President Clinton or may be weakly or extremely prejudiced against a societal group. Finally, people's attitudes are associated with different degrees of *confidence* or subjective certainty (see Abelson, 1988; Petty, Briñol, & Tormala, 2002). A woman may be very confident that Clinton was a good president, but decrease confidence in this attitude as a result of new information that derogates Clinton's image.[3]

This chapter is concerned with stability and changes in the evaluations of an object as time passes. Attitude change denotes a transformation of at least one of the aforementioned attitude dimensions over two different (and arbitrarily defined) time points. Some attitudes *change in evaluative category* or *implication*. For instance, individuals who initially favor a president may later receive information that leads them to disapprove of this president. Attitudes also *change in extremity and confidence*. For example, people with negative attitudes toward smoking may disapprove of smoking even more after making

[3]It is important to note that properties such as extremity and confidence are often termed *attitude strength*. We believe that conceptualizing attitude change requires understanding change in all of these dimensions.

new friends who also disapprove of smoking (attitude polarization following corroboration). As an example of change in confidence, people may become more confident in their stereotypes about a minority group if training designed to decrease stereotypes backfires (boomerang type of effect).

In contrast to attitude change, *attitude survival* (also denoted *maintenance* and *persistence*) denotes continuity in the three dimensions of evaluative category, extremity, and confidence. For example, people can automatically access their prior evaluations of political parties and maintain the same exact attitudes over many years (e.g., Fazio, 1990; Fazio, Powell, & Herr, 1983). Attitudes also survive when individuals form an attitude that is identical to a prior one on the basis of relevant information that is available online, even when they did not retrieve their prior attitude from permanent memory. As described by Bem (1965; see also Albarracín & Wyer, 2000), people may repeatedly infer an attitude on the basis of their past behavior that happens to be salient at the time (for a review of conditions that facilitate self-perception, see Eagly & Chaiken, 1993). When this behavior is the same over time, the attitude individuals generate is also likely to be stable (for discussions of how chronic accessibility of information can lead to attitudes that are identical to attitudes people formed at an earlier time, see Schwarz & Bohner, 2001; Wilson & Hodges, 1992). We will discuss these different phenomena and their facilitating conditions in the context of empirical evidence relevant to our model.

Although attitude extremity and confidence are distinct attitude dimensions, they often go hand in hand. Consider the case in which people recall a general, dichotomous categorization of an object as good or bad. For instance, people may recall that they previously thought that a war against Iraq was a bad idea. Those who become more or less confident in their category assignment should express a more or less extreme judgment, provided that there are enough verbal labels in the context of a broader judgmental scale (e.g., "very" or "slightly" bad). In the example, people who become more confident that the Iraq war is a bad idea are likely to describe the war as "very bad," whereas people who hesitate with respect to their prior judgment may characterize it as "slightly bad." However, very different effects might emerge for changes in confidence and extremity when people start with a more specific judgment, such as "very" bad on a semantic differential scale. Under those conditions, becoming more confident in one's judgment could imply reendorsing "very bad" as one's judgment rather than changing the extremity of one's attitude.

In addition to ceiling effects, implicit theories about change may further complicate the situation. If a person's initial attitude changes in valence, confidence may increase or decrease depending on the circumstances being considered. For example, a person who is initially against the Iraq war may

receive information about the advantages of the war, leading that person to manifest a neutral or even positive position. If the person focuses on his or her having changed the earlier attitude in light of more comprehensive information, his or her attitude confidence should increase as extremity decreases. In contrast, if the person focuses on his or her having changed the prior attitude, he or she may conclude that attitudes in this domain are short-lived and decrease his or her confidence in them. In sum, the model discussed in this chapter predicts changes in extremity and confidence in the case of attitude polarization, but it makes no assumptions about confidence in the case of a compromise between the prior attitude and the attitude-related information.

III. Activation/Comparison Model

The activation/comparison model stipulates that attitude maintenance and change are a function of (1) prior attitude activation, (2) activation of information related to the prior attitude, and (3) comparison between the prior attitude and the attitude-related information. According to this activation/comparison model, none of these three components is inevitable. People may activate their prior attitude without activating related information. For example, a man planning to vote in an upcoming political election may recall his prior favorable attitude toward the candidate without recalling specific information about the candidate or attending to media portrayals of the candidate. Moreover, concurrent activation of a prior attitude and information related to that attitude does not guarantee comparison between these two components. The man might read a newspaper article describing the behavior of the candidate without considering how the implications of the information in the article fit with his attitude toward the candidate. We describe the nature and predicted effects of attitude activation and information comparison on attitude change and maintenance below. Figure 2 shows the outcomes of these processes on change and survival, and Table I summarizes the model postulates.

A. PROPOSED PROCESSES

1. Activation of Prior Attitude

People activate a prior attitude if they retrieve an association between an object and a category that they previously stored in memory (see Fazio, 1986). For instance, a person may recall that a person is "good" or "bad,"

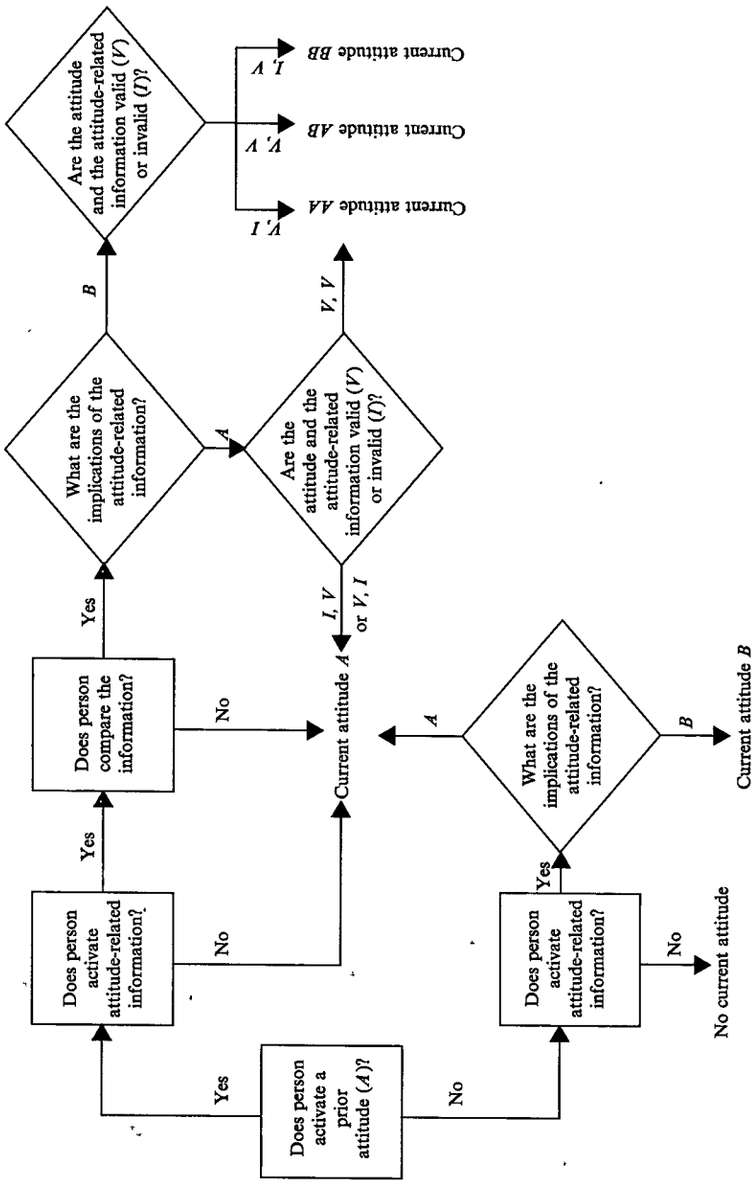

Fig. 2. Influence of processes of activation and comparison on attitudinal outcomes. Boxes indicate processes and diamonds indicate decision points. *A* and *B* represent different implications or categories (e.g., bad versus good). *V* and *I* denote subjectively valid and invalid information, respectively. *AA* and *BB* represent attitudes of the same *A* and *B* evaluation with increased confidence, extremity, or both.