

ARTICLE

Attitude strength: Distinguishing predictors versus defining features

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Abstract

Attitudes play a fundamental role in many aspects of social psychology, but researchers have long recognized that attitudes vary in their susceptibility to change and their influence on behavior and cognitive processes. This insight lies at the heart of *attitude strength*, which is defined as an attitude's durability and impact. A variety of attitude attributes such as certainty and ambivalence have been shown to correlate with these aspects of attitude strength, which has made for some confusion as to what variables *define* strong attitudes versus *predict* an attitude's strength. In this article, we highlight this distinction between predictors and defining features of strength and review recent programs of research demonstrating the independence of strength-related attitude attributes and attitude strength itself. Specifically, although some attitude attributes are associated with the attitude's durability and impact, there are conditions under which those attributes fail to predict attitude strength or even have the opposite effects. Throughout, this review reveals nuances in the attitude strength literature and provokes new questions for future inquiry.

1 | INTRODUCTION

Attitudes play a fundamental role in social psychology, and yet scholars have long recognized that attitudes are not all equally consequential. In the wake of mixed evidence on the effects of attitudes on behavior, some suggested that “it may be desirable to abandon the attitude concept” (Wicker, 1971, p. 29), but others pursued an alternative perspective—that attitudes vary in their *strength* (Raden, 1985). As Fazio and Zanna (1981) argued, “[r]ather than asking

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whether attitudes relate to behavior, we have to ask "Under what conditions do what kinds of attitudes held by what kinds of individuals predict what kinds of behavior?" (p. 165). This perspective has proven generative, sparking a massive literature focused on distinguishing weak from strong attitudes, extending across constructs in psychology, including the self (DeMarree, Petty, & Briñol, 2007), political ideology (Shoots-Reinhard, Petty, DeMarree, & Rucker, 2015), job satisfaction (Ziegler, Schlett, Casel, & Diehl, 2012), and prejudice (Christ et al., 2010).

Nevertheless, with the growing influence of attitude strength comes opportunities to muddle two unique aspects of this perspective: the variables that *predict* an attitude's strength and the properties that *define* strength. For example, one might be inclined to refer to attitudes held with certainty as "strong attitudes," but we propose that this conflates two distinct constructs that are actually conceptually and empirically independent. Several recent advances shine a light on this distinction, so we review these new areas of research as a means of emphasizing this theoretical point.

2 | CONCEPTUALIZING ATTITUDE STRENGTH

2.1 | Defining features

How would you test whether something is "strong"? You might push it to see if it breaks or see if it exerts force on its environment. In defining attitude strength, Krosnick and Petty (1995) similarly proposed that attitudes are strong when they are durable and have impact. An attitude's *durability* is most often assessed as its stability over time and propensity to withstand attack (e.g. in response to persuasive communication). *Impact* most often refers to how much an attitude provokes correspondent behaviors and shapes one's thinking (e.g. guiding attention and judgment). Together, these observable characteristics are the "defining features" of attitude strength (Krosnick & Petty, 1995, p. 4).¹

For example, consider two voters who both support the same politician. However, although their responses to a typical survey question appear identical (e.g. marking "6" on a seven-point oppose–support scale), one person's attitude toward the politician is relatively weak, whereas the other's is relatively strong. This means that compared with the person with a weaker attitude, the person with a stronger attitude will be more likely to maintain her opinion over the course of the election cycle even when television ads and social media feuds challenge her views (i.e. her attitude will be relatively durable). Her opinion will also be more likely to bias her interpretation of who performed better in the debates, and she will be more likely to actually cast a ballot on Election Day for her preferred candidate (i.e. her attitude will be relatively impactful).

2.2 | Attitude attributes that predict strength

By the above definition, one can only observe an attitude's strength by directly probing its durability and impact, but can we anticipate which attitudes are likely to be strong versus weak? Decades of research have uncovered myriad attitude attributes that correlate with attitude strength outcomes. To provide a brief overview of the kinds of variables that predict strength, we begin by reviewing a selection of commonly studied attitude attributes and the research that has supported traditional views that they have simple overall relationships with attitude strength (for more thorough reviews, see Petty & Krosnick, 1995; Visser, Bizer, & Krosnick, 2006).² Later, however, we revisit these attributes to offer a more nuanced look at their effects.

2.2.1 | Accessibility

Attitude accessibility describes how strongly someone mentally associates an attitude object and its evaluation. It is typically measured using response latencies; being able to provide an evaluation more quickly indicates greater

accessibility. In general, accessibility has been tied to the defining features of attitude strength: more accessible attitudes tend to be more stable over time (Bassili, 1996), resistant to persuasion (Pfau et al., 2003), predictive of behavior (Fazio, Chen, McDonel, & Sherman, 1982), and likely to bias attention (Roskos-Ewoldsen & Fazio, 1992) and information processing (Houston & Fazio, 1989).

2.2.2 | Ambivalence

People with ambivalent attitudes have both positive and negative reactions to an attitude object (Kaplan, 1972; Thompson, Zanna, & Griffin, 1995) and generally experience being mixed and conflicted about the object (Priester & Petty, 1996). Research has supported ambivalence as a marker of attitude weakness; more ambivalent attitudes tend to be more vulnerable to change (Armitage & Conner, 2000; Bassili, 1996) and demonstrate less attitude–behavior consistency (Armitage & Conner, 2004).

2.2.3 | Certainty

Attitude certainty is the subjective sense of conviction with which an attitude is held (Tormala & Rucker, 2018). Consistent with being a predictor of attitude strength, greater certainty in one's attitude has been associated with more resistance to persuasion (Petrocelli, Tormala, & Rucker, 2007), stability over time (Bassili, 1996), attitude–behavior consistency (Fazio & Zanna, 1978; Warland & Sample, 1973), and attitude-biased information processing (Knobloch-Westerwick & Meng, 2009).

2.2.4 | Importance

Importance is how much a person perceives him or herself to care about a particular attitude (Eaton & Visser, 2008). Attitudes on which people place a great deal of importance are typically considered strong. More importance is associated with greater resistance to persuasion (Zuwerink Jacks & Devine, 1996), stability over time (Krosnick, 1988b), attitude–behavior consistency (Krosnick, 1988a), and attitude-consistent information processing (Holbrook, Berent, Krosnick, Visser, & Boninger, 2005).

2.2.5 | Elaboration

Attitudes can also differ in how much they were formed through careful thinking about relevant information (Barden & Tormala, 2014; Petty, Haugtvedt, & Smith, 1995). Attitudes based more on effortful thinking tend to be relatively strong; more thought-based attitudes are more resistant to persuasion (Haugtvedt & Wegener, 1994; Horcajo & Luttrell, 2016), persistent over time (Haugtvedt & Petty, 1992), and aligned with relevant behavior (Barden & Petty, 2008).

2.2.6 | Knowledge

Attitude-relevant knowledge can be conceptualized in many ways, ranging from mere amount of knowledge to the perceived breadth or complexity of one's knowledge. Working knowledge describes the recollections that come to mind when considering an attitude object (Wood, Rhodes, & Biek, 1995) and has been associated with greater ability

to resist persuasion, at least with regard to superficial persuasion cues such as irrelevant source likability (e.g. Wood & Kallgren, 1988). More knowledge also tends to predict attitudes' stability over time (Bartle, 2000) and correspondence with future behaviors (Davidson, Yantis, Norwood, & Montano, 1985).

2.2.7 | Moralization

A relatively recent attitude attribute to receive empirical attention is attitude moralization, which is the degree to which people perceive an attitude as connected to core moral values (Skitka, 2014).³ Like other classic attitude strength predictors, the more people perceive a moral basis for an attitude, the more resistant they are to influence (e.g. Aramovich, Lytle, & Skitka, 2012; Luttrell, Petty, Briñol, & Wagner, 2016), the more stable the attitude is over time (Luttrell & Togans, 2020), the more the attitude corresponds to relevant behavior (Judge et al., 2012; Skitka & Bauman, 2008), and the more the attitude biases judgments (Bauman & Skitka, 2009; Garrett & Bankert, 2018).

2.2.8 | Distinctiveness of strength-related attitude attributes

It is worth noting that despite similarly predicting attitude strength and their relatively high inter-correlations, these attitude attributes are conceptually and empirically distinct. Although previous research has tried to identify latent factors underlying these variables (e.g. Abelson, 1988; Erber, Hodges, & Wilson, 1995; Pomerantz, Chaiken, & Torde-sillas, 1995; Prislín, 1996), other evidence shows that they reflect distinct qualities of an evaluation. For example, confirmatory factor analyses find superior fit for models assuming each attitude attribute constitutes its own latent factor (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993; Lavine, Huff, Wagner, & Sweeney, 1998). Different attitude attributes also correspond to activity in distinct brain regions (Luttrell, Stillman, Hasinski, & Cunningham, 2016), manipulations of one attribute do not necessarily affect other attributes (e.g. Clarkson, Tormala, & Rucker, 2008; Luttrell, Petty, Briñol, & Wagner, 2016), and these attributes exert independent effects on attitude strength outcomes (see Visser et al., 2006 for a comprehensive review of this point).

3 | PREDICTORS ARE NOT DEFINING PROPERTIES

As the attitude strength literature has grown and informed a variety of novel questions, the attributes we reviewed above have occasionally been conflated with attitude strength itself. For example, L. Brannon, Tagler, and Eagly (2007) operationalized "attitude strength" as responses to questions about importance, certainty, centrality, and knowledge. Hübner, Mohs, and Petersen (2014) similarly referred to importance, certainty, and knowledge as "self-reported measures of attitude strength" (p. 356), and Robison, Leeper, and Druckman (2018) interpreted null effects on extremity and importance as null effects on "attitude strength." Additionally, to distinguish moral attitudes from "strong attitudes," Skitka, Bauman, and Sargis (2005) controlled for variables such as certainty and importance (Studies 1–3) or classified people as having strong attitudes based on measures of extremity and certainty (Study 4). We highlight these examples not to diminish the quality of the research or to suggest that these are particularly extreme or unusual cases. Rather, our aim is merely to show how easily strength-related attitude attributes can be conflated with attitude strength itself.

We appreciate that this point may seem pedantic, but several lines of research illuminate the pitfalls of assuming that these attitude attributes are synonymous with strength. For example, several high-powered tests with representative samples have failed to find consistent evidence that importance was related to attitude stability (Leeper, 2014), moderated the relationship between political attitudes and voting behavior (Leeper & Robison, 2018), or moderated the impact of one's own attitude on judgments of attitude prevalence (Fabrigar & Krosnick, 1995). Other evidence

also fails to support relationships between attitude moralization and resistance to persuasion (S. M. Brannon, DeJong, & Gawronski, 2019) and between ambivalence and attitude stability (Armitage & Conner, 2000). These findings suggest that calling important, unambivalent, or morally based attitudes “strong” would be misleading, at least under some circumstances.

Such null effects can be interpreted in several ways. At the extremes, they could mean that attributes such as importance actually never reflect an attitude's strength and evidence that supports such effects are false positives, or that these attributes truly reflect an attitude's strength and some tests will be nonsignificant even when the null hypothesis is false (Fabrigar & Wegener, 2016; Kenny & Judd, 2019). A more nuanced take, however, is that the relationships between various attitude attributes and attitude strength systematically vary, which is the perspective we take here. See Figure 1 for a schematic overview of the distinctions between strength-related attitude attributes (i.e. strength predictors) and attitude strength, as well as moderators of these variables' relationships.

3.1 | Interactions between attitude strength predictors

Researchers often focus on attitude attributes' main effects on attitude strength. For instance, researchers may be especially interested in understanding the effects of attitude certainty or importance and thus examine their effects in isolation or as independent effects in the same study. These approaches assume that a particular attribute either is or is not a reliable predictor of attitude strength. More recently, however, researchers have been examining interactions *between* distinct attributes.

Much of this research has found ambivalence to moderate other attributes' effects. Recall that ambivalence refers to how much an attitude is relatively one-sided versus comprising a mix of positive and negative evaluations of the same object. New evidence tends to suggest that traditional predictors of attitude strength are especially likely to have their expected effects for relatively unambivalent attitudes, but for relatively ambivalent attitudes, the attributes typically associated with attitude strength can have null or even opposite effects.

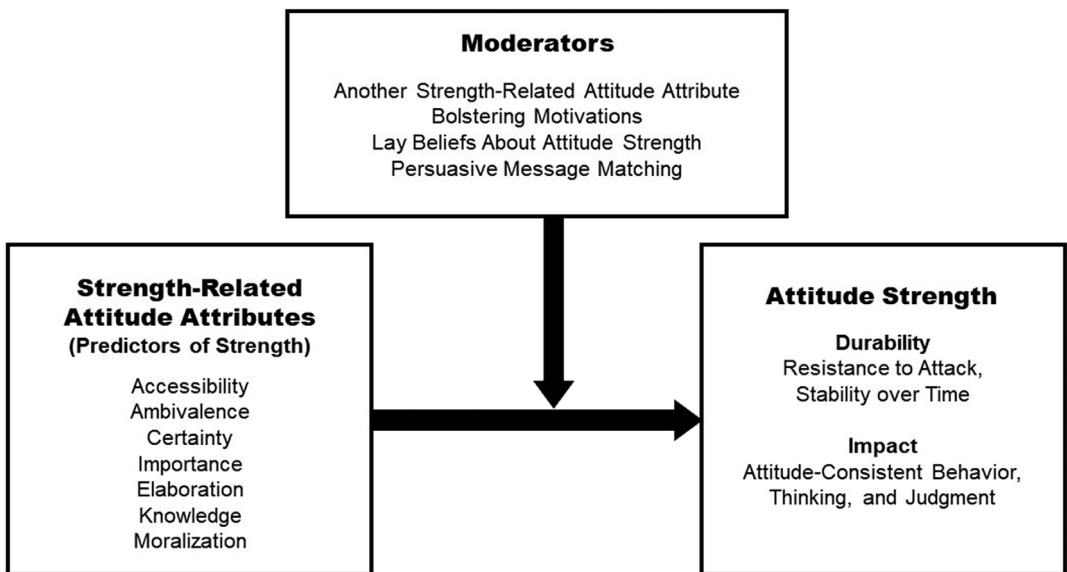


FIGURE 1 An overview of the distinction between strength-related attitude attributes (i.e. predictors of strength) and attitude strength itself. Note that the list of relevant attitude attributes and potential moderators is meant to be illustrative and not exhaustive

For example, consider the interaction between ambivalence and certainty on attitude durability. Certainty is often considered a predictor of an attitude's strength such that people who are more certain in an attitude are less likely to change it. However, when Clarkson et al. (2008) independently manipulated ambivalence and certainty before presenting people with information that challenged their initial attitudes, they found that when people had initially developed univalent attitudes, those who also developed more confidently held evaluations were less persuaded by the new information than those who had been led to hold their evaluations with less certainty. That is, when people had a one-sided attitude, greater certainty led to greater resistance to change, consistent with prior attitude strength predictions. However, when people instead developed ambivalent attitudes, they were *more* persuaded when they were more (vs. less) certain in their evaluations. In other words, for ambivalent attitudes, certainty's effect on resistance to change was opposite to common depictions of it as an indicator of strength. The same interaction pattern has since been shown for longitudinal attitude stability: certainty is associated with more stability for relatively unambivalent attitudes, but is associated with *less* stability for relatively ambivalent attitudes (Luttrell, Petty, & Briñol, 2016; Luttrell, Petty, & Briñol, 2020).

Ambivalence also moderates the effects of importance. For example, research on context effects in survey responses has tended to show that other questions in a survey may create a context that nudges someone to evaluate a target stimulus more positively or negatively (Tourangeau & Rasinski, 1988). One can construe this effect as evidence of evaluative instability and thus a sign of weak attitudes. However, these context effects tend to occur most when people are ambivalent but also say that the issue is very important (Tourangeau, Rasinski, Bradburn, & D'Andrade, 1989a, 1989b). That is, although "important" attitudes are classically depicted as signifying attitude strength, they were associated with greater instability when the attitude was ambivalent.

Finally, ambivalence also moderates the effects of attitude-relevant knowledge. Wallace et al. (2019) examined attitude strength as the correspondence between one's attitudes and relevant judgments and behaviors (i.e. attitude impact). Consistent with depictions of high knowledge as an indicator of strength, these studies show that attitudes were quite predictive of relevant outcomes when people report knowing more about the topic; however, this effect was attenuated for relatively ambivalent attitudes. Thus, ambivalence seems to undermine the effects of knowledge on attitude strength.

Despite a general focus on ambivalence as a moderator, some work has examined importance as a moderator of other attributes (Visser, Krosnick, & Norris, 2016; Visser, Krosnick, & Simmons, 2003). For example, Wright, Cullum, and Schwab (2008) found interactions between importance and moralization on social behaviors toward someone whose attitude diverged from the participant's. Specifically, people were less generous and more distant when the disagreement concerned a moral (vs. nonmoral) issue but only when they also reported that the issue was important to them.

By highlighting the potential for interactions between different attitude attributes, this body of work demonstrates that particular attributes can predict durability and impact for some attitudes but not others. We anticipate new research that broadens the scope of these interactive effects to other strength-related attitude attributes and other features of strength.⁴

3.2 | Bolstering versus strength motivations

The effects of attitude attributes can also depend on one's motivation. Recall that strong (vs. weak) attitudes are those that guide thinking and behavior. Although strength-related attitude attributes often predict these outcomes, under some conditions, attitudes guide thoughts and behavior more when they have attributes traditionally thought to characterize *weak* attitudes. Specifically, characteristics commonly associated with weak attitudes, such as uncertainty, are aversive (Festinger, 1954), creating a push to alleviate discomfort. Thus, the attitude holder may seek to fortify or bolster his or her evaluation in order to possess a strong, coherent opinion.

One way in which someone could help bolster an attitude is seeking and processing attitude-congruent information (Clark & Wegener, 2013). That is, gaining attitude-consistent information could help someone validate an attitude, whereas contradictory information could potentially threaten it. In this case, attributes traditionally associated with weak attitudes should paradoxically correspond with a *greater* tendency to use an attitude to guide information selection. By contrast, feeling that one's attitude is already well founded is a signal that no additional information is needed, and thus there would be no particular push toward attitude-consistent information. These patterns, however, would be in contrast with the typical characterization of *strong* attitudes being especially likely to guide one's thinking and attention in attitude-consistent ways (i.e. attitudes having more *impact* on thinking and behavior). Recent research has not only documented these apparently contradicting effects of various attitude attributes but has also identified when an attribute evinces strength effects and when it evinces bolstering effects instead.

First, consider the opposing effects attitude certainty can have. Certainty is often treated as a predictor of attitude strength, and some evidence likewise shows that people have stronger biases in favor of attitude-consistent information when they are more certain of those attitudes (Knobloch-Westerwick & Meng, 2009). But *lacking* certainty can be unpleasant, prompting motivations to resolve doubt (Petty, Briñol, Tormala, & Wegener, 2007). According to the "sufficiency principle" (Chaiken, Liberman, & Eagly, 1989), individuals who lack certainty will process information to increase their confidence, whereas people who already feel certain should have little motivation to seek information. Therefore, in contrast to the typical attitude strength effect, *uncertainty* can also prompt people to be more selective in choosing and processing attitude-consistent information as a way to increase confidence. Indeed, in order to boost their confidence, people who are relatively uncertain of an attitude are more likely to choose to read pro-attitudinal (vs. counter-attitudinal) novel information (Sawicki et al., 2011) and will more carefully process information when it agrees (vs. disagrees) with their attitude (Clark & Wegener, 2013). Conversely, when attitudes are already confident, disagreeable information is chosen and processed more deeply than agreeable information (see Albarracín & Mitchell, 2004).

The motivation to increase attitude certainty can influence a variety of judgments or behaviors beyond information seeking or processing. In the advocacy domain, it would seem that people should be more inclined to persuade others when they are more certain of their own attitude, consistent with a traditional attitude strength approach (Akhtar, Paunesku, & Tormala, 2013; Cheatham & Tormala, 2015). However, it is also possible that *uncertainty* could promote greater advocacy as a means of increasing one's confidence. That is, certainty seems to have a curvilinear relationship with advocacy: increasing certainty corresponds with greater advocacy, consistent with a traditional attitude strength perspective, but increasing *uncertainty* also corresponds with greater advocacy by activating a desire to bolster one's existing attitude (Cheatham & Tormala, 2017). Consistent with this, Gal and Rucker (2010) found that people whose confidence had been shaken reported stronger intentions to advocate for their position and put more effort into actually persuading others. Highlighting the motivational underpinnings of this effect, however, the effects of doubt diminished when people's need for validation was reduced (e.g. by affirming their identity) or they did not believe advocacy would actually prove validating.

Both strength and bolstering effects can also be observed for social affiliation depending on a person's focus when making judgments (known as metacognitive reflection). Attitudes have long been understood to guide interpersonal impressions; people tend to like others who share their attitudes (Byrne, 1969). However, if certainty reflects an attitude's strength, confidently held attitudes should better guide a person's evaluation of someone else with whom they agree or disagree. Indeed, this is the case when people are merely focused on evaluating a target (Sawicki & Wegener, 2018). However, affiliating with attitudinally similar others can be an alluring opportunity to bolster one's own attitude (e.g. Clarkson, Smith, Tormala, & Dugan, 2017), so when people instead reflect on what the other person's opinion would mean for their own (i.e. consider metacognitive properties of the attitude), they become more attracted to someone with whom they agree if they are relatively *uncertain* about their own attitude (Sawicki & Wegener, 2018). Although past research had independently shown that features like uncertainty could undermine or increase an attitude's influence, Sawicki and Wegener (2018) identify metacognitive reflection as the key moderator of uncertainty's effects on attitudinal outcomes. This theoretical distinction presents a set of guiding

principles to help researchers predict when traditional strength patterns would emerge (i.e. when people focus on a decision without reflecting on metacognitive properties of the attitude) versus when a bolstering pattern would be more likely (i.e. under metacognitive reflection). In sum, it would be misleading to characterize uncertain attitudes as “weak” because when people are focused on their desire for confidence, uncertainty can make their attitudes have more *impact* on their thoughts, judgment, and behaviors.

Ambivalence is another attribute that is often considered a predictor of weak attitudes, but like uncertainty, experiencing conflicting reactions creates a tension that people want to resolve (van Harreveld, Nohlen, & Schneider, 2015). As a result, ambivalence is associated with selectively processing information that would reduce conflict (i.e. pro-attitudinal information) and avoiding information that could increase tension further (i.e. counter-attitudinal information; Clark, Wegener, & Fabrigar, 2008; Maio, Bell, & Esses, 1996). Greater ambivalence has also been associated with choosing to see more attitude-consistent information, particularly when the information was unfamiliar and thus more capable of reducing ambivalence (Sawicki et al., 2013). That is, contrary to the typical connection to weak attitudes, ambivalent attitudes can greatly impact thoughts and behaviors (e.g. information choices) when these biases serve to alleviate the state of conflict.

Notably, the bolstering studies presented here examined the “impact” feature of attitude strength, focusing on an attitude's influence on judgments, thinking, and behavior. It remains an open question whether bolstering effects can apply to attitudes' durability. That is, variables typically associated with weakness may sometimes prompt greater resistance and stability as a means of bolstering the attitude. For instance, people infer attitude certainty from their ability to resist strongly argued messages (Tormala & Petty, 2002) and from how stable they think their attitudes have been over time (Petrocelli, Clarkson, Tormala, & Hendrix, 2010), so when people *lack* certainty, they may be especially motivated to resist persuasion and hang onto an attitude as a way of proving to themselves that their attitude is durable, bolstering their confidence. As with the effects on attitudes' impact, however, whether uncertainty produces susceptibility to change versus motivated resistance would depend on an individual's goals and attention in the moment.

Bolstering effects could also apply broadly to other strength-related attitude attributes. In general, an attribute's effect on the attitude's impact or durability should depend on the person's desire for such an attribute. For example, uncertainty increases attitude-consistent information choices because people desire additional certainty, but this bolstering motivation is absent if they believe that they already possess sufficient certainty. Presumably, this logic applies across strength-related attributes. Consider knowledge. Typically, knowing a lot about an issue is associated with attitude strength, and some evidence shows that it is high-knowledge people who use their attitudes to guide information processing, favoring information they agree with (Biek, Wood, & Chaiken, 1996). However, when lacking knowledge, someone might desire a more informed attitude and similarly use their attitudes more strongly to guide information processing in order to increase attitude-consistent knowledge. Further work is needed to test whether bolstering effects apply across strength-related attitude attributes and identify the conditions under which such attributes evince strength versus bolstering effects.

3.3 | Lay beliefs about attitude strength

Strength-related attitude attributes can also vary in how they are subjectively construed. That is, whereas a particular attribute may connote strength for some people or in a particular context, it may connote weakness for other people or contexts. The research in this area has predominantly examined effects on attitude certainty, but these insights have broader implications for attitude strength.

For example, attitudes that come to mind more quickly (i.e. are more *accessible*) tend to be stronger than attitudes that come to mind more slowly (Fazio, 1995). As such, when people perceive that an attitude comes to mind easily, they tend to be more confident in it (Haddock, Rothman, Reber, & Schwarz, 1999; Kopp, 2010). However, despite these average tendencies, people can differ in what it means for something to come to mind quickly, which

has implications for how certain they feel. On the one hand, people are quite *confident* in opinions that come to mind quickly if they believe that being able to give a quick opinion means they know their stance very clearly. On the other hand, people are quite *uncertain* about opinions that come to mind quickly if they believe that giving a quick opinion means they have not thought enough about the issue (Briñol, Petty, & Tormala, 2006; Tormala, Clarkson, & Henderson, 2011). Similarly, more accessible attitudes can be especially unwelcome in cultures emphasizing adherence to social norms and discouraging self-expression (Barnes & Shavitt, 2018).

As another example, when people believe that they have successfully resisted persuasion, they tend to become more certain in their attitude (Tormala & Petty, 2002). Again, however, there are several ways to interpret one's ability to resist persuasion; perceiving oneself to have successfully resisted persuasion increases certainty if the person views resistance positively (e.g. it demonstrates intelligence and independent thinking) but not if they view it negatively (e.g. it demonstrates lack of insight and closed-mindedness; Rydell, Hugenberg, & McConnell, 2006).

Although the previously reviewed evidence tested effects on attitude certainty, lay beliefs about various attitude attributes should also affect strength outcomes themselves (i.e. durability and impact). For example, people may often evaluate ambivalence negatively, construing it as evidence that one's attitude is incomplete or unresolved (Kruglanski & Shteynberg, 2012). Such a perspective is consistent with treating ambivalence as a predictor of attitude weakness. However, people can also evaluate ambivalence positively, viewing it as a natural psychological state. Members of East Asian cultures, for instance, tend to have more tolerance for "contradiction" than members of Western cultures (Spencer-Rodgers, Williams, & Peng, 2010). As such, one study found that ambivalence was more strongly associated with susceptibility to persuasion among European Canadians than East Asian Canadians (Ng, Hynie, & MacDonald, 2012). In other words, ambivalence was only predictive of attitude weakness (i.e. susceptibility to change) among people who interpret ambivalence as a sign that their attitude is unresolved. We presume that many of the attitude characteristics that are often treated as reliable predictors of attitude strength may be similarly associated with various subjective construals that have different implications for the attitude's durability and impact.

3.4 | Persuasive matching can undermine strength

Finally, although strong attitudes are those that resist persuasion, a savvy communicator could craft a message to change attitudes that one would ordinarily expect to be strong. Specifically, many studies have shown that a message is more likely to change someone's attitude when it matches (vs. mismatches) something about the audience and their pre-existing approach to thinking about the issue. For instance, messages are more persuasive when framed in such a way that they match (vs. mismatch) the recipient's culture (Hornikx & O'Keefe, 2009) or moral values (Feinberg & Willer, 2019). Similarly, messages are more persuasive when they speak to the function (Petty, Wheeler, & Bizer, 2000) or basis (Fabrigar & Petty, 1999) of the recipient's initial attitude. Notably, the success of persuasive matching seems to be mediated by its effect on enhanced processing of the message's arguments, at least when processing is unconstrained (see Petty et al., 2000).

Therefore, if an attitude has a particular attribute that typically corresponds with resistance to persuasion, it may actually demonstrate more openness to persuasion if the message is adequately tailored to that attribute. For example, as we reviewed earlier, confidence is typically associated with resistance to processing attitude-relevant information. However, Tormala, Rucker, and Seger (2008) tested whether message matching could evoke the opposite effect. They induced some people to feel quite confident and others to feel doubtful. They then presented a message arguing for a new academic policy at the participants' school. In a control condition, results replicated the standard effect: confidence led to less message processing. In the experimental condition, however, the same message was framed in terms of confidence, noting that the intention was "removing students' doubts and restoring confidence" (p. 144). Supporting a matching effect, the students who felt confident (vs. doubtful) processed the message more in this condition. In other words, contrary to its typical resistance effect, confidence led to more openness to a persuasive message that employed a confidence frame.

More recently, a similar approach was applied to the effects of attitude moralization. As we noted earlier, moralized attitudes have been associated with a particular resistance to change. However, these studies have tended to focus on resistance to social conformity pressures (Aramovich et al., 2012; Hornsey, Majkut, Terry, & McKimmie, 2003; Hornsey, Smith, & Begg, 2007) or non-moral persuasive arguments (Luttrell, Petty, Briñol, & Wagner, 2016). Nevertheless, messages can focus on making moral arguments as a persuasive strategy (e.g. Mucciaroni, 2011), which would match the basis of moralized attitudes. Luttrell, Philipp-Muller, and Petty (2019) manipulated whether messages made moral versus non-moral arguments. For non-moral messages, more moralized attitudes were more resistant to persuasion, consistent with moralization as a predictor of attitude strength. But for moral messages, attitude moralization no longer corresponded with greater resistance; in fact, highly moralized attitudes were relatively susceptible to persuasion by moral (vs. non-moral) arguments.

Future work in this area could continue to consider how other strength-related attitude attributes might fail to evince strength in the face of messages that are tailored to those characteristics.

4 | CONCLUSIONS

By reviewing recent evidence, we have emphasized a distinction between attitude strength's predictors versus its defining features. That is, although it might seem appropriate to call a confidently held attitude "a strong attitude," this conflates confidence with strength, which is more directly defined by durability and impact. Indeed, we highlighted several cases in which certainty was *not* related to how strong an attitude proved to be or even corresponded with attitude weakness.

This framework prompts many questions for future research. First, the moderators we reviewed (see Figure 1) have yet to be extended to all strength-related attitude attributes. For example, future work could consider how lay theories moderate moralization effects. Further, however, researchers should consider novel moderators of these attributes' effects on attitude strength. For instance, why else might confidently held attitudes nevertheless succumb to persuasion or fail to correspond with relevant behavior?

Of course, this is not to suggest that variables such as certainty, accessibility, ambivalence, and moralization are disposable. They are intriguing constructs in their own right, and researchers should continue probing their unique causes and consequences. We do, however, encourage researchers to avoid treating these variables as direct measures of attitude strength and instead consider when and why they are associated with attitudes that are especially resistant to change, persistent over time, and influential for thought and behavior.

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ENDNOTES

¹ Rather than making strong claims about latent constructs or the relationship between durability and impact, we adopt Krosnick and Petty's approach to considering "attitude strength" as "a heuristic label we attach to certain attitudes as a way of efficiently noting that they possess certain characteristics" (p. 3).

² Many of these attributes can be measured at both "objective" and "subjective" levels. Although some investigations have highlighted distinctions between these measures, many studies often use objective and subjective measures interchangeably. Despite raising intriguing questions, this measurement distinction is beyond the scope of this review. Therefore, we treat studies employing objective and subjective measures of the same attributes similarly (for more thorough discussions of this point, see Bassili, 1996; Visser & Holbrook, 2012; Wegener, Downing, Krosnick, & Petty, 1995).

- ³ Although moralization has received quite a lot of attention, we note that some prior work has similarly considered an attitude's basis in *core values* as a predictor of strength (Blankenship & Wegener, 2008; Philipp-Muller, Wallace, & Wegener, 2020).
- ⁴ Notably, however, this approach is not a panacea. Some combinations of strength-related attributes may not evince interaction patterns. One analysis, for example, predicted ambivalence \times importance interactions on attitude stability but found no support for this effect (Craig, Martinez, & Kane, 2005).

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