
4. Attitude strength and consumer behavior

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INTRODUCTION

The attitude construct is as indispensable to understanding consumer psychology as Allport (1935) famously said it is to social psychology more generally. Attitudes (i.e., people's overall evaluations of objects, issues, or people) matter in large part because they affect people's judgments and behavior. For example, more positive evaluations of a product will enhance the likelihood of purchase. As such, forming and changing attitudes are core aspects of marketing, and evaluative constructs more generally are frequently the main dependent variables in consumer research - attitudes toward ads and products, trust, satisfaction, attachment to brands, and so on. This emphasis on measuring consumer evaluations reflects the influence of attitudes on consumption behaviors from purchasing and willingness to pay to advocacy and word of mouth.

Accordingly, for nearly the past half century, social psychology and consumer behavior researchers have collaborated to understand the psychology of attitudes, attitude change, and how attitudes affect behavior. A major development in this area has been the discovery that the impact of attitudes is often not straightforward. For example, some attitudes are more predictive of behavior than others. The emergence of *attitude strength* as an important construct occurred in part to address when attitudes would be consequential (Petty & Krosnick, 1995; Howe & Krosnick, 2017; Luttrell & Sawicki, 2020). The construct of "strength" refers to an attitude's durability and impact, including its persistence over time, resistance to influence, and effects on judgments, decisions, and perhaps most critically, on behavior (Krosnick & Petty, 1995).

Researchers have identified a number of properties of attitudes that indicate an attitude's strength beyond the extremity or polarization of the attitude itself. These include the degree of confidence and ambivalence associated with an attitude, and whether the attitude has a moral basis or links to one's identity. The first section of our chapter reviews research on consumer attitude strength, focusing on two properties that have been particularly well studied in the consumer behavior literature: certainty and ambivalence. We touch more briefly upon other attitude strength indicators (elaboration, accessibility, etc.) and note research examining interrelations among these indicators as well as efforts to group them into clusters.

Broadly, research on consumer attitude strength finds results consistent with investigations of attitude strength in other areas, from management (Durso et al., 2016) to health (Conner et al., 2022) to politics (Shoots-Reinhard et al., 2015). That is, attitudes tend to last longer and matter more when any of the many strength indicators suggest they should (e.g., when certainty in an attitude is high, the attitude predicts behavior better than when certainty is low; Rucker et al., 2014). After reviewing these traditional strength effects in our first section, we next discuss emerging evidence that some of these effects can sometimes be reversed. Maintaining our emphasis on certainty and ambivalence, we discuss recent research showing

that these properties can either increase or decrease attitude-consistent behavior, depending on characteristics of the person, attitude, and behavior (see Petty et al., 2023). We offer an explanation for such reversals and identify several moderators that can shape when each type of effect is more likely. Finally, in a third section, we flag other noteworthy directions in attitude strength research, which explore how different ways of framing an attitude can affect its strength, individual differences in attitude strength, and perceptions of others' attitude strength-related properties.

ATTITUDE PROPERTIES ASSOCIATED WITH STRENGTH

This section reviews major findings regarding the associations between attitude certainty or ambivalence and attitudinal impact. Because the literature on each is extensive, the review is necessarily brief and illustrative rather than systematic or comprehensive. In particular, we highlight how these properties can predict consumption-related behaviors like purchasing and word of mouth.

Attitude Certainty

Attitude certainty refers to a person's subjective sense of clarity about their position and/or belief that their attitude is valid or correct (Tormala & Rucker, 2018). A host of factors can contribute to attitude certainty, from the quantity of attitude-relevant information a person possesses (Rucker et al., 2008; Tsai et al., 2008) and the credibility of the source of that information (Tormala & Petty, 2004) to the person's inferred ability to resist counterarguments to their position (Rucker & Petty, 2004), how accessible the attitude is in their mind (Shanker Krishnan & Smith, 1998), and their perceptions of social consensus on the issue (Lee & Kronrod, 2020). Broadly, these various antecedents can be grouped into three types of appraisals of the information underlying a person's attitude: its perceived accuracy, completeness, and applicability to the situation at hand (Rucker et al., 2014).

Greater attitude certainty tends to increase the impact of attitudes. For example, greater certainty about a favorable brand evaluation increases consideration of the brand's products (Priester et al., 2004), and greater certainty about the benefits of a health food product increases intention to purchase it (Tudoran et al., 2012). Attitudes held with more certainty also tend to persist for longer (Petrocelli et al., 2007), are more resistant to social influence (Kelley & Lamb, 1957), and are more likely to motivate advocacy or word of mouth (Cheatham & Tormala, 2015).

Attitudinal Ambivalence

Attitudinal ambivalence refers to the degree of evaluative inconsistency or conflict associated with an attitude. Two distinct conceptualizations of ambivalence feature prominently in the literature. Objective (a.k.a. structural or potential) ambivalence refers to the degree to which both positive and negative evaluations of an object are present (Kaplan, 1972), whereas subjective (or felt) ambivalence refers to the degree of internal (experienced) conflict about an attitude (Priester & Petty, 1996). Objective ambivalence is a key antecedent of subjective ambivalence (Sengupta & Johar, 2002), but there are at least three other causes of felt conflict that do not

require objectively mixed evaluations: disagreement with important others (Priester & Petty, 2001), a belief that counter-attitudinal information exists of which one is not aware (Priester et al., 2007), and a desire to change one's current attitude (DeMarree et al., 2014).

Much like uncertainty, research has tended to find that greater ambivalence reduces an attitude's durability and impact. For example, greater objective ambivalence about available choice alternatives is associated with delaying the decision (Durso et al., 2016; Durso et al., 2021) and declining to state a preference (Luce, 1998; Nowlis et al., 2002). Furthermore, more objective ambivalence toward green products reduces green purchase intentions (Wang et al., 2022), higher objective ambivalence toward a country reduces willingness to buy brands associated with that country (Russell et al., 2011), and more objective ambivalence about one's purchase selections is associated with a greater likelihood of online shopping cart abandonment (Huang et al., 2018). Additionally, enhanced objective ambivalence about appetizing but unhealthy foods increases visual sensitivity to portion size (Cornil et al., 2014), which might similarly function to reduce consumption. Similar results emerge for subjective ambivalence: higher subjective ambivalence about eating meat is associated with reduced meat consumption (Berndsen & van der Pligt, 2004), greater subjective ambivalence about a product replacement decision is linked to lower replacement intentions (Roster & Richins, 2009), and more subjective ambivalence about COVID-19 mitigation policies predicted less willingness to socially distance and wear a mask during the pandemic (Siev & Petty, 2024).

The Structure of Attitude Strength

A number of other attitude strength-related properties beyond certainty and ambivalence have been shown to influence consumer behavior. For example, across a variety of contexts, attitudes have more impact when based on extensive thought (Barden & Petty, 2008; Haugtvedt & Petty, 1992; Haugtvedt & Wegener, 1994; Priester & Petty, 2003) and direct experience with the attitude object (Fazio & Zanna, 1978; Smith & Swinyard, 1983), when cognitively accessible (Berger & Mitchell, 1989; Fazio et al., 1989) and tied to emotions (Fedorikhin et al., 2008; Rocklage & Luttrell, 2021) or morality (Luttrell et al., 2021; Philipp-Muller et al., 2022; Skitka et al., 2005) and viewed as defining parts of consumers' group identities or self-concepts (Belk, 1988; Oyserman, 2009; Xu & Petty, 2024; Zunick et al., 2017).

Attempts to group attitude strength-related properties into broader clusters (Bassili, 1996; Bloemer & de Ruyter, 2001; Visser et al., 2006) have produced valuable insights about the interrelations among variables (e.g., highlighting effects of elaboration on certainty, Barden & Petty, 2008; and self-definition on accessibility, DeMarree et al., 2007; Park et al., 2010). This work has led to some controversy as to how many factors the attitude strength construct represents, but researchers have largely concluded that the various properties are different enough to be treated separately (Krosnick & Petty, 1995; Petty et al., 2023; Philipp-Muller et al., 2020). Interactions that emerge among these properties in predicting attitude strength-related outcomes, discussed next, support this approach.

Interactions among Attitude Strength Properties

When attitude strength indicators interact with each other to predict outcomes, it suggests at least partial independence. Jointly considering certainty and ambivalence can be especially useful in examining this. Rather than affecting judgments and behaviors directly as main

effects, when analyzed together certainty amplifies the effect of ambivalence, enhancing the impact of attitudes when ambivalence is low (the traditional effect of certainty), but reducing it when ambivalence is high. For example, attitudes held with greater certainty are *less* stable over time and resistant to persuasion if they are also high in ambivalence (Clarkson et al., 2008; Luttrell et al., 2016). Similarly, ambivalence tends to be more influential in reducing an attitude's impact when attitude-relevant knowledge is high (Wallace et al., 2020), suggesting ambivalence is especially determinative when attitudes are otherwise strong. Although many attitude strength properties are closely related (see Petty et al., 2023), these interactive findings make clear that the properties are distinct, as treating them separately improves the ability to predict relevant judgments and behaviors.

REVERSALS OF TRADITIONAL ATTITUDE STRENGTH EFFECTS

The attitude strength literature generally considers each strength property to be predominantly associated with a particular tendency to either increase or decrease attitudinal impact. For example, as noted, higher attitude certainty tends to increase an attitude's impact (e.g., enhancing durability and prediction of behavior), but higher attitudinal ambivalence tends to reduce an attitude's impact. However, research has documented a number of exceptions. In this section, we review and contextualize these reversals, and identify several moderators that predict when the certainty and ambivalence with which attitudes are held show their traditional strength effects versus reversals.

Attitudinal Insecurity and Compensatory Attitude Strength

Attitude certainty and ambivalence capture not only an attitude's validity and consistency (how they are typically understood in attitude strength research) but are also associated with feelings of *security and insecurity* related to the attitude (Pang et al., 2017; Siev et al., 2022). Feeling high certainty and low ambivalence (low conflict) are generally considered desirable states, which promote feelings of assurance and security in consumers' attitudes. Conversely, being highly uncertain and/or ambivalent is often considered undesirable and can make consumers feel insecure about their attitude. As explained shortly, research suggests feelings of insecurity that stem from attitude uncertainty or ambivalence can sometimes promote outcomes traditionally associated with high certainty and low ambivalence.

That is, in addition to the *assured attitude strength* effects reviewed in the previous section, certainty and ambivalence can also be associated with *compensatory attitude strength* effects, which can result in the opposite patterns (e.g., Moreno et al., 2023). Feelings of assurance associated with confidently holding a univalent (one-sided) position promote attitude-consistent behaviors, but feelings of insecurity associated with feeling doubtful or conflicted can also do so. Compensatory attitude strength effects are examples of "within-domain" (vs. "across-domain") compensatory behaviors (Brannon, 2019; Lisjak et al., 2015), where the compensatory behavior is related (vs. unrelated) to the object or attitude about which the person feels uncomfortable (see Mandel et al., 2023; Rucker et al., 2025 for reviews of consumer compensation effects).

For example, research on compensatory strength effects of attitude certainty shows that consumers are more likely to try to persuade others of their opinion when they are relatively

high or low in certainty about their position (relative to moderate certainty; Cheatham & Tormala, 2017; Gal & Rucker, 2010). When certainty is high (vs. moderate), feelings of assurance increase advocacy. However, when certainty is low (vs. moderate), a desire to bolster one's weak attitude increases advocacy. Similarly, lower certainty predicts more selective exposure to unfamiliar attitude-consistent information, again to bolster a weak attitude (Sawicki et al., 2011), and when people engage in social comparison, lower certainty predicts a stronger preference for attitudinally similar (vs. dissimilar) others (Sawicki & Wegener, 2018). These findings all appear to result from feelings of insecurity and the desire to compensate for or defend the weak or vulnerable attitude.

Recent work shows that attitude uncertainty can predict more willingness to engage in a variety of attitude-consistent behaviors, especially when the behaviors are extreme and the attitudinal domain is threatening (Siev et al., 2023). Thus, the same measures of attitude certainty can simultaneously predict assured attitude strength effects for ordinary behaviors and compensatory attitude strength effects for extreme behaviors. For example, confidence about COVID-19 mitigation policies was positively linked to ordinary behaviors such as the willingness to wear masks during the pandemic, but negatively linked to more extreme behaviors such as the willingness to aggressively confront people who refused to wear masks. This might occur because extreme behaviors are diagnostic of the actor's beliefs (Skowronski & Carlston, 1989), allowing a person to send a strong signal of clarity or commitment, helping compensate for a perceived attitudinal weakness.

Ambivalence, too, can produce compensatory attitude strength effects. For example, although greater ambivalence predicts less selective exposure when relevant knowledge is high (a traditional attitude strength effect), this reverses when knowledge is low because people seek information to bolster their weak position (Sawicki et al., 2013). Greater ambivalence also increases willingness to pay for and intentions to use risky products (e.g., untested cognitive enhancement supplements) (Hamby & Russell, 2022), and is associated with more support for extreme political actions like violence (Siev & Petty, 2024; also see Gollwitzer et al., 2022). Although the precise psychological mechanisms underlying these various compensatory attitude strength effects may differ, they appear to broadly result from the psychological discomfort associated with being uncertain or ambivalent and the resulting motivation to bolster, defend, or affirm the vulnerable attitude.

Several factors appear to moderate the likelihood that certainty and ambivalence will predict assured versus compensatory attitude strength effects. For example, extreme behaviors (e.g., destroying company property) are more likely than ordinary behaviors (e.g., purchasing a product) to exhibit compensatory attitude-strength effects, perhaps because the unusualness and/or costliness of extreme actions enhances their signal value, appealing to those dealing with attitude-related discomfort (Siev et al., 2023; Siev & Petty, 2024). Other types of behavior that tend to appeal to consumers dealing with self-threat might similarly lend themselves to compensatory attitude strength effects, such as acquiring high-status goods (Mazzocco et al., 2012; Sivanathan & Pettit, 2010) or, more broadly, goods that symbolize a person's ideals (McGregor et al., 2013).

The compensatory attitude strength effect on extreme attitude-consistent behaviors is also greater when the attitude, despite being uncertain or ambivalent, shows other signs of strength. For example, consumers who feel ambivalent about opinions that they are nonetheless certain about or committed to are especially supportive of extreme pro-attitudinal actions (Siev & Petty, 2024). Thus, variables that increase attitudinal commitment enhance these

effects, such as believing that one's ambivalent position is justified (Siev & Petty, 2024). These findings parallel the interactions that emerge for ordinary behaviors, where greater ambivalence reduces attitudinal impact, especially when confidence is high, as discussed earlier. Additionally, as noted, those who perceive the attitudinal domain (e.g., COVID-19 mitigation policies) to be especially threatening also show such effects particularly strongly (Siev et al., 2024). Identifying further moderators of assured versus compensatory attitude strength effects is a worthwhile goal of continued work in this area.

Other Mechanisms

The effects of attitude strength-related properties can occasionally reverse for reasons beyond compensating for weakness (e.g., Irmak et al., 2017; Muthukrishnan et al., 2001). For example, although greater attitude-relevant thought tends to strengthen attitudes (Petty & Cacioppo, 1986), thinking more about complex information reduces the stability of preferences because it leads to inconsistent weighting of specific pieces of information over time (Nordgren & Dijksterhuis, 2009). Additionally, greater ambivalence about a goal (e.g., getting a new job) can increase willingness to pursue the goal by reducing the self-threat associated with the possibility of failure (Reich et al., 2022). This research reinforces the view that the self-threat implications of particular attitudes are an important consideration in anticipating their impact, albeit for reasons other than discomfort and compensation.

OTHER RECENT DEVELOPMENTS IN ATTITUDE STRENGTH RESEARCH

Our final section covers other noteworthy trends in research on attitude strength. Specifically, we highlight findings regarding how attitude- or preference-framing can affect attitude strength, individual differences in attitude strength, and perceptions of other people's attitude strength-related properties.

Framing Effects on Attitude Strength

Research on framing effects (i.e., presenting the same information in different ways such as saying a hamburger is 80% fat versus 20% lean; Levin & Gaeth, 1988) in judgment and decision-making shows that logically equivalent descriptions of the same information can have distinct effects on information processing (Tversky & Kahneman, 1981). Related work in the attitudes domain extends this insight, showing that the way an attitude or preference is framed - especially with regard to its *valence* - shapes how much impact the attitude or preference has. In particular, all else being equal, framing a preference between two objects negatively, such as in terms of *rejecting or opposing* the non-preferred option (versus positively, as in *choosing or supporting* the preferred option), can increase the strength with which the preference is held (Teeny & Petty, 2025), people's intentions to act upon it (Bizer et al., 2011), and other people's inclinations to adopt the same preference (Nan et al., 2023). Additionally, several contextual factors have been shown to moderate "valence-framing" effects. Specifically, support-framing can be more impactful in at least some ways when the alternative choices are desirable (Perfecto et al., 2017), when people are communicating their preferences to others

(Catapano & Tormala, 2021), and when preferences are tied to important group identities (Siev et al., 2024).

Individual Differences in Attitude Strength

Not only do beliefs and attitudes vary in how strongly they are held; individuals vary in their propensities to hold *any* opinions strongly. First of all, people differ in their tendencies to form attitudes toward any objects (their need to evaluate; Jarvis & Petty, 1996; Xu et al., 2023), to think about (thereby strengthening) their attitudes (need for cognition; Cacioppo & Petty, 1982), to commit to their attitude positions even on topics to which they have not given much thought (Kwon & Nayakankuppam, 2015), and to maintain their attitudes over time (Xu et al., 2020). Moreover, people vary in their dispositional tendencies to hold their attitudes with certainty (DeMarree et al., 2020) and ambivalence (Schneider et al., 2021), to moralize their attitudes (moral awareness; Reynolds, 2006), and to infuse them with emotion (need for affect; Maio & Esses, 2001), among other tendencies. One useful direction for continued research in this area would be to identify differences between the processes involved in attitude-specific versus trait-level attitude strength effects. For example, distinct persuasive strategies might be needed to change attitudes that are strong due to attitude-specific knowledge and elaboration versus due to person-level factors. Such an approach would also complement emerging research on how strong attitudes can be changed (e.g., with two-sided messages, Xu & Petty, 2022; 2024; with abstract messages, Wan & Rucker, 2013).

Perceptions of Others' Attitude Strength

Finally, research has explored the interpersonal dynamics around attitude strength, highlighting the extent to which people are attuned to the strength-related properties of others' opinions (Teeny et al., 2023; Vaughan-Johnston, 2024). Illustrating this, in the domain of social interaction, perceptions that a person is ambivalent (Siev et al., 2024) or emotional (Teeny & Petty, 2022) about their beliefs can increase social avoidance of the person (e.g., reduced attempts to influence them). In contrast, people are generally drawn to those with strong, coherent views (Goldenberg et al., 2023; Zimmerman et al., 2022). Perceptions of attitude strength also matter in the domain of persuasion, where, for instance, some research has shown that expressing certainty in one's view is generally good for persuasion (Löhre et al., 2024; but see Karmarkar & Tormala, 2010).

CONCLUSIONS

After half a century of research, the attitude strength framework birthed in social psychology continues to generate valuable insights about consumer behavior. This chapter has outlined key findings from the attitude strength literature and explored recent trends that, while reinforcing traditional findings, also reveal reversals under certain conditions. The longevity of attitude strength as a research area underscores its significance in understanding human behavior and its complexity, which ongoing research continues to uncover. We look forward to further advances in both consumer and social psychological research on attitude strength.

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