

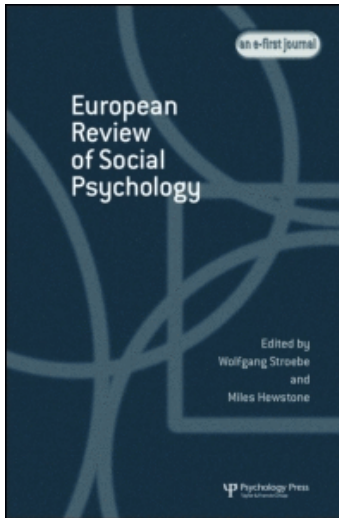
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### Emerging perspectives on the structure and function of attitude strength

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## Emerging perspectives on the structure and function of attitude strength

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For more than 20 years, scholars have used the term “attitude strength” to refer to the durability and impactfulness of attitudes, and a large literature attests to the important leverage that this concept offers for understanding and predicting behaviour. Despite its prominence, however, a number of fundamental questions remain regarding the structure and function of attitude strength. In this chapter we draw on a wide range of evidence to clarify the nature of attitude strength. Rather than conceiving of attitude strength as a meaningful psychological construct, we argue that it is better conceptualised as an umbrella term that refers in only the most general way to multiple, separable classes of attitude outcomes, instigated by different antecedents and produced by distinct psychological processes. Although strong attitudes share a set of general qualities—resistance to change, persistence over time, impact on thought and behaviour—there are many distinct routes by which attitudes come to possess these qualities, and many diverse ways in which these qualities manifest themselves. Our analysis shifts the focus away from the structural properties of attitude strength and towards a fuller appreciation of the distinct sources from which attitudes derive their strength. We argue in particular for the value of attending more closely to the social bases of attitude strength, and we illustrate the value of this approach by reviewing several lines of research.

**Keywords:** Attitudes; Persuasion; Attitude strength; Social networks; Social power.

Attitudes are ubiquitous—we hold them towards the people we know, the products we purchase, the political leaders we elect, the policies they enact, and countless other objects. Indeed, stored in memory are our evaluations of the vast and diverse array of stimuli that we have encountered within our

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environment. Not only are these evaluations extensive and diverse, but they are also notoriously powerful. They spring to mind instantly and effortlessly when we encounter an attitude object, and once activated they colour our experiences in myriad ways. Attitudes guide our thoughts, bias our judgements, and influence our interpretations of events. Attitudes also motivate and guide our behaviour, inspiring us to approach objects that we like and avoid objects that we dislike. Thus, attitudes powerfully regulate our interactions with the world around us.

Not all attitudes exert such profound effects on thought and behaviour, however. In fact, some attitudes are largely inconsequential, yielding no discernable impact on thought or action. In recent decades a central focus within the attitude literature has been on identifying the conditions under which attitudes do and do not powerfully regulate cognition and behaviour, and indeed great strides have been made in this effort.

It has been established, for example, that attitudes influence thought and behaviour for some types of people more than others, and in some situations more than others (see Eagly & Chaiken, 1993). In addition, however, attitude researchers have determined that some attitudes are inherently more powerful than others. These attitudes profoundly influence our perceptions of and thoughts about the world around us, and they inspire us to act in attitude-congruent ways. Further, these attitudes tend to be tremendously durable, remaining stable across time and in the face of counter-attitudinal information. Other attitudes do not possess any of these qualities—they exert little influence on thought and behaviour, they fluctuate over time, and they change in response to persuasive appeals.

The term “attitude strength” has been used to capture this variation in the range of influence that an attitude tends to have, and it is a distinction that provides important leverage for understanding and predicting the impact of attitudes on thought and behaviour. Knowing an individual’s attitude towards a particular object can be useful in predicting his or her behaviour towards the object, but knowing the *strength* of the attitude is often equally important.

But what exactly is the nature of a “strong” attitude? What makes one attitude strong and another attitude weak? The answers to these seemingly straightforward questions have been quite controversial. In this chapter we review this controversy, bringing to bear several lines of evidence that clarify the conceptualisation of attitude strength.

We begin by briefly reviewing a long-running dispute among attitude researchers as to whether strength-related attitude features have a unidimensional underlying structure or a more multifaceted structure. We then provide a resolution of this debate, reviewing evidence that unambiguously documents the complex and multifaceted nature of attitude strength. Through this resolution we converge on a new conceptualisation of

attitude strength, one that provides novel insights not only regarding the structure of attitude strength but also about its functioning. Among these insights is a newfound appreciation for the value of “situating” attitude strength. We illustrate the value of this approach by reviewing several fruitful streams of research documenting the sensitivity of attitude strength to various aspects of the immediate social context. In light of these new findings, we chart a course for future research on attitude strength.

## WHAT IS AN ATTITUDE?

Conceptualisations of the attitude construct have changed over the years, but most contemporary researchers define an attitude as a general, relatively enduring evaluation of an object (e.g., Petty & Cacioppo, 1981). Attitudes are *evaluative* in that they reflect the degree to which our response to an object is positive and approach-oriented versus negative and avoidance-oriented. Indeed, attitudes are typically conceptualised as falling along a bipolar dimension ranging from extremely negative to extremely positive (with a midpoint representing neutrality towards the attitude object). Attitudes are *general* in that they reflect our overall, summary evaluation of an object (which may be based on a number of more specific positive and negative attributes of the object). Attitudes are *enduring* in that they are presumed to be represented in long-term memory and to exhibit at least some stability over time, rather than being fleeting evaluative responses to an object. Finally, attitudes are specific to particular objects (such as a person, a group, an issue, or a concept) rather than diffuse evaluative responses (such as moods).

## ATTITUDE STRENGTH

Given this conceptualisation it is clear that attitudes vary in valence as well as extremity. But as we hinted earlier, attitudes also vary in strength. That is, independent of where attitudes lie along an evaluative continuum, some attitudes are very firm and impactful and others are not. This distinction between strong and weak attitudes has been the focus of sustained scholarly attention for more than two decades. Of particular interest has been the identification of specific features of strong attitudes that differentiate them from weak attitudes, and a large literature now exists that does precisely this (for reviews, see Petty & Krosnick, 1995; Visser, Bizer, & Krosnick, 2006).

Among these strength-related attitude features are the volume of attitude-relevant *knowledge* on which the attitude is based, the degree to which an individual attaches personal *importance* to the attitude, the *accessibility* of the attitude, the *certainty* with which the attitude is held, the degree to which the attitude is *ambivalent* or comprises evaluatively mixed reactions to the attitude object, the degree to which the attitude was formed through

thoughtful *elaboration* of attitude-relevant information, and a handful of others (for a review, see Visser et al., 2006). In separate lines of research, each of these features has been shown to differentiate strong attitudes from weak attitudes.

For example, attitudes that individuals care deeply about and consider very personally important are more predictive of behaviour than less-important attitudes (e.g., Budd, 1986; Parker, Perry, & Gillespie, 1974; Rokeach & Kliejunas, 1972). Attitudes high in personal importance are also more resistant to change (e.g., Fine, 1957; Gorn, 1975; Zuwerink & Devine, 1996), and exert more influence on relevant judgements (e.g., Byrne, London, & Griffitt, 1968; Clore & Baldridge, 1968; Krosnick, 1988b). Similar sorts of relations have been documented between each of the other strength-related features and the defining properties of strong attitudes. Ultimately, attitude scholars have achieved fairly broad consensus about the features of attitudes that are related to attitude strength.

More elusive, however, has been agreement about the nature of the relations among these features, and about the underlying structure of attitude strength that is responsible for these relations. Because these different structural representations imply different functional properties of attitude strength, they have led to disparate perspectives within the attitude literature on the nature of attitude strength. Progress in this domain requires resolution of these core issues.

### DIVERGENT PERSPECTIVES ON ATTITUDE STRENGTH

To a large degree the dispute among attitude scholars boils down to the familiar divide between “lumpers” and “splitters”. Some scholars have emphasised the overlap in the various strength-related features. Because features such as attitude importance, certainty, and knowledge all relate in similar ways to the defining elements of strength (i.e., resistance to persuasion, persistence over time, and influence on behaviour and cognition), these scholars have conceived of the features as essentially interchangeable manifestations of a smaller number of underlying constructs (e.g., Abelson, 1988; Bassili, 1996; Haddock, Rothman, Reber, & Schwarz, 1999; Haddock, Rothman, & Schwarz, 1996; Pomerantz, Chaiken, & Tordesillas, 1995; Prislin, 1996; Rouse & Olson, 1994). According to this view, a thorough understanding of attitude strength processes requires a clear delineation of the workings of these one (e.g., Priester, Nayakankuppam, Fleming, & Godek, 2004; Verplanken 1989, 1991) or two (e.g., Bassili, 1996; Pomerantz et al., 1995) underlying latent constructs.

Other scholars have emphasised the conceptual distinctions between each of the various strength-related features. These scholars have pointed out, for

example, that attaching a great deal of personal importance to an attitude is psychologically distinct from simply possessing a great deal of information about an attitude object or holding the attitude with a great deal of certainty. Moreover, they argue that these conceptually distinct constructs are likely to arise from unique antecedents and produce at least some non-overlapping consequences (e.g., Krosnick, Boninger, Chuang, Berent, & Carnot, 1993). This perspective suggests that an understanding of attitude strength processes requires careful attention to the workings of each of these distinct constructs, alone and in combination. As a result, this perspective paints a considerably more complicated portrait of attitude strength.

### EMPIRICAL EVIDENCE

Many scholars have conducted exploratory factor analyses or principal components analyses in an effort to identify the structure that underlies measures of the various strength-related attitude features. These analyses unfailingly reveal clusters of strength-related features that intercorrelate, consistent with the notion that these features are manifestations of a common underlying construct (e.g., Abelson, 1988; Bass & Rosen, 1969; Bassili, 1996; Pomerantz et al., 1995). And in fact the factor solutions that have emerged from a number of disparate investigations have been quite consistent (Visser et al., 2006). Based on results of this sort, researchers have often created composite indices of attitude strength and have used these indices to explore the consequences of attitude strength (e.g., Bassili, 1996; Eagly, Kulesa, Brannon, Shaw, & Hutson-Comeaux, 2000; Thompson & Zanna, 1995; Verplanken, 1989, 1991).

Of course, averaging together measures of the various strength-related features only makes sense if these features do in fact reflect common underlying factors. If instead strength-related features such as importance, knowledge, certainty, and the others are distinct constructs, with different antecedents and distinct consequences for thought and behaviour, averaging across them will obscure the ways in which they operate, individually and in tandem. Indeed, investigations that have relied on a different analytic approach have suggested precisely this.

Specifically, in place of exploratory factor analyses some scholars have used confirmatory factor-analytic techniques (e.g., Krosnick et al., 1993; Krosnick, Jarvis, Strathman, & Petty, 1994; Lavine, Huff, Wagner, & Sweeney, 1998; Visser, 1998). In each of these investigations scholars have explicitly tested the possibility that a common underlying construct could account for covariation among sets of strength-related attributes. In each case the fit of such models was compared to the fit of a model in which the strength-related features were assumed to be distinct (albeit correlated) constructs. In all of these investigations, treating the strength-related

features as distinct constructs provided better fit than did the common factor models (e.g., Krosnick et al., 1993, 1994; Lavine et al., 1998; Visser, 1998). Findings of this sort call into question the practice of combining measures of various strength-related features to create omnibus indices of attitude strength.

### AN EMPIRICAL IMPASSE?

It has become quite clear that continued efforts to factor-analyse the correlations among strength-related features are unlikely to resolve the dispute regarding the structure and function of attitude strength. The conclusions derived from these analyses depend on the particular analytic approach that is taken. In fact the very same set of correlations can be used to generate support for either perspective, depending on choice of exploratory versus confirmatory factor-analytic approaches (Krosnick et al., 1993; Visser, 1998).

For example, Visser (1998) analysed the correlations among various strength-related attitude features for participants' attitudes towards capital punishment and for their attitudes towards legalised abortion. First using exploratory factor-analytic techniques she found that for both attitude objects, attitude importance, knowledge, and elaboration all loaded on the first factor, whereas attitude certainty, extremity, and affective-cognitive consistency loaded on the second factor (see Table 1). This two-factor solution is similar to those identified in a number of other investigations, suggesting among other things that attitude importance and attitude-relevant knowledge are reflections of the same underlying latent factor.

However, confirmatory factor analyses of these same correlations supported very different conclusions. For example, Visser (1998) explicitly

TABLE 1  
Factor loadings for strength-related attitude features for attitudes towards capital punishment and legalised abortion

<i>Strength-Related Feature</i>	<i>Capital Punishment</i>		<i>Abortion</i>	
	<i>Factor I</i>	<i>Factor II</i>	<i>Factor I</i>	<i>Factor II</i>
Attitude Importance	<b>.78</b>	.36	<b>.70</b>	.42
Knowledge	<b>.86</b>	.19	<b>.77</b>	.29
Elaboration	<b>.88</b>	.14	<b>.93</b>	.05
Certainty	.46	<b>.75</b>	.36	<b>.79</b>
Extremity	.05	<b>.83</b>	.23	<b>.75</b>
Affective-cognitive. consistency	.29	<b>.76</b>	.08	<b>.84</b>

Adapted from Visser (1998).

tested the fit of a latent factor model in which the measures of attitude importance and the measures of attitude-relevant knowledge were reflections of a common underlying construct. A variety of indices suggested that this model provided poor fit to the data. For example, root mean square error of approximation (RMSEA) values of 0.06 or lower indicate acceptable fit (e.g., Hu & Bentler, 1999) and the common factor model that Visser (1998) tested yielded RMSEA values of 0.37 and 0.39 for capital punishment and abortion, respectively. In contrast, a model in which measures of attitude importance and measures of attitude-relevant knowledge were posited to reflect two separate constructs fit the data very well (e.g., RMSEA = 0.03 and 0.06 for capital punishment and abortion, respectively). Thus, depending on the specific analyses performed, very different conceptual conclusions can be derived from the very same set of correlations.

### RECONCILING THESE DIVERGENT PERSPECTIVES

How, then, might attitude scholars achieve consensus about the structure and function of attitude strength? We have recently argued that the solution lies in asking a different set of questions about the strength-related features (e.g., Visser et al., 2006; Visser, Krosnick, & Norris, 2007; Visser, Krosnick, & Simmons, 2003). Rather than focusing on the degree to which measures of the various strength-related features covary (as both exploratory and confirmatory factor analyses do), we have advocated direct explorations of the overlap in the antecedents and consequences of each of these features.

To the extent that two or more strength-related features arise from the same antecedents and produce the same cognitive and behavioural outcomes, there is little utility in differentiating between them. This is true even if measures of these strength-related features are far from perfectly correlated. On the other hand, if two strength-related features have distinct antecedents and set into motion different cognitive or behavioural processes, maintaining distinctions between these features is critical for our understanding of attitude strength. And again, this is true even if these strength-related features are quite strongly correlated.

Several recent investigations have taken this approach. We next highlight some illustrative findings from these programmes of research, and we consider their implications for conceptualisations of attitude strength.

#### Importance and certainty

One recent set of studies examined the overlap in the consequences of attaching great importance to a particular policy attitude and holding that attitude with great certainty (Visser et al., 2003). Across a range of outcomes, a number of interesting divergences emerged (see Table 2). For



TABLE 2  
Common and unique antecedents of attitude importance and attitude certainty

<i>Predictor</i>	<i>Dependent variable</i>		
	<i>Acceptability of non-preferred candidates</i>	<i>Intention to vote</i>	<i>Actual turnout</i>
Importance	0.14	1.84***	2.02***
Certainty	-1.25***	1.03*	-0.34

Adapted from Visser et al. (2003).

example, people who held their policy attitudes with great certainty were less likely than those who held their views with less certainty to find any candidate other than their own preferred candidate to be acceptable. Meanwhile, the importance that people attached to their policy attitudes was unrelated to this tendency to find only one's own candidate acceptable. On the other hand, people high in attitude importance and those high in attitude certainty were both more likely than their counterparts to express an intention to participate in an upcoming election, but only attitude importance predicted actual turnout on election day. Finally, attitude importance and attitude certainty interacted to predict attitude-expressive behaviours. Individuals who attached importance to their policy attitudes and also held them with great certainty were especially likely to perform behaviours like writing a letter to a public official or attending a public gathering to discuss a social or political issue.

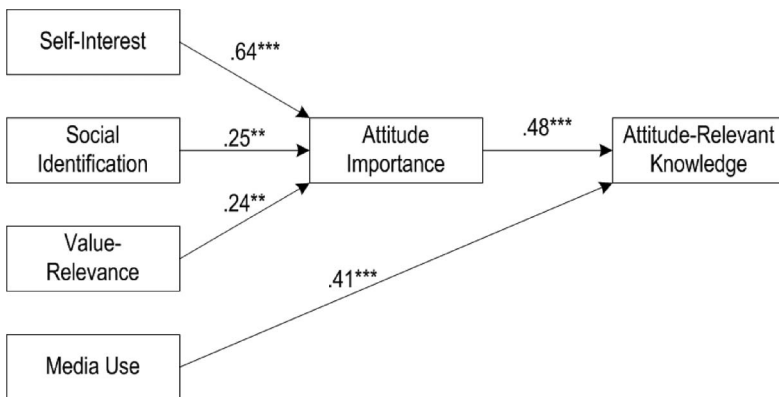
All of this suggests that attitude importance and attitude certainty set into motion at least some non-overlapping cognitive and behavioural consequences, confirming the utility of maintaining distinctions between them when exploring attitude processes.

### Importance and knowledge

A separate line of investigation examined the overlap in the antecedents and consequences of attitude importance and attitude-relevant knowledge (Visser et al., 2007). Although measures of these constructs have consistently loaded on the same factor in exploratory factor analyses, Visser et al. (2007) posited that they are in fact unique psychological constructs. In particular they argued that knowledge confers specific cognitive abilities, whereas importance ignites particular motivations. Given this fundamental difference, Visser et al. (2007) anticipated that importance and knowledge would arise from different antecedents and would produce distinct cognitive and behavioural consequences, and the results of several studies suggested that this is so.

For example, replicating past investigations (e.g., Boninger, Krosnick, & Berent, 1995a), Visser et al. (2007) found that the importance that people attached to a particular policy attitude was determined by (1) the degree to which they perceived that the policy impinged on their material self-interest, (2) the importance of the policy to significant others, and (3) the degree to which the policy attitude was linked to their core values. The amount of knowledge that people possessed about the policy, on the other hand, was determined by their exposure and attention to the news media (Figure 1). Thus, attitude importance and attitude-relevant knowledge were found to spring from largely distinct sources.

Importance and knowledge were also shown to predict different cognitive and behavioural outcomes (Visser et al., 2007; see Table 3). For example, the more knowledge people possessed about an attitude object, the more moderate their attitudes tended to become in response to a conflicting set of empirical evidence. In contrast, the more importance people attached to this same attitude object, the *less* their attitudes moved towards moderation in response to the conflicting evidence. Further, attitude importance (but not attitude-relevant knowledge) predicted self-reports of perceived attitude polarisation following exposure to conflicting empirical evidence. And importance (but not knowledge) predicted negative affective reactions in response to the passage of a counter-attitudinal law or a counter-attitudinal speech. Finally, people who attached importance to their attitudes towards an issue expressed great interest in obtaining additional information about the issue, whereas possessing a large store in attitude-relevant information did not motivate interest in additional information.



**Figure 1.** Documenting the causes of attitude importance and knowledge. Adapted from Visser et al. (2007); \*\* $p < 01$ ; \*\*\* $p < 001$ .

TABLE 3  
Common and unique antecedents of attitude importance and attitude-relevant knowledge

Predictor	<i>Dependent variable</i>				
	<i>Attitude change</i>	<i>Perceived Attitude change</i>	<i>Affective Reaction to Counter-attitudinal law</i>	<i>Affective reaction to counter-attitudinal speech</i>	<i>Motivation to gain additional information</i>
Importance	-.17*	.29+	.56***	.33*	.67***
Knowledge	.12+	-.09	.01	-.14	.02

Adapted from Visser et al. (2007).

### Certainty and accessibility

The certainty with which people hold their attitudes has sometimes been said to reflect the cognitive accessibility of the attitude (e.g., Bassili, 1996). Specifically, it has been hypothesised that people infer the certainty of their attitudes by reflecting on the speed and ease with which they come to mind, inferring that they are quite certain of attitudes that come to mind quickly and effortlessly, and that they are less certain of attitudes that require time and effort to generate or retrieve. And indeed attitude certainty and attitude accessibility have sometimes loaded together on a common factor in exploratory factor analyses (e.g., Bassili, 1996; Pomerantz et al., 1995).

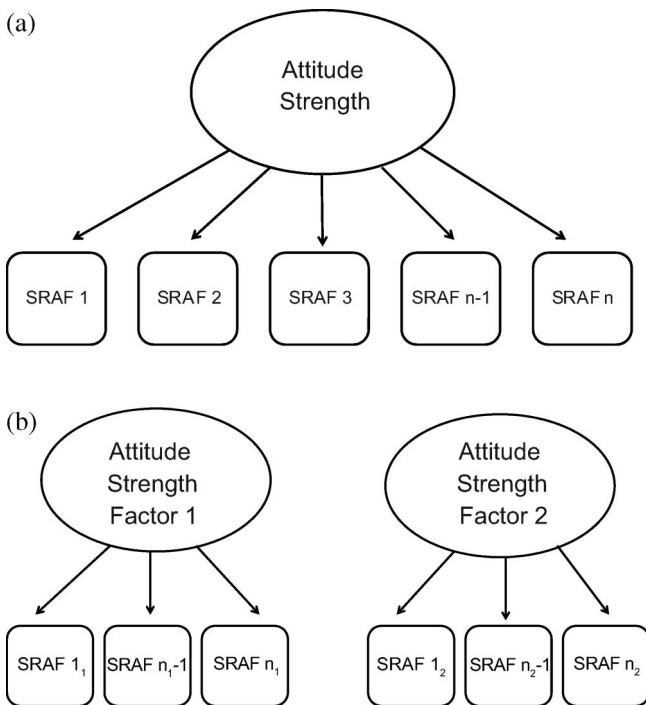
However, a direct comparison of their antecedents and consequences suggests that certainty and accessibility are distinct constructs (Berger, 1992). For example, repeated attitude expression increased attitude accessibility but had no impact on the certainty with which people held their attitudes. In contrast, repeated exposure to attitude-relevant information increased attitude certainty but had no impact on the accessibility of those attitudes. Further, attitude-behaviour correspondence varied as a function of attitude certainty, but not as a function of attitude accessibility. That is, people who were highly certain of their attitudes were more likely to act in accordance with those attitudes, but people whose attitudes were highly accessible were no more likely than those with less accessible attitudes to do so. None of these findings is consistent with the notion that certainty and accessibility reflect a common underlying construct.

### A NEW CONCEPTUALISATION OF ATTITUDE STRENGTH

These and other similar investigations converge on a new view of attitude strength. First, and most fundamentally, they suggest that we can lay to rest

with considerable confidence the notion that attitude strength is a unitary construct (Figure 2a). Although some scholars continue to embrace conceptualisations of this sort (e.g., Priester et al., 2004), a broad range of evidence challenges the tenability of such models. Unidimensional models of attitude strength cannot account for the intricate patterns of attitude strength effects that have consistently emerged when particular strength-related attitude features have been examined individually and in concert with other strength-related features (e.g., Berger, 1992; Visser et al., 2003, 2007). Treating attitude strength as a unitary construct obscures the workings of these attitude processes, impeding scientific progress.

Even a more complex common-factors view of attitude strength appears to be inappropriate. Such models suggest that subsets of the strength-related attitude features reflect common underlying facets of attitude strength (Figure 2b). As we have seen, however, a steadily growing body evidence poses a strong challenge to this perspective. Strength-related features presumed to reflect a common latent factor have repeatedly been shown to

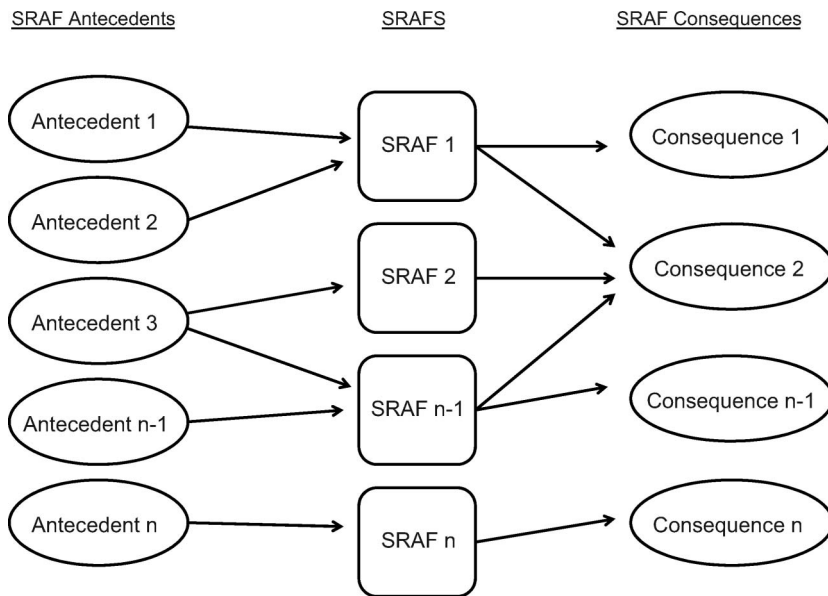


**Figure 2.** (a) Representation of attitude strength as a unitary construct. (b) Representation of a common-factors model of attitude strength. SRAF = strength-related attitude feature.

arise from distinct causal antecedents, to fluctuate independently over time, and to set into motion at least some distinct cognitive and behavioural consequences. In fact, in none of these investigations have two strength-related attitude features been found to have common antecedents or fully overlapping consequence (Visser et al., 2006).

Instead, the various strength-related attitude features appear to be appropriately conceived of as a distinct construct in their own right (Figure 3). These constructs arise from at least partially independent antecedents and set into motion at least some unique consequences for thought and behaviour. Further, even when these constructs produce similar outcomes, they often appear to operate through distinct psychological mechanisms.

This simple shift in how attitude strength is conceptualised yields a number of important insights. First, it suggests that it may be time to abandon the notion that attitude strength is a construct at all, even a highly complex, multidimensional one. Instead, “attitude strength” may be better thought of as an umbrella term that refers in only the most general way to multiple, separable classes of attitude outcomes, instigated by different antecedents and produced by distinct psychological processes. Although strong attitudes share a set of general qualities—resistance to change, persistence over time, impact on thought and behaviour—there appear to be



**Figure 3.** Representation of strength-related attitude features as distinct constructs with unique combinations of antecedents and consequences. SRAF = strength-related attitude feature.

many distinct routes by which attitudes come to possess these qualities, and many diverse ways in which these qualities manifest themselves.

Some attitudes may be strong because they are based on a large amount of information, and this store of attitude-relevant knowledge tends to lead to greater resistance to change, persistence over time, and increased impact on thought and behaviour through specific cognitive and behavioural processes. Other attitudes may be strong because they are considered personally important, which also causes the attitude to be influential and durable, but through different mechanisms. Further, although importance and knowledge both increase attitude-behaviour correspondence, they may facilitate different *kinds* of behaviours. And although both increase the biasing impact of attitudes on information processing, they appear to produce different kinds of biases. Thus, attitudes that are based on substantial knowledge and attitudes that are accorded personal importance are both “strong”, but this common label masks very different outcomes and processes.

As this example illustrates, referring to an attitude as strong or weak provides only the most general information about its likely impact on thought and behaviour. More exact inferences about how the attitude will regulate cognition and action require more precise specification of the *bases* of its strength. Thus, it may be quite useful to use the term attitude strength to broadly differentiate between attitudes that are durable and impactful and those that are not, but it may be misleading to conceive of attitude strength as a meaningful psychological construct.

All of this highlights a second important insight that this conceptualisation of attitude strength yields: precision in our understanding of when and how an attitude will impact thought and behaviour requires clarity not only about the strength of the attitude but also about the source of that strength. As we have seen, different sources of strength instigate distinct kinds of cognitive, affective, and behavioural outcomes. This new conceptualisation shifts the focus of attention, therefore, away from the structure and function of one or two latent constructs and towards a fuller delineation of the many disparate bases from which attitudes derive their durability and impactfulness.

### ELUCIDATING THE BASES OF ATTITUDE STRENGTH

One approach to clarifying the bases of attitude strength involves a sharper theoretical and empirical focus on the strength-related attitude features themselves rather than on “attitude strength” more generally. Rather than differentiating strong attitudes from weak ones, it may be more productive to focus on fully delineating the differences between important attitudes and

unimportant attitudes, between those based on a great deal of knowledge and those based on little knowledge, and so on. And indeed, a great deal of research has done precisely this (e.g., Boninger, Krosnick, Berent, & Fabrigar, 1995b; Wood, Rhodes, & Biek, 1995).

This approach has been highly productive. The antecedents and consequences of many of the strength-related attitude features have been documented (see Petty & Krosnick, 1995), and this work continues fruitfully today (e.g., Petrocelli, Tormala, & Rucker, 2007). Thus, a fairly elaborate understanding of the workings of the various strength-related features has begun to emerge.

### Limitations

This focus on the specific features of attitudes that differentiate the strong from the weak has had its costs, however. First, this approach has produced a somewhat disjointed literature. Some scholars have investigated the workings of attitude importance (e.g., Boninger et al., 1995a; Krosnick, 1988a, 1988b; 1989), for example, while other scholars have examined attitude accessibility (e.g., Fazio, 2000; Fazio, Chen, McDonel, & Sherman, 1982; Fazio, Sanbonmatsu, Powell, & Kardes, 1986) and yet others have investigated attitude-relevant knowledge (e.g., Wood, 1982; Wood & Kallgren, 1988; Wood, Kallgren, & Preisler, 1985), and so on. The sustained focus on strength-related features as bases of strength has largely failed to yield an integrated set of findings meaningfully connecting the various features.

This approach has also largely failed to connect the attitude strength literature to other core theoretical and empirical traditions within social psychology. This is unfortunate, given the many potential points of contact. For example, one of the well-established antecedents of attitude importance is identification with social groups for whom the attitude object is materially relevant or considered especially important. But very little theoretical or empirical work has capitalised on this link, formally drawing out the links between social identity theory and attitude strength. As a result of these kinds of omissions, the attitude strength literature has remained unnecessarily disconnected from much of social psychology.

Finally, placing the strength-related attitude features in the spotlight has tended to keep the focus of scholarly attention on intra-individual processes (e.g., subjective judgements of importance or certainty, the store of idiosyncratic information that an individual has in memory, the strength of the cognitive associations between representations of an attitude objects and their evaluations). As we have said, this focus on intra-individual properties and processes has been tremendously fruitful, yielding important insights regarding the functioning of the various strength-related attitude features. But this focus may have obscured valuable new insights that could

come through efforts to situate attitude strength within a broader social context.

### Situating attitude strength

In countless ways, our attitudes are shaped by the social context in which we hold them. We discuss and debate our attitudes in conversations with close others (e.g., Huckfeldt, Morehouse Mendez, & Osborn, 2004; Mutz, 2002; Visser & Mirabile, 2004). We adjust our attitudes in light of consensus information and on the basis of our perceptions of ingroup and outgroup attitudes (e.g., Prislin, Brewer, & Wilson, 2002; Prislin, Limbert, & Bauer, 2000). Our attitudes and attitude-relevant behaviours are influenced by perceptions of societal norms (e.g., Trafimow, 1994). And we adopt attitudes appropriate to the social roles and social identities that we embrace (e.g., Biddle, Bank, & Slavings, 1987; Terry, Hogg, & White, 1999). Recently a number of scholars have begun to explore the possibility that these and other social and contextual features may have implications for the strength of an individual's attitudes, shifting the focus from intra-individual to interpersonal and contextual bases of strength.

In our view this shift represents an exciting new chapter in attitude strength research, one that builds on the existing literature and holds the promise to deliver what earlier approaches have yet to offer. By grounding attitude processes in the larger social context in which they unfold, attitude scholars may be able to develop a broader framework into which the various strength-related attitude features fit, lending coherence to this disjointed literature. Of even greater potential value, this approach provides new opportunities to establish links between attitude strength and a host of classic and contemporary literatures within social psychology, capitalising on theoretical and empirical advances within these various literatures to enrich our understanding of attitude processes. Finally, this broader focus is likely to reveal new bases of attitude strength, contributing additional insights regarding when and how attitudes influence thought and behaviour.

In the remaining sections we illustrate some of these promising developments by reviewing recent research documenting the ways in which social networks, social power, and social roles regulate attitude strength. Although far from exhaustive, our review highlights some of the many ways in which efforts to situate attitude strength are already yielding important new insights.

## SOCIAL NETWORKS

For most of us, the single most salient feature of our social environments is the set of individuals with whom we interact on a regular basis.



Sociologists refer to this set of individuals as our “social network”, and scholars across numerous disciplines (e.g., psychology, political science, sociology, organisational behaviour, public health) have increasingly turned their attention to various features of the social networks in which individuals are embedded (e.g., Huckfeldt et al., 2004; Mutz, 2002; Visser & Mirabile, 2004). Rather than examining people as detached individuals, social network researchers recognise that individuals are embedded within rich webs of interpersonal relationships linking them to friends, family members, co-workers, and others (Burt, 1980; Wasserman & Faust, 1994).

Within the attitude domain scholars have tended to focus on the distribution of opinions within these networks. Some individuals are embedded in social networks made up of others who share their views on a particular issue. Other individuals are embedded within networks that are more attitudinally diverse, comprising others who hold a range of attitudes on the target issue.

### Implications of social network composition for attitude strength

Recent investigations have begun to explore the implications of being embedded within social networks that vary in attitudinal composition (e.g., Levitan & Visser, 2007, 2008; Visser & Mirabile, 2004). Drawing on a number of social-psychological theories, these scholars have suggested that the attitudinal composition of an individual’s social network is likely to affect the durability and impactfulness of his or her attitudes (Visser & Mirabile, 2004).

For example, social comparison theory (e.g., Festinger, 1950) suggests that attitudinal congruity within an individual’s social network may signal to the individual that his or her attitude is valid. As a result, individuals embedded in social networks of like-minded others may hold their attitudes with greater certainty or confidence and may therefore be less open to changing them (e.g., Gross, Holtz, & Miller, 1995). In contrast, being embedded in a more attitudinally diverse social network may raise doubts in individuals’ minds about the validity of their attitudes, rendering them more open to attitude change.

In addition, attitudinally congruent social networks may exert normative influence, signalling to individuals that a particular attitude is appropriate or desirable (e.g., Deutsch & Gerard, 1955). These norms within attitudinally congruent networks may socially constrain individuals’ attitudes, raising the perceived social costs of attitude change. Individuals embedded in attitudinally congruous networks may, therefore, be less open to changing their attitudes in order to maintain interpersonal harmony (e.g., Schachter, 1951).

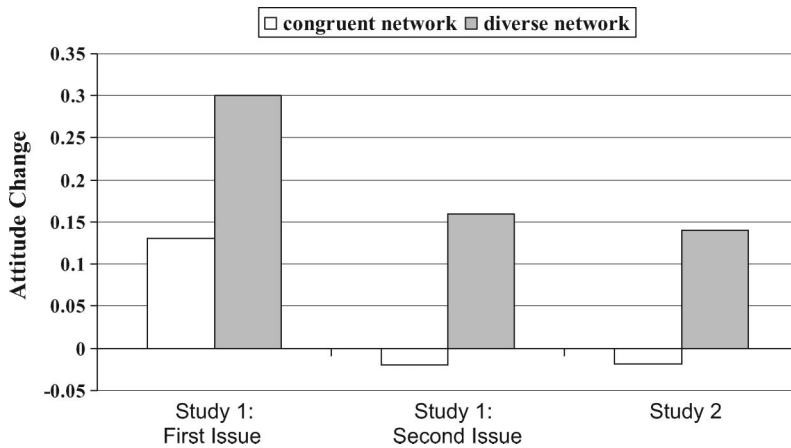
Network composition may also affect the degree of ambivalence that individuals experience regarding a particular attitude object. Although typically understood to be a function of intra-individual evaluative tension, it has been established that ambivalence can also result from interpersonal evaluative tension (Priester & Petty, 2001). Thus, even when one's own attitude is univalent, people sometimes experience subjective ambivalence when important others hold divergent points of view. This suggests that individuals embedded within attitudinally diverse social networks may experience more ambivalence about their views than do individuals embedded within attitudinally congruent networks, and ambivalence is associated with greater vulnerability to attitude change, decreased attitude-behaviour correspondence, and other manifestations of attitude strength (e.g., Armitage & Conner, 2000).

All of this suggests that the immediate social context in which one is situated may enhance or diminish the strength with which individuals hold their attitudes, rendering them more or less vulnerable to persuasion, more or less likely to act in accordance with their views, and so on.

### Empirical tests of the relation between social network composition and attitude strength

A number of studies using a range of methodologies lend support to the notion that social network composition has important implications for individual-level attitude strength outcomes. Some of these studies have taken an experimental approach in which social networks have been created in the laboratory and the attitudinal composition of the networks has been systematically varied (e.g., Visser & Mirabile, 2004, Studies 1 & 2). Simulating the dynamics of real-world social networks, participants in these studies engaged in a number of computer-mediated group tasks, including group discussions of various campus issues. During the discussions they had the opportunity to express their views towards a target issue (e.g., comprehensive senior exams, unannounced dorm searches) and to learn the ostensible views of fellow group members, which were manipulated to be either attitudinally uniform or diverse. Participants were later exposed to a counter-attitudinal message regarding the target issue, and attitude change was assessed. Across several attitude objects, those who were assigned to attitudinally diverse social networks were more likely than those assigned to attitudinally congruous networks to change their attitudes when they subsequently encountered a counter-attitudinal persuasive message (see Figure 4). Thus, the composition of the social network to which participants were assigned determined the extent to which they resisted persuasion.

Other studies have taken a correlational approach, examining the relation between the attitudinal composition of people's *actual* social networks and



**Figure 4.** Attitude change as a function of social network composition. Adapted from Visser and Mirabile (2004).

individual-level attitude strength. The findings from these naturalistic studies mirror those from the laboratory experiments. Whether examined within undergraduate samples (Levitan, Kwong, & Visser, 2006; Levitan & Visser, 2007, Studies 1 & 2; Visser & Mirabile, 2004, Study 3) or nationally representative samples (Levitan & Visser, 2007, Study 3, 2008; Visser & Mirabile, 2004, Study 4), these studies have revealed that people who are embedded in more attitudinally congruent social networks tend to resist changing their attitudes when confronted with counter-attitudinal persuasive appeals (Levitan & Visser, 2007, Study 1; Visser & Mirabile, 2004, Studies 3 & 4), to hold attitudes that are more stable over time (Levitan & Visser, 2007, Studies 1 & 2), and to exhibit greater attitude-behaviour correspondence (Levitan et al., 2006).

*Underlying mechanisms.* Importantly, many of these investigations have also probed the psychological mechanisms by which social network composition produces various attitude strength related outcomes. For example, in line with their predictions, Visser and Mirabile (2004) found that the participants embedded in more attitudinally diverse social networks reported greater ambivalence (Studies 1–4) and less certainty (Studies 2 & 4) about the target issue than did participants in attitudinally congruent networks (regardless of whether the networks were created in the laboratory or were participants' actual networks). Consistent with mediation, controlling for participants' levels of attitudinal ambivalence (Studies 1–4) or attitude certainty (Studies 2 & 4) reduced the magnitude of the relation between social network composition and resistance to attitude change, and Sobel tests confirmed the significance of these mediational paths. These

findings suggest that individuals embedded within attitudinally diverse social networks are more easily swayed, in part because they are more conflicted and less certain about their views, than are individuals embedded within attitudinally congruent networks.

Interestingly, a different strength-related feature appears to drive the relation between social network composition and attitude-behaviour correspondence. Levitan et al. (2006) found that as individuals' social networks became increasingly attitudinally diverse with respect to the issue of legalised abortion, these individuals reported less willingness to engage in attitude expressive behaviours (e.g., wearing a badge expressing their own views towards abortion). However, unlike resistance to change, the effect was fully mediated by attitude importance: As networks became more attitudinally diverse, people reported that the issue of abortion was less important to them personally, and this decrease in importance resulted in less willingness to engage in attitude-expressive behaviours.

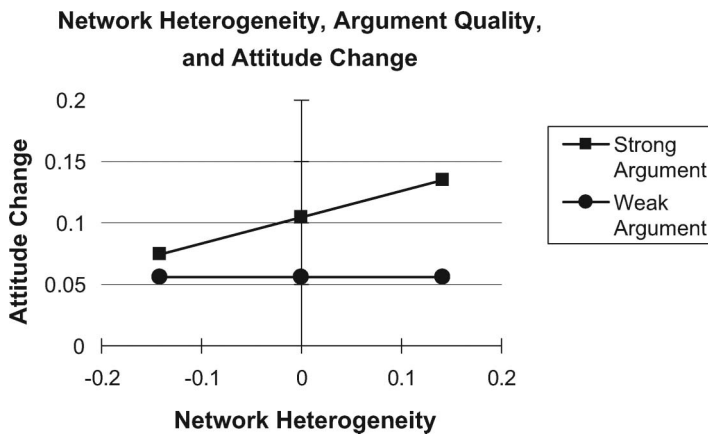
Taking a very different approach, Levitan and Visser (2008) have explored the role that cognitive processing may play in explaining the relation between social network composition and attitude change. Drawing on dual-process theories of persuasion (e.g., Chaiken, 1987; Petty & Cacioppo, 1986), these authors proposed that individuals embedded within attitudinally diverse networks might carefully scrutinise attitude-relevant information in an effort to ensure that their attitudes are valid and to reduce attitudinal ambivalence. Levitan and Visser (2008) also acknowledged that the reverse could occur—social network heterogeneity could lead to less scrutiny of a persuasive message. It may be uncomfortable to think about issues about which there is disagreement within one's social network, and people in diverse networks may be motivated to avoid this discomfort.

To explore these possibilities, Levitan and Visser (2008) assessed the attitudinal composition of individuals' social networks using a large, nationally representative sample. Participants reported the degree to which each of their network members' political views were similar to or different from their own views. From these reports an overall index of social network attitudinal congruity was computed. Levitan and Visser (2008) then used this index to predict attitude change in response to a counter-attitudinal persuasive message. Importantly, the authors varied the content of the persuasive message such that it contained strong and compelling arguments for some participants and relatively weak and unconvincing arguments for other participants. Such argument-quality manipulations have proven useful for determining the degree to which people are carefully processing the content of a persuasive message (see Petty & Cacioppo, 1986). To the extent that people are scrutinising the content of a message, they should be more persuaded by strong than by weak arguments. But if people are processing a message superficially, they should respond similarly to strong and weak arguments.

Replicating past findings, these researchers found that people embedded within attitudinally diverse networks exhibited more attitude change in response to a persuasive message than did people whose network members shared a common view. However, the relation between network composition and attitude change was moderated by argument quality: Individuals embedded within attitudinally congruous social networks did not differentiate between strong and weak arguments, indicating they were relatively insensitive to the merits of the arguments and did not carefully scrutinise the message. In contrast, those with more attitudinally diverse network members were more persuaded by strong arguments than by weak arguments—a marker of careful message processing (see Figure 5). In short, these data suggest that being surrounded by network members with diverse views motivates people to thoughtfully consider attitude-relevant information, and it is this careful consideration of attitude-relevant information that produced the observed attitude change in past investigations.

### Alternative explanations

*Informational accounts.* In the course of understanding how social network composition may produce strength-related attitude outcomes, a number of alternative explanations for the observed results have been explored. In their initial paper, for example, Visser and Mirabile (2004) considered the possibility that the attitudes ostensibly expressed by social network members might have simply provided participants with information about the views of fellow students more generally—normative information that could serve as an additional persuasive message. However,



**Figure 5.** Argument quality differentiation as a function of social network composition. Adapted from Levitan and Visser (2008).

when they manipulated both the diversity of views to which participants were exposed (congruous vs diverse) as well as the source of the views (experimentally created network members vs participants from a previous study), they found that only those who received information from network members were affected by the attitude diversity manipulation (Visser & Mirabile, 2004, Study 2). In contrast, those who learned the views of “participants in a previous study” did not show this effect. These findings suggest that the impact of social network composition on attitude strength is not simply a function of the information conveyed within congruent versus diverse social networks, but is more fundamentally tied to the dynamics within these networks.

*Reverse causality.* A second alternative interpretation rests on the possibility that distinct processes may be responsible for the apparently converging results across the experimental and correlational paradigms. It is possible, for example, that individuals interacting within the artificial confines of a laboratory setting are, indeed, more open to change when embedded in a network of strangers who hold a range of views than when surrounded by like-minded strangers. But the processes that unfold under more mundane circumstances within naturally occurring social structures may be quite different. In particular, it is well established that strong attitudes influence people’s perceptions (for review, see Petty & Krosnick, 1995). It is plausible, therefore, that individuals with strong attitudes on a given issue may (mis)perceive congruence in the attitudes of their network members, regardless of the actual composition of the network. Alternatively, individuals with strong attitudes on a particular issue may be more likely than those with weaker attitudes to actively seek out interaction partners who share their position, actively constructing attitudinally congruent social networks. Thus, reverse causal processes could be operating—the strength of an individual’s attitude may determine the perceived composition of his or her social network, either because of attitude projection or because of selective network construction.

Recent work by Levitan and Visser (2007) provides initial evidence to rule out both of these alternative explanations. For two successive cohorts of entering freshmen, they explored the impact of newly formed, quasi-randomly assigned social networks (based on the random dorm assignment process)<sup>1</sup> on attitude strength. They found that participants’ perceptions of

<sup>1</sup>Freshmen entering the university community are randomly assigned to housing units, putting them in proximity to particular sets of other students. Given the profound impact of proximity on friendship patterns (e.g., Festinger, Schachter, & Back, 1950) this means that some students are likely to establish social networks comprising others who share their views on a particular social or political issue, whereas others will find that they are surrounded by individuals with a greater variety of views.

their actual network members' views were in fact quite accurate. Across the two target issues (affirmative action and the Bush presidency), participants misperceived the valence of their network members' attitudes only about 10% of the time, and they were able to report with a fair degree of accuracy the precise attitudes held by their network members on the target issues. Surprisingly, the tendency to misperceive network members' attitudes was unrelated to the strength of participants' own attitudes—those with especially durable attitudes were no more likely than those with more malleable attitudes to perceive that their network members shared their views. Thus, attitude projection cannot account for the observed relation between network composition and attitude strength.

In a multi-wave panel study, Levitan and Visser (2007) followed the emerging friendship patterns of freshmen, starting when they first arrived on campus and extending several months into the school year. With this complex data set Levitan and Visser were able to determine the degree to which individuals with divergent views tended to be expelled from participants' social networks over time, and whether this tendency was especially pronounced for participants with durable and temporally stable attitudes towards the target issues. Although some selective network construction did emerge (i.e., participants were disproportionately likely to retain like-minded others in their networks over time for one of the two issues), this tendency was no greater for participants with especially durable and stable target attitudes. Thus, selective network construction cannot account for the observed relation between network composition and resistance to attitude change. Instead, the relation appears to reflect the causal impact of social network composition on resistance to attitude change and attitude stability.

## SOCIAL POWER

Another salient feature of our social environment, and a force that has motivated human relationships and behavior throughout history (Emerson, 1962; Keltner, Gruenfeld, & Anderson, 2003; Turner, 2005), is where we stand relative to others in a social hierarchy. In some situations we find ourselves in positions of power over others, while in different situations we are subject to others' control or influence. More specifically, we sometimes possess and sometimes lack social power. At its core, social power is the capacity to control others' outcomes by administering or withholding valued resources, rewards, and/or punishments (French & Raven, 1959; Kipnis, 1976; Thibaut & Kelley, 1959). Recent investigations have begun to test the possibility that the possession of social power may affect resistance to persuasion and other manifestations of attitude strength.

A flurry of new studies has confirmed that social power is indeed related to attitude strength, although the relation is anything but simple. In fact, power has been shown to influence the strength with which individuals hold their attitudes in several distinct ways. For example, social power has been shown to increase the confidence that individuals have in the validity of their initial beliefs and attitudes (Briñol, Petty, Valle, Rucker, & Becerra 2007). This greater confidence in one's initial attitudes apparently reduces the motivation to attend carefully to additional attitude-relevant information. Briñol and colleagues (2007) found that whereas low-power participants were more persuaded by strong than by weak arguments (suggesting that they were carefully processing the content of the messages), participants in positions of power failed to detect such argument quality differences.<sup>2</sup> These findings are consistent with previous research showing that social power can increase people's reliance on cognitive short-cuts rather than effortful information processing strategies (e.g., Fiske, 1993).

Other scholars have identified additional ways in which the possession of power may affect the strength of an individual's attitudes. For example, Eaton and Visser (2008) have documented descriptive and prescriptive expectations for power-holders to exhibit resoluteness, which appear to have implications for the actual levels of resoluteness that power-holders exhibit (Eaton, 2005; Eaton & Visser, 2006).

In a set of initial studies examining norms for power-holders, participants made trait ratings of a target that varied in power (Eaton & Visser, 2006). In one study, for example, participants read a brief description of a target named Joe, after which they were asked to make guesses about his personality traits. Joe was described as a 35-year-old white male who lives in the suburbs with his wife and golden retriever in an upper middle-class neighbourhood. Some participants read that Joe had a relatively high level of power at work. Specifically, they read that the target was the head of the accounting division of a large insurance company where he managed a group of 30 employees, all of whom were under his direct supervision. Other participants read that Joe worked in the accounting division of a large insurance company. They read that he was one of 30 employees who worked in his division, all of whom were under the direct supervision of the head of the accounting division.

As expected, participants' impressions of Joe varied depending on his level of power in the workplace. When Joe held a position of power he

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<sup>2</sup>In this same series of studies, when power was induced immediately after a persuasive message had already been processed, but before participants had expressed their attitudes, high-power individuals were found to be more confident in the validity of their thoughts than were low-power individuals, and those thoughts exerted greater impact on the attitudes that participants ultimately formed (Briñol et al., 2007).



was perceived to be more assertive, less yielding, and less persuadable than when he held a less powerful position. These expectations appear not to have reflected a general halo effect, as the high-power target was rated no more compassionate, cheerful, or sincere than his low-power counterpart. Other studies in this line of research have replicated these effects using more general targets (“manager” versus “subordinate”) and a more diverse, non-student participant population (Eaton & Visser, 2006), and using behavioural predictions rather than trait ratings (Eaton, 2005).

The strong expectation that powerful people are resolute is, of course, represented cognitively. Given this, Eaton and Visser (2006) anticipated that activating the concept of power would also activate the trait of resoluteness. An abundance of research has demonstrated that traits activated in this manner can powerfully shape human behaviour, causing people to act in accordance with the primed trait (Bargh, Chen, & Burrows, 1996). Thus, activating the concept of power may lead people to exhibit more resoluteness when their attitudes are challenged.

To test this idea, Eaton and Visser (2006) incidentally exposed participants to words associated with the concept of power or to words that were unrelated to power using a *power-priming* or a *power-neutral* word-search task that has been used in past research to semantically prime the concept of power (Chen, Lee-Chai, & Bargh, 2001). All participants then read a counter-attitudinal persuasive message arguing in favour of mandatory meal plans for all University of Chicago students, and expressed their attitudes towards the target issue. As expected, participants primed with the concept of power were less susceptible to persuasion than participants who were not primed with power.

A follow-up study using a large, nationally representative sample was conducted to pinpoint the cognitive mechanism by which activating the concept of power produced increased resistance to persuasion. As before, Eaton and Visser (2008) exposed participants to words related to social power or unrelated to power, this time using a vocabulary task as the priming manipulation (Rasinski, Visser, Zagatsky, & Rickett, 2005). Next they presented participants with pre-tested strong or weak counter-attitudinal messages opposing capital punishment, and assessed participants’ post-message attitudes towards capital punishment. Attitude change scores were computed as the difference between participants’ initial attitudes towards capital punishment and their post-message attitudes.

Both prime type and argument quality predicted attitude change, with power-primed participants showing less attitude change than controls, and participants being more persuaded by the strong message than by the weak one. No interaction of power and argument quality was obtained, suggesting that while participants in the power-primed and control

conditions both discriminated between strong and weak messages, those in the power-primed condition demonstrated a bias towards resisting persuasion. These findings suggest that the norm of resistance to persuasion associated with high-power social roles can bias the way new information is processed (Petty & Cacioppo, 1986; Petty & Wegener, 1999), reducing power-holders' susceptibility to persuasion even when they carefully attend to counter-attitudinal information. This finding is congruent with research showing that power can bias the way that information about other people is processed, influencing impression formation processes (Goodwin, Gubin, Fiske, & Yzerbyt, 2000).

Taken together, these burgeoning lines of research suggest that power may affect resistance to attitude change in at least two ways. First, power may increase people's confidence in their initial attitudes, causing power-holders to forgo processing additional attitudinal information—a finding consistent with work showing that powerful people increase their reliance on stereotypes (for a review, see Fiske & Dépret, 1996). Alternately, power may introduce a bias in the way that power-holders process new information—a bias towards confirming the norm for power-holders to be resolute. This notion is consistent with work by Overbeck and Park (2001, 2006) and Goodwin and colleagues (2000) showing that power does not always lead to reduced processing, and instead can bias impression processes.

Scholars have only begun to explore the conditions under which power will influence resistance to change through these distinct pathways. One possibility is that the process by which power operates will be moderated by the personal importance or relevance of the attitude object to the power-holder. Research showing that power can reduce the attention paid to persuasive messages has been conducted using attitude objects of little apparent importance to participants (Briñol et al., 2007). These attitude objects (a new, currently unavailable mobile phone and a vaccination policy) were ones for which participants had no prior attitudes, and that were not tightly linked to participants' values, identity, or self-interest (Boninger et al., 1995a). In contrast, research showing that power can bias the way individuals carefully process information was conducted using the issue of capital punishment, an issue to which people attach a relatively high degree of personal importance. Ongoing research is examining this possibility, as well as exploring additional processes through which power may regulate attitude strength.

## SOCIAL IDENTITY

According to the social identity perspective (e.g., Hogg, 2006; Hogg & Reid, 2006; Turner, 1999), individuals represent social groups as prototypes,

which prescribe certain behaviours and attitudes. Upon categorising themselves as a member of a group, individuals' attitudes are depersonalised so that they conform to those prescribed by the ingroup prototype (Turner, 1999; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). In other words, when a particular social identity is salient we view the world through the lens of the group and internalise the group's attitudes (Hogg & Smith, 2007). By definition, therefore, attitudes tied to social identities are shared attitudes, putting into play the processes we have described in the preceding sections.

Attitudes linked to social identities can take on characteristics likely to render those attitudes durable and impactful. For example, individuals view attitudes that are tightly linked to core social identities as important (Boninger et al., 1995a) and valid (Haslam, McGarty, & Turner, 1996; van Knippenberg, 1999, 2000), and they perceive attitude-congruent arguments as especially persuasive (van Knippenberg, Lossie, & Wilke, 1994; van Knippenberg & Wilke, 1992). And, as we have discussed previously, individuals who know that their attitudes are shared by similar others are more certain of their views (McGarty, Turner, Oakes, & Haslam, 1993) and feel that their attitudes are more reflective of objective truth and reality (Turner, 1991). Finally, when social identity and self-categorisation are made salient, attitudes associated with the identity are more likely to be cognitively accessible (e.g., Terry, Hogg, & White, 2000). Thus, identification with a social group can have direct consequences for the strength of prototypical attitudes.

Strong identification with a group can also increase attitude-behaviour correspondence (for an overview see Terry et al., 2000). For example, researchers have found that students are more likely to intend to engage in health behaviours that are perceived to be normative of their campus peers—but especially so if they strongly identify with this reference group (Terry & Hogg, 1996). Other studies have revealed similar patterns of increased attitudinally expressive behaviour when group membership was experimentally heightened (e.g., White, Hogg, & Terry, 2002). Finally, researchers have also demonstrated that attitudes are more likely to influence behavioural intentions when they are highly central or important to one's group (Smith, Terry, Crosier, & Duck, 2005). In short, a social identity perspective suggests that individuals are more likely to engage in behaviours supportive of their attitudes when those attitudes are normative for a group with which they identify and one identifies strongly with the group (Hogg & Smith, 2007; Terry et al., 2000).

In addition to shaping the attitudes we acquire and the extent to which those attitudes guide behaviour, group memberships can also play a role in processes of attitude change and persuasion. Individuals are generally more persuaded by messages that are delivered by an ingroup member—especially when their social identity is made salient (McGarty, Haslam, Hutchinson, &

Turner, 1994; Wilder, 1990). Furthermore, individuals find persuasive messages that endorse group-prototypic positions to be especially persuasive (van Knippenberg et al., 1994; van Knippenberg & Wilke, 1992). Both of these findings are clearly consistent with a social identity perspective. That is, when a social identity is made salient, individuals favour things related to the ingroup over those associated with the outgroup (e.g., Turner, 1991).

Although this ingroup favouritism may seem to be the result of a simple heuristic, shared membership with a message source can operate in a variety of different ways within the persuasion context (e.g., Fleming & Petty, 2000; Mackie & Queller, 2000). An ingroup message source may serve as a peripheral cue, signalling that one can forgo careful scrutiny of the message and simply accept the source's position, particularly when the group's position on an issue is known (Mackie, Gastardo-Conaco, & Skelly, 1992) or when the issue is irrelevant to the ingroup (Mackie, Worth, & Asuncion, 1990). In contrast, an ingroup message source sometimes encourages more careful processing of a message, such as when the group's views on an issue are unknown (Mackie et al., 1992) or when the issue is highly relevant to the ingroup (Mackie et al., 1990). Thus, it appears that there is no single process through which group membership impacts attitude change (for a discussion, see Wood, 2000).

More generally, the social identity perspective highlights the important role that self categorisation, social group membership, and the social context can play in attitude change processes, shifting the focus away from the cognitive and affective processes that unfold within individual actors within a persuasion context and towards a fuller understanding of the processes that govern collective construals of identity and the implications of these social identities for persuasion processes (see Haslam et al., 1996; Wood, 2000).

## DISCUSSION

A wealth of scholarship (reinforced by countless anecdotal examples from our day-to-day lives) confirms that some attitudes are exceedingly difficult to change, and exert a powerful influence on information processing and on behaviour, whereas other attitudes are quite malleable and largely without consequence. The strength of an attitude therefore provides critical leverage for understanding and predicting thoughts and actions regarding an attitude object. Despite its importance, a number of fundamental questions about attitude strength have gone unanswered.

The work that we have reviewed offers new clarity about the nature of attitude strength. Rather than conceiving of attitude strength as a meaningful psychological construct with a set of antecedents and a set of outcomes, we have suggested that it is better thought of as a loose confederation of psychological processes by which some attitudes achieve

durability and impactfulness. The precise nature of these processes varies, as do the particular types of consequences for thought and action. To say that an attitude is strong, then, provides only the most general information about its operation and outcomes. More precise predictions require greater specificity about the source(s) from which the attitude derives its strength. As the evidence we reviewed illustrates, different sources of strength instigate distinct kinds of cognitive, affective, and behavioural outcomes, sometimes through different psychological processes. This new conceptualisation therefore shifts the focus of attention away from the structure and function of a handful of latent constructs and towards a fuller delineation of the many disparate bases from which attitudes derive their durability and impactfulness.

Further, we have argued for the particular value of considering the social and contextual bases of attitude strength. Indeed, we believe that it may be appropriate to conceive of attitude strength as “residing” not solely within the individual, but to some extent within the social context in which the individual is situated. The strength of an attitude appears to depend not only on the degree to which it is psychologically cemented within one’s cognitive representation of the world, but also on the degree to which the attitude is socially cemented, including the extent to which one’s attitude is reinforced by the members of one’s social network, for example, or by where one stands relative to others in a social hierarchy.

Given the social and contextual sensitivity of the strength of our attitudes, it may be unwise to conceive of strength as a relatively fixed property of attitudes, one that derives from fairly stable cognitive and structural features of the attitude. Instead, the findings that we have reviewed suggest that the strength of an attitude will fluctuate not only in response to changes in structural properties of the attitude itself but also in response to changing social circumstances. Disruptions in social network ties, for example, may render some attitudes more durable and impactful and other attitudes less so. Similarly, adopting or discarding a position of power or a social identity will produce shifts in attitude strength.

Importantly, our review is illustrative rather than exhaustive. We have identified a few of the many features of the social context that may regulate attitude strength. For example, research suggests that individuals process attitudinal information differently when it comes from a minority versus a majority source (e.g., Martin & Hewstone, 2001, 2003). Therefore, whether an attitude is explicitly endorsed by a numerical minority or majority may have implications for the durability and impactfulness of one’s attitudes (e.g., Martin, Hewstone, & Martin, 2003). And in addition to occupying high- and low-power roles, individuals occupy many varied social roles over the course of a day, and over the course of their lives, many of which may

prescribe particular levels of resoluteness or openness to change. As individuals enact these different social roles, in the home, the workplace, and the community, the resoluteness with which they hold their attitudes may vary. Our review of recent research suggests that attitude strength may be quite fluid, fluctuating in response to myriad features of the social context in which an attitude is held.

## Methodological implications

Methodologically, reconceptualising “attitude strength” as we suggested has a number of important implications. First and most obviously, it suggests that each of the various strength-related attitude features must be measured and examined separately in investigations of attitude processes, as each has unique predictive value. As our review of recent findings implies, the fairly common practice of combining measures of two or more strength-related attributes into an omnibus index of attitude strength and using that index to predict a particular outcome can often lead researchers astray. A significant relation between the index and the cognitive or behavioural outcome may mask the fact that only one of the strength-related features is actually responsible for the observed association (Visser et al., 2003). Alternatively, such a strategy may fail to detect a relation between the index and the outcome because the various strength-related attitude features may relate in opposite ways to the outcome, cancelling each other out when combined into a single index. As our review of recent findings suggests, a full understanding of attitude processes requires that each of the strength-related features be measured separately and that their independent and interactive effects be examined.

Importantly, this applies not only to future research but also to the inferences that we draw from past research. Many scholars have combined measures of different strength-related features into omnibus indices and have used these indices to explore the antecedents and consequences of attitude strength (e.g., Bassili, 1996; Bassili & Roy, 1998; Eagly et al., 2000; Hodson, Maio, & Esses, 2001; Holland, Verplanken, & van Knippenberg, 2002; Pomerantz et al., 1995; Prislin, 1996; Theodorakis, 1994; Thompson & Zanna, 1995; Verplanken, 1989, 1991). It is probably wise to consider the findings from these studies as tentative until further research is conducted to untangle the potentially complex interplay of the various strength-related features and their shared and unique outcomes.

## An agenda for future research

The findings we have reviewed also chart a clear course for future research on attitude strength.

*Strength-related attitude features.* First, attitudes researchers are charged with developing theories aimed at describing and predicting the common and unshared antecedents and consequences of the various strength-related attitude features. Clarifying the workings of each strength-related attitude feature, alone and in combination, will permit more refined predictions about specific attitude effects, based on the nature of particular strength-related attitude features and the psychological processes by which they operate. Some of this work has been done but much remains to be learned.

*Situating attitude strength.* findings that we have reviewed also impel scholars to take seriously the fact that individuals are embedded in rich social worlds and are highly sensitive to changes in their social context. The field has long recognised that the attitudes we hold are powerfully influenced by the views of the people around us. The findings we have reviewed suggest that in addition to influencing the valence of our attitudes, the social context in which we reside can also affect the strength of our attitudes. A high-priority goal for attitude researchers, then, is to develop a fuller appreciation of the dynamic interplay between features of the social context and individual-level evaluative processes.

In addition to enriching our understanding of attitude processes, this approach may lead to a broader framework within which the disparate set of attitude strength findings can be positioned. Further, grounding attitude processes in the social context is likely to illuminate connections between attitude strength and other core domains within social psychology, potentially yielding new synergies and opening up fruitful new lines of inquiry.

*Implicit attitudes.* Our focus has been on the factors that regulate the durability and impactfulness of individuals' explicit attitudes. These insights might fruitfully be applied to implicit attitudes as well. That is, the durability and impactfulness of one's implicit attitudes may also depend on social and contextual variables.

It is well known, for example, that the valence of one's implicit attitudes is often heavily influenced by one's cultural and social milieu (for a review, see Rudman, 2004). Korean and Japanese American students have been found to show greater automatic ingroup bias when their ancestors' culture has subtly been made salient (Greenwald, McGhee, & Schwartz, 1998), and people raised primarily by their mothers have been found to implicitly prefer women to men (Rudman & Goodwin, 2004). It may also be the case that social and contextual factors, like the attitudinal heterogeneity of one's social network or one's social identity, impact the malleability of one's implicit attitudes. In support of this assumption, researchers have found that changing one's social milieu, even temporarily, by exposing them to

counter-stereotypic social exemplars, reduces their implicit biases for at least 24 hours (Dasgupta & Greenwald, 2001). Additional research on the stability and tenacity of implicit attitudes as a function of social and contextual variables is clearly warranted.

## CONCLUSION

We began with the observation that attitudes are ubiquitous. Stored in memory each of us has our own idiosyncratic assortment of summary evaluations of the myriad people, places, and things in our environment. But not all attitudes are created equal. Some exert powerful effects on our thoughts and behaviours, whereas others are largely inconsequential. As we have seen, however, precise predictions about *how* strong attitudes exert their impact require a fuller understanding of the bases of attitude strength and the processes by which they operate.

We have suggested that particularly significant gains may result from a focus on the social bases of strength, but such a focus also presents significant challenges. Of course, social contexts vary in a virtually limitless number of ways, with complex implications for attitude processes. The work we have reviewed suggests that understanding the interplay between social contextual features and attitude properties and processes represents both a daunting challenge and a tremendously promising opportunity for attitude researchers, one with exciting theoretical and practical payoffs.

## REFERENCES

- Abelson, R. P. (1988). Conviction. *American Psychologist*, *43*, 267–275.
- Armitage, C. J., & Connor, M. (2000). Attitudinal ambivalence: A test of three key hypotheses. *Personality and Social Psychology Bulletin*, *26*, 1421–1432.
- Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality & Social Psychology*, *71*, 230–244.
- Bass, A. R., & Rosen, H. (1969). Some potential moderator variables in attitude research. *Educational and Psychological Measurement*, *29*, 331–348.
- Bassili, J. N. (1996). Meta-judgemental versus operative indexes of psychological attributes: The case of measures of attitude strength. *Journal of Personality and Social Psychology*, *71*, 637–653.
- Bassili, J. N., & Roy, J. P. (1998). On the representation of strong and weak attitudes about policy in memory. *Political Psychology*, *19*, 669–681.
- Berger, I. E. (1992). The nature of attitude accessibility and attitude confidence: A triangulated experiment. *Journal of Consumer Psychology*, *1*, 103–123.
- Biddle, B. J., Bank, B. J., & Slavings, R. L. (1987). Norms, preferences, identities and retention decisions. *Social Psychology Quarterly*, *50*, 322–337.
- Boninger, D. S., Krosnick, J. A., & Berent, M. K. (1995a). Origins of attitude importance: Self-interest, social identification, and value relevance. *Journal of Personality and Social Psychology*, *68*, 61–80.



- Boninger, D. S., Krosnick, J. A., Berent, M. K., & Fabrigar, L. R. (1995b). The causes and consequences of attitude importance. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences*. Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Briñol, P., Petty, R. E., Valle, C., Rucker, D. D., & Becerra, A. (2007). The effects of message recipients' power before and after persuasion: A self-validation analysis. *Journal of Personality and Social Psychology*, *93*, 1040–1053.
- Budd, R. J. (1986). Predicting cigarette use: The need to incorporate measures of salience in the theory of reasoned action. *Journal of Applied Social Psychology*, *16*, 633–685.
- Burt, R. S. (1980). Models of network structure. *Annual Review of Sociology*, *6*, 79–141.
- Byrne, D. E., London, O., & Griffitt, W. (1968). The effect of topic importance and attitude similarity–dissimilarity on attraction in an intrastranger design. *Psychonomic Science*, *11*, 303–304.
- Chaiken, S. (1987). The heuristic model of persuasion. In M. P. Zanna, J. M. Olson, & C. P. Herman (Eds.), *Social influence: The Ontario Symposium* (Vol. 5, pp. 3–9). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of the effects of social power. *Journal of Personality & Social Psychology*, *80*, 173–187.
- Clore, G. L., & Baldridge, B. (1968). Interpersonal attraction: The role of agreement and topic interest. *Journal of Personality and Social Psychology*, *9*, 340–346.
- Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology*, *81*, 800–814.
- Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgement. *Journal of Abnormal and Social Psychology*, *51*, 629–636.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Orlando, FL: Harcourt Brace Jovanovich College Publishers.
- Eagly, A. H., Kulesa, P., Brannon, L. A., Shaw, K., & Hutson-Comeaux, S. (2000). Why counterattitudinal messages are as memorable as proattitudinal messages: The importance of active defense against attack. *Personality and Social Psychology Bulletin*, *26*, 1392–1408.
- Eaton, A. (2005). *Social power and attitude change across the life course*. Unpublished master's thesis, University of Chicago.
- Eaton, A. A., & Visser, P. S. (2006, May). *The effects of social power on susceptibility to attitude change*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL, USA.
- Eaton, A. A., & Visser, P. S. (2008, May). *How high-power role norms affect resistance to persuasion: A biased-processing account*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago.
- Emerson, R. (1962). Power-dependence relations. *American Sociological Review*, *27*, 31–41.
- Fazio, R. H. (2000). Accessible attitudes as tools for object appraisal: Their costs and benefits. In G. Maio & J. Olson (Eds.), *Why we evaluate: Functions of attitudes* (pp. 1–36). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- 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., Sanbonmatsu, D. M., Powell, M. C., & Kardes, F. R. (1986). On the automatic activation of attitudes. *Journal of Personality and Social Psychology*, *50*, 229–238.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, *57*, 271–282.
- Festinger, L., Schacter, S., & Back, K.W. (1950). *Social pressures in informal groups*. New York: Harper.

- Fine, B. J. (1957). Conclusion-drawing, communicator credibility, and anxiety as factors in opinion change. *Journal of Abnormal and Social Psychology*, 5, 369–374.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48, 621–628.
- Fiske, S. T., & Dépret, E. (1996). Control interdependence and power: Understanding social cognition in its social context. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 7, pp. 31–61). New York: Wiley.
- Fleming, M. A., & Petty, R. E. (2000). Identity and persuasion: An elaboration likelihood approach. In D. J. Terry & M. A. Hogg (Eds.), *Attitudes, behavior, and social context: The role of norms and group membership* (pp. 171–199). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- French, J. R. P., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), *Studies in social power*. Ann Arbor, MI: University of Michigan Press.
- Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes & Intergroup Relations*, 3, 227–256.
- Gorn, G. J. (1975). The effects of personal involvement, communication discrepancy, and source prestige on reactions to communications on separatism. *Canadian Journal of Behavioral Science*, 7, 369–386.
- 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). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Haddock, G., Rothman, A. J., Reber, R., & Schwarz, N. (1999). Forming judgements of attitude certainty, intensity, and importance: The role of subjective experiences. *Personality and Social Psychology Bulletin*, 25, 771–782.
- Haddock, G., Rothman, A. J., & Schwarz, N. (1996). Are (some) reports of attitude strength context dependent? *Canadian Journal of Behavioral Science Revue Canadienne des Sciences du comportement*, 28, 313–316.
- Haslam, S. A., McGarty, C., & Turner, J. C. (1996). Salient group memberships and persuasion: The role of social identity in the validation of beliefs. In J. L. Nye & A. M. Brower (Eds.), *What's social about social cognition? Research on shared cognition in small groups* (pp. 29–56). London: Sage Publications.
- Hodson, G., Maio, G. R., & Esses, V. M. (2001). The role of attitudinal ambivalence in susceptibility to consensus information. *Basic and Applied Social Psychology*, 23(3), 197–205.
- Hogg, M. A. (2006). Social identity theory. In P. J. Burke (Ed.), *Contemporary social psychological theories* (pp. 111–136). Stanford, CA: Stanford University Press.
- Hogg, M. A., & Reid, S. A. (2006). Social identity, self-categorisation, and the communication of group norms. *Communication Theory*, 16, 7–30.
- Hogg, M. A., & Smith, J. R. (2007). Attitudes in social context: A social identity perspective. *European Review of Social Psychology*, 18, 89–131.
- Holland, R. W., Verplanken, B., & van Knippenberg, A. (2002). On the nature of attitude–behavior relations: The strong guide, the weak follow. *European Journal of Social Psychology*, 32, 869–876.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55.
- Huckfeldt, R., Morehouse Mendez, J., & Osborn, T. (2004). Disagreement, ambivalence, and engagement: The political consequences of heterogeneous networks. *Political Psychology*, 25, 65–95.

- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, *110*, 265–284.
- Kipnis, D. (1976). *The powerholders*. Chicago: University of Chicago Press.
- Krosnick, J. A. (1988a). 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. (1988b). Attitude importance and attitude change. *Journal of Experimental Social Psychology*, *24*, 240–255.
- Krosnick, J. A. (1989). Attitude importance and attitude accessibility. *Personality and Social Psychology Bulletin*, *15*, 297–308.
- Krosnick, J. A., Boninger, D. S., Chuang, Y. C., Berent, M. K., & Carnot, C. G. (1993). Attitude strength: One construct or many related constructs? *Journal of Personality and Social Psychology*, *65*, 1132–1151.
- Krosnick, J. A., Jarvis, B., Strathman, A., & Petty, R. E. (1994). *Relations among dimensions of attitude strength: Insights from induced variable models*. Unpublished manuscript, Ohio State University, Columbus, OH.
- Lavine, H., Huff, J. W., Wagner, S. H., & Sweeney, D. (1998). The moderating influence of attitude strength on the susceptibility to context effects in attitude surveys. *Journal of Personality and Social Psychology*, *75*, 359–373.
- Levitan, L. C., Kwong, J., & Visser, P. S. (2006). *The social network composition's impact on individuals' attitude strength: How is our attitude strength affected as we jump from one branch of our social network to another?* Unpublished manuscript, University of Chicago.
- Levitan, L. C., & Visser, P. S. (2007). *Social network composition and attitude strength: Exploring the dynamics within newly formed social networks*. Manuscript submitted for publication.
- Levitan, L. C., & Visser, P. S. (2008). The impact of the social context on resistance to persuasion: Effortful versus effortless responses to counter-attitudinal information. *Journal of Experimental Social Psychology*, *44*, 640–649.
- Mackie, D. M., Gastardo-Conaco, M. C., & Skelly, J. J. (1992). Knowledge of the advocated position and the processing of in-group and out-group persuasive messages. *Personality and Social Psychology Bulletin*, *18*, 145–151.
- Mackie, D. M., & Queller, S. (2000). The impact of group membership on persuasion: Revisiting “who says what to whom with what effect?”. In D. J. Terry & M. A. Hogg (Eds.), *Attitudes, behavior, and social context: The role of norms and group membership* (pp. 135–155). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Mackie, D. M., Worth, L. T., & Asuncion, A. G. (1990). Processing of persuasive in-group messages. *Journal of Personality and Social Psychology*, *58*, 812–822.
- Martin, R., & Hewstone, M. (2001). Conformity and independence in groups: Majorities and minorities. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (Vol. 1, pp. 209–234). Oxford, UK: Blackwell.
- Martin, R., & Hewstone, M. (2003). Majority versus minority influence: When, not whether, source status instigates heuristic or systematic processing. *European Journal of Social Psychology*, *33*, 313–330.
- Martin, R., Hewstone, M., & Martin, P. Y. (2003). Resistance to persuasive messages as a function of majority and minority source status. *Journal of Experimental Social Psychology*, *39*, 585–593.
- McGarty, C., Turner, J. C., Oakes, P. J., & Haslam, S. A. (1993). The creation of uncertainty in the influence process: The roles of stimulus information and disagreement with similar others. *European Journal of Social Psychology*, *23*, 17–38.

- McGrath, C., Haslam, S. A., Hutchinson, K. J., & Turner, J. C. (1994). The effects of salient group memberships on persuasion. *Small Group Research, 25*, 267–293.
- Mutz, D. C. (2002). The consequences of cross-cutting networks for political participation. *American Journal of Political Science, 46*, 838–855.
- Overbeck, J. R., & Park, B. (2001). When power does not corrupt: Superior individuation processes among powerful perceivers. *Journal of Personality and Social Psychology, 80*, 549–565.
- Overbeck, J. R., & Park, B. (2006). Powerful perceivers, powerless objects: Flexibility of powerholders' social attention. *Organisational Behavior and Human Decision Processes, 99*(2), 227–243.
- Parker, H. A., Perry, R. W., & Gillespie, D. F. (1974). Prolegomenon to a theory of attitude-behavior relationships. *Pakistan Journal of Psychology, 7*, 21–39.
- Petrocelli, J. V., Tormala, Z. L., & Rucker, D. D. (2007). Unpacking attitude certainty: Attitude clarity and attitude correctness. *Journal of Personality and Social Psychology, 92*, 30–41.
- Petty, R. E., & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches*. Dubuque, IA: Wm. 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. (Eds.). (1995). *Attitude strength: Antecedents and consequences*. Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- 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.
- Pomerantz, E. M., Chaiken, S., & Tordesillas, R. S. (1995). Attitude strength and resistance processes. *Journal of Personality & Social Psychology, 69*, 408–419.
- Priester, J. R., Nayakankuppam, D., Fleming, M. A., & Godek, J. (2004). The A<sup>2</sup>SC<sup>2</sup> Model: The influence of attitudes and attitude strength on consideration and choice. *Journal of Consumer Research, 30*, 574–587.
- 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.
- Prislin, R. (1996). Attitude stability and attitude strength: One is enough to make it stable. *European Journal of Social Psychology, 26*, 447–477.
- Prislin, R., Brewer, M., & Wilson, D. J. (2002). Changing majority and minority positions within a group versus an aggregate. *Personality and Social Psychology Bulletin, 28*, 640–647.
- Prislin, R., Limbert, W. M., & Bauer, E. (2000). From majority to minority and vice versa: The asymmetrical effects of losing and gaining majority position within a group. *Journal of Personality and Social Psychology, 79*, 385–397.
- Rasinski, K. A., Visser, P. S., Zagatsky, M., & Rickett, E. M. (2005). Using implicit goal priming to improve the quality of self-report data. *Journal of Experimental Social Psychology, 41*, 321–327.
- Roese, N. J., & Olson, J. M. (1994). Attitude importance as a function of repeated attitude expression. *Journal of Experimental Social Psychology, 30*, 39–51.
- Rokeach, M., & Kliejunas, P. (1972). Behavior as a function of attitude-toward-object and attitude-toward-situation. *Journal of Personality and Social Psychology, 22*, 194–201.
- Rudman, L. A. (2004). Sources of implicit attitudes. *Current Directions in Psychological Science, 13*, 80–83.
- Rudman, L. A., & Goodwin, S. A. (2004). Gender differences in automatic ingroup bias: Why do women like women more than men like men? *Journal of Personality and Social Psychology, 87*, 494–509.

- Schachter, S. (1951). Deviation, rejection, and communication. *Journal of Abnormal and Social Psychology*, 46, 190–207.
- Smith, J. R., Terry, D. J., Crosier, T., & Duck, J. M. (2005). The importance of the relevance of the issue to the group in attitude-intention consistency. *Basic and Applied Social Psychology*, 27, 163–170.
- Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude-behavior relationships: A role for group identification. *Personality and Social Psychology Bulletin*, 22, 776–793.
- Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behavior: Self-identity, social identity and group norms. *British Journal of Social Psychology*, 38, 225–244.
- Terry, D. J., Hogg, M. A., & White, K. M. (2000). Attitude-behavior relations: Social identity and group membership. In D. J. Terry & M. A. Hogg (Eds.), *Attitudes, behavior, and social context: The role of norms and group membership* (pp. 167–193). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Theodorakis, Y. (1994). Planned behavior, attitude strength, role identity, and the prediction of exercise behavior. *The Sports Psychologist*, 8, 149–165.
- Thibaut, J. W., and Kelley, H. H. (1959). *The social psychology of groups*. New York: John Wiley & Sons.
- Thompson, M. T., & Zanna, M. P. (1995). The conflicted individual: Personality-based and domain-specific antecedents of ambivalent social attitudes. *Journal of Personality*, 63, 259–288.
- Trafimow, D. (1994). Predicting intentions to use a condom from perceptions of normative pressure and confidence in those perceptions. *Journal of Applied Social Psychology*, 24, 2151–2163.
- Turner, J. C. (1991). *Social influence*. Pacific Grove, CA: Brooks/Cole.
- Turner, J. C. (1999). Some current issues in research on social identity and self-categorisation theories. In N. Ellemers, R. Spears, & B. Doosje (Eds.), *Social identity* (pp. 6–34). Malden, MA: Blackwell Publishers.
- Turner, J. C. (2005). Explaining the nature of power: A three-process theory. *European Journal of Social Psychology*, 35, 1–22.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorisation theory*. Oxford, UK: Blackwell.
- van Knippenberg, D. (1999). Social identity and persuasion: Reconsidering the role of group membership. In D. Abrams & M. A. Hogg (Eds.), *Social identity and social cognition* (pp. 315–331). Malden, MA: Blackwell Publishers.
- van Knippenberg, D. (2000). Group norms, prototypicality, and persuasion. In D. J. Terry & M. A. Hogg (Eds.), *Attitudes, behavior, and social context: The role of norms and group membership* (pp. 157–170). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- van Knippenberg, D., Lossie, N., & Wilke, H. (1994). In group prototypicality and persuasion: Determinants of heuristic and systematic message processing. *British Journal of Social Psychology*, 33, 289–300.
- van Knippenberg, D., & Wilke, H. (1992). Prototypicality of arguments and conformity to ingroup norms. *European Journal of Social Psychology*, 22, 141–155.
- Verplanken, B. (1989). Involvement and need for cognition as moderators of beliefs-attitude-intention consistency. *British Journal of Social Psychology*, 28, 115–122.
- Verplanken, B. (1991). Persuasive communication of risk information: A test of cue versus message processing effects in a field experiment. *Personality and Social Psychology Bulletin*, 17, 188–193.
- Visser, P. (1998). *Assessing the structure and function of attitude strength: Insights from a new approach*. Unpublished doctoral dissertation, The Ohio State University.

- Visser, P. S., Bizer, G. Y., & Krosnick, J. A. (2006). Exploring the latent structure of strength-related attitude attributes. *Advances in Experimental Social Psychology*, 38, 1–67.
- Visser, P. S., Krosnick, J. A., & Norris, C. J. (2007). *Attitude importance and attitude-relevant knowledge: Motivator and enabler*. Manuscript submitted for publication.
- Visser, P. S., Krosnick, J. A., & Simmons, J. P. (2003). Distinguishing the cognitive and behavioral consequences of attitude importance and certainty: A new approach to testing the common-factor hypothesis. *Journal of Experimental Social Psychology*, 39, 118–141.
- Visser, P. S., & Mirabile, R. R. (2004). Attitudes in the social context: The impact of social network composition on individual-level attitude strength. *Journal of Personality and Social Psychology*, 87, 779–795.
- Wasserman, S., & Faust, K. (1994). *Social network analysis: Methods and applications*. Cambridge, UK: Cambridge University Press.
- White, K. M., Hogg, M. A., & Terry, D. I. (2002). Improving attitude–behavior correspondence through exposure to normative support from a salient ingroup. *Basic and Applied Social Psychology*, 24, 91–103.
- Wilder, D. A. (1990). Some determinants of the persuasive power of in-groups and outgroups: Organisation of information and attribution of independence. *Journal of Personality and Social Psychology*, 59, 1202–1213.
- 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. (2000). Attitude change: Persuasion and social influence. *Annual Review of Psychology*, 51, 539–570.
- Wood, W., & Kallgren, C. A. (1988). Communicator attributes and persuasion: Recipients' access to attitude-relevant information in memory. *Personality and Social Psychology Bulletin*, 4, 172–182.
- Wood, W., Kallgren, C. A., & Preisler, R. M. (1985). Access to attitude-relevant information in memory as a determinant of persuasion: The role of message attributes. *Journal of Experimental Social Psychology*, 21, 73–85.
- 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). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Zuwerink, J. R., & Devine, P. G. (1996). Attitude importance and resistance to persuasion: It's not just the thought that counts. *Journal of Personality and Social Psychology*, 70, 931–944.