Self and Attitude Strength Parallels: Focus on Accessibility

Kenneth G. DeMarree,[1]* Richard E. Petty,[1] and Pablo Briñol[2]
[1] *Ohio State University*
[2] *Universidad Autónoma de Madrid*

Abstract

Numerous parallels exist between the literatures on attitudes and the self, yet they are generally considered in isolation. In this paper, we focus on some parallels with respect to the concept of self-strength – that is, aspects of self-esteem and the self-concept that impart the qualities of durability and impactfulness. Using research on attitude strength as our foundation, we first introduce some relevant strength variables such as accessibility, certainty, and ambivalence. Then, as a case study we review existing research on self-view accessibility. Our review is organized based on parallel findings on attitude accessibility in order to demonstrate the utility of this approach. By considering research on attitude strength, we are able to organize, and in some cases reinterpret, previous self-related findings, make new predictions regarding the self, and increase the precision of predictions. We believe that this approach can foster integration between the areas of attitudes and the self, advancing theory and research on both.

The research literatures on attitudes and the self are massive, representing two of the largest areas of research within social psychology (Tesser & Bau, 2002). Although these literatures largely have developed independently, they share many parallels, as we outline below. At the most general level, the purpose of this review is to discuss the similarities between attitudes and the self with respect to the concept of 'strength' – features of attitude or self-representations that impart these representations with the ability to guide behavior and thought, as well as resist change and remain stable over time (Krosnick & Petty, 1995). We begin by first outlining the parallels between these literatures. We then introduce research and theory on attitude strength, and briefly describe how similar phenomena have been discussed in the self-literature. Next, using accessibility as a case study, we provide a more detailed analysis of the theory and research on this strength variable. Finally, we close by discussing the potential benefits, both to research on attitudes and on the self, that a conceptual integration would provide as well as on differences between the attitudes and self literatures that may have prevented such an integrative approach to date.

Why Is Research on Attitudes Useful for Understanding the Self?

A key question to address at the outset is whether concepts and theories from the attitudes literature are applicable to the self (and vice versa). We believe that the theory and research in each of these research domains is applicable to the other for a number of reasons. Perhaps of most import-ance is the fact that self-esteem is typically defined as an attitude toward the self (e.g. Baumeister, 1998; Rosenberg, 1965). The self can be viewed as an attitude object (e.g. Petty, Baker, & Gleicher, 1991) just as policy issues (e.g. abortion) or consumer products (e.g. a brand of cola) are (Eagly & Chaiken, 1993). From the perspective that the self is an attitude object, it is expected that the same basic principles that apply to other attitude objects should also be applicable to the self, and any differences would be differences of degree, not of kind.

Not only can the self be conceptualized as an attitude object, but also many researchers consider attitudes, at least if they are personally important, to be part of the self (e.g. Brown, 1991; Correll, Spencer, & Zanna, 2004). From this perspective, research on attitudes is applicable to the self because it has already been exploring the self – albeit a specific subset of self-elements. Indeed, people's likes and dislikes are an important part of who individuals are as people (for a review of the identity function of attitudes, see Maio & Olson, 2000).

In addition to these definitional issues, the literatures on attitudes and the self are marked by many parallels (see, for example, DeMarree & Petty, 2007; DeMarree, Petty, & Briñol, 2007a; Sherman & Fazio, 1983). For example, the predictive utility of both the self (including personality, which we include as part of the self for the sake of this review, see Mischel & Morf, 2003) and attitudes was called into question (e.g. Baumeister, Campbell, Krueger, & Vohs, 2003; Mischel, 1968; Wicker, 1969), and many of the same solutions were developed to address this challenge (see DeMarree et al., 2007a; Swann, Chang-Schneider, & McClarty, 2007). For example, researchers of attitudes (e.g. Ajzen & Fishbein, 1977; Davidson & Jaccard, 1979; Weigel & Newman, 1976) and the self (e.g. Epstein, 1983; Paunonen, Haddock, Forsterling, & Keinonen, 2003) found that self-reports became better predictors of behavior when the self-assessments and behaviors were measured at the same level of specif-icity. Furthermore, various individual differences have moderated whether attitudes predicted behavior. That is, the expressed evaluations (whether about self or other objects) of some people were found to be more predictive of behavior than those of other people (e.g. Cacioppo, Petty, Kao, & Rodriguez, 1986; Koestner, Bernieri, & Zuckerman, 1992; Snyder, 1979; Zanna, Olson, & Fazio, 1980; for a review, see Briñol & Petty, 2005).

Of most importance for the focus of the current review, researchers discovered that within any given individual, some of their attitudes (Fazio

& Zanna, 1978) or self-reports (Swann & Ely, 1984) are more predictive than others. In the attitudes literature, such attitudes are considered to be strong and, as we describe shortly, researchers have identified various indicators of strong versus weak attitudes (for a review, see Petty & Krosnick, 1995). In the next section, we describe the characteristics of strong attitudes, and briefly review how some strength variables have already received empirical attention in the study of the self.

Self-Strength

According to Krosnick and Petty (1995), strong attitudes are those that are durable and impactful. With respect to durability, strong attitudes are more stable over time and resistant to change than are weak attitudes. With respect to impact, strong attitudes are more predictive of behavior and produce larger biases in thought and judgment than do weak attitudes. Although durability and impactfulness are the defining features of strong attitudes, strength is not assumed to be a unified latent construct (Krosnick & Petty, 1995). Researchers have documented several variables that predict the strength consequences of an attitude.

We believe that a similar definition to the one above is appropriate in the self domain. Thus, in defining self-strength, we suggest that strong self-elements as those that manifest the qualities of durability and impactfulness (DeMarree & Petty, 2007; DeMarree et al., 2007a). We use the generic term self-elements in our definition because we believe the processes associated with attitude strength variables are applicable to multiple levels of analysis, including global and specific self-evaluations, traits, motives, and so forth. That is, the characteristics and processes relevant for strength could apply to whatever mental content is associated with the self, ranging from specific traits to global self-esteem.

Strength-Related Dimensions of Attitudes and the Self

Many different variables have been associated with strength consequences in research on attitudes (Petty & Krosnick, 1995; Visser, Bizer, & Krosnick, 2006) and the self (DeMarree & Petty, 2007). Among these are accessibility, ambivalence, certainty, extremity, importance, and knowledge (see Petty & Krosnick (1995) for a more complete review). Below, we briefly introduce each of these variables and point to sample findings within the self and attitudes literatures before going into a more detailed presentation of attitude and self-element accessibility (see Table 1). Although the many variables that are studied in research on attitude strength are all broadly associated with the same consequences (i.e. durability and impactfulness), we point out that each variable is conceptually distinct. Indeed, even within variables, there are conceptual distinctions (e.g. objective versus perceived knowledge) that are important to keep in mind. In addition,

Table 1 Findings discussed in this paper demonstrating strength consequences in the attitudes and self literatures

Strength dimension	Attitudes		The self	
	Durability	**Impactfulness**	**Durability**	**Impactfulness**
Objective ambivalence	Armitage and Connor (2000) Bell and Esses (1997)	Armitage and Connor (2000) Bell and Esses (2002) Maio, Bell, & Esses (1996)	Riketta and Ziegler (2007)	
Subjective ambivalence	Haddock (2003)	Clark, Wegener, & Fabrigar (forthcoming) Haddock (2003)		
Consistency (e.g., affective-cognitive consistency; global-specific consistency)	Chaiken and Baldwin (1981)	Chaiken and Yates (1985)	DeMarree, Morrison, Wheeler, & Petty (2008)	Woike and Baumgardner (1993)
Implicit-explicit discrepancies		Petty, Tormala, Briñol, & Jarvis (2006)		Briñol, Petty, & Wheeler (2006)
Certainty	Bassili (1996) Tormala and Petty (2002)	Fazio and Zanna (1978) Petty, Briñol, & Tormala (2002) Rucker and Petty (2004) Tormala and Petty (2002)	Pelham (1991) Swann and Ely (1984)	Briñol and Petty (2003) Pelham and Swann (1994) Shoots-Reinhard, DeMarree, Rucker, & Petty (2006) Swann and Pelham (2002)
Extremity	Osgood and Tannenbaum (1955)	Fazio and Zanna (1978)	Markus (1977)* Sedikides (1995)*	Markus (1977)*

Table 1 Continued

Strength dimension	Attitudes		The self	
	Durability	**Impactfulness**	**Durability**	**Impactfulness**
Importance	Krosnick (1988a)	Holbrook, Berent, Krosnick, Visser, & Boninger (2005) Krosnick (1988b)	Eisenstadt and Leippe (1994) Markus (1977)* Pelham (1991) Sedikides (1995)*	Markus (1977)* Pelham and Swann (1989)
Objective knowledge	Davidson, Yantis, Norwood, & Montano (1985) Wood (1982)	Davidson et al. (1985)		
Subjective knowledge		Radecki and Jaccard (1995) Wood and Lynch (2002)		Warshaw and Davis (1984)
Accessibility	Bassili (1996)	Bassili (1993) Fabrigar, Priester, Petty, & Wegener (1998) Fazio and Hilden (2001) Fazio and Williams (1986) Houston and Fazio (1989) Smith, Fazio, & Cejka (1996)	DeMarree et al. (2007b)	DeMarree et al. (2007b) Dunning and Hayes (1996) Higgins (1997) Mellema and Bassili (1995) Norman and Aron (2003)

*Often in research on the self, extremity, and importance have been confounded. As such, results should be interpreted with caution.

the conditions under which and the processes by which different strength variables produce strength outcomes can differ from variable to variable. Consistent with the advice of Krosnick and colleagues (e.g. Krosnick & Petty, 1995; Visser et al., 2006), we recommend that researchers studying attitude or self-strength assess multiple indicators of strength, and avoid aggregating these measures into a single indicator unless there is cogent evidence of their coherence in a particular domain.

Ambivalence

Ambivalence refers to evaluative conflict. When different aspects of a given evaluation provide opposing cognitive, affective, or behavioral implications, ambivalence is said to be present (Kaplan, 1972; Thompson, Zanna, & Griffin, 1995). Evaluative conflict is a broad term, and as such, several forms of ambivalence have been identified and studied in the literature on attitudes.

Objective ambivalence. Objective ambivalence refers to the structural state of ambivalence. That is, objective ambivalence is said to exist when both positive and negative associations to a given attitude object are present. This ambivalence is typically assessed by asking participants to separately report how positive and how negative their reactions to an attitude object are, ignoring any reactions of opposing valence (Kaplan, 1972). These positive and negative ratings are then entered into an equation that produces an index of conflict (e.g. Priester & Petty, 1996; Thompson et al., 1995). Research on objective ambivalence in the attitudes literature has generally found ambivalent attitudes to be less stable, more malleable, and less predictive of behavior than unambivalent attitudes (e.g. Armitage & Conner, 2000; Bell & Esses, 1997; Maio et al., 1996). Little research has examined objective ambivalence with respect to the self (e.g. Gramzow, Sedikides, Panter, & Insko, 2000), and we were only able to find one published study that examined strength consequences of ambivalence, finding objectively ambivalent self-esteem was more malleable in the face of false performance feedback than unambivalent self-esteem (Riketta & Ziegler, 2007).

Subjective ambivalence. Subjective ambivalence refers to the perception of psychological conflict. It is typically assessed using self-reports of feelings of conflict, mixed feelings, and indecision with regard to the attitude object (Priester & Petty, 1996; Thompson et al., 1995). Obviously, one critical antecedent of subjective ambivalence is actual evaluative conflict (i.e. objective ambivalence); however, other factors such as interpersonal sources of conflict (Priester & Petty, 2001) and even anticipation of conflict based on missing information (Priester, Petty, & Park, 2007) can also lead to feelings of ambivalence. Felt ambivalence has been studied

less in the attitudes literature than objective ambivalence, but the existing research indicates parallel effects, such that people who feel high (versus low) ambivalence seem to have weaker attitudes (e.g. Haddock, 2003).

Interestingly, although more research in the attitudes literature has been conducted on objective ambivalence, it has generally been assumed that ambivalence effects are due to an experienced state of conflict (i.e. subjective ambivalence) that people are motivated to reduce (e.g. Bell & Esses, 2002; Maio et al., 1996). The motivation to reduce ambivalence can render ambivalent individuals more susceptible to attitude change because these individuals are motivated to process information that can potentially reduce their feelings of conflict (such as information supporting rather than opposing their existing opinions; Clark et al., forthcoming). Even less research has examined subjective ambivalence in the self, and as yet, no strength outcomes have been associated with self-evaluative subjective ambivalence (Riketta & Ziegler, 2007). However, it is interesting to note that several items of the self-concept clarity scale (e.g. 'My beliefs about myself often conflict with one another'; Campbell et al., 1996) seem to tap into subjective ambivalence (see DeMarree & Petty, 2007; Riketta & Ziegler, 2007).

Consistency

Consistency is another broad collection of constructs that deal with the evaluative congruency of different aspects of an evaluation, such as between affective and cognitive bases of an attitude (Chaiken, Pomerantz, & Giner-Sorolla, 1995). Whereas ambivalence requires the presence of conflicting reactions, inconsistency could potentially exist without such conflict (e.g. with positive affective reactions and neutral cognitive reactions, see Maio, Esses, & Bell, 2000). One of the most studied forms of consistency in attitudes is the degree of consistency of affective, cognitive, and global evaluative reactions (Chaiken et al., 1995). There are three potential forms of consistency within this umbrella: affective-cognitive, affective-evaluative, and cognitive-evaluative consistency. In this frame-work, a person could have some degree of inconsistency if all components were positive (or negative) but some were more positive (or negative) than the others. These variables are typically computed from separate indices assessing these evaluative components (Chaiken et al.), such as affective, cognitive, and evaluative semantic differential scales (Crites, Fabrigar, & Petty, 1994). Existing research on attitude strength indicates that as attitudinal bases become more consistent, strength-related properties increase. For example, as the affective-cognitive consistency of an attitude increases, the attitude is less likely to change (Chaiken & Baldwin, 1981) and more predictive of thought (Chaiken & Yates, 1985) than are inconsistent attitudes.

Although no research we are aware of has examined the consistency of affective and cognitive attitudinal bases within the self, other forms of consistency have been explored. For example, Woike and Baumgardner (1993) found that discrepancies between global and specific self-views were associated with increased interest in learning about oneself. Presumably, in situations like this, increased interest in or attention to self-relevant information will help to resolve the discrepancy, leading to more consistent self-evaluations (cf. Maio et al., 1996). In addition, discrepancies between actual and possible selves is another potential indicator of consistency that has received a great deal of attention in the self literature (see, for example, Higgins, 1996b; Markus & Nurius, 1986), but has only recently garnered attention by attitudes researchers (i.e. actual versus desired attitudes; Maio & Thomas, 2007). Our own research indicates that such discrepancies in the attitudes literature (e.g. actually holding a negative attitude toward gay marriage, but wanting to be positive) share many of the same properties as when these constructs are applied to the self (DeMarree, Wheeler, Petty, & Briñol, 2007). In addition, actual–desired self-discrepancies seem to be associated with the resistance of self-views to change, at least with some change inductions (e.g. self-evaluative conditioning), a hallmark of attitude strength (DeMarree et al., 2008).

Implicit–explicit discrepancies

With the increased use of measures of attitudes that tap into automatic evaluative associations (e.g. Fazio, forthcoming; Greenwald, McGhee, & Schwartz, 1998), researchers have recently begun to investigate the implications of discrepancies between implicit (automatic) and explicit (deliberative) evaluations. Discrepancies are typically measured by taking the absolute value of the difference between standardized implicit and explicit measures of attitudes (e.g. Briñol et al., 2006; Kehr, 2004). Petty and colleagues (e.g. Petty et al., 2006) argued that these discrepancies can sometimes produce a state of 'implicit ambivalence' – a conflict of which people are either unaware or in denial. This ambivalence can occur when a given object has both positive and negative associations, but one set of these associations is not seen as valid (Petty, 2006; Petty, Briñol, & DeMarree, forthcoming). Because at a conscious level, the person has resolved the conflict by discounting the invalid reaction, any ambivalence remains 'implicit'. Despite the fact that this ambivalence lies below the level of awareness, research on attitudes (Petty et al., 2006) and the self (Briñol et al., 2006) has found that people who have implicit–explicit discrepancies are more likely to engage in processing of information that might reduce the ambivalence, a pattern commonly found in research on conscious ambivalence (e.g. Clark et al., forthcoming; Maio et al., 1996).

Although the direction of self-relevant implicit–explicit discrepancies (i.e. whether the implicit or explicit evaluation is more positive) does not matter in many cases (e.g. Briñol et al., 2006; Kernis et al., 2005), it does seem to be important in others (e.g. Jordan, Logel, Spencer, & Zanna, forthcoming). Most notably, a pattern of high explicit self–esteem coupled with low implicit self-esteem has been labeled 'defensive' or 'fragile' by several researchers (e.g. Bosson, Brown, Zeigler-Hill, & Swann, 2003; Jordan et al., forthcoming; Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003; Kernis, 2003; Lambird & Mann, 2006; Zeigler-Hill, 2006). This pattern of self-esteem has been associated with narcissism, instability, and a 'defensive' pattern of information processing of self-relevant information. However, several studies have found that the presence of any implicit–explicit discrepancy, *regardless of the direction*, can have negative consequences (e.g. Kehr, 2004; Kernis et al., 2005; Schröder-Abé, Rudolph, & Schütz, 2007; see also Briñol et al., 2006). Understanding when and why discrepancy direction is important will be a key task for future research.

Certainty

Attitude certainty is the perception of conviction or validity about one's evaluation (Gross, Holtz, & Miller, 1995). Thus, certainty is a meta-cognitive aspect of attitudes, or a cognition about one's own judgment (Petty, Briñol, Tormala, & Wegener, 2007). Certainty is typically assessed by direct self-reports, such as 'I am confident of my opinion of myself' or 'I am certain that my attitude toward capital punishment is correct.' Attitudes held with certainty tend to be more durable (e.g. Bassili, 1996; Tormala & Petty, 2002) and impactful (e.g. Fazio & Zanna, 1978; Rucker & Petty, 2004; Tormala & Petty, 2002) than are attitudes held with less certainty (for a review, see Petty et al., 2007).

Certainty is one of the earliest self-strength variables to receive empirical attention (Marecek & Mettee, 1972), and as such, certainty has been one of the more heavily researched self-strength variables (for a review, see DeMarree et al., 2007a), in large part because of Swann's work on self-verification (for a review, see Swann, Rentfrow, & Guinn, 2003). Parallel to findings on attitude strength, self-views held with certainty tend to be more durable (e.g. Pelham, 1991; Swann & Ely, 1984) and impactful (e.g. Pelham & Swann, 1994; Shoots-Reinhard et al., 2006; Swann & Pelham, 2002) than are self-views held with doubt (DeMarree et al., 2007a; Swann et al., 2003). In addition to being applied to attitudes, self-esteem, and other self-views, certainty has also been found to moderate the impact of *thoughts* on subsequent attitudes or judgments. Whether thoughts are about the self (Briñol & Petty, 2003) or other attitude objects (Petty et al., 2002), thoughts held with certainty are more predictive of subsequent evaluations, regardless of their valence. Hence, if

a person has thoughts about their strengths that are held with certainty (versus doubt), they would have a positive self-evaluation, but if their weaknesses are held with certainty (versus doubt), they would more likely have a negative self-evaluation. These certainty effects have been obtained with both measured and manipulated certainty (see Briñol & Petty, 2004, for a review).

Extremity

Extremity represents the deviation of an attitude from a neutral point, typically the theoretical mean of a scale (e.g. five on a nine-point scale), and is computed by taking the absolute difference from the scale midpoint (Abelson, 1995). Extremity is unique among strength indicators in that it is impossible to completely disentangle the strength measure from the specific attitudinal position itself. Whereas it is possible to have two individuals with the same attitude (e.g. moderately negative toward capital punishment), but who differ in the amount of certainty or accessibility associated with that evaluation, attitudes that differ in extremity are by necessity, different attitudes (Visser et al., 2006), at least when extremity is conceptualized as an objective measure (subjective extremity might be less problematic in this sense, although it is not common to assess extremity with subjective measures).

   More extreme attitudes are more durable (e.g. Osgood & Tannenbaum, 1955) and are more impactful (e.g. Fazio & Zanna, 1978) than are less extreme attitudes. Research evidence on the self is also consistent with the notion that extreme self-views are more durable (Markus, 1977; Sedikides, 1995) and impactful (Markus, 1977). However, it is important to note that in most research on self-extremity, confounds likely existed. Often this is because individuals were selected based on multiple criterion (e.g. extreme and personally important self-views, Markus, 1977; Sedikides, 1995) or because extremity is typically associated with other strength indicators such as certainty or accessibility. Nonetheless, because of research findings documenting the strength consequences of extremity, researchers are encouraged to control for extremity in their attitude or self-strength research.

Importance

Importance pertains to the psychological significance that a person attaches to a given attitude or other construct (Boninger, Krosnick, Berent, & Fabrigar, 1995; Krosnick, 1988b). It is important to distinguish between attitude importance (which refers to something attached to the attitude) and attitude object importance (which refers to how important is the issue, topic, or trait for which one holds an attitude; Zimbardo, 1960). Conceptually, as an attitude strength variable, importance should refer

to the attitude, but empirically, many studies on attitude importance have measured object importance as the two are highly correlated (see Petty et al., 2007, for a discussion). Because of its meta-cognitive nature (Petty et al., 2007), both attitudes and self-researchers have typically assessed importance using direct self-report questions, such as 'How personally important is [the issue of capital punishment/being athletically skilled] to you?' (e.g. Boninger et al., 1995; Pelham & Swann, 1989). Just as issues that are personally important elicit more thought than unimportant ones (Petty & Cacioppo, 1979), so too are important attitudes hypothesized to be more energizing of thought and behavior than are less important attitudes (e.g. Visser et al., 2006). Research indicates that important attitudes (like attitudes on important topics) are more durable (Krosnick, 1988a) and impactful (e.g. Holbrook et al., 2005; Krosnick, 1988b) than are less important attitudes, and parallel findings have been documented in the self (Eisenstadt & Leippe, 1994; Pelham, 1991; Pelham & Swann, 1989; Sedikides, 1995). It is important to note, however, that importance is often confounded with extremity in research on the self (e.g. Markus, 1977; Sedikides, 1995), and as such, many of these findings should be interpreted with caution (for a more complete discussion, see DeMarree & Petty, 2007).

Knowledge

Knowledge is the amount of information a person has with regard to the attitude object. Like ambivalence, the term knowledge can refer to a number of psychologically distinct constructs, each of which is assessed in different ways, including via knowledge listing (objective amount of information), knowledge test (accuracy of knowledge), and direct, self-reported knowledge (perceived knowledge; see Wood, Rhodes, & Biek, 1995). Although they are often the same (e.g. Johnson, 1994), the antecedents and consequences of objective and perceived knowledge can vary. For example, recent research has demonstrated the independence of participants' perceived knowledge and the actual amount of information they have. For example, receiving three items of information about person A immediately after receipt of just one item about person B makes recipients feel well informed about A, but receiving the same three items about A after receiving six items about person B makes recipients feel relatively low in knowledge about A (Tormala & Petty, 2007). Going one step further, recent research suggests that learning new and unusual information about an attitude object (producing more objective knowledge) can sometimes lead people to think they have less information about the object than not learning this information (Kruger & Dunning, 1999; Rucker, Lee, & Briñol, forthcoming). These subjective perceptions of increased knowledge in the absence of real differences can affect the extent of persuasion (Tormala & Petty, 2007) and information-processing activity (Rucker et al., forthcoming).

Although research on attitude strength has found strength-related consequences of knowledge (e.g. Davidson et al., 1985; Radecki & Jaccard, 1995; Wood, 1982; Wood & Lynch, 2002), relatively little research has been conducted on self-knowledge as a strength variable. In one study, self-perceptions were found to be more predictive of behavior as participants' self-perceived knowledge increased (Warshaw & Davis, 1984; Rucker, Petty, & Briñol, forthcoming).

Attitude and Self-Element Accessibility

Having reviewed a number of strength indicators applied to attitudes and the self, we turn to one strength indicator and discuss it in some depth. In particular, accessibility is one of the most heavily researched variables in the attitudes domain (for reviews, see Fazio, 1995, forthcoming), and as such, provides an ideal case to explore the merits of the attitude strength approach within the self literature (for analyses of other strength variables, see DeMarree & Petty, 2007; DeMarree et al., 2007a).

Conceptualization and measurement of accessibility

Accessibility represents the strength of the association between an attitude object and its evaluation in memory (Fazio, Chen, McDonel, & Sherman, 1982). Although *perceived* accessibility could be assessed with a self-report, accessibility is generally operationalized in a structural way as the speed with which the attitude comes to mind when reporting one's attitude (Fazio, 1995). Thus, accessibility is commonly assessed using response latencies to attitude questions (for a description of various measures of accessibility, see Fazio, Williams, & Powell, 2000). In addition to measurement, accessibility is often manipulated by having participants express their attitudes multiple times, thus rehearsing the object–evaluation link (Fabrigar et al., 1998; Powell & Fazio, 1984). Next, we describe the consequences associated with accessibility.

Durability

Research on attitude accessibility has demonstrated that accessible attitudes are more enduring than less accessible attitudes. In one study, Bassili (1996) found increased stability of attitudes over a 10-day period and decreased change in response to a brief counter-attitudinal argument as attitude accessibility increased. There has been very little research collected to date on the relationship between self-accessibility and durability of self-beliefs. In one of our own studies (DeMarree, Petty, & Strunk, 2007b), we measured self-esteem and self-esteem accessibility and subsequently had participants engage in an ostensibly unrelated experiment designed to change their self-views. In this task, participants listed either

positive or negative characteristics they held with respect to their planned careers and then reported their self-evaluation as a potential job candidate. This manipulation has been used successfully to change self-views in past research (Briñol & Petty, 2003), and was again successful, but only among individuals low in self-view accessibility. As accessibility increased, the impact of the trait generation task on self-views decreased, demonstrating the resistance of accessible self-views to change. Another study (DeMarree et al., 2007b) examined the stability of self-esteem over a month–long period. In this study, as the accessibility of initial self-esteem increased, so did its ability to predict subsequent self-esteem. Together, these data provide initial support for both the resistance and stability aspects of durability, key hallmarks of strength.

Impact

Accessible attitudes are also more predictive of behavior (e.g. Bassili, 1993; Fazio et al., 1982; Fazio & Williams, 1986), a wide range of information-processing activity (e.g. Fabrigar et al., 1998; Fazio & Williams, 1986; Houston & Fazio, 1989; Smith et al., 1996), and of affective consequences (e.g. Fazio & Hilden, 2001) than are less accessible attitudes (for reviews, see Fazio, 1995, forthcoming). For example, in one study conducted during the months surrounding the 1984 presidential election (Fazio & Williams, 1986), candidate attitudes biased participants' interpretation of candidates' debate performance and participant voting behavior, but did so to a greater degree as accessibility of these attitudes increased.

Similar findings have been documented in the self literature as well. For example, Norman and Aron (2003) looked at characteristics of possible selves, which are self-elements representing what one believes one could become (Markus & Nurius, 1986). Possible selves can be either positive (a possible self one desires to attain) or negative (a possible self one wishes to avoid). They found that the accessibility of possible selves predicted motivation and intentions to engage in behaviors that would facilitate attaining or avoiding positive or negative possible selves. Furthermore, accessibility provided unique predictive utility beyond other aspects of the possible self-representations, such as their availability (Norman & Aron, 2003). In a related finding, Mellema and Bassili (1995) measured the accessibility of participants' self-monitoring scale (Snyder, 1974) responses as the time it took participants to answer the scale questions during a phone survey. They found that when participants' level of self-monitoring was highly accessible, their responses to the self-monitoring scale were better predictors of the extent to which their values were congruent with their attitudes (a characteristic associated with low self-monitoring) than when self-monitoring scale responses were less accessible (see also Dijksterhuis et al., 1998).

Because accessible constructs provide the lens through which we view the world (Bruner, 1957; Higgins, 1996a), much of the research on

self-accessibility (and also attitude accessibility) has looked at the information–processing consequences of accessible self-elements. Recent research has shown that people are more likely to use their own self-representations as a standard for judging others when these self-representations are highly accessible than when they are less accessible (Dunning & Hayes, 1996). In another study, as the accessibility of the self-attitude increased, interpretations of ambiguous information about the self were more in line with self-views (DeMarree et al., 2007b). Other information–processing biases associated with self-esteem, such as the degree of optimistic versus pessimistic biases in future predictions (Strunk, Lopez, & DeRubeis, 2006) and in attributions for the causes of events (Seligman, Abramson, Semmel, & von Baeyer, 1979), have similarly been found to vary as a function of accessibility (DeMarree et al., 2007b).

Research by Higgins, Shah, and Friedman (1997) on self-attribute accessibility is one of the few studies that has explored self-strength moderation of affective states. According to self-discrepancy theory (Higgins, 1987, 1997), discrepancies between current selves and different self-guides (ideal versus ought) are associated with different types of negative affect. In their study, Higgins and colleagues found that the magnitude of discrepancies between actual self-ratings and self-guides interacted with the accessibility of these self-guides in predicting relevant emotions. Specifically, the relationship between a self-discrepancy and the specific affect associated with it was stronger when the accessibility of self-guides was high than when it was low (Higgins et al., 1997).

Discussion

Although the findings on self-accessibility have been documented for a wide range of self-elements and relevant outcomes, they are remarkably consistent. Accessible self-views appear to be more durable and are better predictors of behavior and biases in thought. This is consistent with the body of research on attitude accessibility (e.g. Fazio, 1995) and on attitude strength (Petty & Krosnick, 1995) more broadly. While the existing research on accessibility is promising, there is still much to be done. As should be clear from the above review, most research on self-element accessibility has examined the impactfulness criterion of self-strength, and in particular biases in information processing. These information–processing biases observed among people high in self-element accessibility provide a constant supply of self-view consistent information (e.g. because ambiguous information is interpreted in a consistent manner). The end result of this should be self-views that are stable over time and resistant to change, outcomes that have only begun to be investigated.

In addition to the question of whether accessibility will moderate the impact of attitudes or self-views, the question of *when* accessibility will

produce impactfulness also needs to be addressed. Existing research indicates that accessible self–representations guide judgment under relatively spontaneous judgment and behavior conditions (e.g. Koole, Dijksterhuis, & van Knippenberg, 2001). However, there is reason to believe that accessible constructs can also guide thought and behavior under relatively deliberative contexts as well, albeit potentially via different mechanisms (cf. Petty, Schumann, Richman, & Strathman, 1993; Wegener, Clark, & Petty, 2006). Under low thought conditions, accessible self–representations can guide judgment and behavior by serving as a shortcut for making quick decisions. However, under high thought conditions, the biasing impact of accessible constructs on information processing has the potential to color interpretations of and reactions to relevant stimuli in the environment (see also Fazio & Towles–Schwen, 1999; Petty & Cacioppo, 1986; Petty & Wegener, 1999). Although accessible self–dimensions might influence judgments in both low and high thought conditions, the subsequent strength–related consequences associated with those judgments might be different, because judgments formed under high thought conditions tend to be stronger than those formed under low thought conditions (Petty, Haugtvedt, & Smith, 1995).

Thus far, we have treated each attitude strength indicator as a relatively independent construct that is nonetheless associated with the same class of outcomes (i.e. durability and impactfulness). Although these conceptual distinctions are useful, it should be noted that in the real world, there are times when the origins and consequences of strength variables overlap and times when they do not. Accessibility, for example, can both stem from, and lead to other strength variables. For example, over time, attitudes that people hold with high importance become more accessible because of the high amount of elaboration that attitudes on important issues receive (e.g. Petty & Cacioppo, 1979) and the consequences of this enhanced processing (e.g. the accumulation of attitude-consistent knowledge, see Bizer & Krosnick, 2001, Holbrook et al., 2005). Hence, variables that typically do not impact accessibility directly (e.g. personal relevance, Bizer & Krosnick, 2001), can, over time, exert an indirect effect on attitude accessibility (Petty et al., 1995). In the self domain, a conceptual parallel might occur if a person enters a new environment (e.g. baseball camp), and from this environment begins to view certain self-attributes as important (e.g. athletic ability). Over time, these self-attributes could become highly accessible, at least in this particular context.

Accessibility can also impact other strength variables. For example, in attitudes research, increasing the accessibility of an attitude, such as through repeated expression, can lead attitudes to become more extreme (Downing, Judd, & Brauer, 1992; but see Fazio, 1995) or more certain (Holland, Verplanken, & van Knippenberg, 2003), at least when people have a naïve theory that the ease with which something comes to mind is a positive thing (Briñol, Petty, & Tormala, 2006).

Parallel to the above example, if a person enters a context that makes a specific self-view highly accessible (e.g. their athletic ability), this increased accessibility could lead them to be more certain of their existing self-views, or even change those self-views to be more extreme (e.g. a person might change their self-view from athletic to *extremely* athletic).

General Discussion

In this review, we have highlighted the parallels between the literatures on attitudes and the self, focusing on the concept of strength. Using research on attitude strength as a framework, we discussed several strength variables that have been associated with the durability and impactfulness of both attitudes and self-views. In addition, we reviewed the findings associated with one strength variable – accessibility – in more detail. Across each of these variables, we find that parallel effects have been observed in both literatures.

As we mentioned earlier, attitudes can be conceptualized as part of the self and the self can viewed as an attitude object. We believe that recognizing the parallels between research on attitudes and the self can yield numerous benefits. First of all, recognizing the parallels between these literatures increases the body of data from which to develop and test theories. This can be particularly useful for research on the self, where it may be more difficult to manipulate strength variables than it is for more mundane objects. Instead, analog studies can be conducted using novel attitude objects, where the valence and strength of an evaluation can be manipulated (Wegener, Downing, Krosnick, & Petty, 1995). This approach, in conjunction with correlational studies on the self, can provide for stronger causal inference than correlational studies alone. Attitudes researchers can also benefit from this symbiosis because for many people, the self represents one of the strongest attitudes on some strength indicators (e.g. importance or knowledge). Furthermore, variables that have proven useful in understanding the stability and malleability of the self (e.g. Donahue, Robins, Roberts, & John, 1993; Linville, 1987; Showers, 1995) could also prove useful for understanding other attitudes (Fabrigar, Petty, Smith, & Crites, 2006). The key role that the self plays in attitude-relevant topics such as dissonance and the role of self-affirmation in persuasion also provide important examples of how such an integrative approach can be useful to attitudes researchers (Eagly & Chaiken, 2007).

Differences between attitudes and the self

Thus far, we have focused on the parallels and similarities between the literatures related to attitudes and the self, and in particular, the concepts

of attitude and self-strength. One might wonder also about the possible differences that have prevented this kind of integrative approach thus far. One potentially key difference is that in the self domain there is often an explicit or implicit assumption of positive valence (in terms of well-being, adaptation, mental illness, distress, functionality, etc.) associated with the term 'strength' (e.g. Peterson & Seligman, 2004), whereas in attitudes, strength is generally seen as orthogonal to valence (i.e. a positive or negative attitude toward oneself could be equally strong). That is, what we are suggesting in this paper is that a strong (e.g. accessible) self is one that is durable and impactful regardless of whether those consequences are good or bad for the person.

In the case of information-processing biases discussed earlier (e.g. DeMarree et al., 2007b), people with accessible *low* self-esteem expected a greater likelihood of negative than positive events in their life, and made more internal, stable, and global attributions for the causes of negative than for positive events, patterns not evident from people with equally negative, but inaccessible self-esteem. A 'strong' self in this sense is one that may run a high risk of depression (Beck, Rush, Shaw, & Emery, 1979). Furthermore, someone with strong, negative self-views might have a more difficult time in therapy than someone whose equally negative self-views are weaker. Of course, the opposite was true for individuals with accessible versus inaccessible high self-esteem. These individuals were especially likely to show positive biases in terms of their self-judgments and attributions.

Although the term 'strength' sometimes refers to a healthy positive self-esteem within the self literature (e.g. Peterson & Seligman, 2004), this conceptualization of strength still relates to many of the consequences we have articulated for strength. That is to say that people with high self-esteem tend to, on average, display more of the characteristics of strength than do low self-esteem individuals. We believe that this is, at least in part, an artifact of the distribution of self-esteem scores in the populations typically examined in social psychological research (see, for example, Baumeister, 1998). An examination of our own pre-screening from several previous quarters (totaling over 1000 participants) shows that fewer than 7 percent of our undergraduate sample actually has low self-esteem (i.e. self-esteem that falls below the theoretical midpoint of the scale). Assuming this pattern is typical, the 'low' self-esteem observed in most studies is essentially the middle of the scale. Thus, level of self-esteem becomes confounded with its extremity. By recruiting samples that contain the full range of possible self-esteem scores, the relationship between level of self-esteem and self-strength variables could be dramatically reduced. Thus, although in practice there is a difference between the self and attitude literatures with respect to the relationship between valence and strength, in theory, this relationship might be accounted for using the concept of extremity.

Other differences between the self and attitudes literatures likely also exist. For example, for many people the motives associated with knowledge acquisition in each literature may appear to be different. In the self literature, much of the research on knowledge acquisition has focused on the self-enhancement motive (e.g. Sedikides, 1993; Taylor & Brown, 1988), while research has focused to a lesser extent on consistency (Swann & Read, 1981a; 1981b) and accuracy (Trope, 1980) motives. The attitudes literature, in contrast, has focused more attention on accuracy (Nienhuis, Manstead, & Spears, 2001; Petty & Cacioppo, 1981) and consistency (Festinger, 1957) motives, and much less research on an 'enhancement motive' (e.g. Chen, Schecter, & Chaiken, 1996; Cialdini, Levy, Herman, Kozlowski, & Petty, 1976; Nienhuis et al., 2001). Although the degree to which these motives have been investigated within the attitudes and self literatures varies, each motive has been shown to operate within each.

Perhaps one of the most interesting illustrations of how the motive of self-enhancement is related to attitude and attitude change comes from research on self-affirmation processes (Steele, 1988). For example, Cohen, Aronson, and Steele (2000) argued that because affirming oneself can reduce the perception of threat, it would decrease the need to defend one's attitudes against attacking messages (e.g. one that says that one's current lifestyle could cause cancer; Harris & Napper, 2005) thereby making one more vulnerable to persuasion. More recently, Briñol, Petty, Gallardo, and DeMarree (forthcoming) looked at the effects of self-affirmation on persuasive messages that are not related to or threatening to the self. Consistent with the idea that self-affirmation (i.e. satisfying the self-enhancement motive) affects confidence, we found that self-affirmation can increase or decrease attitude change by different processes under different circumstances. This multiple roles outcome for self-affirmation (i.e. confidence) renders it similar to the multiple roles that have been shown for other variables in persuasion settings such as one's mood or the expertise of the source (see Petty & Wegener, 1999).

Certainly, many of the phenomena studied within the attitudes literature involve the self (e.g. the roles of self-affirmation in persuasion, enhancement motives may be most relevant for self-relevant objects), but this is only further evidence for the many conceptual parallels these literatures possess. Hence, our belief is that although there are certainly differences in the degree to which specific motives have been discussed in the attitudes and self literatures, these differences do not reflect distinct kinds of motives that apply to one domain rather than the other. In fact, although within the self literature, some authors have studied the relationship of different motives in order to establish a hierarchy among them (e.g. Sedikides, 1993), in attitude change situations, we suspect that any of the key human motives can be supreme depending on a number

of individual and situational factors (see Briñol & Petty, 2005, for further discussion). In addition, any one motive can sometimes be subsumed by another (e.g. people may want to be consistent in order be feel good about themselves). At other times, motives can operate independently (e.g. a true need to know requires accepting the fact of ambivalence rather than consistency). At still other times motives act in opposite ways allowing them to balance each other (e.g. although the need for self-enhancement could motivate people to seek positive information from others, the need for consistency could exert pressure against such behavior when existing self-beliefs are negative, see Swann et al., 2003).

Yet, another potential difference between the self and attitudes lies in how these constructs are represented in memory. Although most perspectives on self-representation hold that the self is represented in the same ways that other constructs (including attitudes) are represented (e.g. DeSteno & Salovey, 1997; Greenwald & Pratkanis, 1984; Kihlstrom & Cantor, 1984), there are perspectives that offer more unique views. For example, several researchers posit that metaphor (e.g. Moser, 2007) or stories (i.e. narratives; e.g. Kashima, Gurumurthy, Ouschan, Chong, & Mattingly, 2007; McAdams, 2001; McLean, Pasupathi, & Pals, 2007) are important aspects of the ways in which the self is represented. This is quite different from many perspectives on attitude representation (e.g. Fazio, 1995, forthcoming; Petty et al., forthcoming) for one key reason. Whereas most research on self-representation examines the entire self–concept, research on attitude representation often examines only the representation of the summary evaluation itself. However, when the representation of the entire attitude object is taken into account (e.g. Pratkanis, 1989; Pratkanis & Greenwald, 1989), the similarities to self-representation become more apparent. This is not to say that attitudes are always developed through narratives or metaphors, simply that there are circumstances when both narratives (e.g. Green, Strange, & Brock, 2002) and metaphors (Ottati, Rhoads, & Graesser, 1999; Sopory & Dillard, 2002) can play an important role in the development and maintenance of attitudes. Hence, again, we believe that differences between the attitudes and self literatures are differences in degree, not in kind.

In summary, although there are numerous possible differences between the attitudes and self literatures, we feel that these differences often represent differences in the interests of researchers studying these topics, and less in inherent differences between the constructs. Organizational features, origins, and motives relevant to one literature have often been studied, to varying degrees, in the other literature. To echo an earlier point, researchers in each discipline may be able to better understand the constructs they are interested in by exploring both attitudes and the self, because the dimensions studied in each literature may be more fully represented as a result.

Closing remarks

Although our review has focused on the strength parallels between the attitudes and self literatures, we believe that there is room for further integration. Parallel and complementary theories exist in each area of research, and considering the perspectives and findings each area has to offer can enrich these theories. Obviously, the attitudes and self literatures are not the only research areas that can benefit from conceptual integration. A full understanding of human behavior and cognition will require an integrative approach, spanning disciplinary bounds. We hope this review provides a small step in that direction.

Short Biographies

Kenneth DeMarree's research lies at the intersection of attitudes, social cognition, and the self, including the role of the self in stereotype priming effects, attitude and self-strength, and the role of the self in persuasion. Mr. DeMarree's research has been published in outlets such as the *Journal of Personality and Social Psychology*, *Personality and Social Psychology Bulletin*, and the *Personality and Social Psychology Review*. Mr. DeMarree holds a BA in Psychology from the University of Rochester and an MA from Ohio State University, where he is currently completing his doctorate.

Richard Petty's research focuses on situational and dispositional factors influencing attitude, belief, and behavior change. Dr. Petty has edited or authored seven books and his research has been published in outlets such as *Journal of Personality and Social Psychology*, *Journal of Experimental Social Psychology*, and *Psychological Bulletin*. Current research examines both meta-cognitive and automatic processes associated with attitude structure, change, and information processing. Before coming to the psychology department at Ohio State University, where he is currently a distinguished university professor, Dr. Petty was on the faculty at the University of Missouri. Dr. Petty holds a BA in Government and Psychology from the University of Virginia and a PhD from Ohio State University.

Pablo Briñol's research focuses on the antecedents and consequences of both automatic and deliberative processes in attitude change. Dr. Briñol's research has been published in outlets such as the *Journal of Personality and Social Psychology*, *Journal of Experimental Social Psychology*, and *Journal of Consumer Research*. Current research examines the role of emotion, embodiment, and other diverse factors associated with attitude change. Dr Briñol is an Assistant Professor of Psychology at the Universidad Autónoma de Madrid. Dr. Briñol holds both BA and PhD in Psychology from the Universidad Autónoma de Madrid.

Endnote

* Correspondence address: Department of Psychology, Ohio State University, 1835 Neil Avenue, Columbus, OH 43210, USA. Email: demarree.1@osu.edu.

References

Abelson, R. P. (1995). Attitude extremity. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 25–41). Hillsdale, NJ: Lawrence Erlbaum Associates.

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, **84**, 888–918.

Armitage, C. J., & Conner, M. (2000). Attitudinal ambivalence: A test of three key hypotheses. *Personality and Social Psychology Bulletin*, **26**, 1421–1432.

Bassili, J. N. (1993). Response latency versus certainty as indexes of the strength of voting intentions in a CATI survey. *Public Opinion Quarterly*, **57**, 54–61.

Bassili, J. N. (1996). Meta-judgmental versus operative indexes of psychological attributes: The case of measures of attitude strength. *Journal of Personality and Social Psychology*, **71**, 637–653.

Baumeister, R. F. (1998). The self. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th edn, Vol. 1, pp. 680–740). New York: McGraw Hill.

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, **4**, 1–44.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy of Depression*. New York: Wiley.

Bell, D. W., & Esses, V. M. (1997). Ambivalence and response amplification toward native peoples. *Journal of Applied Social Psychology*, **27**, 1063–1084.

Bell, D. W., & Esses, V. M. (2002). Ambivalence and response amplification: A motivational perspective. *Personality and Social Psychology Bulletin*, **28**, 1143–1152.

Bizer, G. Y., & Krosnick, J. A. (2001). Exploring the structure of strength-related attitude features: The relation between attitude importance and attitude accessibility. *Journal of Personality and Social Psychology*, **81**, 566–586.

Boninger, D. S., Krosnick, J. A., Berent, M. K., & Fabrigar, L. R. (1995). The causes and consequences of attitude importance. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 159–189). Hillsdale, NJ: Lawrence Erlbaum Associates.

Bosson, J. K., Brown, R. P., Zeigler-Hill, V., & Swann, W. B. (2003). Self-enhancement tendencies among people with high explicit self-esteem: The moderating role of implicit self-esteem. *Self and Identity*, **2**, 169–187.

Briñol, P., & Petty, R. E. (2003). Overt head movements and persuasion: A self-validation analysis. *Journal of Personality and Social Psychology*, **84**, 1123–1139.

Briñol, P., & Petty, R. E. (2004). Self-Validation processes: The role of thought confidence in persuasion. In G. Haddock & G. R. Maio (Eds.), *Contemporary Perspectives on the Psychology of Attitudes* (pp. 205–226). London: Psychology Press.

Briñol, P., & Petty, R. E. (2005). Individual Differences in Persuasion. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), *Handbook of Attitudes and Attitude Change* (pp. 575–615). Hillsdale, NJ: Lawrence Erlbaum Associates.

Briñol, P., Petty, R. E., & Tormala, Z. L. (2006). The meaning of subjective ease and its malleability. *Psychological Science*, **17**, 200–206.

Briñol, P., Petty, R. E., & Wheeler, S. C. (2006). Discrepancies between explicit and implicit self-concepts: Consequences for information processing. *Journal of Personality and Social Psychology*, **91**, 154–170.

Briñol, P., Petty, R. E., Gallardo, I., & DeMarree, K. G. (forthcoming). The effect of self-affirmation in non threatening persuasion domains: Timing affects the process. *Personality and Social Psychology Bulletin*.

Brown, J. D. (1991). Accuracy and bias in self-knowledge. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of Social and Clinical Psychology: The Health Perspective* (pp. 158–178). New York: Pergamon Press.

Bruner, J. S. (1957). On perceptual readiness. *Psychological Review*, **64**, 123–152.

Cacioppo, J. T., Petty, R. E., Kao, C. F., & Rodriguez, R. (1986). Central and peripheral routes to persuasion: An individual difference perspective. *Journal of Personality and Social Psychology*, **51**, 1032–43.

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, **70**, 141–156.

Chaiken, S., & Baldwin, M. W. (1981). Affective-cognitive consistency and the effect of salient behavioral information on the self-perception of attitudes. *Journal of Personality and Social Psychology*, **41**, 1–12.

Chaiken, S., & Yates, S. (1985). Affective-cognitive consistency and thought-induced attitude polarization. *Journal of Personality and Social Psychology*, **49**, 1470–1481.

Chaiken, S., Pomerantz, E. M., & Giner-Sorolla, R. (1995). Structural consistency and attitude strength. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 387–412). Hillsdale, NJ: Lawrence Erlbaum Associates.

Chen, S., Schecter, D., & Chaiken, S. (1996). Getting at the truth or getting along: Accuracy versus impression motivated heuristic and systematic processing. *Journal of Personality and Social Psychology*, **71**, 262–275.

Cialdini, R. B., Levy, A. S., Herman, C. P., Kozlowski, L. T., & Petty, R. E. (1976). Elastic shifts in opinion: Determinants of direction and durability. *Journal of Personality and Social Psychology*, **34**, 663–672.

Clark, J. K., Wegener, D. T., & Fabrigar, L. R. (forthcoming). Subjective attitude ambivalence and message scrutiny: The moderating role of message discrepancy. *Personality and Social Psychology Bulletin*.

Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence: Reducing biased evaluation by affirming the self. *Personality and Social Psychology Bulletin*, **26**, 1151–1164.

Correll, J., Spencer, S. J., & Zanna, M. P. (2004). An affirmed self and an open mind: Self-affirmation and sensitivity to argument strength. *Journal of Experimental Social Psychology*, **40**, 350–356.

Crites, S. L. Jr., Fabrigar, L. R., & Petty, R. E. (1994). Measuring the affective and cognitive properties of attitudes: Conceptual and methodological issues. *Personality and Social Psychology Bulletin*, **20**, 219–234.

Davidson, A. G., & Jaccard, J. (1979). Variables that moderate the attitude-behavior relation: Results of a longitudinal study. *Journal of Personality and Social Psychology*, **37**, 1364–1376.

Davidson, A. R., Yantis, S., Norwood, M., & Montano, D. E. (1985). Amount of information about the attitude object and attitude-behavior consistency. *Journal of Personality and Social Psychology*, **49**, 1184–1198.

DeMarree, K. G., & Petty, R. E. (2007). How do we conceptualize a 'strong' self-concept? *A Review of the Parallels between Self-Strength and Attitude Strength*. Unpublished manuscript, Ohio State University, Columbus, OH.

DeMarree, K. G., Petty, R. E., & Briñol, P. (2007a). Self-certainty: Parallels to attitude certainty. *International Journal of Psychology and Psychological Therapy*, **7**, 159–88.

DeMarree, K. G., Petty, R. E., & Strunk, D. R. (2007b). *Self-Esteem Accessibility As Attitude Strength: On the Durability and Impactfulness of Accessible Self-Views*. Unpublished manuscript, Ohio State University, Columbus, OH.

DeMarree, K. G., Wheeler, S. C., Petty, R. E., & Briñol, P. (2007c). *Unpublished Raw Data*. Ohio State University, Columbus, OH.

DeMarree, K. G., Morrison, K. R., Wheeler, S. C., & Petty, R. E. (2008). *A New Consequence for Actual-Possible Self-Discrepancies: Malleability to Subtle Situational Influence*. Poster presented at the SPSP Annual Meeting, Albuquerque, NM.

DeSteno, D., & Salovey, P. (1997). Structural dynamism in the concept of self: A flexible model for a malleable concept. *Review of General Psychology*, **1**, 389–409.

Dijksterhuis, A., Spears, R., Postmes, T., Stapel, D., Koomen, W., van Knippenberg, A., et al. (1998). Seeing one thing and doing another: Contrast effects in automatic behavior. *Journal of Personality and Social Psychology*, **75**, 862–871.

Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology*, **64**, 834–846.

Downing, J. W., Judd, C. M., & Brauer, M. (1992). Effects of repeated expressions on attitude extremity. *Journal of Personality and Social Psychology*, **63**, 17–29.

Dunning, D., & Hayes, A. F. (1996). Evidence for egocentric comparison in social judgment. *Journal of Personality and Social Psychology*, **71**, 213–229.

Eagly, A. H., & Chaiken, S. (1993). *Psychology of Attitudes*. Fort Worth, TX: Harcourt, Brace, Jovanovich.

Eagly, A. H., & Chaiken, S. (2007). Attitude research in the 21st century: The current state of knowledge. In D. Albarracin, B. T. Johnson & M. P. Zanna (Eds.), *The Handbook of Attitudes* (pp. 743–767). Mahwah, NJ: Lawrence Erlbaum Associates.

Eisenstadt, D., & Leippe, M. R. (1994). The self-comparison process and self-discrepant feedback: Consequences of learning you are what you thought you were not. *Journal of Personality & Social Psychology*, **67**, 611–626.

Epstein, S. (1983). Aggregation and beyond: Some basic issues on the prediction of behavior. *Journal of Personality*, **51**, 360–392.

Fabrigar, L. R., Petty, R. E., Smith, S. M., & Crites, S. L. Jr. (2006). Understanding knowledge effects on attitude-behavior consistency: The role of relevance, complexity and amount of knowledge. *Journal of Personality and Social Psychology*, **90**, 556–577.

Fabrigar, L. R., Priester, J. R., Petty, R. E., & Wegener, D. T. (1998). The impact of attitude accessibility on cognitive elaboration of persuasive messages. *Personality and Social Psychology Bulletin*, **24**, 339–352.

Fazio, R. H. (1995). Attitudes as object-evaluation associations: Determinants, consequences, and correlates of attitude accessibility. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 247–282). Mahwah, NJ: Lawrence Erlbaum Associates.

Fazio, R. H. (forthcoming). Attitudes as object-evaluation associations of varying strength. *Social Cognition*.

Fazio, R. H., & Hilden, L. E. (2001). Emotional reactions to a seemingly prejudiced response: The role of automatically activated racial attitudes and motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin*, **27**, 538–549.

Fazio, R. H., & Towles-Schwen, T. (1999). The MODE model of attitude-behavior processes. In S. Chaiken & Y. Trope (Eds.), *Dual Process Theories in Social Psychology* (pp. 97–116). New York: Guilford Press.

Fazio, R. H., & Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude-perception and attitude-behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, **51**, 505–514.

Fazio, R. H., & Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Experimental Social Psychology*, **14**, 398–408.

Fazio, R. H., Chen, J., McDonel, E. C., & Sherman, S. J. (1982). Attitude accessibility, attitude-behavior consistency, and the strength of the object-evaluation association. *Journal of Experimental Social Psychology*, **18**, 339–357.

Fazio, R. H., Williams, C. J., & Powell, M. C. (2000). Measuring associative strength: Category-item associations and their activation from memory. *Political Psychology*, **21**, 7–25.

Festinger, L. (1957). *A theory of Cognitive Dissonance*. Palo Alto, CA: Stanford University Press.

Gramzow, R. H., Sedikides, C., Panter, A. T., & Insko, C. A. (2000). Aspects of self-regulation and self-structure as predictors of perceived emotional distress. *Personality and Social Psychology Bulletin*, **26**, 188–205.

Green, M. C., Strange, J. J., & Brock, T. C. (2002). *Narrative Impact: Social and Cognitive Foundations*. Mahwah, NJ: Lawrence Erlbaum Associates.

Greenwald, A. G., & Pratkanis, A. R. (1984). The self. In R. S. Wyer Jr. & T. K. Srull (Eds.), *Handbook of Social Cognition* (Vol. 3, pp. 129–178). Hillsdale, NJ: Lawrence Erlbaum Associates.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, **74**, 1464–1480.

Gross, S. R., Holtz, R., & Miller, N. (1995). Attitude certainty. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 215–245). Hillsdale, NJ: Lawrence Erlbaum Associates.

Haddock, G. (2003). Making a party leader less of a party member: The impact of ambivalence on assimilation and contrast effects in political party attitudes. *Political Psychology*, **24**, 769–780.

Harris, P. R., & Napper, L. (2005). Self-affirmation and the biased processing of threatening health-risk information. *Personality and Social Psychology Bulletin*, **31**, 1250–1263.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, **94**, 319–340.

Higgins, E. T. (1996a). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles*. New York: Guilford Press.

Higgins, E. T. (1996b). The 'self digest': Self-knowledge serving self-regulatory functions. *Journal of Personality and Social Psychology*, **71**, 1062–1083.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, **52**, 1280–1300.

Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology*, **72**, 515–525.

Holbrook, A. L., Berent, M. K., Krosnick, J. A., Visser, P. S., & Boninger, D. S. (2005). Attitude importance and the accumulation of attitude-relevant knowledge in memory. *Journal of Personality and Social Psychology*, **88**, 749–769.

Holland, R. W., Verplanken, B., & van Knippenberg, A. (2003). From repetition to conviction: Attitude accessibility as a determinant of attitude certainty. *Journal of Experimental Social Psychology*, **39**, 594–601.

Houston, D. A., & Fazio, R. H. (1989). Biased processing as a function of attitude accessibility: Making objective judgments subjectively. *Social Cognition*, **7**, 51–66.

Johnson, H. M. (1994). Processes of successful intentional forgetting. *Psychological Bulletin*, **116**, 274–292.

Jordan, C. H., Logel, C., Spencer, S. J., & Zanna, M. P. (forthcoming). The heterogeneity of self-esteem: Exploring the interplay between implicit and explicit self-esteem. In R. E. Petty, R. H. Fazio & P. Briñol (Eds.), *Attitudes: Insights From the New Implicit Measures*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Jordan, C. H., Spencer, S. J., Zanna, M. P., Hoshino-Browne, E., & Correll, J. (2003). Secure and defensive high self-esteem. *Journal of Personality and Social Psychology*, **85**, 969–978.

Kaplan, K. J. (1972). On the ambivalence-indifference problem in attitude theory and measurement: A suggested modification of the semantic differential technique. *Psychological Bulletin*, **77**, 361–372.

Kashima, Y., Gurumurthy, A. K., Ouschan, L., Chong, T., & Mattingley, J. (2007). Connectionism and self: James, mead, and the stream of enculturated consciousness. *Psychological Inquiry*, **18**, 73–96.

Kehr, H. M. (2004). Implicit/explicit motive discrepancies and volitional depletion among managers. *Personality and Social Psychology Bulletin*, **30**, 315–327.

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry*, **14**, 1–26.

Kernis, M. H., Abend, T. A., Goldman, B. M., Shrira, I., Paradise, A. N., & Hampton, C. (2005). Self-serving Responses Arising From Discrepancies Between Explicit and Implicit Self-esteem. *Self and Identity*, **4**, 311–330.

Kihlstrom, J. F., & Cantor, N. (1984). Mental representations of the self. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 17, pp. 1–47). San Diego, CA: Academic Press.

Koestner, R., Bernieri, F., & Zuckerman, M. (1992). Self-regulation and consistency between attitudes, traits, and behaviors. *Personality and Social Psychology Bulletin*, **18**, 52–59.

Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology*, **80**, 669–685.

Krosnick, J. A. (1988a). Attitude importance and attitude change. *Journal of Experimental Social Psychology*, **24**, 240–255.

Krosnick, J. A. (1988b). The role of attitude importance in social evaluation: A study of policy preferences, presidential candidate evaluations, and voting behavior. *Journal of Personality and Social Psychology*, **55**, 196–210.

Krosnick, J. A., & Petty, R. E. (1995). Attitude strength: An overview. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 1–24). Mahwah, NJ: Lawrence Erlbaum Associates.

Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, **77**, 1121–1134.

Lambird, K. H., & Mann, T. (2006). When do ego threats lead to self-regulation failure? Negative consequences of defensive high self-esteem. *Personality and Social Psychology Bulletin*, **32**, 1177–1187.

Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of Personality and Social Psychology*, **52**, 663–676.

Maio, G. R., & Olson, J. M. (2000). *Why We Evaluate: Functions of Attitudes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Maio, G. R., & Thomas, G. (2007). The epistemic-teleologic model of deliberate self-persuasion. *Personality and Social Psychology Review*, **11**, 46–67.

Maio, G. R., Bell, D. C., & Esses, V. M. (1996). Ambivalence and persuasion: The processing of messages about immigrant groups. *Journal of Experimental Social Psychology*, **32**, 513–536.

Maio, G. R., Esses, V. M., & Bell, D. W. (2000). Examining conflict between components of attitudes: Ambivalence and inconsistency are distinct constructs. *Canadian Journal of Behavioural Science*, **32**, 58–70.

Marecek, J., & Mettee, D. R. (1972). Avoidance of continued success as a function of self-esteem, level of self-esteem certainty, and responsibility for success. *Journal of Personality and Social Psychology*, **22**, 98–107.

Markus, H. R. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, **35**, 63–78.

Markus, H. R., & Nurius, P. (1986). Possible selves. *American Psychologist*, **41**, 954–969.

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, **5**, 100–122.

McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review*, **11**, 262–278.

Mellema, A., & Bassili, J. N. (1995). On the relationship between attitudes and values: Exploring the moderating effects of self-monitoring and self-monitoring schematicity. *Personality and Social Psychology Bulletin*, **21**, 885–892.

Mischel, W. (1968). *Personality and Assessment*. New York: John Wiley & Sons.

Mischel, W., & Morf, C. (2003). The self as a psycho-social dynamic processing system: A meta-perspective on a century of the self in psychology. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 15–43). New York: Guilford Press.

Moser, K. S. (2007). Metaphors as symbolic environment of the self: How self-knowledge is expressed verbally. *Current Research in Social Psychology*, **12**, 151–178.

Nienhuis, A. E., Manstead, A. S. R., & Spears, R. (2001). Multiple motives and persuasive communication: Creative elaboration as a result of impression motivation and accuracy motivation. *Personality and Social Psychology Bulletin*, **27**, 118–132.

Norman, C. C., & Aron, A. (2003). Aspects of possible self that predict motivation to achieve or avoid it. *Journal of Experimental Social Psychology*, **39**, 500–507.

Osgood, C. E., & Tannenbaum, P. H. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review*, **62**, 42–55.

Ottati, V., Rhoads, S., & Graesser, A. C. (1999). The effect of metaphor on processing style in a persuasion task: A motivational resonance model. *Journal of Personality and Social Psychology*, **77**, 688–697.

Paunonen, S. V., Haddock, G., Forsterling, F., & Keinonen, M. (2003). Broad versus narrow personality measures and the prediction of behaviour across cultures. *European Journal of Personality*, **17**, 413–433.

Pelham, B. W. (1991). On confidence and consequence: The certainty and importance of self-knowledge. *Journal of Personality and Social Psychology*, **60**, 518–530.

Pelham, B. W., & Swann, W. B. (1989). From self-conceptions to self-worth: On the sources and structure of global self-esteem. *Journal of Personality and Social Psychology*, **57**, 672–680.

Pelham, B. W., & Swann, W. B. (1994). The juncture of intrapersonal and interpersonal knowledge: Self-certainty and interpersonal congruence. *Personality and Social Psychology Bulletin*, **20**, 349–357.

Peterson, C., & Seligman, M. E. P. (2004). *Character Strengths and Virtues: A Handbook and Classification*. Washington, DC: American Psychological Association.

Petty, R. E. (2006). A metacognitive model of attitudes. *Journal of Consumer Research*, **33**, 22–25.

Petty, R. E., & Cacioppo, J. T. (1979). Issue-involvement can increase or decrease persuasion by enhancing message-relevant cognitive responses. *Journal of Personality and Social Psychology*, **37**, 1915–1926.

Petty, R. E. & Cacioppo, J. T. (1981). *Attitudes and Persuasion: Classic and Contemporary Approaches*. Dubuque, IA: Milliam C. Brown.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. New York: Springer-Verlag.

Petty, R. E., & Krosnick, J. A. (1995). *Attitude Strength: Antecedents and Consequences*. Mahwah, NJ: Lawrence Erlbaum Associates.

Petty, R. E., & Wegener, D. T. (1999). The Elaboration likelihood model: Current status and controversies. In S. Chaiken & Y. Trope (Eds.), *Dual Process Theories in Social Psychology* (pp. 41–72). New York: Guilford Press.

Petty, R. E., Baker, S. M., & Gleicher, F. (1991). Attitudes and drug abuse prevention: Implications of the Elaboration Likelihood Model of persuasion. In L. Donohew, H. E. Sypher, & W. J. Bukoski (Eds.), *Persuasive Communication and Drug Abuse Prevention* (pp. 71–90). Hillsdale, NJ: Lawrence Erlbaum Associates.

Petty, R. E., Schumann, D. W., Richman, S. A., & Strathman, A. J. (1993). Positive mood and persuasion: Different roles for affect under high-and low-elaboration conditions. *Journal of Personality and Social Psychology*, **64**, 5–20.

Petty, R. E., Haugtvedt, C. P., & Smith, S. M. (1995). Elaboration as a determinant of attitude strength: Creating attitudes that are persistent, resistant, and predictive of behavior. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 93–130). Mahwah, NJ: Lawrence Erlbaum Associates.

Petty, R. E., Briñol, P., & Tormala, Z. L. (2002). Thought confidence as a determinant of persuasion: The self-validation hypothesis. *Journal of Personality and Social Psychology*, **82**, 722–741.

Petty, R. E., Tormala, Z. L., Briñol, P., & Jarvis, W. B. G. (2006). Implicit ambivalence from attitude change: An exploration of the PAST model. *Journal of Personality and Social Psychology*, **90**, 21–41.

Petty, R. E., Briñol, P., Tormala, Z. L., & Wegener, D. T. (2007). The role of meta-cognition in social judgment. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles* (2nd edn, pp. 254–284). New York: Guilford Press.

Petty, R. E., Briñol, P., & DeMarree, K. G. (forthcoming). The Meta-Cognitive Model (MCM) of attitudes: Implications for attitude measurement, change, and strength. *Social Cognition*.

Powell, M. C., & Fazio, R. H. (1984). Attitude accessibility as a function of repeated attitudinal expression. *Personality and Social Psychology Bulletin*, **10**, 139–148.

Pratkanis, A. R. (1989). The cognitive representation of attitudes. In A. R. Pratkanis, S. J. Breckler & A. G. Greenwald (Eds.), *Attitude Structure and Function* (pp. 71–98). Hillsdale, NJ: Lawrence Erlbaum Associates.

Pratkanis, A. R., & Greenwald, A. G. (1989). A sociocognitive model of attitude structure and function. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 22, pp. 245–285). San Diego, CA: Academic Press.

Priester, J. R., & Petty, R. E. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology*, **71**, 431–449.

Priester, J. R., & Petty, R. E. (2001). Extending the bases of subjective attitudinal ambivalence: Interpersonal and intrapersonal antecedents of evaluative tension. *Journal of Personality and Social Psychology*, **80**, 19–34.

Priester, J. R., Petty, R. E., & Park, K. (2007). Whence univalent ambivalence: From the anticipation of conflicting reactions. *Journal of Consumer Research*, **34**, 11–21.

Radecki, C. M., & Jaccard, J. (1995). Perceptions of knowledge, actual knowledge, and information search behavior. *Journal of Experimental Social Psychology*, **31**, 107–138.

Riketta, M., & Ziegler, R. (2007). Self-ambivalence and reactions to success versus failure. *European Journal of Social Psychology*, **37**, 547–560.

Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.

Rucker, D. D., & Petty, R. E. (2004). When resistance is futile: Consequences of failed counterarguing for attitude certainty. *Journal of Personality and Social Psychology*, **86**, 219–235.

Rucker, D. D., Lee, A. Y., & Briñol, P. (forthcoming). *Learning More Yet Knowing Less: The Effects of Information Acquisition on Subjective Knowledge and Information Processing*. Manuscript under review.

Rucker, D. D., Petty, R. E., & Briñol, P. (forthcoming). What's in a frame anyway? A meta-cognitive analysis of the impact of one versus two sided message framing on attitude certainty. *Journal of Consumer Psychology*.

Schröder-Abé, M., Rudolph, A., & Schütz, A. (2007). High implicit self-esteem is not necessarily advantageous: discrepancies between explicit and implicit self-esteem and their relationship with anger expression and psychological health. *European Journal of Personality*, **21**, 319–339.

Sedikides, C. (1993). Assessment, enhancement, and verification determinants of the self-evaluation process. *Journal of Personality and Social Psychology*, **65**, 317–338.

Sedikides, C. (1995). Central and peripheral self-conceptions are differentially influenced by mood: Tests of the differential sensitivity hypothesis. *Journal of Personality and Social Psychology*, **69**, 759–777.

Seligman, M. E., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology*, **88**, 242–247.

Sherman, S. J., & Fazio, R. H. (1983). Parallels between attitudes and traits as predictors of behavior. *Journal of Personality*, **51**, 308–345.

Shoots-Reinhard, B. L., DeMarree, K. G., Rucker, D. D., & Petty, R. E. (2006). *Personality Certainty: Increasing the Predictive Utility of Personality Scales*. Paper presented at the Midwestern Psychological Association, Chicago, IL.

Showers, C. J. (1995). The evaluative organization of self-knowledge: Origins, processes, and implications for self-esteem. In M. H. Kernis (Ed.), *Efficacy, Agency, and Self-Esteem* (pp. 101–120). New York: Plenum Press.

Smith, E. R., Fazio, R. H., & Cejka, M. A. (1996). Accessible attitudes influence categorization of multiply categorizable objects. *Journal of Personality and Social Psychology*, **71**, 888–898.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, **30**, 526–537.

Snyder, M. (1979). Self-monitoring processes. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 12, pp. 85–128). New York: Academic Press.

Sopory, P., & Dillard, J. P. (2002). The persuasive effects of metaphor: A meta-analysis. *Human Communication Research*, **28**, 382–419.

Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* (Vol. 21, pp. 261–302). New York: Academic Press.

Strunk, D. R., Lopez, H., & DeRubeis, R. J. (2006). Depressive symptoms are associated with unrealistic negative predictions of future life events. *Behaviour Research and Therapy*, **44**, 875–896.

Swann, W. B., & Ely, R. J. (1984). A battle of wills: Self-verification versus behavioral confirmation. *Journal of Personality & Social Psychology*, **46**, 1287–1302.

Swann, W. B., & Pelham, B. (2002). Who wants out when the going gets good? Psychological investment and preference for self-verifying college roommates. *Self and Identity*, **1**, 219–233.

Swann, W. B., & Read, S. J. (1981a). Acquiring self-knowledge: The search for feedback that fits. *Journal of Personality and Social Psychology*, **41**, 1119–1128.

Swann, W. B., & Read, S. J. (1981b). Self-verification processes: How we sustain our self-conceptions. *Journal of Experimental Social Psychology*, **17**, 351–372.

Swann, W. B., Chang-Schneider, C., & McClarty, K. L. (2007). Do our self-views matter? Self-concept and self-esteem in everyday life. *American Psychologist*, **62**, 84–94.

Swann, W. B., Rentfrow, P. J., & Guinn, J. S. (2003). Self-verification: The search for coherence. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 367–383). New York: Guilford Press.

Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, **103**, 193–210.

Tesser, A., & Bau, J. J. (2002). Social psychology: Who we are and what we do. *Personality and Social Psychology Review*, **6**, 72–85.

Thompson, M. M., Zanna, M. P., & Griffin, D. W. (1995). Let's not be indifferent about (attitudinal) ambivalence. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 361–386). Hillsdale, NJ: Lawrence Erlbaum Associates.

Tormala, Z. L., & Petty, R. E. (2002). What doesn't kill me makes me stronger: The effects of resisting persuasion on attitude certainty. *Journal of Personality and Social Psychology*, **83**, 1298–1313.

Tormala, Z. L., & Petty, R. E. (2007). Contextual contrast and perceived knowledge: Exploring the implications for persuasion. *Journal of Experimental Social Psychology*, **43**, 17–30.

Trope, Y. (1980). Self-assessment, self-enhancement, and task preference. *Journal of Experimental Social Psychology*, **16**, 116–129.

Visser, P. S., Bizer, G. Y., & Krosnick, J. A. (2006). Exploring the latent structure of strength related attitude attributes. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 38, pp. 1–67). New York: Academic Press.

Warshaw, P. R., & Davis, F. D. (1984). Self-understanding and the accuracy of behavioral expectations. *Personality and Social Psychology Bulletin*, **10**, 111–118.

Wegener, D. T., Clark, J. K., & Petty, R. E. (2006). Not all stereotyping is created equal: Differential consequences of thoughtful versus nonthoughtful stereotyping. *Journal of Personality and Social Psychology*, **90**, 42–59.

Wegener, D. T., Downing, J., Krosnick, J. A., & Petty, R. E. (1995). Measures and manipulations of strength-related properties of attitudes: Current practice and future directions. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 455–487). Mahwah, NJ: Lawrence Erlbaum Associates.

Weigel, R. H., & Newman, L. S. (1976). Increasing attitude-behavior correspondence by broadening the scope of the behavioral measure. *Journal of Personality and Social Psychology*, **33**, 793–802.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues*, **25**, 41–78.

Woike, B. A., & Baumgardner, A. H. (1993). Global-specific incongruencies in self-worth and the search for self-knowledge. *Personality and Social Psychology Bulletin*, **19**, 290–295.

Wood, S. L. & Lynch, J. G. (2002). Prior knowledge and complacency in new product learning. *Journal of Consumer Research*, **29**, 416–426.

Wood, W. (1982). Retrieval of attitude-relevant information from memory: Effects on susceptibility to persuasion and on intrinsic motivation. *Journal of Personality and Social Psychology*, **42**, 798–810.

Wood, W., Rhodes, N., & Biek, M. (1995). Working knowledge and attitude strength: An information-processing analysis. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences* (pp. 283–313). Hillsdale, NJ: Lawrence Erlbaum Associates.

Zanna, M. P., Olson, J. M., & Fazio, R. H. (1980). Attitude-behavior consistency: An individual difference perspective. *Journal of Personality and Social Psychology*, **38**, 432–440.

Zeigler-Hill, V. (2006). Discrepancies between implicit and explicit self-esteem: Implications for narcissism and self-esteem instability. *Journal of Personality*, **74**, 119–143.

Zimbardo, P. G. (1960). Involvement and communication discrepancy as determinants of opinion conformity. *Journal of Abnormal and Social Psychology*, **60**, 86–94.