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EDITORIAL: ATTITUDES CAN BE MEASURED! BUT WHAT IS AN ATTITUDE?

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When Thurstone (1928) declared that "attitudes can be measured," he opened the gates for what has become one of the most important constructs in social psychology. In fact, it is difficult to imagine what contemporary social psychology would be like without the concept of attitude. Some researchers have even argued that "the concept of attitude is probably the most distinctive and indispensable concept" in social psychology (Allport, 1935, p. 798).

Notwithstanding the significance of the attitude construct, social psychology has experienced recurring debates regarding its proper definition (see Eagly & Chaiken, 1993; Fazio, 1995; Zanna & Rempel, 1988). Although these controversies waned in the closing decades of the 20th century (Eagly & Chaiken, 2005), the situation has changed with the recent development of a new class of indirect attitude measures (for reviews, see Fazio & Olson, 2003; Petty, Fazio, & Briñol, in press; Wittenbrink & Schwarz, 2007). These measures differ from traditional self–report measures, in that they do not require explicit evaluations of an attitude object. Rather, attitudes inferred from these measures are based on participants' performance on experimental paradigms, such as sequential priming (Neely, 1977) or response interference tasks (Kornblum, Hasbroucq, & Osman, 1990). Examples of these *implicit attitude measures* include the Implicit Association Test (Greenwald,

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McGhee, & Schwartz, 1998), affective priming (Fazio, Jackson, Dunton, & Williams, 1995), semantic priming (Wittenbrink, Judd, & Park, 1997), the Extrinsic Affective Simon Task (De Houwer, 2003), the Go/No–Go Association Task (Nosek & Banaji, 2001), and the Affect Misattribution Procedure (Payne, Cheng, Govorun, & Stewart, 2005).

Given the incredible amount of research stimulated by implicit attitude measures, it is probably not an overstatement to claim that these measures brought about, if not a scientific revolution (Kuhn, 1962), at least a substantial reorientation of priorities and perspectives. At the same time, however, they also led to new theoretical controversies regarding the proper conceptualization of the attitude construct. For instance, some researchers argued that the two measurement techniques represent different approaches to assessing the same underlying attitude, differing only in the extent to which they allow participants to control their responses (e.g., Fazio et al., 1995). Yet, other researchers claimed that different measurement techniques tap two distinct types of attitudes, which have been described as explicit and implicit attitudes (e.g., Greenwald & Banaji, 1995). The latter conceptualization can be further divided into models claiming that implicit attitudes differ from explicit attitudes in that the former reflect unconscious (rather than conscious) attitudes (e.g., Banaji, 2001), and models stating that implicit attitudes represent earlier acquired attitudes that have not been replaced by more recently acquired, explicit attitudes (e.g., Wilson, Lindsey, & Schooler, 2000). Further fueling the debate, some researchers argued that it may be ill–founded to think of attitudes as stable, trait–like representations (e.g., Schwarz & Bohner, 2001). Rather, these researchers argued that attitudes are generally constructed on the spot, irrespective of whether they are assessed by means of explicit or implicit measures.

Not surprisingly, these divergent assumptions have elicited new and substantially deeper theoretical controversies regarding the proper conceptualization of the attitude construct. Elaborating on some of the aforementioned issues, questions that are subjects of these controversies are: Is there only one attitude or can people have multiple attitudes toward the same object? Is there something like a "real" attitude that can be contrasted with other sorts of evaluations? What exactly is the difference between "automatic" and "controlled" evaluations? In which particular sense of the "four horsemen of automaticity" (Bargh, 1994) can attitudes be called "automatic"? Can attitudes be unconscious? How exactly are attitudes represented in memory? Are attitudes generally constructed on the spot or do attitudes reflect stable, trait–like dispositions? How do personal evaluations differ from mere knowledge about the

evaluations endorsed by others? What happens to the old attitude when attitudes change? What is the nature of attitudinal ambivalence?

The main goal of this Special Issue is to provide an overview of different theoretical approaches and their respective conceptualizations of the attitude construct. This goal is inspired by the conviction that scientific controversies can be most fruitfully resolved by open discussions, in which the proponents of different approaches have the chance to provide a comprehensive overview of their arguments. These arguments can then be scrutinized by the scientific community, which may help to identify the most functional way of defining the attitude construct. Even if this ultimate goal may seem quite ambitious, and perhaps too idealistic, the present juxtaposition of different views may at least enhance conceptual and theoretical clarity, which should help to provide satisfying answers to the aforementioned questions.

The first article by Eagly and Chaiken (this issue) argues for the functionality of an inclusive umbrella definition of attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993, p. 1). Specifically, Eagly and Chaiken argue that a general definition of attitude needs to be congenial to the various metaphors that researchers have proposed to describe the inner tendency that constitutes attitude. At the same time, a definition should be sufficiently inclusive, in that it remains independent of changing research trends. To be sure, these trends may be associated with different specifications of the inner tendency that constitutes attitude. However, the fact that theoretical specifications differ as a function of time or theoretical perspectives should not challenge the proposed umbrella definition. In their article, Eagly and Chaiken specify the respective roles of the three components of their definition—tendency, entity, evaluation—and the implications of their definition for various issues, including attitude expression and attitude construction, structural aspects of attitudes, the distinction between implicit and explicit attitudes, and different metaphors associated with this distinction.

The second article by Fazio (this issue) provides an extensive review of research guided by another, classic definition: attitudes as object–evaluation associations (Fazio, 1995). This definition represents the core component of the MODE Model (Fazio, 1990), which is one of the most significant frameworks for research using implicit attitude measures. Specifically, the MODE Model argues that attitudes are represented in memory as object–evaluation associations, which may vary in terms of their strength. If these associations are sufficiently strong, evaluations may be activated automatically upon the encounter of an object–relevant stimulus. Whether or not such automatically activated attitudes in-

fluence evaluative judgments of the attitude object further depends on people's motivation and opportunity to engage in elaborate processing of evaluative characteristics of the attitude object. In his article, Fazio discusses the implications of this conceptualization for several debated issues, such as the notion of attitude construction, the stability versus malleability of automatically activated attitudes, the correspondence between implicit and explicit measures of attitudes, and the controversy between single and dual attitude models.

Whereas both Eagly and Chaiken (this issue) and Fazio (this issue) regard attitudes as relatively stable across time and contexts, the third article by Schwarz (this issue) questions conceptualizations of attitudes as rigid, trait–like representations. Instead, Schwarz claims that attitudes are generally constructed on the spot, irrespective of whether they are assessed directly with standard self–report measures or indirectly via implicit measures (Schwarz & Bohner, 2001). This claim is based on recent research showing that implicit attitude measures seem to be susceptible to the same kinds of contextual influences previously obtained for explicit attitude measures (for a review, see Gawronski & Bodenhausen, 2006). Adopting a functional view on attitudes, Schwarz argues that this context–dependency appears dysfunctional only when it is judged from the perspective of an uninvolved observer who aims at predicting behavior of other individuals irrespective the context—a perspective often adopted by attitude researchers. However, context–sensitive evaluations seem to be highly functional when they are judged from the perspective of the actor, for whom quick and context–sensitive evaluations stand in the service of action. In his article, Schwarz discusses how constructionist models account for stability versus malleability of attitudes, attitude–behavior consistency, and various issues pertaining to the distinction between explicit and implicit attitude measures.

In the fourth article, Petty, Briñol, and DeMarree (this issue) review their recently proposed Meta–Cognitive Model (MCM) of attitudes (Petty, 2006; Petty & Briñol, 2006), and its implications for the conceptualization of the attitude construct. In line with Fazio (this issue), Petty et al. argue that attitudes are represented in memory as object–evaluation associations. The central assumptions of the MCM pertain to what happens when attitudes change. Specifically, Petty et al. argue that new information about an attitude object simply adds new evaluative associations to the already existing representation of the attitude object. Moreover, if the new evaluation is inconsistent with the old one, the old association is qualified by a negation tag, giving superiority to the new evaluation. Drawing on evidence that the processing of negations typically requires a high amount of cognitive effort (Deutsch, Gawronski, & Strack, 2006; Gilbert, 1991), automatic (or implicit) evaluations are as-

sumed to reflect a combination of the newly acquired and the old, unqualified evaluation. However, if people have the cognitive capacity to retrieve the negation tag from memory, the relative impact of the old evaluation will be reduced, thus resulting in a strong influence of the newly acquired attitude on deliberate (or explicit) evaluations. In their article, Petty et al. discuss the implications of the MCM for various debated issues, such as the presumed number of attitudes stored in memory and the distinction between explicit and implicit attitudes, as well as central questions pertaining to attitude change, attitude strength, and attitudinal ambivalence.

The fifth article by Gawronski and Bodenhausen (this issue) provides a review of their recently proposed Associative–Propositional Evaluation (APE) Model (Gawronski & Bodenhausen, 2006). The central distinction in this model pertains to the activation of associations in memory and the propositional validation of evaluations and beliefs. Specifically, Gawronski and Bodenhausen argue that the valence of automatically activated associations determines the evaluative quality of immediate affective reactions toward an attitude object. Whether or not this affective reaction will be used as a basis for an evaluative judgment further depends on whether this evaluation is consistent with other judgment–relevant information that is momentarily considered. If the evaluation implied by the affective reaction is consistent with other momentarily considered information, it will be used as a basis for an evaluative judgment, thereby resulting in congruence between affective reactions and evaluative judgments. If, however, the evaluation implied by the affective reaction is inconsistent with other momentarily considered information, people need to resolve this inconsistency in order to avoid uncomfortable feelings of cognitive dissonance (Festinger, 1957). In this case, inconsistency may be resolved by a rejection—or invalidation—of the evaluation implied by one's automatic affective reaction. Importantly, as mere negations of affective reactions do not necessarily deactivate the associations that have led to these reactions (Deutsch et al., 2006), consistency–related invalidation of affective reactions can lead to dissociations between evaluative judgments and automatic affective reactions (Gawronski & Strack, 2004). In their article, Gawronski and Bodenhausen discuss the implications of this conceptualization for various debated issues, such as automatic features of attitudes, the stability versus malleability of attitudes, asymmetries in implicit and explicit attitude change, and the representation of attitudes in memory.

The sixth article by Conrey and Smith (this issue) discusses how recent research in the tradition of connectionist models can inform theorizing regarding the mental representation of attitudes in memory. Drawing on the core assumptions of parallel distributed processing models,

Conrey and Smith reject the notion of rigid object–evaluation associations, as inspired by traditional associative network models of memory (sometimes called "file–drawer" models). Even though parallel distributed processing models generally adopt the notion of *nodes* and *associations*, these models describe mental concepts in terms of *patterns of activation*, rather than in terms of single nodes. Similar to the pixels of a TV screen, a single node does not have any meaning independent of the whole picture of which it is a part. Instead, meaning—or a concept—is represented by the overall pattern of activated associations, just as the picture on a TV screen is the result of a whole configuration of pixels. From this perspective, attitudes do not represent cross–situationally rigid "things" but momentary "states" that may differ as a function of the context in which an object is encountered (Smith & Conrey, 2007). In their article, Conrey and Smith discuss the implications of their connectionist approach for contemporary issues in attitude research, including the representation of attitudes in memory, automatic features of attitudes, the distinction between explicit and implicit attitudes, and the presumed number of attitudes that we may hold toward an object.

Finally, the seventh article by Cunningham, Zelazo, Packer, and Van Bavel (this issue) reviews the core assumptions of their recently proposed iterative reprocessing (IR) model (Cunningham & Zelazo, 2007). Drawing on recent insights provided by social cognitive neuroscience, Cunningham et al. argue that momentary evaluations of an object are constructed from relatively stable attitude representations in memory, which are assumed to enter an iterative reprocessing cycle. This reprocessing cycle is further assumed to involve different hierarchically organized levels, which lead to different outcomes depending on the final level of processing. At the lowest level, the outcome is a relatively crude, immediate evaluation involving subcortical brain regions, such as the amygdala and the ventral striatum. This evaluation may then enter higher levels of processing, including, in the following hierarchical order, the somatosensory cortex, the orbifrontal cortex, the anterior cingulate, and the prefrontal cortex. A crucial assumption in Cunningham et al.'s model is that relatively automatic evaluations at the lowest level of processing continue to be engaged throughout the iterative cycle, such that automatic evaluations influence *and* are influenced by more reflective processes at higher levels of processing. Distinguishing between computational, algorithmic, and implementational levels of analysis (Marr, 1982), Cunningham et al. discuss the implications of their model for various questions, including the distinction between automatic (implicit) and reflective (explicit) evaluations, attitude representation and attitude construction, the stability versus malleability of attitudes, and the nature of attitudinal ambivalence.

Even though all of these models may differ—to smaller or larger degrees—with regard to specific assumptions about what exactly constitutes an attitude and how attitudes should be conceptualized in the first place (e.g., inner tendencies, object–evaluation associations, momentary constructions, states of pattern activation), all of them share the assumption that evaluative responses play a significant role—if not *the* most significant role—for understanding social behavior. From this perspective, the represented theorists likely agree with Allport's (1935) contention that "the concept of attitude is probably the most distinctive and indispensable concept" in social psychology (p. 798). This Special Issue is intended to provide a platform for an open discussion of different theoretical approaches, which may further enhance conceptual clarity in attitude research. Such enhanced clarity may be the first step in answering the aforementioned, controversial questions, thereby promoting future progress in research on attitudes.

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